



Extraordinary Meeting of Council

30 June 2021

**UNDER SEPARATE COVER
ATTACHMENTS**

ITEM 5.1

**QUEANBEYAN-PALERANG REGIONAL COUNCIL
EXTRAORDINARY MEETING OF COUNCIL**

ATTACHMENTS – 30 June 2021 Page i

Item 5.1	Adoption of QPRC Waste Strategy	
	<i>Attachment 1</i>	<i>Draft Waste Strategy - Community Engagement Report2</i>
	<i>Attachment 2</i>	<i>Draft Waste Strategy..... 11</i>
	<i>Attachment 3</i>	<i>Draft Waste Strategy Appendix A..... 101</i>
	<i>Attachment 4</i>	<i>Draft Waste Strategy Appendix B..... 130</i>
	<i>Attachment 5</i>	<i>Draft Waste Strategy Appendix C 135</i>
	<i>Attachment 6</i>	<i>QPRC Waste Strategy General Waste Charge Rating Approach203</i>

QUEANBEYAN-PALERANG REGIONAL COUNCIL

Council Meeting Attachment

30 JUNE 2021

ITEM 5.1 ADOPTION OF QPRC WASTE STRATEGY

ATTACHMENT 1 DRAFT WASTE STRATEGY - COMMUNITY ENGAGEMENT
REPORT



Draft QPRC Waste Strategy Community Engagement Report

Ref: Doc Set ID 1299436

Report - Community engagement – Draft QPRC Waste Strategy

Executive Summary of engagement report:

Community engagement was undertaken through Council's Your Voice portal and included advertising through Council media channels, a press release and highlighting at the community meetings recently held. The draft Waste Strategy was on exhibition from 4 May 2021 to 2 June 2021.

Council received 12 submissions and reached 101 participants. Submissions were generally supportive of the draft Waste Strategy. Negative comments were generally related to a specific aspect of the draft Waste Strategy and are not considered to materially affect the draft Waste Strategy.

Letters were sent to both Veolia and Canberra Region Joint Organisation inviting them to comment on the draft Waste Strategy. Neither submitted a response.

On the basis of the comments received, it is recommended that the draft Waste Strategy is adopted as is.

Participation in engagement:

Community engagement was undertaken through Council's Your Voice portal. The draft Waste Strategy was on exhibition from 4 May 2021 to 2 June 2021.

The draft Waste Strategy was referenced at the community meetings held on 4 May 2021 at Bungendore, 11 May 2021 at Braidwood, 20 May 2021 at Queanbeyan.

Letters were sent to both Veolia and Canberra Region Joint Organisation inviting them to comment on the draft Waste Strategy. Neither submitted a response.

The engagement period was advertised through Council's normal media channels and a press release was issued on 7 May 2021 regarding the strategy.

Aware Participants	Informed Participants	Engaged Participants
101	39	12

Comments received:

Submitter:	Submission:	Staff Response	Staff Recommendation
3356675	Don't go overboard with this, stop demonising landfill, it's just a big hole and there is plenty of land around.	The environmental impact of waste disposal extends well beyond the actual landfill itself. Landfill will likely continue to be an appropriate disposal method for some portion of the waste, however, the wider impact on resource consumption requires us as a community to minimise the amount of waste sent to landfill.	That the draft Waste Strategy is adopted as is.



Report - Community engagement – Draft QPRC Waste Strategy

Submitter:	Submission:	Staff Response	Staff Recommendation
		In addition to this, there are a number of regulatory requirements which must be complied with related to diversion of waste from landfill.	
3354226	<p>I object to the reduction in opening days of the Queanbeyan WAMI. If only open for the proposed 4 days it will create a bottle neck for people wanting to dispose of recyclables. The site can get congested very easily. This can create a reluctance to use the facility and put the recyclables in the rubbish bin instead.</p> <p>I'm also not really impressed with the amount of money you seem to want to charge for the waste services.</p> <p>I would also like a bit more clarification regarding the bulky goods pickups. A lot of people don't have the resources to get rid of larger items and this service is invaluable.</p>	<p>Staff observations are that there is limited use of the Waste Minimisation Centre throughout the day. When busy periods occur, these are generally for a very short period of time and impact few visitors. A Council report will be prepared regarding the most appropriate days to close.</p> <p>Waste management charges have been determined using a robust methodology and are charged on a cost-recovery basis. The imposition of Council's Activity Cost Attribution and Distribution of Governance Directive has also been included in the financial models for the first time.</p> <p>Bulky waste collections will be continued for urban areas. It will be discontinued for rural areas due to low patronage and high cost.</p>	That the draft Waste Strategy is adopted as is.
3387859	<p>Our family have implemented steps to recycle and reduce our waste with waste separation using worm farms, soft plastics, 10c, returning items via Nespresso recycling, bottle cap drop off and teracycle opportunities. We also buy products when possible that reduce packaging, but unfortunately this is actually very difficult to do.</p> <p>We generally only throw away around 1 small shopping bag to landfill a week for a household of 5 people, and really only need to use curb side bin once every 4 weeks for a 1/3 full bin. Many of our neighbours however have overflowing red bins every week.</p> <p>I feel that there could be a huge reduction in waste if there was education and incentive to sort our waste. Helping people to become organised in their own waste sorting, understanding their impact on the big picture and feeling assured that the water reduction</p>	Community education is acknowledged as a critical measure to improve waste diversion and, as such, is a focus of the draft Waste Strategy. The financial model includes a significant annual allocation of funds and resources to develop and implement a wide range of community education activities. The draft Waste Strategy includes an action to develop a Community Education Strategy to guide our education activities.	That the draft Waste Strategy is adopted as is.

Report - Community engagement – Draft QPRC Waste Strategy

Submitter:	Submission:	Staff Response	Staff Recommendation
	<p>strategies they do at home will flow through to waste depots - expose's such as war on waste have lead may people to stop bothering about sorting at home thinking it all goes to landfill anyway. Also making sure they understand what is recyclable and what is not. much packaging now has what goes to the bin and what can be recycled/ returned to store, but frequently it is incorrect or not present.</p> <p>I note that Hume are offering an education session, but not many of them. Possibility increasing people's understanding of their waste would help improve people's willingness to do something at home. Possibly even pinning people's rates to education attendance and action would be a good way to reach more people? Landlords would need to pass this through to tenants in some way.</p> <p>there is also the waste in our river systems, a Sunday afternoon paddle along Queanbeyan river can fill a whole canoe with rubbish and the storm water grates are frequently full. Community events that can help reduce this areas of waste would also help in the big picture of waste reduction.</p> <p>Is it possible for QPRC to introduce systems I have seen in other councils around foodwaste in green bins for people who can't use their scraps - we have a lot of multiunit dwellings nearby.</p> <p>Is there anyway collective councils can make a push to reduce packaging in groceries and other products to reduce the waste coming into peoples homes in the first place? I understand the need for packaging for transporting and protecting goods, but it is very excessive.</p>	<p>Food waste is the "low hanging fruit" of waste diversion for QPRC. Expansion of the existing Garden Organics collection service in the Queanbeyan, Googong and Jerrabomberra urban areas to include food waste is a recommendation of the draft Waste Strategy.</p> <p>Council is a member of several peak bodies and associations that undertake lobbying on behalf of our community on a number of matters, including waste reduction measures.</p>	

Report - Community engagement – Draft QPRC Waste Strategy

Submitter:	Submission:	Staff Response	Staff Recommendation
	<p>Is a local green shed type initiative a possibility?</p> <p>is a local recycling 'book' or search via the council that people could access, such as scrap metal, clothes recycling etc? so they are able to think about this as an option for their larger waste.</p> <p>Currently it is easier just to put it in the bin and forget about it</p>	<p>To manage costs to ratepayers, the draft Waste Strategy recommends that Bungendore Resource Recovery Facility be the main waste facility in the LGA. As such, no green shed type initiative is recommended for Queanbeyan.</p> <p>Given the proximity to the ACT and the large overlap in service providers, QPRC relies heavily on ACT education resources for matters like this. Development of a specific local resource would be considered as part of the Community Education Strategy.</p>	
3353751	I think it's great that council is trying to reduce the amount of waste going to landfill. Reduce reuse recycle.	No response required	No recommendation required
3355091	<p>Re electronic information portions of draft waste strategy.</p> <p>I commented on the previous council digital strategy regarding the counterproductive and ideologically driven withdrawal of letterbox deliveries of the council waste calendar and recycling information. My comment made no difference whatsoever and the option for residents to pick up a calendar from council doesn't contribute positively to recycling efforts.</p> <p>If council is serious about improving recycle collection quality, it will move to a system that provides on-fridge access to information about what can be recycled. Currently the information in the media is so confusing, that much that could be recycled isn't, and much that can't be recycled is put in the recycling bin.</p> <p>Other councils have fridge calendars with recycling information on the back. This is highly useful, and all residents can access it. The decision to remove the delivery of these to all households is environmentally and cost negative. Failure to reassess this will show that council is NOT SERIOUS about its stated goals. There needs to be a cost-benefit analysis and this needs to include a realistic fact based understanding of</p>	<p>Wide scale printing and distribution of waste management calendars was phased out a few years ago and Council has not received a large volume of complaints on this matter. Printing and distribution of waste calendars unnecessarily consumes resources, comes at a high cost and also prevents updating of information in a timely manner.</p> <p>A small number of printed calendars are made available at each Council office for distribution to those that wish to receive one. These are offered on a first-come, first-served basis and are mailed out when requested when available.</p> <p>Council staff do not agree that continuing with the current practice regarding waste calendars reflects a lack of seriousness about managing waste.</p>	That Council continue with the current practice related to waste management calendars.

Report - Community engagement – Draft QPRC Waste Strategy

Submitter:	Submission:	Staff Response	Staff Recommendation
	how many people actually use the current online service. Quite frankly, I find it a pain, and have printed out the information for my fridge. Perhaps we will be ready for the transition in another few years, but the time is not right yet. Additionally, I would anticipate that information would be delivered by mail to residents in any case, so it may as well go out on the back of a fridge calendar.		
3354455	No comment made	No response required	No recommendation required
3356521	Seems pretty vague so can't really comment on that. Would be good to see projects such as diverting food waste in particular and reducing amount of waste to begin with.	Significant background information was provided on Council's Your Voice page for review by ratepayers. Food waste is the "low hanging fruit" of waste diversion for QPRC. Expansion of the existing Garden Organics collection service in the Queanbeyan, Googong and Jerrabomberra urban areas to include food waste is a recommendation of the draft Waste Strategy. Waste reduction efforts will be a focus of education activities proposed in the draft Waste Strategy.	That the draft Waste Strategy is adopted as is.
3353222	In order to minimise waste there are areas where Bungendore waste minimisation centre could help with recycling some of the existing waste. Traditionally people constructing projects would search for the components in the tip or metal pile. This is a cost benefit for the project and recycling benefit for the community. In recent times this has not been allowed. I realise there are WHS risks but they are not insurmountable. Please look at allowing recycling in areas such as the Metal pile as it is not scavenging it is recycling and gives a lot of pleasure to people creating affordable projects for themselves and often with their children.	Removal of waste from stockpiles is a high safety risk to the person undertaking the activity and to any other person in the vicinity. Risks include crushing from shifting materials, cuts and abrasions from the materials and exposure to unknown chemicals and/or material. Significant injury and death are realistic risks. Were this to occur, Council would be exposed to significant criminal and civil prosecutions. For this reason, scavenging from waste stockpiles is not permitted and will not be permitted. Where identified by staff, usable materials are diverted to the buy-back sheds for re-sale.	That the draft Waste Strategy is adopted as is.

Report - Community engagement – Draft QPRC Waste Strategy

Submitter:	Submission:	Staff Response	Staff Recommendation
3353734	I applaud the plan to collect and process food organics alongside green organics, and I hope this is put into practice as soon as possible. I suggest that public bins should be separated into recycling, FOGO and residual waste, as with domestic bins. At the very least, bins at public events (markets, multicultural day, etc) should include recycling and FOGO. People in QPRC deserve to be treated as fully capable of participating actively in landfill reduction.	The draft Waste Strategy recommends that combined waste bins are placed in public areas. Public space bins are routinely contaminated and need to be treated as residual waste to avoid contamination of larger volumes of waste. This is often a cause of complaint to Council when ratepayers observe what is nominally a recycling bin being emptied into a residual waste truck. Public events are not strictly in the domain of the draft Waste Strategy. Utilities staff will continue to work with public event organisers to encourage greater diversion of waste, however, this is ultimately a decision of the organisers.	That the draft Waste Strategy is adopted as is.
3353154	Looks fair, future focussed and well considered	No response required	No recommendation required
3353960	I don't understand the need for fogo; people should be encouraged to compost in their own property and there should be council incentives or reduced cost supplies to facilitate this. Ie free/subsidised worm farms, compost bins, bokashi bins, etc. there also needs to be more education on recycling, waste management, etc. I would also like to see increased recycling capabilities (ie soft plastic recycling). I do support the reduction in rates for only two bins. I have three bins currently and the green bin is unnecessary as I deal with my yard waste through compost or within my garden. I would welcome a	Centralised food organics and garden organics collection services are the most efficient and cost-effective way to reduce waste volumes on a large scale. Not all residents have the space or will to undertaking home composting and the vast majority of composting systems cannot accept the breadth of food wastes accepted by a centralised system (for example, meat and bones). Community education is acknowledged as a critical measure to improve waste diversion and, as such, is a focus of the draft Waste Strategy. The financial model includes a significant annual allocation of funds and resources to develop and implement a wide range of community education activities. The draft Waste Strategy includes an action to develop a Community Education Strategy to guide our education activities. Bin systems are offered based on the service location and property type. Any property currently receiving a 3-bin system will continue to do so and there is no option to opt-out of the bin system in place.	That the draft Waste Strategy is adopted as is.

Report - Community engagement – Draft QPRC Waste Strategy

Submitter:	Submission:	Staff Response	Staff Recommendation
	reduction in fees to not have one (or potentially two) of my bins not collected/in use.		
3376899	I came to Braidwood from the Northern beach area of Sydney. My waste station was the Kimbriki recycling centre. You could not tip there unless you had sorted your waste and this rule was strictly monitored at each area. At the Braidwood transfer station I see people tipping recyclable material into the waste bins. Things such as plastic, glass and timber. I would like to see the attendants at the transfer station given authority to require people to sort their waste and dispose of it in the correct area.	<p>Council waste facility staff can only rely on their powers of persuasion to encourage effective separation of waste streams. There is no regulatory power available to staff to enforce separation and for WHS reasons we would be unlikely to direct staff to enforce such a power if it did exist.</p> <p>Increased understanding of the benefits of separating waste prior to arriving at the facility will have a greater impact on diversion. The draft Waste Strategy includes significant investment in community education activities which is expected to include education activities conducted at waste facilities.</p>	That the draft Waste Strategy is adopted as is.

QUEANBEYAN-PALERANG REGIONAL COUNCIL

Council Meeting Attachment

30 JUNE 2021

ITEM 5.1 ADOPTION OF QPRC WASTE STRATEGY

ATTACHMENT 2 DRAFT WASTE STRATEGY

Waste Strategy- Final Draft

Queanbeyan-Palerang Regional Council

4 May 2021



MRA Consulting Group

QPRC Waste Strategy
Waste Management Strategy 2019 - 2049

DRAFT

Waste Management Strategy 2020 - 2050

Queanbeyan-Palerang Regional Council

Client: Queanbeyan-Palerang Regional Council

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5 May 2021

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MRA Consulting Group

QPRC Waste Strategy
Waste Management Strategy 2019 - 2049

Quality Information

Document Waste Management Strategy 2019 - 2049

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Prepared by Rebecca Larkin

Reviewed by Katherine Dodd

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			Name/Position	Signature
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0.2	21-Jul-2020	Final Draft	Katherine Dodd Principal Consultant	
0.3	05-May-2021	Update following Councillor feedback	Karinne Taylor Principal Consultant	

Disclaimer

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Table of Contents

Abbreviations / Glossary	i
Executive Summary	ii
1 Introduction	1
1.1 Objectives of the Waste Strategy	3
1.2 Consistency with State and Regional Waste Strategies	3
1.3 Structure of the Waste Strategy	4
2 Development of the Strategy	5
2.1 Waste Strategy Briefing Paper	5
2.2 Community and Stakeholder Engagement	6
2.3 Waste Management Options Analysis	7
2.4 Review and update of QPRCs 30 Year Financial Plan	7
3 Population and Waste Generation	8
3.1 Population and Households	8
3.2 Municipal Solid Waste Generation and Diversion	9
3.3 Commercial and Industrial Waste Generation	10
3.4 Construction and Demolition Waste Generation	11
4 Key Legislation and Guidelines	12
5 Current Waste Management	15
5.1 Residential Waste Services	15
5.1.1 Kerbside Collection	15
5.1.2 Bulky Waste	16
5.2 Waste Disposal	17
5.3 Council Waste Infrastructure	21
5.3.1 Waste Facility Staffing Levels	23
5.3.2 Rural Recycling Stations	23
5.4 Commercial Waste Services	23
5.4.1 Business Recycling Programs	24
5.4.2 Food Rescue	24
5.5 Construction and Demolition Waste	25
5.6 Other Waste Management Services	25
5.6.1 Education	25
5.6.2 Illegal Dumping	26
5.6.3 Clean Up Australia Day	26
5.6.4 Roadside litter collection	27
5.6.5 Natural disaster management	27
6 Waste Management Options	28
6.1 Scenarios modelled	28
6.2 Council Funding	31
6.2.1 Domestic Waste Management Charge	31
6.2.2 Council Working Fund General Waste Charge	31
6.2.3 Landfills Charge (former Palerang LGA)	33
6.2.4 Business Waste Management Charge (former QCC LGA)	33
6.3 Modelling Methodology and Assumptions	34
6.4 Modelling Results	34
6.4.1 Waste Diversion	35
6.4.2 Domestic Waste Management Charge	35
6.4.3 Council General Waste Charge	35
6.4.4 Business Waste Management Charge	36
6.4.5 Net Present Value	42
7 Recommended Waste Management Strategy	43
7.1.1 Why this scenario?	43
7.1.2 Domestic Waste Management	43
7.1.3 General Waste Management	47
7.1.4 Business Waste Management	53
7.1.5 Total Annual Waste Management Charges	56

MRA Consulting Group

QPRC Waste Strategy
Waste Management Strategy 2019 - 2049

8	Next Steps	58
9	Limitations	59
	Appendix A Community Consultation Report	A
	Appendix B Long List of Options	B
	Appendix C Waste Strategy Briefing Paper	C

Abbreviations / Glossary

Abbreviation	Description
ABS	Australian Bureau of Statistics
ACT	Australian Capital Territory
C&D	Construction & Demolition
C&I	Commercial & Industrial
CDS	Container Deposit Scheme
Commingled	Materials that are able to be recycled or reprocessed through a materials
Recyclables	recovery facility
CRJO	Canberra Region Joint Organisation
DWM	Domestic Waste Management Charge – Charge levied for the kerbside
	collection of bins
EfW	Energy from Waste
EPA	NSW Environment Protection Authority
ERP	Quarterly Population Estimates
FOGO	Food Organics and Garden Organics
GHG	Greenhouse Gas
GO	Garden Organics
GST	Goods and Services Tax
GWC	General Waste Charge – Charge levied to cover waste management costs
	not directly related to kerbside collections
LGA	Local Government Area
MRF	Materials Recovery Facility
MSW	Municipal Solid Waste
NSW	New South Wales
NTCRS	National Television and Computer Recycling Scheme
Organic waste	Waste from plants or animals that can be composted into material suitable
	for reuse
POEO	NSW Protection of the Environment Operations Act 1997
QCC	Former Queanbeyan City Council
QPRC	Queanbeyan-Palerang Regional Council
Residual Waste	Waste sent to landfill
RRC	Resource Recovery Centre
WARR	Waste and Resource Recovery
WTS	Waste Transfer Station

Recycling Rate

The recycling rate for a particular waste stream (municipal solid waste (MSW), commercial and industrial (C&I), construction and demolition (C&D)) is the proportion of all materials recycled from that waste stream in a given year (measured in tonnes) compared with the sum of all waste generated from that waste stream in the same year. Recycling excludes recovery of energy from waste processes.

Landfill Diversion

Landfill diversion refers to the proportion of all materials (measured in tonnes) that are either recycled or otherwise recovered (such as through an energy-from-waste facility) compared with total waste generation in a given year disposed of to landfill.

Executive Summary

Queanbeyan-Palerang Regional Council (QPRC) was formed in May 2016 after the amalgamation of the former Queanbeyan City Council (QCC) and Palerang Council. In light of the amalgamation, QPRC commissioned AECOM Australia Pty Ltd to prepare a consolidated 2019-2049 Waste Management Strategy (the 'Strategy'). The Strategy has been finalised by MRA Consulting Group (MRA). The Strategy provides an opportunity to assist QPRC to meet the objective of a sustainable, "clean green" community outlined in the *QPRC 2017 Community Strategic Plan* and address the following key issues faced by the council:

- Predicted population growth in the local government area (LGA) to 76,000 people by 2031
- Achieving *NSW Waste Avoidance and Resource Recovery Strategy 2014-2021* (WARR Strategy) targets
- Different fees and charges regimes based on the former LGA boundaries
- Different waste services provided across the LGA
- Delivery of the same service by Council staff in some areas and by Contractors in other areas
- Sporadic, adhoc waste education activities
- Differences in gate fees at disposal and recycling facilities for the same materials from different areas

A number of actions identified in the former Palerang Council Waste Strategy¹ and the former QCC Waste and Resource Recovery Strategy² (QCC Waste Strategy) have been implemented or completed, while others are no longer relevant or supported.

E1 Objectives of the Waste Strategy

This Strategy has been prepared to provide an approach for waste and resource management in the LGA over the next 30 years in a manner which maximises landfill diversion and resource recovery. The key objectives of the Waste Strategy are to:

- provide an overview of the existing waste management practices and services offered
- engage and gauge community views on current and potential waste management options
- identify options for waste management and resource recovery across the whole LGA
- develop key actions to assist Council in implementing the Waste Strategy over a 30-year timeframe

The Strategy broadly aligns with the key ambitions and actions of the ACT Waste Strategy, the NSW Waste and Sustainable Materials Strategy and the CRJO Regional Waste Strategy and provides actions that will assist the region and state with achieving the objectives of the respective strategies.

E2 Council, Population and Projected Waste Generation

QPRC covers an area of approximately 5,319 km². Major population centres include Queanbeyan, Bungendore, Braidwood and Googong. There are also several rural villages and a number of large residential populations living in rural-residential areas to the west of the LGA near the ACT border. QPRC currently serves a population of approximately 58,100 people. Population is expected to grow significantly in the LGA to 76,000 people by 2031. Population growth is reflected in the growth of the number of households within the LGA.

Overall, the total number of households in the QPRC LGA is expected to grow from 26,742 in 2016 to 40,064 in 2050.

QPRC generates MSW from kerbside collection, waste dropped off at waste transfer stations and landfills (self-hauled) and bulky waste collection (from the former QCC LGA only).

¹ URS (2015), Waste Management Strategy 2015-2035 for Palerang Council

² APC (2013), Waste and Resource Recovery Strategy 2013-2023 for Queanbeyan City Council

Based on the current waste generation, diversion rates and growth in households, QPRC is estimated to double the amount of waste generated in 2050.

Table E1 provides a summary of estimated MSW generation from 2017 to 2050 based on current diversion rates.

Table E1 Waste generation 2016 – 2050 (tonnes per annum)

	2017	2021	2026	2031	2036	2041	2046	2050
Residual	16,075	17,346	19,415	21,766	24,059	25,918	27,829	29,433
Recycling	6,126	6,612	7,407	8,304	9,172	9,895	10,636	11,258
Organics	4,983	5,408	6,216	7,122	8,008	8,681	9,358	9,928
Total	27,184	29,366	33,037	37,192	41,238	44,494	47,822	50,618

A waste service for commercial premises is offered by QPRC to businesses in the former QCC LGA. According to the *QPRC 2016-2017 WARR Survey* the following waste quantities were collected by Council from the commercial and non-residential sector:

- Residual Waste –from 792 premises – 398 tonnes - landfilled
- Recyclables – from 597 premises – 116.5 tonnes – 11.6 tonnes landfilled, remaining recycled
- Greenwaste – 49 premises – 11.9 tonnes - recycled

QPRC provide the former Palerang LGA with 123 waste and recycling services to the commercial and non-residential sector however does not separately record these quantities from municipal waste.

The above quantities based on services provided by QPRC to the commercial sector are expected to represent only a small percentage of the overall C&I waste generation in the LGA, with the majority collected by private waste contractors and delivered to facilities in the ACT region

C&D waste is currently received at Bungendore, Braidwood and Braidwood Waste Transfer Stations. The following figures are noted in the 2017-18 WARR Survey:

- Concrete 115.5 tonnes - passed onto external processor
- Mixed C&D: 769 tonnes – landfilled
- Other – 4,559 tonnes – landfilled

The quantities noted above are expected to represent only a small percentage of the overall C&D waste generation in the LGA with the majority delivered to processing facilities in the ACT region

Currently, we do not meet the targets set out in NSW Waste Avoidance and Resource Recovery Strategy 2014-2021.

What makes up our waste



General waste



Recycling



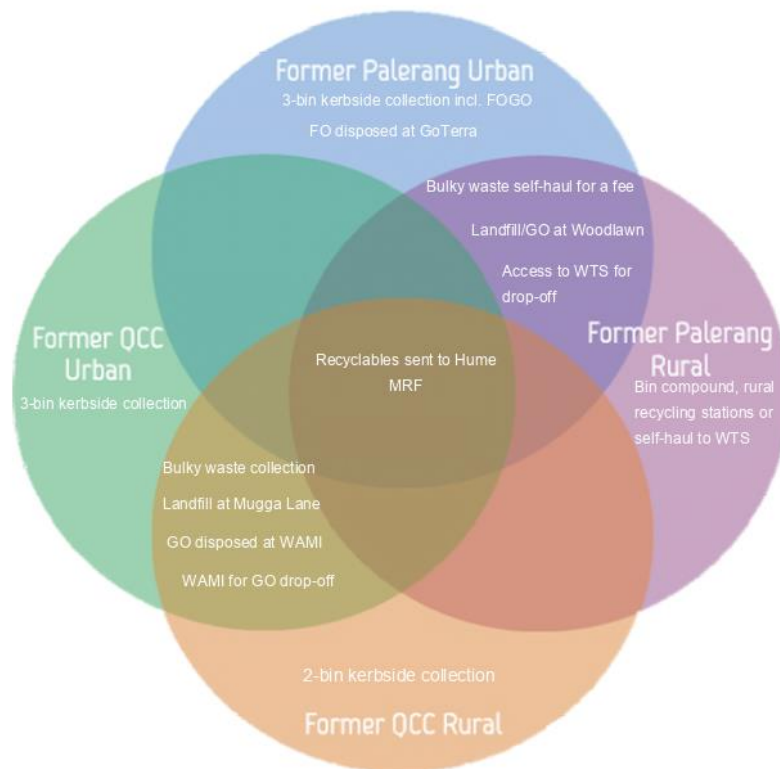
Garden Organics



Bulky Waste

E3 Review of Current Waste Management in QPRC

QPRC provides waste services broadly consistent with those offered by other CRJO councils. Nevertheless, considerable variations remain across the CRJO and QPRC regions with regards to waste services and practices between the former Queanbeyan and Palerang councils.



Based on the number of service types provided to residents of the former QCC and former Palerang Councils the following issues are apparent with the current waste management services provided to residents of QPRC:

Table E2 Issues identified with current waste management services in the QPRC LGA

Category of service	Issue identified with current service
Residential Waste Services	Food waste is not currently collected in the former QCC LGA. This represents a significant amount of material that can be diverted from landfill.
	Population growth in areas with a Domestic Waste Management service in the former Palerang LGA has reached the point where the number of collection trucks and drivers is not sufficient to appropriately manage the service.
	The rates structure for waste management services varies according to the location of the property. Properties in the former LGAs pay different amounts for the same or similar services. Properties in the former Palerang LGA pay a General Waste Charge to manage waste outside the scope of domestic waste management.

Category of service	Issue identified with current service
	Waste collection services in the former QCC LGA are undertaken by contract. Waste collection services in the former Palerang LGA are undertaken by Council.
	On-going misuse of some rural recycling stations.
Bulky Waste	The existing bulky waste collection service in Queanbeyan/Googong is not well utilised and is labour intensive to manage. In addition, the service is not fully funded and there are insufficient funds to service all eligible properties.
	Bulky waste is treated differently between the former LGAs. Although kerbside bulky waste collection was included in the Palerang strategy for those areas with Domestic Waste Management service, it had not yet been implemented due to resource constraints and significant safety and illegal dumping concerns in rural areas.
Waste Disposal	As not all areas of the QPRC LGA pay the General Waste Charge, not all residents have access to the same facilities.
	The same waste type from different areas are sent to different waste facilities and therefore pay different gate fees for the same waste type.
	The location of the Queanbeyan composting facility in the ACT exposes Council to a regulatory environment outside of the usual environment. This presents issues with respect to the management and reporting of waste.
Council Waste Infrastructure	Collection and management of data differs between council waste facilities. This makes assessment and reporting of waste generation and diversions rates problematic.
	Staffing levels at many waste facilities does not provide sufficient coverage of staff sickness and leave which results in additional exposure to public safety and environmental risks.
Commercial Waste Services	The fees and charges levied to businesses are different between the former LGAs.
	The business waste diversion programs are not well utilised. It is unclear if this is due to a lack of awareness of the programs or if they are considered too difficult to be involved in.
	Reliance on grant funding for business waste diversion programs means that waste diversion momentum is lost at the end of the program.
Education	Education activities are sporadic and/or ad-hoc, are not well targeted and are not sufficiently resourced to be effective.
Illegal Dumping	There are insufficient resources to adequately investigate illegal dumping events in a timely manner. As a result, illegal dumping events are often cleaned up with no investigation.
	There are insufficient resources to safely manage illegal dumping collections and to undertake roadside litter collection across the LGA.
	Roadside litter collection does not have sufficient resources to cover the whole LGA.
Other Waste Services	Free disposal of waste on Clean Up Australia Day risks large volumes of private waste and is unfunded. The practice also potentially diverts residents from cleaning up public spaces to cleaning up private property.
	Council does not have a policy for the management of waste generated by natural disasters.

E4 Alternative Options for Waste Management in the QPRC LGA

A number of integrated scenarios were identified as alternatives to the business as usual (BAU). These were based on common themes found in the shortlisted options, feedback received during community consultation and issues identified with the current waste management services (Table E2).

The following scenarios for waste management in the LGA were assessed:

BAU	Current waste management
Scenario 1	Improve litter and illegal dumping in the LGA
Scenario 2	Improve waste education in the LGA
Scenario 3	Improve management of organics collection and processing
Scenario 4	Increase diversion from landfill for C&I and C&D streams
Scenario 5	Improve all keys areas of waste management in the LGA, including general waste, recycling, organic and bulky waste streams, and associated infrastructure

Each of the above scenarios was modelled on a "user pays" basis. The model provided a series of funding paths including the Domestic Waste Management and/or General Waste Charge, Business Waste Management Charge and facility gate fees (refer to Table E3).

There are potential opportunities for government grants to support the key actions of the Waste Strategy under *Waste Less, Recycle More* and more recent Federal funding to support the export of recyclables. As it is not certain if Council would be successful in gaining financial assistance, the financial model has been developed on the assumption that it is fully self-funding. Any grants gained will be reflected in future updates of this Strategy.

The final Strategy for waste management and resource recovery in the LGA would be rolled out to resident and business annual rates.

Table E3 Council Waste Services Charges Description and Recommendation

Charge	Description	Recommendation
Domestic Waste Management Charge	In accordance with Section 496 of the <i>Local Government Act</i> , Council must make and levy an annual charge for the provision of domestic waste management services for each parcel of rateable land for which the service is available, referred to below as the Domestic Waste Management charge. Domestic Waste Management charges are applied to residents with a kerbside waste collection.	Combine the two Domestic Waste Management funds into a single fund covering all domestic waste services.

Charge	Description	Recommendation
	The charge covers the costs associated with management of residential waste as provided in Table 13 of the main report.	
Council Working Fund General Waste Charge	The majority of residents and businesses in the rural and urban areas of the former Palerang LGA pay the General Waste Charge. This charge funds the following components of Council's waste management activities listed in Table 12 of the main report.	Expand the General Waste Charge to cover all QPRC residential properties and move all costs and assets related to waste (other than domestic waste) to the General Waste Charge.
Landfills Charge (former Palerang LGA)	Any property issued with a landfill pass within the former Palerang LGA pays the Landfill Charge. This charge covers the cost of disposing of waste at landfills within the former Palerang LGA, for those rural residents who don't receive a kerbside collection service. This cost is separated from the General Waste Charge following a ruling by the Australian Taxation Office. Following the closure of Braidwood landfill, this cost can now be removed.	Cease charging the Landfills Charge on all properties in the former Palerang LGA.
Business Waste Management Charge	Council imposes a mandatory charge for businesses in the former QCC LGA for the availability of a waste service and an optional charge if the owner chooses to have a waste or recycling bin collected from the premises by Council.	Expand the Business Waste Management Charge to all properties rated as business in the LGA.

E5 Recommended Waste Management Strategy

To facilitate discussion, Council staff and consultants are recommending that Scenario 3 be adopted. The recommendation is based on the modelled waste diversion rates, the financial model and the operational issues identified with the BAU. Additional actions have been included where necessary to assist with understanding of interim arrangements or to make the overall strategy clear.

Scenario 3 has been recommended for the following reasons:

- It delivers the equal highest waste diversion over the life of the Strategy
- It balances costs to residents with delivering diversion targets
- It provides an equitable solution for all residents and businesses in the LGA
- It provides all residents with access to all QPRC waste facilities and reduced gate fees at our waste facilities
- It provides sufficient resources and funding to enable the identified actions to be undertaken

E5.1 Waste Diversion

Compared with the BAU, Scenario 3 would achieve 20% greater diversion of waste from landfill by 2050.

Table E4 Landfill Diversion Rate - BAU and Scenario 3

	BAU	Scenario 3
Diversion Rate - 2029	45%	63%
Diversion Rate - 2050	45%	63%

E5.2 Domestic Waste Management Charge

The strategy for domestic waste management is outlined below in Table E5. The 2021/22 charges are shown in Table E6.

Table E5 Recommended Scenario – Domestic Waste Management Actions and Timeframe

Number	Aspect	Action	What problem is this solving?	Priority
DWM1.	Funding	Amalgamate the two existing Domestic Waste Management Funds into one fund	Separate funds resulting from Council amalgamations	High
DWM2.		Maintain a minimum \$500,000 in the Domestic Waste Management Fund reserve to act as a buffer for future price shocks	Volatility in markets	On-going
DWM3.		Transfer remaining cash into the General Waste Management Fund to fund future works	Separate funds resulting from Council amalgamations	High
DWM4.		Levy a Domestic Waste Management charge in accordance with the adopted model	On-going funding of operations	On-going
DWM5.	Collection Contract	Continue the current DWM collection arrangements until an analysis of the two collection providers is completed to determine the best value (in-house or private) collection method	Determines the best-value solution for future contracts	High
DWM6.	Collections	Maintain the current gazetted DWM zone extents	Confirms DWM collection zones	N/A
DWM7.		Prepare a policy on collection from properties located on existing routes used by collection vehicles travelling between collection zones (for example, between Bungendore and Captains Flat)	Improves the existing ad-hoc arrangements in place in rural areas of the LGA	Medium
DWM8.		Once the policy is complete, introduce an optional collection zone along existing routes used by collection vehicles travelling between collection zones (for example, between Bungendore and Captains Flat)	Improves the existing ad-hoc arrangements in place in rural areas of the LGA	Medium
DWM9.		Maintain the current waste collection types in each zone, excluding matters covered in DWM8.	Confirms DWM waste collection types	N/A
DWM10.		Expand the Food Organics and Garden Organics collection to the urban areas of Queanbeyan (including Googong and Jerrabomberra) once an appropriate processing facility is completed	Low diversion of food waste	High
DWM11.		Develop and implement a bin contamination policy that permits removal of services for on-going/serious contamination	Recycling and FOGO contamination rates	High
DWM12.		Purchase and staff new collection trucks as necessary as the area grows (subject to the outcome of the DWM5)	Safe provision of collection services	Low
DWM13.		Liaise with Council's Planning sections about on-going review of the Development Control Plans related to multi-unit developments and mixed use developments	Safe provision of collection services	Medium
DWM14.	MUD and Mixed Use Developments	At mixed use properties where it is not possible to keep commercial and residential waste separate, require the property to arrange their own waste collection and charge a "Mixed Use" rate, which will be the same as a residential vacant land charge (per rateable property)	Effective provision of collection services	Medium

MRA Consulting Group

QPRC Waste Strategy x
Waste Management Strategy 2019 - 2049

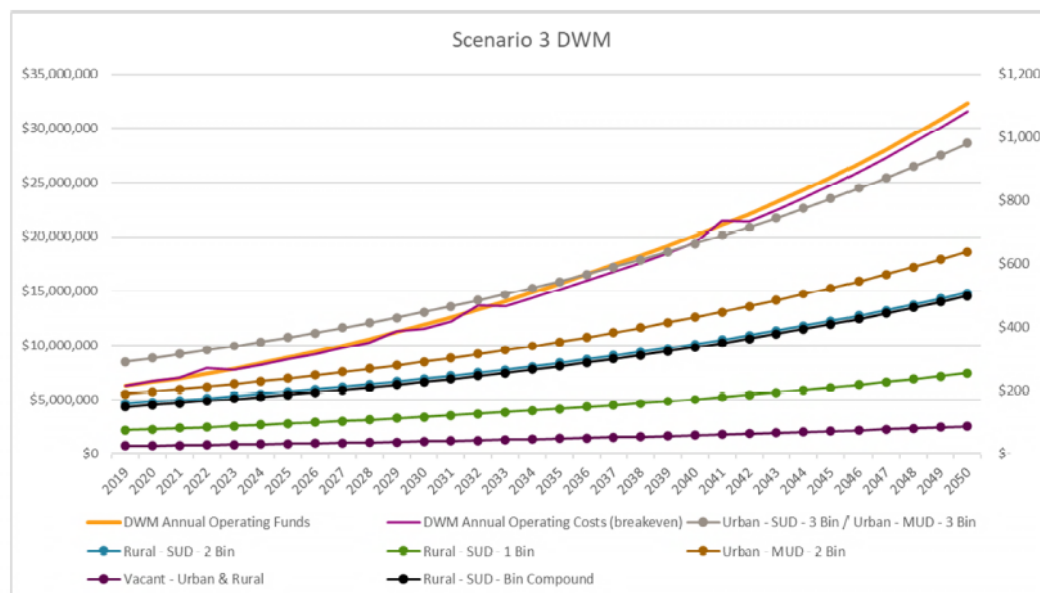
Number	Aspect	Action	What problem is this solving?	Priority
DWM15.	Waste Disposal	Continue to use Hume Materials Recovery Facility for commingled recyclables collected by both Council and Contractor-operated collection vehicles until a new contract is prepared and awarded	Appropriate disposal of collected waste	N/A
DWM16.		Continue to use Bungendore Resource Recovery Facility for residual waste from areas serviced by Council-operated collection vehicles	Appropriate disposal of collected waste	N/A
DWM17.		Continue to use Mugga Lane for residual waste from areas serviced by Contractor-operated collection vehicles until Bungendore Resource Recovery Facility is upgraded	Appropriate disposal of collected waste	N/A
DWM18.		Once Bungendore Resource Recovery Facility is upgraded, and subject to satisfactory contractual arrangements, use Bungendore Resource Recovery Facility for residual waste from areas serviced by Contractor-operated collection vehicles	Appropriate disposal of collected waste	Following facility upgrade
DWM19.		Continue to use Bungendore Resource Recovery Facility for FOGO waste from areas serviced by Council-operated collection vehicles	Appropriate disposal of collected waste	N/A
DWM20.		Continue to use WAMI for collected GO waste from areas serviced by Contractor-operated collection vehicles until Bungendore Resource Recovery Facility is upgraded	Appropriate disposal of collected waste	N/A
DWM21.		Once a new FOGO facility is constructed, divert all FOGO collections to the new facility	Appropriate disposal of collected waste	Following facility upgrade
DWM22.	Education	Hire a dedicated Waste Officer to implement education and engagement program (Shared with GWM38 and BWM12)	Insufficient resources to undertake tasks identified in the Strategy	High
DWM23.		Develop and implement a routine bin inspection program to reduce contamination rates in kerbside collection. (Shared with GWM39 and BWM13)	Recycling / FOGO contamination rates, ad-hoc education activities and closing data gaps	High
DWM24.		Undertake regular bin audits to ascertain current generation rates, contamination rates and problem areas. Results to be incorporated into education programs	Recycling and FOGO contamination rates and closing data gaps	High
DWM25.		Improve digital media which provides information on the QPRC waste services available to the community (Shared with GWM40 and BWM14)	Ad-hoc education activities	Medium
DWM26.		Prepare and implement a Community Waste Education Strategy covering schools, general public, business/industry, and initiatives identified in the strategy. (Shared with GWM41 and BWM15)	Ad-hoc education activities	High
DWM27.	Bulky Waste	Expand the existing bulky waste collection to all properties provided with an an Urban – SUD – 3 Bin, Urban – MUD – 3 Bin or Urban – MUD – 2 Bin service.	Managing bulky waste collections	Medium
DWM28.		Cease the bulky waste collection program (including rural collections) for all other properties	Managing bulky waste collections	High
	Shared costs/resources with DWM, GWM			

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Table E6 Recommended Scenario – Domestic Waste Management Annual Charges

Domestic Waste Management Code	Domestic Waste Management Charge 2019/2020*	Domestic Waste Charge 2020/2021		
		New QPRC Domestic Waste Management Code	BAU	S3
DWP1	\$385	Urban - SUD - 3 Bin	\$334	\$315
DW1	\$328			
DWP4	\$311	Rural - SUD - 2 Bin	\$218	\$170
DW15	\$355			
DW17	\$181	Rural - SUD - 1 Bin	\$97	\$82
DWP8	\$108			
DWP12	\$26	Vacant - Urban & Rural	\$28	\$28
DW10	\$26			
DW8	\$328	Urban - MUD - 3 Bin	\$334	\$315
DWP6	\$234	Rural - SUD - Bin Compound	\$208	\$160
DW7	\$299	Urban - MUD - 2 Bin	\$253	\$205
DW11	\$48	Moved to General Waste Charge		-
Not Applicable	Note Applicable	Mixed-Use – No Service	As per Vacant Rate	

Figure E1 Recommended Scenario - Domestic Waste Management Charge



E5.3 General Waste Management Charge

The strategy for general waste management is outlined below in Table E7. The 2021/22 charges are shown in Table E8.

The charge will be levied on all residential and non-business properties in the LGA.

Table E7 Recommended Scenario – General Waste Management Actions and Timeframe

Number	Aspect	Action	What problem is this solving?	Priority
GWM1.	Funding	Create and maintain an internally restricted General Waste fund	Creates a transparent fund to provide certainty to ratepayers that income is being used for the agreed purpose	High
GWM2.		Levy a General Waste Management charge to all residential properties within the LGA	Confirms extent of GWM zone and provides on-going funding	On-going
GWM3.		Cease providing refunds to residents using Collector and Tarago waste facilities operated by neighbouring properties	Equity of the user pays model	High
GWM4.		Move all costs and income related to Council operated waste facilities to the General Waste Fund	Improves tracking of income and expenditure and provides certainty to ratepayers that income is being used for the agreed purpose	High
GWM5.		Maintain a minimum \$1,000,000 in the General Waste Management Fund reserve to act as a buffer for future price shocks and changes in regulatory requirements	Volatility of markets and regulatory changes	On-going
GWM6.	Facilities	Maintain and operate existing waste facilities including the current opening hours and accepted wastes unless specifically noted elsewhere in this strategy	Provides certainty for residents of the operations of waste facilities	On-going
GWM7.		Consolidate the Bungendore RRF as the primary waste management facility in the LGA	Efficiency of operations at facilities and safety of facility users	On-going
GWM8.		Continue to operate the Community Recycling Centres at Queanbeyan WAMI and Bungendore RRF	Provides certainty for residents of the operations of waste facilities	On-going
GWM9.		Reduce the public operating hours of the Queanbeyan WAMI to 4 days per week	Efficiency of operations at facilities and safety of facility users	On-going
GWM10.		Modify the Bungendore RRF to improve management of the site	Efficiency of operations at facilities and safety of facility users	High
GWM11.		Construct and operate a centralised FOGO facility for the processing and treatment of all FOGO and GO materials received in the LGA. Relocate two staff from the Queanbeyan WAMI to the new facility.	Appropriate disposal of collected waste	High
GWM12.		Consult with the Nerriga community regarding their preferred replacement waste facility – either a staffed small waste transfer station similar to Macs Reef WTS or an unstaffed bin compound with access control	Improved regulatory and environmental outcomes	High

Number	Aspect	Action	What problem is this solving?	Priority
GWM13.		Design and construct a replacement facility for Nerriga and surrounding localities based on the outcome of GWM12	Improved regulatory and environmental outcomes	High
GWM14.		Upgrade bin compound at Majors Creek	Improved regulatory and environmental outcomes	High
GWM15.		Upgrade bin compound at Araluen	Improved regulatory and environmental outcomes	High
GWM16.		Cease collection of GO at Araluen Bin Compound	Not operating in accordance with regulatory requirements	High
GWM17.		Cease collection of GO at Majors Creek Bin Compound	Not operating in accordance with regulatory requirements	High
GWM18.		Routinely monitor usage/patronage at facilities to review their on-going viability and that they are delivering value for money for ratepayers	Efficiency of operations at facilities and safety of facility users	On-going
GWM19.	Waste Facility Rehabilitation	Rehabilitate and close existing composting site at Oaks Estate following the construction of a new GO/FOGO facility. Existing staff to be divided between replacement FOGO facility and WAMI.	Environmental management and regulatory compliance	Medium
GWM20.		Rehabilitate Bungendore Landfill	Environmental management and regulatory compliance	High
GWM21.		Rehabilitate Braidwood Landfill	Environmental management and regulatory compliance	High
GWM22.		Rehabilitate Majors Creek Landfill	Environmental management and regulatory compliance	Medium
GWM23.		Rehabilitate Araluen Landfill	Environmental management and regulatory compliance	Medium
GWM24.		Close and rehabilitate Nerriga Landfill following the construction of a new facility in Nerriga	Environmental management and regulatory compliance	High
GWM25.		Monitor and maintain closed landfills	Environmental management and regulatory compliance	On-going
GWM26.	Operations	Provide all properties that pay the General Waste Charge with a "General Waste Card" as part of their rates notice	Ensuring only eligible people/businesses have accesses to the subsidised waste disposal rates	On-going
GWM27.		Cease free waste disposal at Council waste facilities on Clean Up Australia Day unless waste is generated from a registered Clean Up Australia Day event	Supports the original intention of the Clean Up Australia Day	High
GWM28.		Undertake waste audits at QPRC waste facilities to identify waste generation and composition of self-haul materials.	Improves data and knowledge of waste streams	Medium

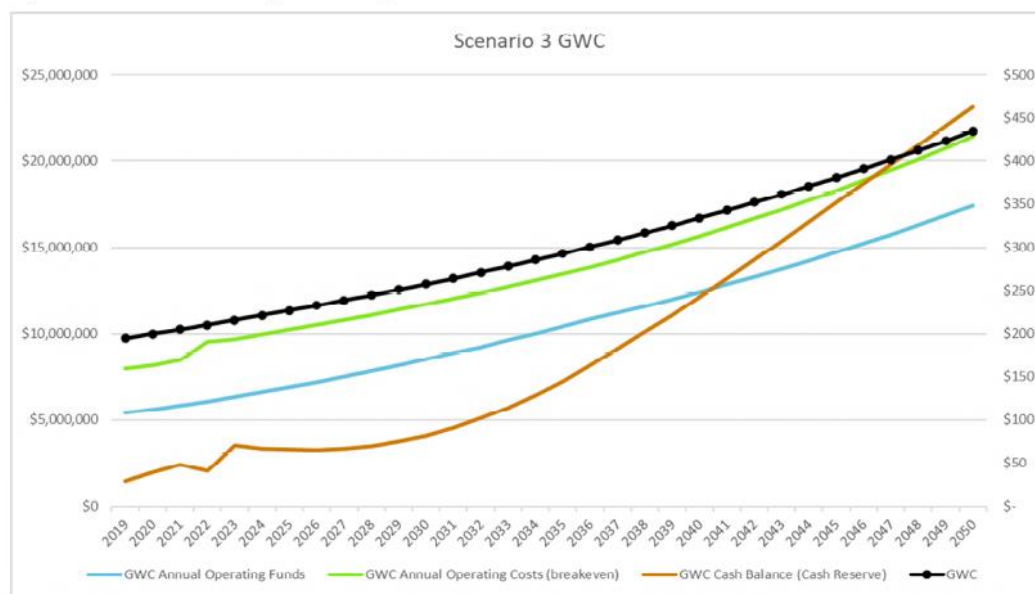
Number	Aspect	Action	What problem is this solving?	Priority
GWM29.		Following engagement of staff identified in GWM34, expand Council's litter management programs to cover the entire LGA	Environmental management and regulatory compliance	Medium
GWM30.	Disposal	Prepare and award a Tender for the disposal of residual waste delivered to Council waste facilities	Procurement not currently in compliance with the Local Government Act	High
GWM31.		Prepare and award a Tender for the disposal of commingled recyclables delivered to Council waste facilities	Procurement not currently in compliance with the Local Government Act	High
GWM32.		Once new FOGO facility is completed, deliver all FOGO and GO waste to centralised facility for processing and treatment	Appropriate disposal of collected waste	High
GWM33.	Staffing	Hire one additional full time equivalent (FTE) to assist operations at Braidwood WTS	Insufficient resources to undertake tasks identified in the Strategy	High
GWM34.		Hire two additional FTE to undertake litter collection activities in the LGA and cover illness/leave in collection and facilities areas.	Insufficient resources to undertake tasks identified in the Strategy	High
GWM35.	Public Bins	Continue to place and service litter bins in public areas	Appropriate provision of services	On-going
GWM36.		Due to ongoing contamination issues, only provide residual waste bins in public areas	Recycling contamination rates	On-going
GWM37.		Undertake regular bin audits of public bins to ascertain current generation rates and materials composition.	Recycling contamination rates	On-going
GWM38.	Education	Hire a dedicated Waste Officer to implement education and engagement program (combined with DWM22 and BWM12)	Insufficient resources to undertake tasks identified in the Strategy	High
GWM39.		Develop an education and routine inspection program to reduce contamination rates at waste facilities. (Shared with DWM23 and BWM13)	Recycling and FOGO contamination rates, ad-hoc education activities and closing data gaps	High
GWM40.		Improve digital media which provides information on the QPRC waste services available to the community (Shared with DWM25 and BWM14)	Ad-hoc education activities	Medium
GWM41.		Prepare and implement a Community Waste Education Strategy covering schools, general public, business/industry, and initiatives identified in the strategy. (Shared with DWM26 and BWM15)	Ad-hoc education activities	High
GWM42.	General	Develop and implement an online booking and payment portal for waste related activities	Inefficiencies in processes	High

	Shared costs/resources with DWM and GWM
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Table E8 Recommended Scenario – General Waste Management Annual Charges

	General Waste Charge 2019/2020*	General Waste Charge 2020/2021	
		BAU	S3
Former Palerang	\$375-\$416	\$143	\$196
Former Queanbeyan	\$0		

Figure E2 General Waste Management Charge – Recommended Scenario



Expected gate fees payable at waste facilities are shown in Table E9. Not all facilities will accept all waste types and eligibility requirements and limitations apply in some instances.

Table E9 Recommended Scenario – General Waste Management Facility Gate Fees

Waste Type	Amount	Charge (GST Inclusive) – with General Waste Card	Charge (GST Inclusive) – without General Waste Card
General Mixed Waste	1 x 240L Bin	\$10	\$10
	Trailer or Ute	\$112	\$112
	Per tonne	\$145	\$145
Household recycling	Any	Free	\$10/cubic metre
Residential greenwaste	Any	Free	\$10/cubic metre
Mattresses	Per mattress	\$53	\$53
CRC Eligible Materials	Per item	Free	Free
Household E-waste		Free	Free

E5.4 Business Waste Management Charge

The strategy for business waste management is outlined below in Table E10. The 2021/22 charges are shown in Table E11.

Table E10 Recommended Scenario – Business Waste Management Actions and Timeframe

Number	Aspect	Action	What problem is this solving?	Timeframe
BWM1.	Funding	Maintain a minimum \$25,000 in the Business Waste Management Fund reserve to act as a buffer for future price shocks	Volatility in markets	On-going
BWM2.		Transfer remaining cash into the General Waste Management Fund to fund future works	Separate funds resulting from Council amalgamations	High
BWM3.		Levy a Business Waste Availability Charge on all business properties in the LGA	On-going funding of operations	On-going
BWM4.		Levy collection charges (on a per bin basis) in accordance with the adopted model for businesses that opt-in to collection services	Businesses only pay for the services they require	On-going
BWM5.	Collections	Provide weekly residual waste collection (via 240L MGB within existing domestic waste collection zones) to businesses on an optional basis.	Businesses only pay for the services they require	On-going
BWM6.		Provide fortnightly commingled recyclables collection (via 240L MGB within existing domestic waste collection zones) to businesses on an optional basis	Businesses only pay for the services they require	On-going
BWM7.		Provide fortnightly garden organics collection (via 240L MGB within existing domestic waste collection zones) to businesses on an optional basis	Businesses only pay for the services they require	On-going
BWM8.		Encourage businesses with larger waste generation rates or requiring more frequent collections to explore private collection contracts	Council does not incur large expenditure to service a small number of businesses	On-going
BWM9.	Education	Expand and promote the ACTSmart or BinTrim business waste education programs to cover the entire LGA	Equal service provision to all businesses	On-going
BWM10.		Conduct a bin audit of C&I customers in LGA to determine approximate volume of waste generated by sector and recycling rates.	Improvement in waste data	On-going
BWM11.		Following the audit identified in BWM10, develop and implement program to increase diversion	Improvement in waste diversion	Medium
BWM12.		Hire a dedicated Waste Officer to implement education and engagement program (Shared with DWM22 and GWM38)	Insufficient resources to undertake tasks identified in the Strategy	High
BWM13.		Develop and implement a routine bin inspection program to reduce contamination rates in kerbside collection. (Shared with DWM23 and GWM39)	Recycling and FOGO contamination rates, ad-hoc education activities and closing data gaps	High

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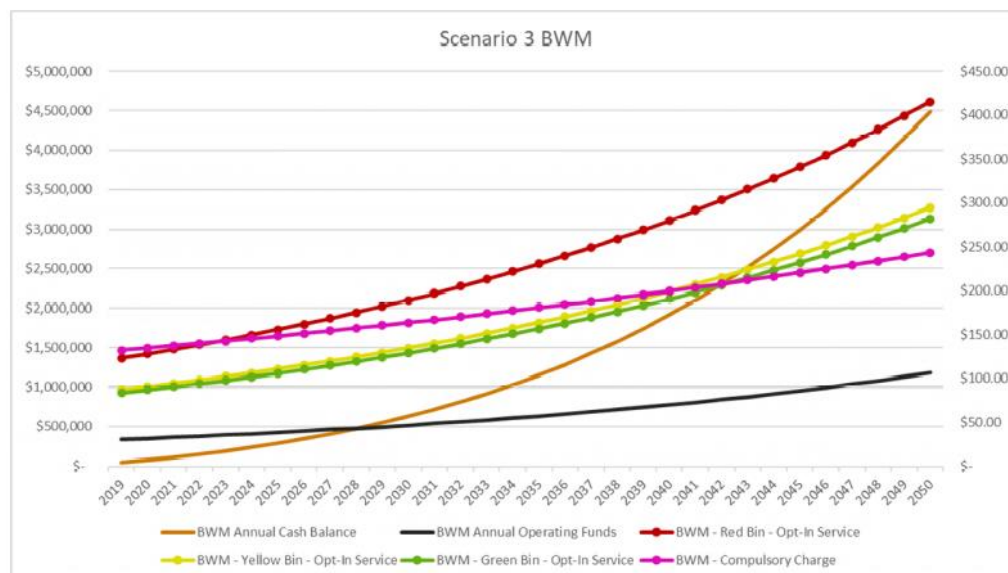
QPRC Waste Strategy xix
Waste Management Strategy 2019 - 2049

Number	Aspect	Action	What problem is this solving?	Timeframe
BWM14.		Improve digital media which provides information on the QPRC waste services available to the community (Shared with DWM25 and GWM40)	Ad-hoc education activities	Medium
BWM15.		Prepare and implement a Community Waste Education Strategy covering schools, general public, business/industry, and initiatives identified in the strategy. (Shared with DWM26 and GWM41)	Ad-hoc education activities	High
	Shared costs/resources with DWM and GWM			

Table E11 Recommended Scenario – Business Waste Management Annual Charge

Opt-in Service	QPRC Revenue Policy Business Waste Management Charge 2020/21	Business Waste Management Charge 2020/21	
		BAU	S3
Red Bin (Residual)	\$262	\$169	\$133
Yellow Bin (Recycling)	\$94	\$131	\$94
Green Bin (GO)	\$94	\$109	\$90
Compulsory Charge – all businesses	\$96	\$78	\$137

Figure E3 Recommended Scenario – Business Waste Management Charge



E5.5 Total Annual Waste Management Charges

The summary of charges for residential and business properties are outlined in Table E12.

Table E12 Recommended Scenario – Summary Annual Waste Management Charges

Waste Management Charge	Type	Scenario 3
Domestic Waste Management	Urban - SUD - 3 Bin	\$315
	Rural - SUD - 2 Bin	\$170
	Rural - SUD - 1 Bin	\$82
	Vacant - Urban & Rural	\$28
	Urban - MUD - 3 Bin	\$315
	Rural - SUD - Bin Compound	\$160
	Urban - MUD - 2 Bin	\$205
	Moved to General Waste Charge	
	Mixed-Use – No Service	\$28
General Waste Management	ALL QPRC residential properties	\$196
Business Waste Management	Red Bin (Residual)	\$133
	Yellow Bin (Recycling)	\$94
	Green Bin (GO)	\$90
	All QPRC Businesses	\$137

The total waste management cost for residential properties is shown in Table E13 and total waste management costs for businesses is shown in Table E14.

Table E13 Recommended Scenario – Total Annual Waste Management Charges - Residential

Domestic Waste Management Code	New QPRC Domestic Waste Management Code	Total Waste Management Costs	Change from BAU
DWP1	Urban - SUD - 3 Bin	\$510	-\$275
DW1			\$173
DWP4	Rural - SUD - 2 Bin	\$366	-\$335
DW15			\$2
DW17	Rural - SUD - 1 Bin	\$278	\$92
DWP8			-\$223
DWP12	Vacant - Urban & Rural	\$224	-\$193
DW10			\$197
DW8	Urban - MUD - 3 Bin	\$510	\$173
DWP6	Rural - SUD - Bin Compound	\$356	-\$274
DW7	Urban - MUD - 2 Bin	\$400	+\$93
DW11	Moved to General Waste Charge	-	-
Not Applicable	Mixed-Use – No Service	\$224	+\$224
N/A	No DWM Service	\$196	-\$194

Table E14 Recommended Scenario – Total Annual Waste Management Charges - Business

New QPRC Business Waste Service	Total Waste Management Costs	Change from BAU
Compulsory Charge – Former QBN	\$137	+\$41
Compulsory Charge – Former Palerang	\$137	-\$253
Red Bin (Residual)	\$133	-\$129
Yellow Bin (Recycling)	\$94	No change
Green Bin (GO)	\$90	-\$4

E6 Next Steps

To finalise the QPRC Waste Strategy the following steps are required:

- Review feedback received from the Waste Strategy Working Group and the community during public exhibition of the recommended scenario
- Finalise the Strategy based on the scenario selected
- Put forward the Strategy to Council to adopt.
- Rates and charges (2021/2022)

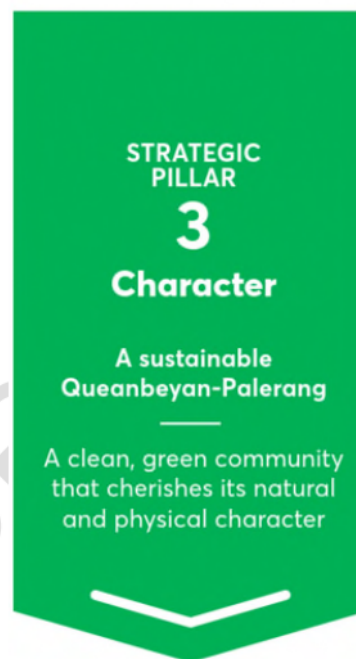
1 Introduction

Queanbeyan-Palerang Regional Council (QPRC) was formed in May 2016 after the amalgamation of the former Queanbeyan City Council (QCC) and Palerang Council. In light of the amalgamation, QPRC commissioned AECOM Australia Pty Ltd to prepare a consolidated 2019-2049 Waste Management Strategy (the 'Strategy'). The Strategy has been finalised by MRA Consulting Group (MRA). The Strategy provides an opportunity to assist QPRC to meet the objective of a sustainable, "clean green" community outlined in the *QPRC 2017 Community Strategic Plan* and address the following key issues faced by the council:

- Predicted population growth in the local government area (LGA) to 76,000 people by 2031
- Achieving NSW Waste Avoidance and Resource Recovery Strategy 2014-2021 (WARR Strategy) targets
- Different fees and charges regimes based on the former LGA boundaries
- Different waste services provided across the LGA
- Delivery of the same service by Council staff in some areas and by Contractors in other areas
- Sporadic, adhoc waste education activities
- Differences in gate fees at disposal and recycling facilities for the same materials from different areas

A number of actions identified in the former Palerang Council Waste Strategy³ and the former QCC Waste and Resource Recovery Strategy⁴ (QCC Waste Strategy) have been implemented or completed, while others are no longer relevant or supported. Key initiatives implemented under the former QCC and Palerang Strategies are discussed further in Section 5 as they relate to this Strategy.

The Council LGA and main waste facilities are shown in Figure 1.

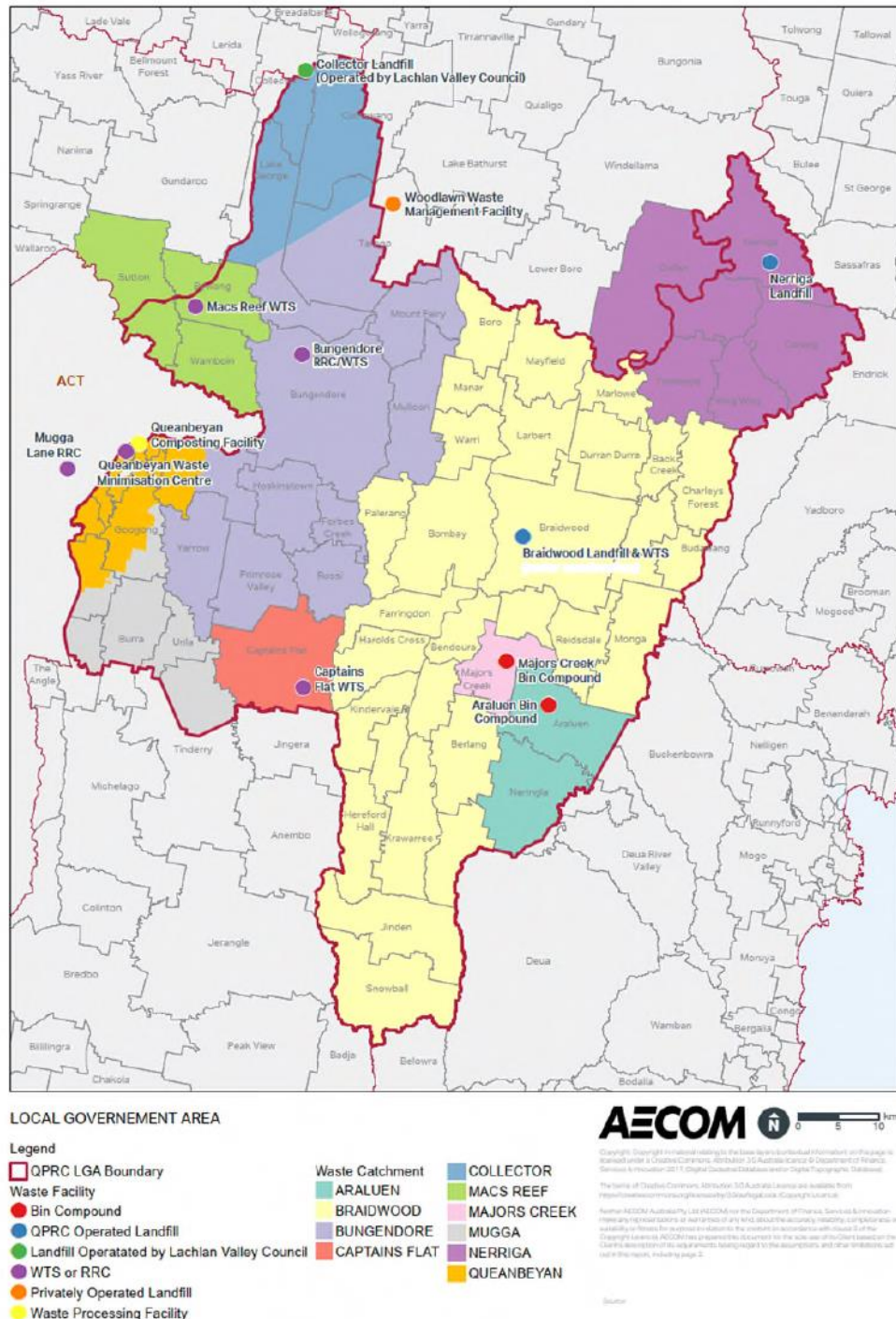


³ URS (2015), Waste Management Strategy 2015-2035 for Palerang Council

⁴ APC (2013), Waste and Resource Recovery Strategy 2013-2023 for Queanbeyan City Council
Revision – 05-May 2021

Prepared for – Queanbeyan-Palerang Regional Council – ABN: 95 933 070 982

Figure 1 QPRC Local Government Area



1.1 Objectives of the Waste Strategy

This Strategy has been prepared to provide an approach for waste and resource management in the LGA over the next 30 years in a manner which maximises landfill diversion and resource recovery. The key objectives of the Waste Strategy are to:

- provide an overview of the existing waste management practices and services offered
- engage and gauge community views on current and potential waste management options
- identify options for waste management and resource recovery across the whole LGA
- develop key actions to assist Council in implementing the Waste Strategy over a 30-year timeframe
- provide consistency with and the ability to meet the objective and ambitions of the ACT Waste Strategy, the NSW Waste and Sustainable Materials Strategy and the CRJO Regional Waste Strategy

We want to be a sustainable, “clean green” community and create the right solutions for our local residents, businesses, service providers and community groups.



1.2 Consistency with State and Regional Waste Strategies

The Strategy broadly aligns with the key ambitions and actions of the *ACT Waste Strategy*, the *NSW Waste and Sustainable Materials Strategy* and the *CRJO Regional Waste Strategy*. The strategies all share the broad goals of:

Table 1 Alignment with State and Regional Waste Strategies

Common Strategic Goals	QPRC Waste Strategy Alignment
Reducing total waste	Through community education activities and cost-signals, Council will be able to support reducing overall waste generation
Increasing average recovery rate from all waste streams	The QPRC Waste Strategy will improve diversion from less than 50% to over 60%. The estimated improvement in diversion is conservative due to the difficulties in accurately predicting the impact of Strategy actions.
Increasing the use of recycled content	Through enhancing source separation at facilities and in domestic waste streams, Council will be able to improve feedstock quality and thus enhance opportunities for increasing the use of recycled content
Phasing out problematic and unnecessary plastics	Through community education activities, Council will be able to support reducing generation of problematic wastes
Reducing the amount of organic waste sent to landfill	A key action in the Strategy is to introduce food organics collections to the urban areas of Queanbeyan
Improving community education	A key action in the Strategy is to enhance community waste education.

The Strategy includes a number of actions that will directly contribute to achieving the objectives of these strategies particularly with respect to enhancing circular economy opportunities in the region.

1.3 Structure of the Waste Strategy

The Waste Strategy consists of the following sections.

Section 1 Introduction: Provides key background information and project objectives relevant to QPRC and its waste management.

Section 2 Development of the Waste Strategy: Provides an outline of the key information which informed the Waste Strategy and subsequent key tasks undertaken in development of the Strategy.

Section 3 QPRC Population and Waste Generation: Provides an overview of the estimated growth in population and associated number of dwellings in the LGA and the associated waste generation over the next 30 years.

Section 4 Key Legislation and Guidelines: Outlines the key waste management and environmental legislation which influence how QPRC manage waste generated in the LGA.

Section 5 Current Waste Management: Describes the current waste management practices implemented in QPRC LGA and provides a review of to the planned changes to waste infrastructure.

Section 6 Waste Management Options: Outlines both long and short lists considered for the QPRC LGA and incorporates an assessment of the preferred options for Council to increase resource recovery.

Section 7 Recommended Waste Management Strategy: Provides an overview of the recommended scenario for managing QPRC's waste and resources based on the outcomes of the financial model. An implementation plan of this scenario has been provided.

Section 8 Next Steps: The immediate actions required to finalise the Strategy.

2 Development of the Strategy

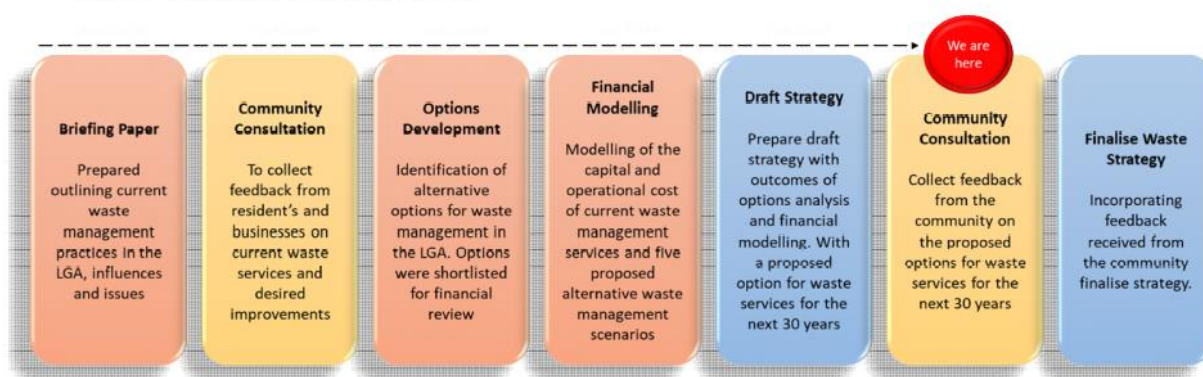
Given the complexities of waste management services in QPRC following the amalgamation, this Waste Strategy has been prepared with a focus on:

- understanding what services are currently provided and to who, presented in the *QPRC Waste Strategy – Briefing Paper* (AECOM, 2018),
- ensuring this information is communicated to the community through establishment of the Waste Strategy Working Group and active community engagement sessions, and
- identifying and reviewing opportunities to improvement access to services,

with the objective of increasing resource recovery across the LGA and provision of equitable services across all QPRC residents. To achieve this a number of tasks were completed as shown in Figure 2 and described further below.

Council is currently at the stage of exhibiting the Draft Waste Strategy to gain feedback from the community on the proposed waste management and resource recovery plan for the next 30 years.

Figure 2 Development of the Waste Strategy



2.1 Waste Strategy Briefing Paper

AECOM undertook a review of QPRC's current waste management practices, regulatory and policy context, and the environmental impact of waste management across the QPRC LGA. Information reviewed was incorporated into all stages of development of the Waste Strategy. Data reviewed included:

- The Palerang Council Waste Management Strategy 2015 – 2035
- The Queanbeyan City Council Waste and Resource Recovery Strategy 2013 – 2023
- Canberra Regional Joint Organisation (CRJO) Regional Waste Strategy 2018-2023
- Information from waste related reports, strategies and studies provided by Council
- QPRC 2017 Strategic Directions Discussion Paper 2017
- Information on costs to Council of existing waste management and recycling services provided by council
- Population and growth rates (Australian Bureau of Statistics (ABS))
- Household growth data provided by Council

Revision – 5 May 2021
Prepared for – Queanbeyan-Palerang Regional Council – ABN: 95 933 070 982

- GIS data for locations of waste and recycling facilities in the region provided by Council
- NSW Waste Avoidance and Resource Recovery Strategy Progress Report 2014 – 2015
- Local Government Waste and Resource Recovery Survey Data provided by Council for years 2012 – 2018
- Queanbeyan-Palerang Council Household Kerbside Bin System Audit 2018 (EC Sustainable, 2018)

The Briefing Paper was presented to the community, as discussed below, and the findings of the paper used to inform the development of this Strategy.

2.2 Community and Stakeholder Engagement

Prior to the development of this draft Strategy, QPRC and AECOM consulted with local residents and key community members through information sessions and a targeted workshop. A survey was also used to collect feedback on residents' and business' experience with waste services.

The objective of the information sessions was to explore responses to the current outcomes on waste management in the QPRC LGA, which was outlined in the QPRC Waste Strategy Briefing Paper. This allowed the community to ask questions in one-on-one conversations with the project team.

Representatives from QPRC and AECOM spoke to approximately 120 community members over the course of three sessions. Surveys were carried out with those interested in having their say.

Key outcomes from the survey include:

- Whilst majority of respondents confirmed a high level of confidence in waste separation, there was a great degree of interest (over 60 per cent) amongst the respondents in receiving between a bit to a lot more waste education from Council.
- About 80 per cent of respondents indicated that they would like Council to provide other waste services and specified their preferences. The top three results included requests for:
 1. more composting services and options to dispose of food waste into green bins
 2. soft plastics recycling services
 3. increased availability of kerbside bin collection for rural residents and changes to the frequency for current receivers.
- The assessment of respondents willingness to pay for these extra services showed that majority would want to pay the same rates, with only 37 per cent willing to pay between \$5 to \$10+ more per quarter.

The key themes that arose during the community drop-in sessions included:

- Education – need for additional education and its importance
- Community perception - Community perception that waste at the transfer stations are not correctly processed
- Rates and fees – interest in weight based billing
- Accessibility – concerns around access times for waste facilities and positive feedback on mattress recycling
- Additional services – return and earn
- Communication – request for regular kerbside collection schedule

A copy of the Consultation Report is provided in Appendix A.

Feedback from the Waste Strategy Working Group identified that during the first round of community consultation understanding of the needs on urban and rural residents was not looked at in sufficient detail. Based on this feedback the consultation of the draft Strategy has incorporated this feedback to gather data representative of rural and urban residents.

Revision – 5 May 2021
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2.3 Waste Management Options Analysis

Based on review of current waste management in the QPRC region, as described in the Briefing Paper (AECOM, 2018), and consultation with Council and the local community, a number of options for future management in the QPRC LGA were identified. These options formed a 'long list' which is provided in Appendix B. The long list of options was assessed against the following assessment criteria to obtain a 'short-list' of options for further detailed assessment:

- Indicative cost of implementation i.e. whether it is broadly feasible from a cost perspective
- Potential to increase resource recovery / landfill diversion
- Whether it would meet minimum regulatory requirements
- If a technology option, then whether it is considered a proven / commercially viable option
- Benefits, Opportunities, Risks and Challenges

The results of the long list options assessment were presented to the Waste Strategy Working Group to gain feedback and obtain confirmation of the five integrated scenarios (combination of a number of individual options) to be included in the financial model for an analysis of their financial feasibility.

The following integrated scenarios for improving waste and resource management across the LGA have been assessed as part of the development of this Waste Strategy:

1. Improve litter and illegal dumping issues in the LGA
2. Improve waste education in the LGA
3. Improve management of organics collection and processing
4. Increase diversion of landfill for C&I and C&D streams
5. Improve all key areas of waste management in the LGA, including general waste, recycling, organic and bulky waste streams, and associated infrastructure.

2.4 Review and update of QPRCs 30 Year Financial Plan

Existing financial information and models were reviewed as part of the project. The financial model for the Queanbeyan Strategy was not available, however the existing Palerang financial model was reviewed. The review found that the former Palerang model would be difficult to adapt to fit the new entity. Therefore a new model was created. The financial model incorporates key financial factors from both former Councils such as planned capital costs, existing loan repayments, operating costs, and fees and charges. The model also incorporates Council's *Activity Cost Attribution and Distribution of Governance Policy*. The model also includes waste diversion rates from landfill over the 30 years period for each of the five shortlisted scenarios compared to the current waste management (referred to as the business as usual (BAU) scenario).

3 Population and Waste Generation

The following section provides an overview of the QPRCs population and households demographics. The growth expected in the region will have an impact on the estimated municipal solid waste (MSW) generation from residential sources and need to be managed by Council over the next 30 years. In addition, Council manages commercial and industrial waste (C&I) from kerbside collection of waste generated by businesses and construction and demolition (C&D) waste from waste received at the Council's Waste Transfer Stations (WTS).

3.1 Population and Households

QPRC covers an area of approximately 5,319 km². Major population centres include Queanbeyan, Bungendore, Braidwood and Googong. There are also several rural villages and a number of large residential populations living in rural-residential areas to the west of the LGA near the ACT border. QPRC currently serves a population of approximately 58,100 people. Population is expected to grow significantly in the LGA to 76,000 people by 2031. Population growth is reflected in the growth of the number of households within the LGA.

Not all areas of QPRC receive domestic waste management services. Figure 3 below shows the estimated growth in the number of households within the domestic waste management area (i.e. properties which receive a kerbside waste collection service).

Figure 3 Growth in the estimated number of households within the domestic waste management area (source: QPRC)

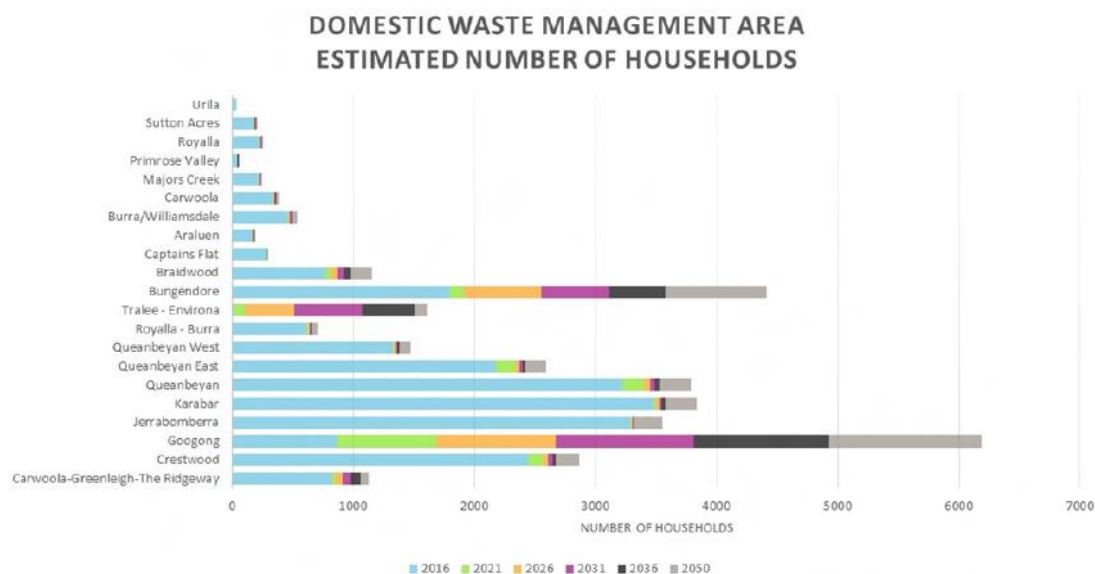
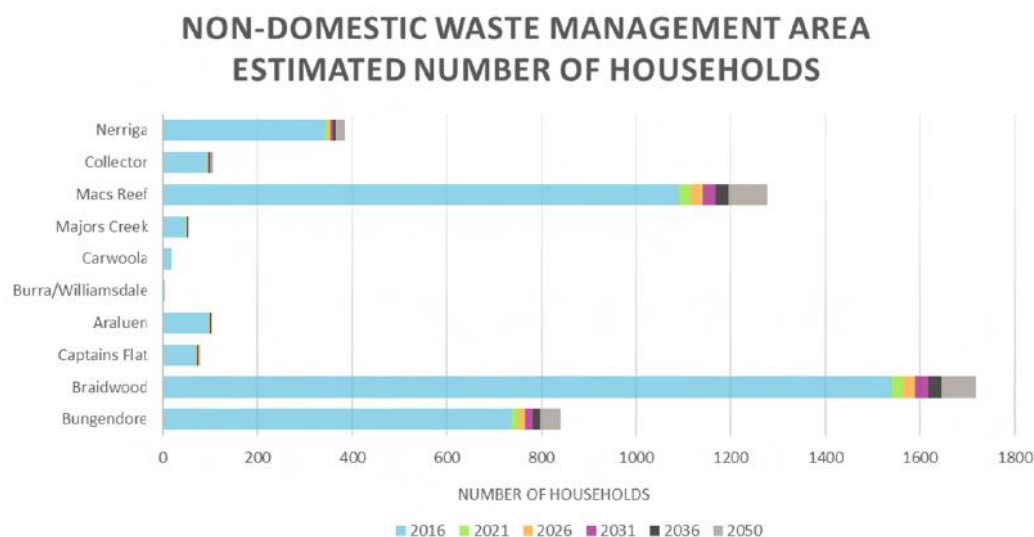


Figure 4 below shows the estimated growth in the number of households outside of the domestic waste management area (i.e. properties that do not receive a kerbside waste service).

Figure 4 Growth in the estimated number of households outside of the domestic waste management area (source: QPRC)



*Note – Burra/Williamsdale has three households

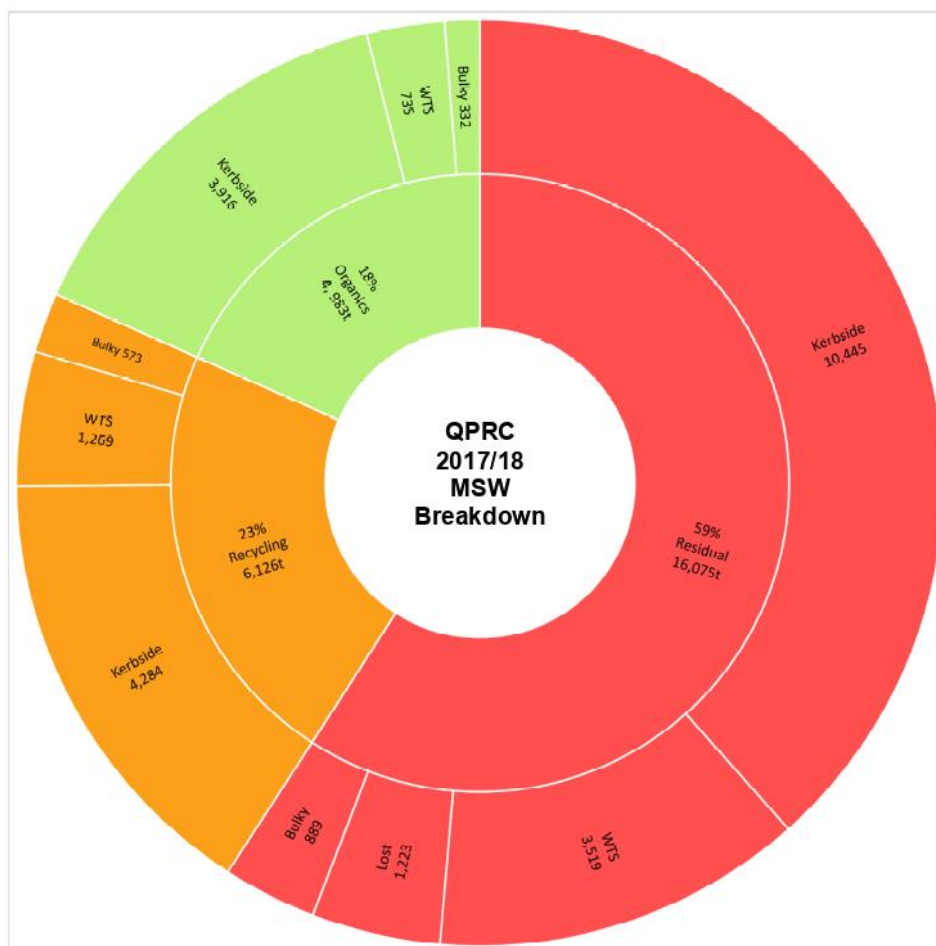
Overall, the total number of households in the QPRC LGA is expected to grow from 26,742 in 2016 to 40,064 in 2050.

3.2 Municipal Solid Waste Generation and Diversion

QPRC generates MSW from kerbside collection, waste dropped off at waste transfer stations and landfills (self-hauled) and bulky waste collection (from the former QCC LGA only). In addition to this, the existing self-haul arrangements within the former Queanbeyan LGA mean that a portion of waste is effectively “lost” through diversion to the ACT. To ensure that all model scenarios use the same waste volumes, an estimate of the amount of material that would potentially come back into the waste stream managed by Council has been included.

As shown in Figure 5, QPRC generated approximately 27,184 tonnes of MSW in 2017/18 from these sources. Of these tonnes generated QPRC diverted approximately 41% of waste from landfill. As the destination of “Lost” material is unknown, it has been conservatively assumed that all “Lost” waste goes to landfill.

Figure 5 QPRC 2017/18 MSW Breakdown of generation and diversion



Based on the current waste generation, diversion rates and growth in households, QPRC is estimated to double the amount of waste generated in 2050. Table 2 provides a summary of estimated MSW generation from 2017 to 2050.

Table 2 Waste generation 2016 – 2050 (tonnes per annum)

	2017	2021	2026	2031	2036	2041	2046	2050
Residual	16,075	17,346	19,415	21,766	24,059	25,918	27,829	29,433
Recycling	6,126	6,612	7,407	8,304	9,172	9,895	10,636	11,258
Organics	4,983	5,408	6,216	7,122	8,008	8,681	9,358	9,928
Total	27,184	29,366	33,037	37,192	41,238	44,494	47,822	50,618

3.3 Commercial and Industrial Waste Generation

A waste service for commercial premises is offered by QPRC to businesses in the former QCC LGA. According to the *QPRC 2016-2017 WARR Survey* the following waste quantities were collected by Council from the commercial and non-residential sector:

- Residual Waste –from 792 premises – 398 tonnes - landfilled
- Recyclables – from 597 premises – 116.5 tonnes – 11.6 tonnes landfilled, remaining recycled
- Greenwaste – 49 premises – 11.9 tonnes - recycled

QPRC provide the former Palerang LGA with 123 waste and recycling services to the commercial and non-residential sector however does not separately record these quantities from municipal waste.

The above quantities based on services provided by QPRC to the commercial sector are expected to represent only a small percentage of the overall C&I waste generation in the LGA, with the majority collected by private waste contractors and delivered to facilities in the ACT region.

3.4 Construction and Demolition Waste Generation

As noted in Section 5.5, C&D waste is currently received at Bungendore, Braidwood and Braidwood Waste Transfer Stations. The following figures are noted in the 2017-18 WARR Survey:

- Concrete 115.5 tonnes - passed onto external processor
- Mixed C&D: 769 tonnes – landfilled
- Other – 4,559 tonnes – landfilled

The quantities noted above are expected to represent only a small percentage of the overall C&D waste generation in the LGA with the majority delivered to processing facilities in the ACT region as noted in Section 5.5.

4 Key Legislation and Guidelines

The following table summarises the current legislative and regulatory environment at a State and National level. Refer to the Briefing Paper, refer to Appendix C, for more detail including likely changes in the short to medium term which may impact on waste management in QPRC and therefore the actions outlined in this Waste Strategy.

Table 3 Current legislation and regulations impacting on waste management in QPRC

Legislation/ Regulation	Short Description/ Relevance to QPRC
Australian Government (Cwth)	
<i>Product Stewardship Act 2011</i>	<p>Mandatory and voluntary schemes involve businesses taking responsibility for the full lifecycle of their products and materials.</p> <p>Paintback is a voluntary scheme allowing free drop off of paint containers and unwanted paint at the Bungendore Resource Recovery Facility, Braidwood Waste Transfer Station and Queanbeyan Waste Minimisation Centre. It is funded by a 15c/L (excl. GST) levy applied to paint wholesalers.</p> <p>There is a free drop off point for QPRC residents for the National Television and Computer Recycling Scheme (NTCRS) in the ACT.</p>
Waste export ban	The Council of Australian Governments (COAG) Waste Export Bans response strategy outlines a timetable to ban the export of waste plastic, paper, glass and tyres. All bans will be in effect from 1 July 2024.
New South Wales	
<i>Protection of the Environment Operations (POEO) Act 1997</i>	<p>Regulation of pollution control, waste disposal and waste management and licensing requirements in NSW. Waste is categorised into MSW, C&I and C&D waste.</p> <p>QPRC predominately manages MSW, however additional C&I services are provided to small businesses and some waste facilities operated by QPRC accept C&D waste.</p> <p>The Bungendore Resource Recovery Facility was issued an environment protection licence in 2018. The EPL includes requirements for groundwater monitoring and noise monitoring.</p>
<i>Protection of the Environment Operations Waste Regulation 2014</i>	<p>Sets out provisions covering the way waste is managed in terms of storage and transportation as well as reporting and record keeping. Key areas relating to QPRC include:</p> <p>Tyres: consignors and transporters of waste tyres are required to monitor the movement of waste tyres in NSW. A site which stores more than 5 tonnes of tyres or 500 waste tyres on site at any time requires an environment protection licence (EPL).</p> <p>Illegal dumping: lists wastes that automatically constitute land pollution to highlight the risk of dumping. To support efforts to reduce illegal dumping and littering, the NSW EPA has developed the <i>Don't be a Tosser</i> campaign.</p> <p>Unlicensed landfills: provides minimum operational standards which must be implemented at an unlicensed landfill site. This clause is relevant to the ongoing operation of Nerriga and Braidwood landfills.</p>
<i>NSW Waste Avoidance and Resource Recovery Act 2001</i>	The <i>NSW WARR Act</i> requires the WARR Strategy to be reviewed and replaced every five years. The WARR strategy promotes the waste hierarchy, providing a guideline for considering options prior to more detailed analyses. With regards to reuse or recycling, the most sustainable option may depend on the specific location of the product and the distance required transporting it to eligible recycling markets. In this instance, the more sustainable waste management option for QPRC may differ between Braidwood and Googong.

Legislation/ Regulation	Short Description/ Relevance to QPRC
	<p>The latest WARR strategy was released by the NSW EPA in 2014 and sets new recycling targets to be achieved by the year 2021-22, including:</p> <ul style="list-style-type: none"> • increase MSW recycling rate from 52% to 70% • increase C&I recycling rate from 57% to 70% • increase C&D recycling rate from 75% to 80% • increase waste diverted from landfill from 63% to 75% <p>It is noted that the EPA is currently preparing a updated 20 Year Waste Strategy which may influence the future directions of waste management in QPRC.</p>
NSW Landfill Levy	<p>Encourages less waste generation and increased resource recovery. Some of the revenue collected from the landfill levy is used to help fund resource recovery initiatives.</p> <p>QPRC is currently not located within the levy paying area. However, the existing levy structure impacts Council and changes the market conditions for recycling operations and waste movement.</p>
<i>Waste Avoidance and Resource Recovery Amendment (Container Deposit Scheme) Act 2016 No 57 and the Waste Avoidance and Resource Recovery (Container Deposit Scheme) Regulation 2017</i>	<p>The NSW container deposit scheme (CDS), Return and Earn, commenced in 2017, enabling individuals and businesses to return eligible containers and receive 10c per container. As of June 2018, there were three drop off points in Queanbeyan/Jerrabomberra.</p> <p>The ACT implemented a complementary CDS via the <i>Waste Management and Resource Recovery Amendment Act 2017</i> in 2018. Recyclables collected from kerbside collections in QPRC are taken to the Hume Materials Recycling Facility (MRF) in the ACT. QPRC is able to claim the 10c from containers collected once a revenue sharing model is agreed with the MRF. This is a potential opportunity to offset costs related to waste management.</p>
<i>Local Government Act 1993</i>	<p>Defines how Councils may exercise their powers and the manner in which Councils are managed and financed. With respect to waste management, Councils may make an annual charge for the provision of waste management services other than domestic waste management services (s. 501). In addition, Councils must make and levy an annual charge for the provision of domestic waste management services (s. 496). With respect to domestic waste management services, Council charges for domestic waste management must be calculated so as to not exceed the reasonable cost to the council of providing those services.</p>
<i>Waste Less Recycle More Initiative</i>	<p>The WLRM grant program provides funding for organisations to improve their management of waste and recovery of resources.</p> <p>Phase 1 of WLRM provided \$465.7 million over the period July 2012 to June 2017, focusing on funding new, large-scale waste and recycling infrastructure, recycling facility upgrades, drop off centres, food and garden organics processing and recycling innovations. Phase 2 of WLRM commenced on 1 July 2017, with the capacity to award \$337 million over 4 years. Priorities have already been outlined with a number of funding areas being potentially relevant to Council:</p> <ul style="list-style-type: none"> • Local government waste and resource recovery – \$70 million; • Illegal dumping prevention and waste enforcement – \$65 million; • Household problem waste – \$57 million; • Waste and recycling infrastructure – \$48 million; • Organics infrastructure – \$35.5 million; • Litter prevention and enforcement – \$30 million;

Legislation/ Regulation	Short Description/ Relevance to QPRC
	<ul style="list-style-type: none"> • Business recycling – \$22.5 million; • Recycling innovation – \$5 million; and • Heads of Asbestos Co-ordinating Authorities – \$4 million.
Australian Capital Territory	
<i>Waste Management and Resource Recovery Act 2016</i>	<p>The Act requires all waste facilities to be licenced and all waste transporters to be registered. Rigorous reporting requirements are stipulated for waste facilities and transporters.</p> <p>The progressive enforcement of provisions is likely to result in some poor waste operators, practicing waste stockpiling, shutting down their ACT sites and seeking to establish new facilities interstate, potentially in QPRC.</p> <p>Under the Act, QPRC is considered both a waste management business (as Council operates the composting facility located at Oaks Estate in the ACT) and a waste transporter. The fact that Council is subject to conditions of the Act leaves Council vulnerable to potential changes to this Act and Regulations enacted under it.</p>

5 Current Waste Management

The following section provides an overview of waste management and resource recovery services currently offered by QPRC.

5.1 Residential Waste Services

QPRC provides waste services broadly consistent with those offered by other CRJO councils. Nevertheless, considerable variations remain across the CRJO and QPRC regions with regards to waste services and practices between the former Queanbeyan and Palerang councils.

5.1.1 Kerbside Collection

Former QCC urban residents receive a three bin kerbside service. This includes a 240L fortnightly collection for recyclables, a 240L fortnightly collection of garden organics (GO) and a 140L or 240L weekly collection of residual waste. Former QCC rural residents receive a two bin kerbside service. This service includes a 240L fortnightly collection for recyclables and residual.

Kerbside collections in the former QCC LGA are provided under contract by J.J. Richards. The contract with J.J. Richards commenced in April 2015 and will conclude in April 2022. The contract includes optional extension to 2025.

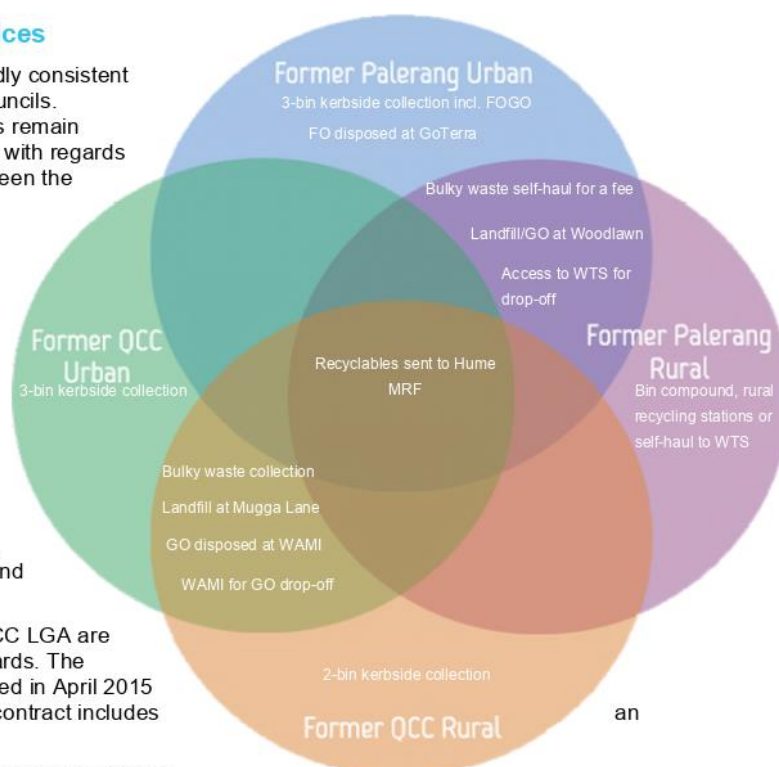
Former Palerang LGA residents living in the townships of Braidwood, Bungendore and Captains Flat receive a three bin service consisting of 140L weekly collection for residual, a 240L fortnightly collection for recyclables and a 240L fortnightly collection for food organics and garden organics (FOGO) service.

Former Palerang LGA residents living in Royalla/Burra/Urila receive a two bin service consisting of 240L fortnightly collection for residual waste and a 240L fortnightly collection for co-mingled recycling. Residents living in Carwoola/Primrose Valley receive one 240L fortnightly collection for co-mingled recycling and currently self-haul their residual waste, which is also the case for Sutton Acres. Residents living in Majors Creek/Araluen receive a 240L fortnightly residual waste collection and a 240L fortnightly co-mingled recycling service.

The former Palerang LGA collection services are provided directly by Council staff using Council-owned trucks.

The current waste collection services and the associated catchment services in QPRC are summarised in Table 4 below.

More remote rural residents within the QPRC are required to self-haul all their wastes to council provided collection points (e.g. bin compounds, rural recycling stations, WTSs and landfills) which are located across the LGA as shown in Table 6. The location of these facilities is shown in Figure 6.



Issue: Food waste is not currently collected in the former Queanbeyan LGA. This represents a significant amount of material that can be diverted from landfill.

Issue: Population growth in the areas with a Domestic Waste Management service in the former Palerang LGA has reached the point where the number of garbage collection trucks and drivers is not sufficient to appropriately manage the service.

Issue: The rates structure for waste management services varies according to the location of the property. Properties in the former LGAs pay different amounts for the same or similar services. Properties in the former Palerang LGA pay a General Waste Charge to manage waste outside the scope of domestic waste management.

Issue: Waste collection services in the former Queanbeyan LGA are undertaken by contract. Waste collection services in the former Palerang LGA are undertaken by Council.

Table 4 QPRC Waste Collection Services

Catchment	Number of Services	Residual	Recycling	GO	FOGO	Collection Contractor
Braidwood	768	140L (W)	240L (F)	N/A	240L (F)	Council
Bungendore	1,441	140L (W)	240L (F)	N/A	240L (F)	Council
Burra/Royalla/Urila	628	240L (F)	240L (F)	N/A	N/A	Council
Captains Flat	275	140L (W)	240L (F)	N/A	240L (F)	Council
Carwoola/Primrose Valley	367	N/A	240L (F)	N/A	N/A	Council
Majors Creek/Araluen	376	240L (F)	240L (F)	N/A	N/A	Council
Queanbeyan – Urban	15,856	140L (W)	240L (F)	240L (F)	N/A	J.J. Richards
Queanbeyan –Urban	1568	240L (W)	240L (F)	240L (F)	N/A	J.J. Richards
Queanbeyan – Multi-unit shared^	2,898	240L (W)	240L (F)	240L (F)	N/A	J.J. Richards
Queanbeyan – Rural	869	240L (F)	240L (F)	N/A	N/A	J.J. Richards
Sutton Acres	177	N/A	240L (F)	N/A	N/A	J.J. Richards
Vacant (no service)	4,218					

(W) Weekly collection, (F) Fortnightly collection, N/A Collection service not offered

^ Some shared multi-unit bins are collected twice weekly

5.1.2 Bulky Waste

Households in the former QCC LGA are provided two kerbside clean-ups per financial year, the cost of this service is covered through the QCC Domestic Waste Management charge. These are accessed by contacting Council and booking a collection of one trailer load of materials which are placed by the resident on the kerbside on the allotted date for collection. For residents living in either multi-unit dwellings or rural areas of the former QCC LGA, two collections per financial year are provided on fixed dates.

Households in the former QCC LGA booked on average 2,792 kerbside bulky waste services over six years.

Given there around 17,424 households eligible to use the kerbside bulky waste service in the former QCC LGA, the number of households utilising the bulky waste collection service is relatively small.

Bulky waste collections were included in the former Palerang Waste Strategy. Due to significant safety issues and resourcing constraints it has not yet been implemented. Former Palerang LGA residents currently self-haul their bulky waste to transfer stations.



Mattresses collection from bulky waste collections or self-hauled to QPRC waste facilities are collected and recycled by Soft Landings.

Issue: The existing bulky waste collection service in Queanbeyan/Googong is not well utilised and is labour intensive to manage. In addition, the service is not fully funded and there are insufficient funds to service all eligible properties.

Issue: Bulky waste is treated differently between the former LGAs. Although kerbside bulky waste collection was included in the Palerang strategy for those areas with Domestic Waste Management service, it had not yet been implemented due to resource constraints and significant safety and illegal dumping concerns in rural areas.

5.2 Waste Disposal

Residual waste collected from the former Palerang LGA through kerbside collection, WTSS and bin compounds are disposed of at Woodlawn Waste Management Facility or Braidwood Landfill. Recyclables collected through kerbside collections, WTSS and bin compounds are taken to the Hume MRF.

Residual waste collected from the former QCC LGA catchments are sent to Mugga Lane Landfill in the ACT. Recyclables collected from kerbside collections are taken to the Hume MRF.

FOGO material from the former Palerang LGA was previously sent to Landtasia Organic Farm in Mulloon for composting. However, this arrangement ended in 2017. FOGO collections are taken to Bungendore Resource Recovery Facility (RRF) where the food organics (FO) component is extracted. The garden organics (GO) component is transferred to Council's GO stockpile and FO is sent to GoTerra, a large scale worm farm. The former QCC LGA GO is composted at Oaks Estate near the sewage treatment plant. The existing facility at Oaks Estate does not provide suitable facilities for site staff, is located within the ACT (and thus exposed to the ACT regulatory environment) and its operation is sometimes in conflict with the operations of the sewage treatment plant.

A summary of where MSW generated in QPRC is processed or disposed is provided in Table 5.

Table 5 Waste Disposal Summary

	Former Palerang LGA	Former QCC LGA
Waste Category	Disposal Facility	Disposal Facility
Residual	Woodlawn Waste Management Facility or Nerriga Landfill	Mugga Lane Landfill, ACT
Recycling	Hume MRF	Hume MRF
Organics	GO – Woodlawn for reuse as mine rehabilitation material FO – GoTerra Worm Farm	Oaks Estate near the sewage treatment plant
Bulky Waste	Self-haul by residents to WTS	Bungendore Resource Recovery Facility and Braidwood Landfill

The waste services provided by QPRC for each waste catchment are summarised in Table 6.



*Former Queanbeyan Waste Minimisation
Centre (WAMI)*



*Organic output from the former
Queanbeyan Oaks Estate garden
organics processing facility*

Issue: As not all areas of the QPRC LGA pay the General Waste Charge, not all residents have access to the same facilities.

Issue: The same waste type from different areas are sent to different waste facilities and therefore pay different gate fees for the same waste type.

Issue: The location of the Queanbeyan composting facility in the ACT exposes Council to a regulatory environment outside of the usual environment. This presents issues with respect to the management and reporting of waste.

MRA Consulting Group

QPRC Waste Strategy
Waste Management Strategy 2019 - 2049

19

Table 6 Summary of waste services for the main townships in the QPRC

Waste Catchment	Township/ Locality	Kerbside Collection				Bin Compound	RRS*	WTS	RRC	Landfill	Bulky Waste Collection
		Residual	Recycling	FOGO	GO						
Araluen	Araluen	✓	✓			✓					
Bungendore	Bungendore	✓	✓	✓				✓	✓		
	Primrose Valley		✓								
	Carwoola		✓								
	Hoskinstown						✓				
	Mount Fairy						✓ (two sites)				
	Tarago						✓				
Braidwood	Braidwood	✓	✓	✓				✓			
	Durran Durran						✓				
	Mongarlowe						✓				
	Ballalaba						✓				
Captains Flat	Captains Flat	✓	✓	✓				✓			
Collector	-									✓	
Macs Reef	Bywong/ Wamboin							✓			
	Sutton East		✓								
Majors Creek	Majors Creek	✓	✓			✓					
Nerriga	Nerriga									✓	
Burra District	Royalla	✓	✓								
	Burra	✓	✓								
	Urila	✓ (select areas)	✓ (select areas)				✓				
	Williamsdale	✓ (select areas)	✓								
Queanbeyan	Urban	✓	✓		✓				✓		✓**
	Rural	✓	✓						✓		✓***

*Rural recycling station

** kerbside on-call

*** fixed date

Figure 6 Waste facilities and waste services in the QPRC LGA

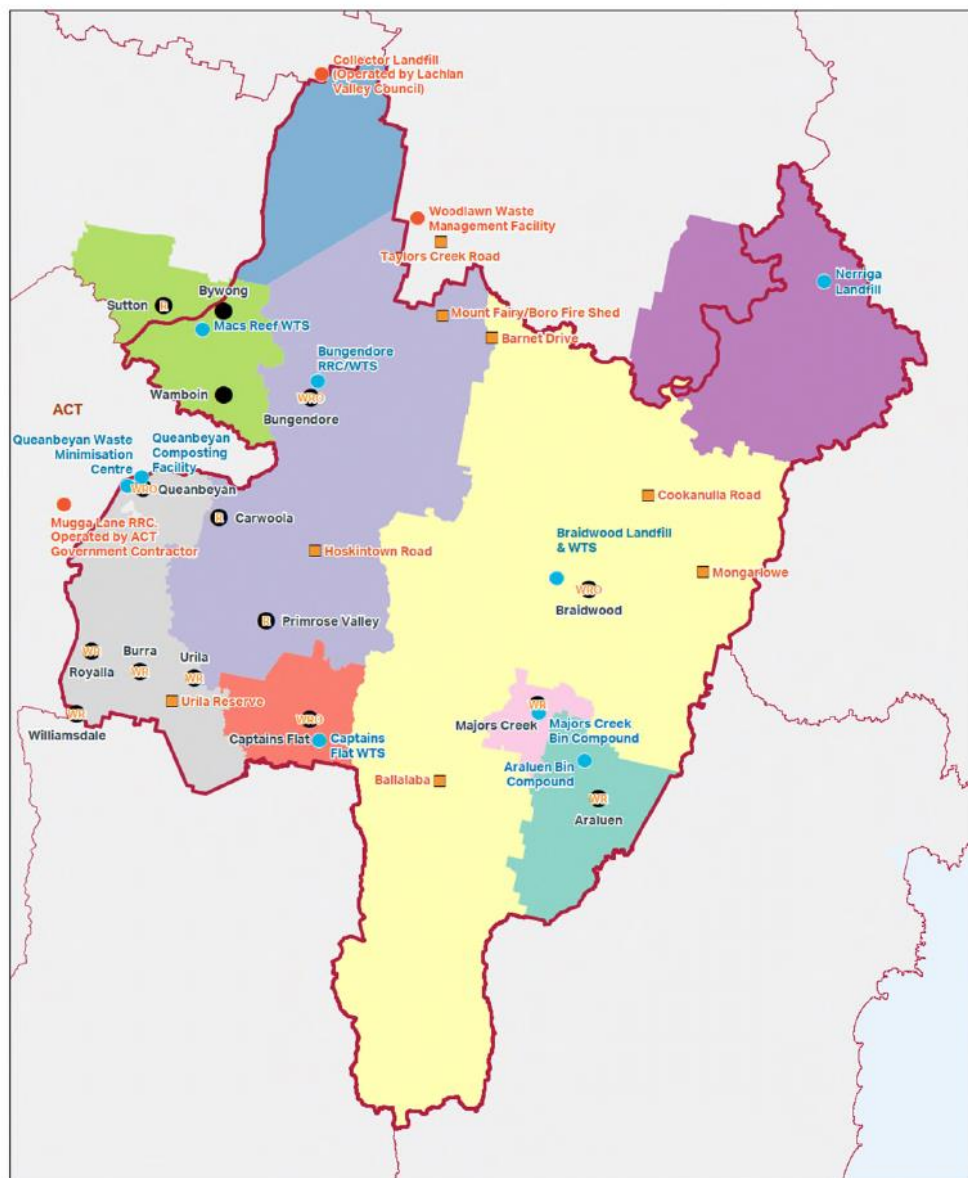


FIGURE 4 WASTE FACILITIES IN QPRC

AECOM N 0 5 10 km

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Source:

- | | | | |
|--|--|--|---|
| <ul style="list-style-type: none"> QPRC LGA Boundary QPRC waste facility Other waste facility Town/Locality Rural Recycling Station | <ul style="list-style-type: none"> Waste Catchment ARALUEN BRAIDWOOD BUNGENDORE CAPTAINS FLAT | <ul style="list-style-type: none"> COLLECTOR MACS REEF MAJORS CREEK MUGGA NERRIGA | <ul style="list-style-type: none"> Kerbside Residual Waste Collection Kerbside Recycling Collection Kerbside Organics Collection |
|--|--|--|---|

5.3 Council Waste Infrastructure

The former Palerang Council has been undertaking a staged plan to close rural unlicensed landfills servicing the former Palerang waste catchments. Table 7 details the planned closure and rehabilitation dates for these facilities, and the proposed alternative waste management practices which will service the communities over the next 30 years. The former QCC does not have any operating landfill therefore has not been considered in this table.

The closure of these rural landfills will reduce the potential long term environmental liabilities for Council although there are significant costs associated with closing these facilities.

In place of the landfill sites, the former Palerang Council has implemented a plan to construct a series of RRCs, WTSs and bin compounds to service the former Palerang residents. Construction of the RRCs and WTSs will also improve council's ability to track waste generation and resource recovery rates and therefore assist council to develop programs to increase diversion from landfill. Table 8 provides an overview of the key waste infrastructure projects undertaken by QPRC.

Table 7 Completed and planned changes to former Palerang unlicensed landfills

Landfill	Est. Closure Date	Rehabilitation Date	Proposed/Implemented Waste Management Practice	Landfill Rehabilitation Cost
Araluen	Closed	2019/20	Kerbside waste collection service supplemented by a bin compound	\$500,000 (estimated)
Bungendore	Closed	2018/19	Bungendore RRC and WTS opened in December 2014	\$1,500,000 (estimated)
Braidwood	Closed	2020/21	Braidwood RRC and WTS opened in November 2019	\$2,000,000 (estimated)
Captains Flat	Closed	2015/16	Captains Flat WTS	\$500,000 (actual)
Collector	-	-	Landfill to remain open for foreseeable future. Operated by Upper Lachlan Shire	-
Macs Reef	Closed	2018/19	Macs Reef WTS	\$1,500,000 (actual)
Majors Creek	Closed	2019/20	Kerbside waste collection service supplemented by a bin compound	\$500,000 (estimated)
Nerriga	2020/21	2020/21	In association with closure of the landfill an alternative waste management service will be investigated through consultation with the community	\$500,000 (estimated)

Table 8 Key Waste Facility Projects

Facility	Description	Approximate Cost
Braidwood WTS	Facility accepting residual waste, recyclables and organics from municipal, commercial & industrial and construction & demolition sources	\$5,500,000
Bungendore RRC and WTS	Largest facility in LGA. Facility accepting residual waste, recyclables and organics from municipal, commercial & industrial and construction & demolition sources	\$4,500,000
Captains Flat WTS	Local facility accepting mainly residential waste streams	\$400,000
Macs Reef Road WTS	Local facility accepting residential waste streams	\$2,000,000
Queanbeyan Waste Minimisation Centre (WAMI)	Purchase of new mulcher	\$1,000,000
	Construction of a Community Recycling Centre	\$200,000



Macs Reef Waste Transfer Station

Issue: Collection and management of data differs between waste facilities. This makes assessment and reporting of waste generation and diversions rates problematic.

5.3.1 Waste Facility Staffing Levels

Each waste facility has different staffing requirements. Differences relate to the size of the facility, the number of waste types received at the facility, the number of people on the site at any one time and over the day and the environmental and public safety requirements. The current staffing levels at each facility are outlined below.

Table 9 Staffing Levels at Waste Facilities

Facility	Number of Staff	Sufficient Staffing to Cover Environmental & Public Safety Risk	Sufficient Staffing to Cover Staff Absences
Braidwood WTS	2	No	No
Bungendore RRC	3	No	No
Captains Flat WTS	1	Yes	No
Macs Reef Road WTS	1	Yes	No
Queanbeyan WAMI	4	Yes	Yes

Issue: Staffing levels at many waste facilities does not provide sufficient coverage of staff sickness and leave which results in additional exposure to public safety and environmental risks.

5.3.2 Rural Recycling Stations

There are a number of rural recycling stations (sometimes referred to as a 'bank of bins') located across the former Palerang LGA. Usage of the stations is variable with some stations used correctly on a consistent basis, while others are routinely misused. Common misuse includes disposal of residual or bulky waste in the bins and overfilling of bins. This misuse presents an environmental and safety risk to Council and facility users.

Issue: On-going misuse of some rural recycling stations.

5.4 Commercial Waste Services

Businesses located in the former QCC LGA can access the following QPRC waste services:

- 1 x 240L residual waste bin
- 240L co-mingled recycling bins provided based on need and storage space available
- 240L GO bins provided based on need and storage space available

If they generate more residual waste than this, they are required to organise their own waste services.

The former Palerang LGA provides approximately 123 services to the commercial and non-residential sector as identified in the 2016-17 WARR survey.

The services currently offered to businesses in the region are summarised in Table 10.

Table 10 Council provided waste services for local businesses

Service	Former Palerang LGA	Former Queanbeyan LGA
Residual	Yes	Yes
Recycling	Yes	Yes
FOGO	No	No
GO	No	Yes
Bulky good drop off	Yes	No
Waste reduction education	Yes	Yes

Issue: The fees and charges levied are different between the former LGAs.

5.4.1 Business Recycling Programs

Within the former QCC LGA, QPRC has been supporting business participation in the ACTSmart business recycling program⁵ since 2012. Approximately 20-30 new businesses have participated in the program each year, with some 32 choosing to remain accredited in the system – voluntarily recording and sharing waste and recycling data. Access to the ACTSmart business recycling program has been extended to the whole QPRC LGA.

A further 76 former QCC LGA businesses have participated in the NSW EPA Bin Trim⁶ program. Further Bin Trim funding was recently allocated to the region and local businesses are being encouraged to participate.

Recycling and waste reduction programs for businesses have been shown to significantly reduce waste to landfill from participating businesses. However, the participation rate remains a relatively small portion of the 4,500 or so business in the QPRC area⁷. Hence, the overall impact of these programs on resource recovery in the QPRC at their current participation rates is likely to be modest.

Issue: The business waste diversion programs are not well utilised. It is unclear if this is due to a lack of awareness of the programs or if they are considered too difficult to be involved in.

5.4.2 Food Rescue

QPRC recently received a funding grant through the EPA Waste Less, Recycle More program to help reduce food waste and rescue food for provision to vulnerable groups via OzHarvest. A Food Rescue Project Officer was appointed in 2018. The officer worked with QPRC businesses and OzHarvest to divert approximately 39 tonnes of food waste from landfill between July 2018 and December 2019. This program has now been completed.

While the quantities of waste diverted through food rescue tend to be relatively small, they provide significant social benefits to disadvantaged members of the community, educational benefits for all involved and often provide economic benefits to the participating businesses.

Issue: Reliance on grant funding means that waste diversion momentum is lost at the end of the program.

⁵ <https://www.actsmart.act.gov.au/what-can-i-do/business/recycling>

⁶ <https://www.epa.nsw.gov.au/your-environment/recycling-and-reuse/business-government-recycling/bin-trim>

⁷ http://stat.abs.gov.au/itt/r.jsp?RegionSummary®ion=10102&dataset=ABS_REGIONAL_ASGS&geoconcept=REGION&measure=MEASURE&datasetASGS=ABS_REGIONAL_ASGS&datasetLGA=ABS_NRP9_LGA®ionLGA=REGION®ionASGS=REGION

5.5 Construction and Demolition Waste

C&D waste is generally managed by private industry with minimal involvement from local government.

C&D waste from the former QCC LGA is taken to the ACT C&D MRF at Mugga Lane or the Capital Concrete Recycling (CCR) Facility at Pialligo. Soil is also taken to the CCR facility.

Building operations in the former Palerang LGA take C&D waste to the Bungendore WTS. C&D businesses are encouraged to separate materials through pricing mechanisms. Concrete and metals are sent to appropriate facilities for recycling, and residual waste is transported to Woodlawn for disposal. A relatively small amount of C&D waste is also received at the Braidwood WTS.

The largest new area of development in the QPRC is the Googong estate which is expected to grow from 892 to 3,748 households by 2031⁸. C&D waste from this area is currently transported approximately 20 km to the Re.Group MRF in Canberra through Jerrabomberra, or to CCR through Karabar and Queanbeyan.

5.6 Other Waste Management Services

5.6.1 Education

Education activities are currently limited within the QPRC LGA and often occur in an adhoc fashion. QPRC funds Keep NSW Beautiful to run the EnviroMentors program⁹ in local primary schools. In March 2018 five local primary schools chose to participate. The Bournda Environmental Education program¹⁰ also runs waste education activities for QPRC schools (via the CRJO). Bournda helped two QPRC schools undertake waste audits in 2017-18.

QPRC staff also provides presentations to local schools, if requested, on an adhoc basis. In addition, QPRC staff also attends community events such as local shows to provide community education and undertake occasional bin inspection programs.

Issue: Education activities are sporadic and/or ad-hoc, are not well targeted and are not sufficiently resourced to be effective.



⁸ idcommunity (2018), Googong: Population, households and dwellings. <<https://forecast.id.com.au/queanbeyan-palerang/population-households-dwellings?WebID=150> >

⁹ <http://knswb.org.au/our-programs/enviromentors/>

¹⁰ <http://bourndaec.nsw.edu.au/>

5.6.2 Illegal Dumping

Under Section 115 of the POEO Act it is an offence to dump waste in a manner that harms or is likely to harm the environment. Council may issue an on the spot fine to an individual for illegal dumping up to a maximum of \$1,500, or up to \$5,000 for corporations. Following a report of dumped waste, Council staff will investigate for evidence of where it may have come from. Where it can be identified who dumped the waste the offender will be prosecuted. An individual may be fined up to \$1,000,000 and/or 7 years' imprisonment, in the case of a corporation a fine of up to \$5,000,000 (s.119, POEO Act).

In reality, insufficient Council resources to undertake investigations leads to many illegal dumping cases not being investigated. In these instances, Council staff arrange the clean up of the waste dumping and costs are borne by all ratepayers. In some instances, clean up activities diverts Council resources from routine operations such as litter collection.

QPRC actively participates in the Regional Illegal Dumping Squad. In 2017/18 financial year Council spent approximately \$20,725¹¹ on managing roadside litter and illegal dumping. Council have reviewed a number of options for minimising these issues as part of this Strategy, to limit illegal dumping and littering in public spaces, on roads and at QPRC waste management facilities.



Issue: There are insufficient resources to adequately investigate illegal dumping events in a timely manner. As a result, illegal dumping events are often cleaned up with no investigation.

Issue: There are insufficient resources to safely manage illegal dumping collections and to undertake roadside litter collection across the LGA.

5.6.3 Clean Up Australia Day

Currently the Council participates in Clean Up Australia Day as a means of managing litter and to educate the community on illegal dumping.

The operation of the Clean Up Australia Day event has been criticised in recent years. A review of the risks associated with clean up events on rural roads has resulted in Council more stringently applying the rules established by the national organisers of Clean Up Australia Day. This has resulted in some long-standing events no longer occurring.

Council has resolved to receive waste from any resident for free on Clean Up Australia Day. This exposes Council to the possibility of a large influx of waste from private properties. This is contrary to the intention of Clean Up Australia Day and is also an unfunded commitment.

Issue: Free disposal of waste on Clean Up Australia Day risks large volumes of private waste and is unfunded. The practice also potentially diverts residents from cleaning up public spaces to cleaning up private property.

¹¹ QPRC 2017/18 WARR Report- Survey Answers

5.6.4 Roadside litter collection

Roadside litter is a frequent cause of concern for residents. Council currently employs one dedicated team of two people to undertake roadside litter collection within the former Queanbeyan LGA. This team is also tasked with public bin waste collection. As such, the team is fully committed and is unable to provide additional coverage. In addition, there is no spare capacity in other suitable teams to provide assistance to this team.

Issue: Roadside litter collection does not have sufficient resources to cover the whole LGA.

5.6.5 Natural disaster management

During times of natural disaster, it is common for large volumes of waste material to be created in a short period of time. Following the immediate aftermath, residents often wish to remove waste from their properties in a timely fashion. It is also becoming common for Council's to waive fees for these materials. On some of these occasions, funding is provided from the State Government to cover these costs.

Natural disasters can impose significant strain on waste facilities. This strain may manifest in large volumes of material stockpiled on the site, a large influx of residents to the site or extended operating hours. It is prudent to develop an overarching policy to manage waste generated by natural disasters. A policy will provide clear guidance for Councillors, staff and residents on how waste from natural disasters is to be managed.

Issue: Council does not have a policy for the management of waste generated by natural disasters.

6 Waste Management Options

A number of integrated scenarios were identified as alternatives to the BAU. These were based on common themes found in the shortlisted options, feedback received during community consultation and issues identified with the current waste management services as highlighted in Section 5.

The following scenarios of waste management in the LGA were assessed:

BAU	Current waste management
Scenario 1	Improve litter and illegal dumping in the LGA
Scenario 2	Improve waste education in the LGA
Scenario 3	Improve management of organics collection and processing
Scenario 4	Increase diversion from landfill for C&I and C&D streams
Scenario 5	Improve all key areas of waste management in the LGA, including general waste, recycling, organic and bulky waste streams, and associated infrastructure

The individual services which make up each option are listed in Table 11. Each of these services has been included in the financial modelling for each scenario.

6.1 Scenarios modelled

Table 11 provides an overview of the services provided under the BAU and each alternative options. The service offering of each option was used to calculate the potential waste diversion and capital and operational costs of each option.

The financial model has been designed on a "user pays" basis. The model provides for a series of funding paths including the Domestic Waste Management charge, Business Waste Management and/or General Waste Charge and facility gate fees.

There are potential opportunities for government grants to support the key actions of the Waste Strategy under Waste Less, Recycle More and more recent Federal funding to support the export of recyclables. As it is not certain if Council would be successful in gaining financial assistance, the financial model has been developed on the assumption that it is fully self-funding. Any grants gained will be reflected in future updates of this Strategy.

The final Strategy for waste management and resource recovery in the LGA would be rolled out to resident and business annual rates.

BAU Scenario

The BAU scenario does have some changes that will be undertaken to provide efficiencies and cost-savings following the amalgamation. These changes generally do not affect service delivery. The BAU scenario also reflects substantial changes in commingled recycling gate fees and the introduction of Council's Activity Cost Attribution and Distribution of Governance Policy.

Table 11 Waste management and resource recovery options – breakdown of individual services

Aspect	Short listed options	BAU	S1	S2	S3	S4	S5
Contract	<ul style="list-style-type: none"> Former QCC contract collection services to a private contractor Former Palarang provide collection services in house 	✓	✓	✓	✓	✓	✓
	Undertake an analysis of the two collection providers to determine the best value provider (in-house or private) collection		✓	✓	✓	✓	✓
Collection	MSW kerbside collection (urban) <ul style="list-style-type: none"> Former QCC residents have a residual, recyclables and GO kerbside bin. Some areas of the former Palarang LGA have kerbside collection comprising a combination of residual, recyclables and FOGO collections. 	✓	✓	✓	✓	✓	✓
	MSW collection (rural) <ul style="list-style-type: none"> Former QCC Not applicable Former Palarang provide rural recycling stations, bin compounds (for landfill & recyclables) and drop off at WTS for residents 						
	Purchase and staff new collection trucks as necessary as the area grows	✓	✓	✓	✓	✓	✓
	Expansion of the QCC GO collection to include FO				✓		✓
	Develop and/or implement a bin contamination policy which can revoke recycling services where there is serious and continuous contamination		✓	✓	✓		✓
Disposal	Dispose of residual waste at Woodlawn by road for QPRC LGA		✓	✓	✓	✓	✓
Council Facilities	Rehabilitate Bungendore, Braidwood, Majors Creek and Araluen Landfills	✓	✓	✓	✓	✓	✓
	Close and rehabilitate Nerriga Landfill	✓	✓	✓	✓	✓	✓
	Maintain and operate existing waste facilities	✓	✓	✓	✓	✓	✓
	Monitor and maintain closed landfills	✓	✓	✓	✓	✓	✓
	Construct and operate of a centralised organics composting facility (FOGO) to service the whole LGA				✓		✓
	Rehabilitate and close existing composting site at Oaks Estate following the construction of a new GO/FOGO facility				✓		✓
	Design and construct a replacement facility for Nerriga and surrounding localities	✓	✓	✓	✓	✓	✓
	Upgrade bin compounds at Majors Creek and Araluen with concrete pads, security fencing and cameras		✓	✓	✓	✓	✓
C&I	Former QCC provide C&I waste collection services via a private contractor	✓	✓	✓	✓	✓	✓
	Former Palarang provide C&I collection services in house						
C&D	Former QCC - ACT facilities (no cost to Council)	✓	✓	✓	✓	✓	✓
	Former Palarang - C&D disposal (drop off) at the Bungendore WTS for a gate fee. Materials are sorted for recycling/disposal						
	Undertake an analysis of the business case to construct and operate a C&D MRF in the LGA					✓	✓

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Aspect	Short listed options	BAU	S1	S2	S3	S4	S5
Education and resources	Undertake regular bin audits to ascertain current generation rates, contamination rates and problem areas. Results to be incorporated into education programs	✓	✓	✓	✓	✓	✓
	Hire an additional staff member to operate the Braidwood WTS	✓	✓	✓	✓	✓	✓
	Prepare and implement a Community Waste Education Strategy covering schools, general public, business/industry, and fund initiatives identified in the strategy		✓	✓	✓	✓	✓
	Hire a dedicated Waste Officer to implement education and engagement program		✓	✓	✓	✓	✓
	Implement an education and routine inspection program to reduce contamination rates in kerbside collection		✓	✓	✓		✓
	Hire additional staff to undertake litter collection activities in the LGA and cover illness/leave in collection and facilities areas		✓				✓
	Expand the ACTSmart or BinTrim business waste education programs to cover the entire LGA			✓		✓	✓
	Undertake waste audits at QPRC waste facilities to identify waste generation and composition of self-haul materials		✓	✓	✓	✓	✓
	Conduct a bin audit of C&I customers in LGA to determine approximate volume of waste generated by sector and recycling rates. Following audit, develop and implement program to increase diversion					✓	
	Improve digital media which provides information on the QPRC waste services available to the community		✓	✓	✓	✓	✓
Bulky waste	Former QCC - two kerbside clean-ups per financial year for SUDs, or two collections on set dates for MUDs and rural areas Former Palarang - No bulky waste collection provided. Self-haul to WTS available to residents	✓		✓	✓	✓	
	Cease provision of bulky waste collection service to LGA. Provide a voucher system to pensioners to have discounted collection from their household. Remaining residents are given access to a free self-haul (i.e. voucher) to an existing RRC – 1 or 2 per property with similar arrangements in terms of size/volume as collections (say 1 trailer load) All areas pay General Waste Charge		✓				✓
Problem Waste	Drop off for various problem wastes provided by former QCC and former Palarang Councils, including chemical waste clean-out, mattress drop off at Bungendore and collection by Soft Landing, tyres, e-waste, fluorescent tubes	✓	✓	✓	✓	✓	✓
	Improvements to and expansion of Council's litter management programs		✓	✓			✓
	Recruit an additional illegal dumping officer to monitor, investigate and prosecute illegal dumping activities		✓	✓			✓
Public	Bins provided in public areas with the contents taken to landfill	✓	✓	✓	✓	✓	✓
Other	Modifications to the Bungendore WTS to improve efficiencies with design and operation / staffing		✓	✓	✓	✓	✓
	Develop and implement an online booking and payment portal for waste related activities e.g. tours, kerbside clean-ups, missed collections		✓	✓	✓	✓	✓

6.2 Council Funding

Council has a number of different fees and charges which are applicable depending on the location of the property and the kind of kerbside collection service they receive. The following sections provide an overview of the charges reviewed in preparation of the QPRC Waste Strategy.

6.2.1 Domestic Waste Management Charge

In accordance with Section 496 of the *Local Government Act*, Council must make and levy an annual charge for the provision of domestic waste management services for each parcel of rateable land for which the service is available, referred to below as the Domestic Waste Management charge.

Domestic Waste Management charges are applied to residents with a kerbside waste collection. A summary of the Domestic Waste Management charge types is shown in Table 12. The Domestic Waste Management charge for dwellings which request additional bins or larger sized bins has not been modelled. The full Revenue Policy is available from Council's website.

Table 12 QPRC Domestic Waste Management Charge Types 2018-19

	Type	Description
Former Queanbeyan	DW1	Individual Servicing (Domestic Waste 140L waste bin, 240L recycling and 240L green waste)
	DW7 DW8	Shared Servicing - Where Bins Are Shared by Two or More Units at Those Premises
	DW10	Vacant Domestic Waste Charge (i.e. properties without a dwelling)
	DW11	Rural Waste Availability Charge - Where a rural domestic waste collection service is available but not used by the customer, that customer will be charged a single 'rural waste availability charge'.
	DW15 DW17	Rural Domestic Waste Collection Service
Former Palerang	DWP1	Domestic Waste Urban (140L Residual, 240L recycling, 240L green waste)
	DWP4	Domestic Waste Rural (240L)
	DWP6	Domestic Waste Rural – Bin compound (240L)
	DWP8	240L Recycling Bin collected fortnightly
	DWP12	Vacant Land (urban)

**Note: Service categories which include an additional bin or larger sized bins have not been modelled, including DW2, DW3-6, DW9, DW12-14, DW21, DW22, DWP3, DWP5, DWP7, DWP9, DWP10, DWP11 and DWP14-23.*

The Domestic Waste Management charge covers the costs associated with management of residential waste as provided in Table 13.

Recommendation: Combine the two Domestic Waste Management funds into a single fund covering all domestic waste services.

6.2.2 Council Working Fund General Waste Charge

The majority of residents and businesses in the rural and urban areas of the former Palerang LGA pay the General Waste Charge. This charge funds the following components of Council's waste management activities listed in Table 13.

Table 13 General Waste Charge and Domestic Waste Management capital and operating costs

General Waste Charge Costs	Domestic Waste Management Costs
Litter Management	Vehicle operational and maintenance costs, including purchase of new garbage trucks as required
Wages of operational and management staff	Preparation and implementation of an Education Strategy
Monitor / maintain closed landfills	Review of collections contracts
Education activities	Education activities
Community Events	Bulky waste servicing
Problem waste management	Waste collection
Public waste management	Gate fee at QPRC waste facilities (paid to the General Waste Charge). The Gate Fee is calculated based on the costs highlighted
Corporate overheads	Corporate overheads
Rehabilitation of closed landfills	
Design and construction costs for new facilities and upgrades / improvements to existing facilities	
Preparing the QPRC Waste Strategy	
Conducting waste audits	
Loan repayments	
Operational and maintenance costs of council waste facilities: <ul style="list-style-type: none"> Bungendore WAMI FOGO Plant (as required) Education Facility (as required) 	
**Operational and maintenance costs of council waste facilities: <ul style="list-style-type: none"> Braidwood Captains Flat Macs Reef Nerriga Landfill / WTS 	

Recommendation: Expand the General Waste Charge to cover all QPRC residential properties and non-business properties and move all costs and assets related to waste (other than domestic or business waste) to the General Waste Charge.

6.2.3 Landfills Charge (former Palerang LGA)

Any property issued with a landfill pass within the former Palerang LGA pays the Landfill Charge. This charge covers the cost of disposing of waste at landfills within the former Palerang LGA, for those rural residents who don't receive a kerbside collection service. This cost is separated from the General Waste Charge following a ruling by the Australian Taxation Office.

The Landfill Charge is \$52 for the 2018/19 financial year. Following the closure of Braidwood landfill, this cost can now be removed.

Recommendation: Cease charging the Landfills Charge on all properties in the former Palerang LGA

6.2.4 Business Waste Management Charge (former QCC LGA)

Council recognises that many businesses operate private waste removal services because of the nature of their manufacturing or business processes. In these premises Council's waste service is not required. However, Council incurs costs in the administration and provision of the waste and recycling bins in business premises. As a result, Council imposes a mandatory charge for businesses in the former QCC LGA for the availability of the service and an optional charge if the owner chooses to have a waste or recycling bin collected from the premises. The business waste management charge covers the following costs:

- Access to the ACTSmart business and office recycling program
- Loan repayments
- Insurance
- Depreciation
- Wages
- Overheads
- Vehicles costs
- Waste Contracts
- Purchase of bins and other assets

Recommendation: Expand the Business Waste Management Charge to all properties rated as business in the LGA.

The volume and type of waste streams generated in businesses is hard to generalise. As such, it is difficult to determine reasonable assumptions for waste disposal costs in the model. In addition, the current practice of discounting waste disposal for businesses through the Palerang GWC results in businesses and residential properties subsidising waste disposal by larger waste-producing businesses. Discounting waste disposal for businesses also distorts recycling markets and results in reduced waste diversion from landfill.

As such, it is recommended that discounted disposal of waste generated by businesses in the LGA is discontinued and the overall BWC fee be amended to reflect this.

Recommendation: Cease discounting waste disposal for business and commercial waste

6.3 Modelling Methodology and Assumptions

In order for Council to understand the financial impacts of the waste management scenarios which might be implemented across the LGA, a financial model was prepared which looks at capital and operating costs anticipated by Council over the next 30 years. The financial model has been used to assess the impacts of each scenario to the Council, and the residential waste charges required to offset the cost of operation and disposal of waste.

The following assumptions were made in the model:

Table 14 Modelling Assumptions

Costs	Assumptions
General Waste Charge and Business Waste Management	The General Waste Charge is payable by all dwellings in QPRC LGA
	The annual charge is based on the 2019 rate plus CPI for each year + a set cash reserve value of \$200,000 for each year (General Waste Charge) and \$25,000 for Business Waste Management. To reflect the higher input costs associated with Scenarios 3 and 5, an additional 0.8% increase has been placed on top of the CPI.
Domestic Waste Management	Domestic Waste Management Charge is assumed to increase by 4% ¹² per year to cover costs each year
	The Domestic Waste Management pays a gate fee to the General Waste Charge for management and disposal of waste, recycling and organics (as provide in Table 13)
	Council Domestic Waste Management types have been defined to incorporate all QPRC residents i.e. they are no longer Former QCC and Former Palerang types
	All alternative scenarios have kerbside waste disposed at Woodlawn via Bungendore WTS
General	The modelling undertaken assumes that the Landfill Charge is no longer applicable
	Includes 18% distribution and attribution on all operational costs
	Includes 4% capital works project fee – fund Projects and Contracts Unit (excluding business charges)
	CPI at 2% - low point of RBA target range
	Costs per year are nominal
	Costs are based on 2018/19 dollars
	General waste fund includes provision for debt servicing for new Council building

6.4 Modelling Results

The following section provides the results of the modelling for each scenario for:

- Waste diversion, refer to Table 15
- Cost to Domestic Waste Management Charge, refer to Table 16
- Cost to General Waste Charge, refer to Table 17
- Cost to Business Waste Management Charge, refer to Table 18

¹² The 4% increase is required to cover the increased costs for the provision of waste management services across the LGA. If this percentage increase is reduced the Council will not have sufficient funds available to service the QPRC communities waste services.

6.4.1 Waste Diversion

Table 15 Waste Diversion

	BAU	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
Diversion Rate - 2019	47%					
Diversion Rate - 2029	45%	54%	53%	62%	53%	63%
Diversion Rate - 2050	45%	54%	53%	63%	53%	63%

6.4.2 Domestic Waste Management Charge

The Domestic Waste Management Charge in 2020/21 is provided below in comparison to the previous charge included in the QPRC Revenue Policy 2019/2020. The BAU cost is greater than the cost currently included in the QPRC Revenue Policy as previously discussed. It is assumed to increase by 4% per year to cover costs each year.

Table 16 Domestic Waste Charge 2020/21

Domestic Waste Management Code	Domestic Waste Management Charge 2020/21*	Domestic Waste Charge 2020/2021						
		New QPRC Domestic Waste Management Code	BAU	S1	S2	S3	S4	S5
DWP1	\$385	Urban - SUD - 3 Bin	\$334	\$310	\$304	\$315	\$295	\$326
DW1	\$328							
DWP4	\$311	Rural - SUD - 2 Bin	\$218	\$180	\$190	\$170	\$184	\$164
DW15	\$355							
DW17	\$181	Rural - SUD - 1 Bin	\$97	\$86	\$87	\$82	\$85	\$83
DWP8	\$108							
DWP12	\$26	Vacant - Urban & Rural	\$28	\$28	\$28	\$28	\$28	\$28
DW10	\$26							
DW8	\$328	Urban - MUD - 3 Bin	\$334	\$310	\$304	\$315	\$295	\$326
DWP6	\$234	Rural - SUD - Bin Compound	\$208	\$170	\$180	\$160	\$174	\$154
DW7	\$299	Urban - MUD - 2 Bin	\$253	\$213	\$224	\$205	\$219	\$197
DW11	\$48	Moved to General Waste Charge	-	-	-	-	-	-

6.4.3 Council General Waste Charge

The General Waste Charge in 2020/21 is provided below in comparison to the charge included in the QPRC Revenue Policy 2019/20. The charge per dwelling reduces significantly because the Revenue Policy was based on only Former Palerang residents (7,938 dwellings) paying the charge. In the Strategy moving forward the General Waste Charge would be paid by all QPRC residents (27,729 dwellings) resulting in distribution of costs across the LGA. All QPRC residents would have access to the QPRC operated waste facilities.

Table 17 General Waste Charge 2020/21

	General Waste Charge 2020/2021*	General Waste Charge 2020/2021					
		BAU	S1	S2	S3	S4	S5
Former Palerang	\$375-\$416	\$143	\$198	\$176	\$196	\$175	\$227
Former Queanbeyan	\$0						

6.4.4 Business Waste Management Charge

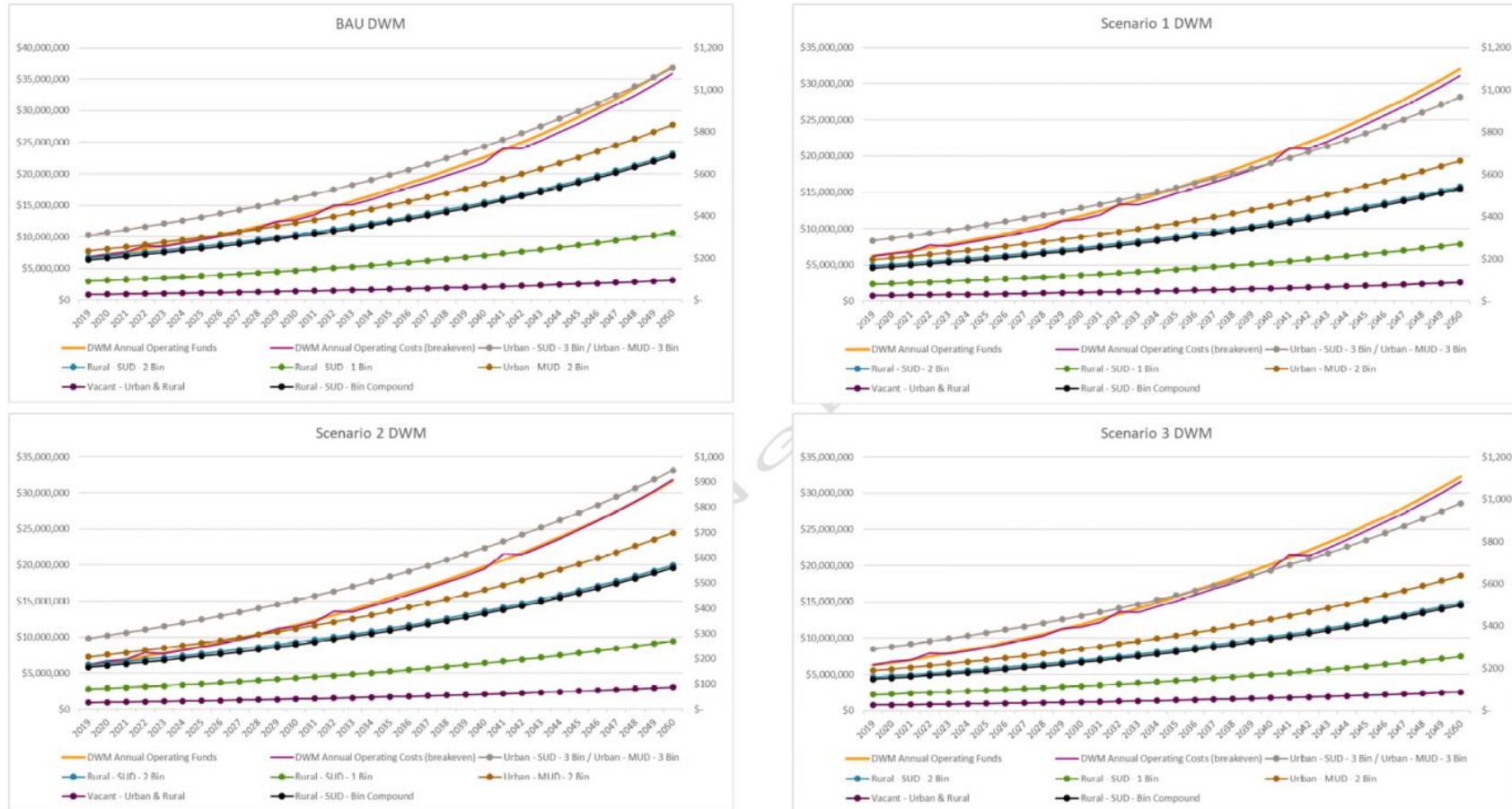
The Business Waste Charges in 2020/21 are provided below in comparison to the charge included in the QPRC Revenue Policy 2019/20. In the Strategy moving forward the Business Waste Availability Charge would be paid by all QPRC businesses resulting in distribution of costs across the LGA.

Charges have been modelled assuming CPI increase each year for services.

Table 18 General Waste Charge 2020/2021

	QPRC Revenue Policy Business Waste Management Charge 2020/2021	Business Waste Management Charge 2020/21					
		BAU	S1	S2	S3	S4	S5
Red Bin (Residual)	\$255	\$169	\$141	\$142	\$133	\$138	\$135
Yellow Bin (Recycling)	\$92	\$131	\$103	\$103	\$94	\$99	\$97
Green Bin (GO)	\$92	\$109	\$95	\$95	\$90	\$93	\$92
Availability Charge	\$94	\$78	\$137	\$137	\$137	\$137	\$137

Figure 7 Domestic Waste Management Annual Funds, Cost, Charge and Cash Reserve



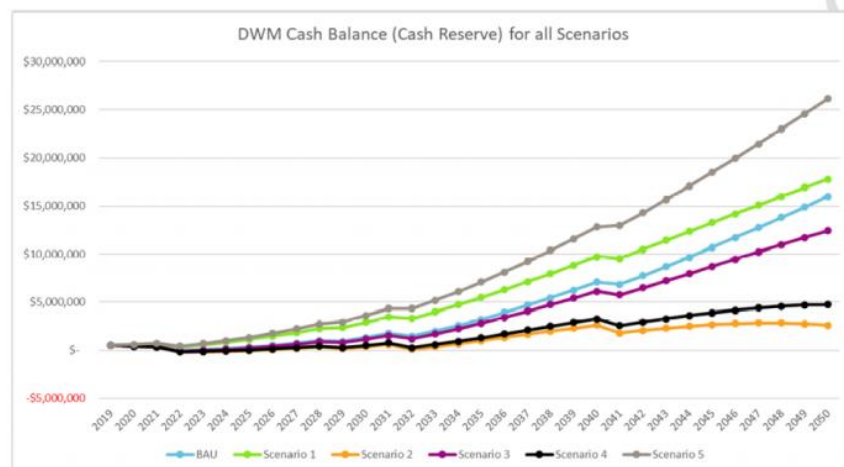
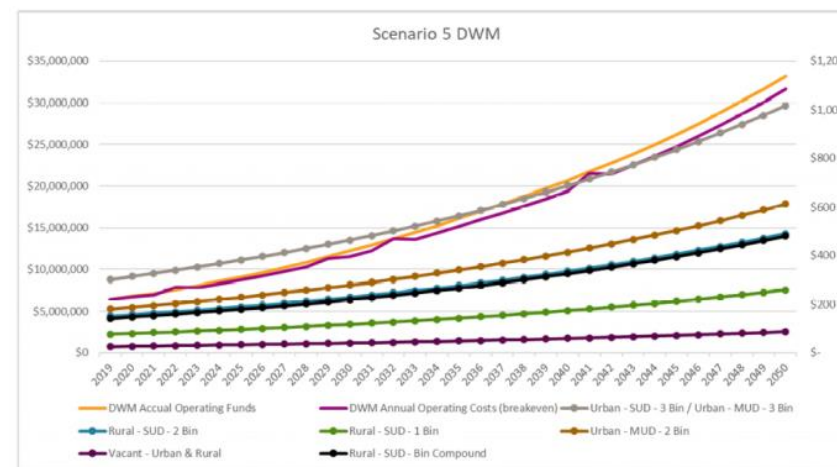
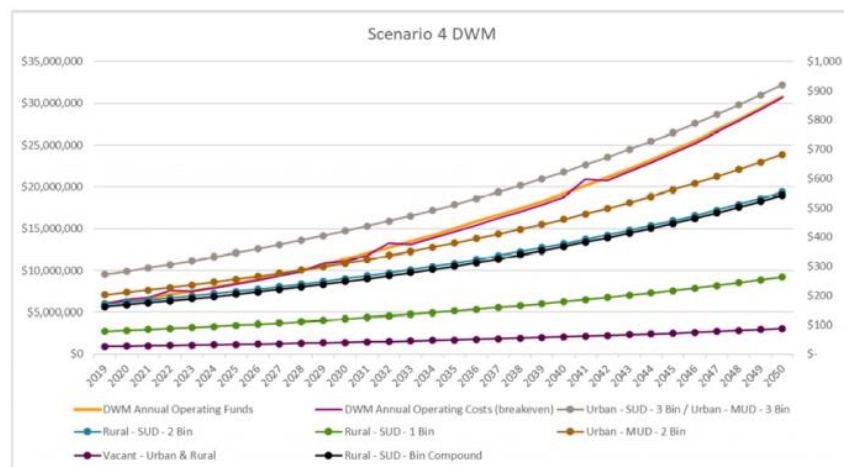
5.1 Adoption of QPRC Waste Strategy

Attachment 2 - Draft Waste Strategy (Continued)

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38



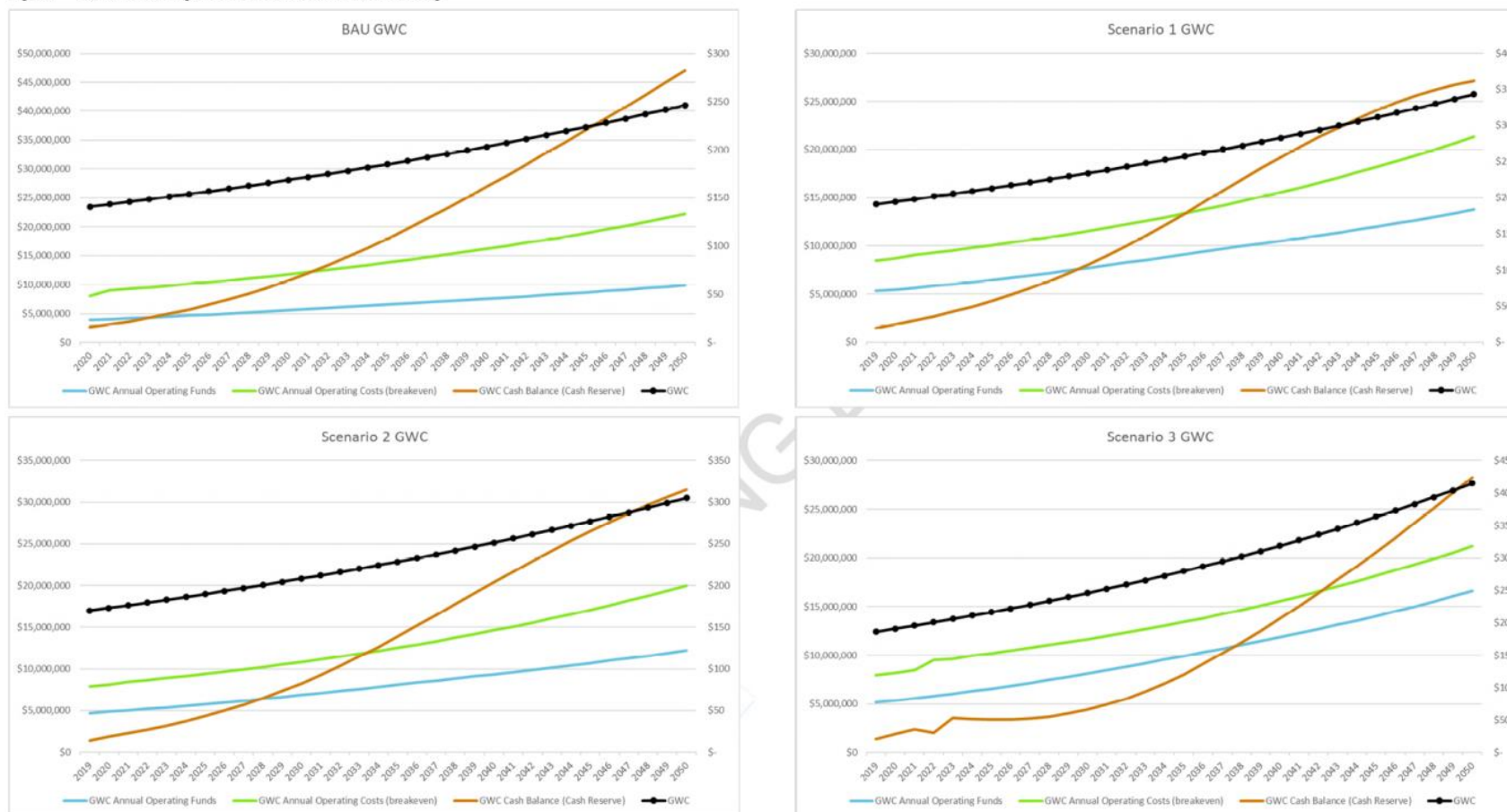
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39

Figure 8 General Waste Charge Annual Funds, Cost, Cash Balance and Charge



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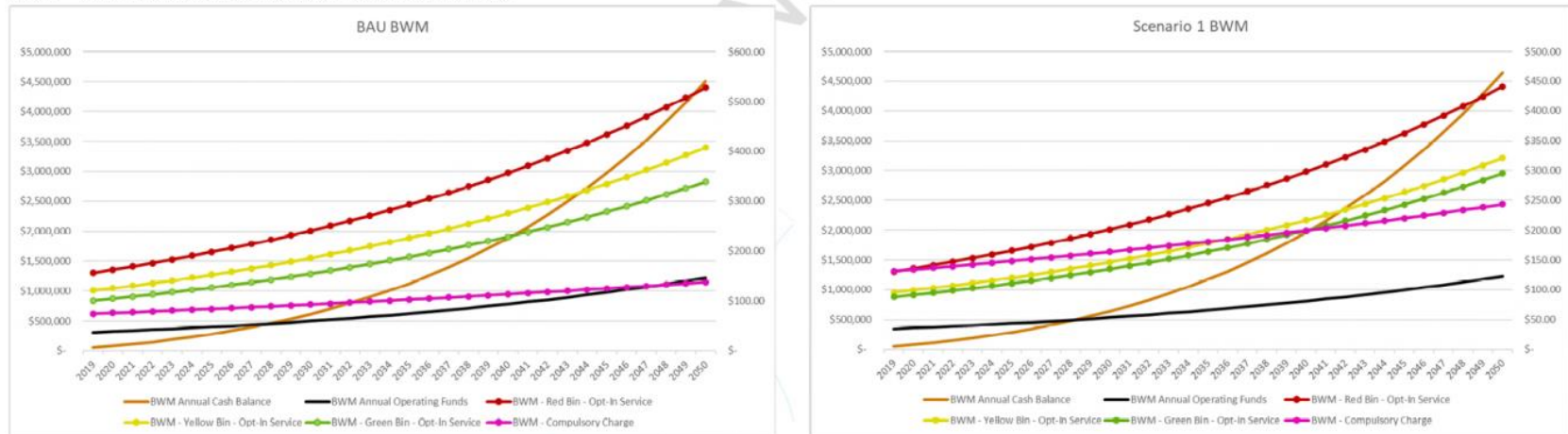
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40



Figure 9 Business Waste Management Charge Annual Cost, Cash Balance and Charges



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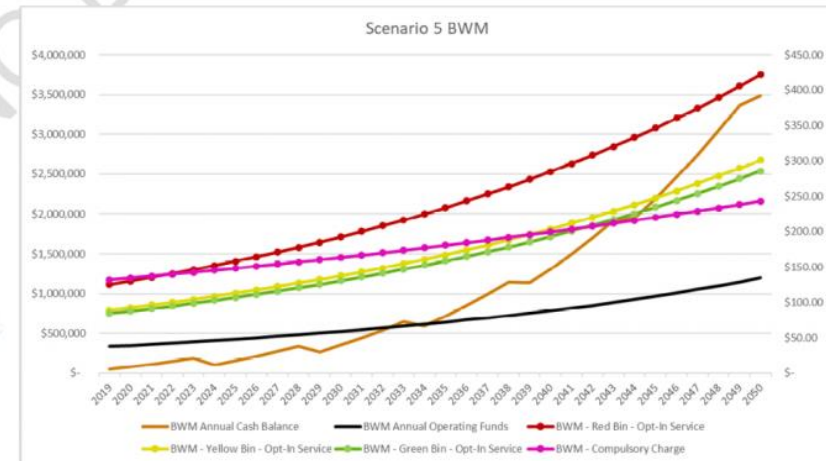
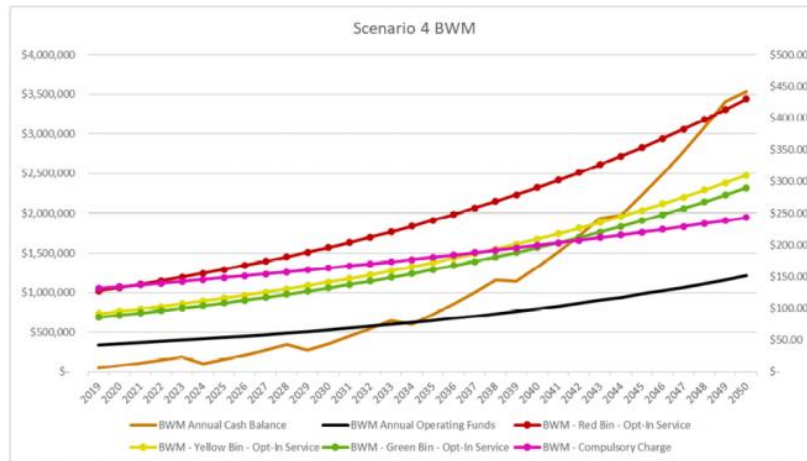
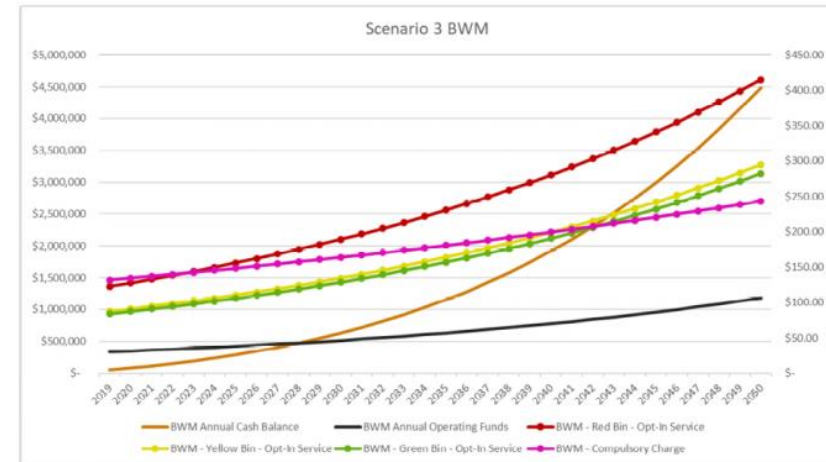
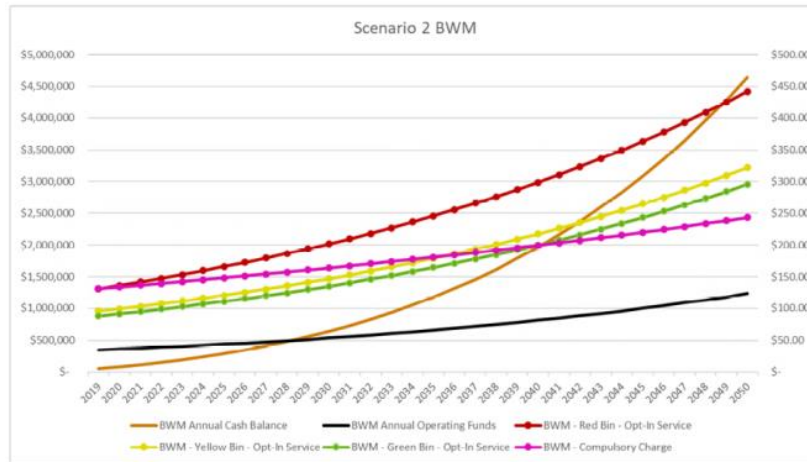
5.1 Adoption of QPRC Waste Strategy

Attachment 2 - Draft Waste Strategy (Continued)

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41



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6.4.5 Net Present Value

NPV of each scenario over 30 years was modelled to review if the Domestic Waste Management Charge and General Waste Charge would provide a positive NPV and therefore cover capital and operating costs and build reserve over time for asset replacement and continuous investment. As shown below in Table 19 with the Domestic Waste Management charge and General Waste Charge provide in Table 16 and Table 17, respectively, are positive.

Table 19 Net Present Value over 30 years

Scenario	Domestic Waste Management Revenue	Domestic Waste Management Cashflow	General Waste Charge Revenue	General Waste Charge Cashflow
BAU	\$130 M	\$2.2 M	\$54 M	\$10.8 M
Scenario 1	\$116 M	\$3.2 M	\$75 M	\$7.1 M
Scenario 2	\$115 M	\$0.2 M	\$67 M	\$7.7 M
Scenario 3	\$117 M	\$1.7 M	\$80 M	\$5.5 M
Scenario 4	\$112 M	\$0.5 M	\$67 M	\$7.6 M
Scenario 5	\$121 M	\$4.5 M	\$93 M	\$5.8 M

7 Recommended Waste Management Strategy

To facilitate discussion, Council staff and consultants are recommending that Scenario 3 be adopted with some minor modifications. The recommendation is based on the modelled waste diversion rates, the financial model and the operational issues. Additional actions have been included where necessary to assist with understanding of interim arrangements or to make the overall strategy clear.

The options shown in Table 20 have been modified or removed from the recommended scenario.

Table 20 Options amended or modified in the Recommended Scenario

Option	Change	Reason for Change
Former QCC - two kerbside clean-ups per financial year for SUDs, or two collections on set dates for MUDs and rural areas Former Palerang - No bulky waste collection provided. Self-haul to WTS available to residents	Amended	To deliver a more simple fee structure, the service will be rolled out to all properties provided with an Urban – SUD – 3 Bin or Urban – MUD – 3 Bin

7.1.1 Why this scenario?

Scenario 3 has been recommended for the following reasons:

- It delivers the equal highest waste diversion over the life of the Strategy
- It balances costs to residents with delivering diversion targets
- It provides an equitable solution for all residents and businesses in the LGA
- It provides all residents with access to all QPRC waste facilities and reduced gate fees at our waste facilities
- It provides sufficient resources and funding to enable the identified actions to be undertaken

7.1.2 Domestic Waste Management

The strategy for domestic waste management is outlined below in Table 21. The 2021/22 charges are shown in Table 22

Table 21 Recommended Scenario – Domestic Waste Management Actions and Timeframe

Number	Aspect	Action	What problem is this solving?	Priority
DWM1.	Funding	Amalgamate the two existing Domestic Waste Management Funds into one fund	Separate funds resulting from Council amalgamations	High
DWM2.		Maintain a minimum \$500,000 in the Domestic Waste Management Fund reserve to act as a buffer for future price shocks	Volatility in markets	On-going
DWM3.		Transfer remaining cash into the General Waste Management Fund to fund future works	Separate funds resulting from Council amalgamations	High
DWM4.		Levy a Domestic Waste Management charge in accordance with the adopted model	On-going funding of operations	On-going
DWM5.	Collection Contract	Continue the current DWM collection arrangements until an analysis of the two collection providers is completed to determine the best value (in-house or private) collection method	Determines the best-value solution for future contracts	High
DWM6.	Collections	Maintain the current gazetted DWM zone extents	Confirms DWM collection zones	N/A
DWM7.		Prepare a policy on collection from properties located on existing routes used by collection vehicles travelling between collection zones (for example, between Bungendore and Captains Flat)	Improves the existing ad-hoc arrangements in place in rural areas of the LGA	Medium
DWM8.		Once the policy is complete, introduce an optional collection zone along existing routes used by collection vehicles travelling between collection zones (for example, between Bungendore and Captains Flat)	Improves the existing ad-hoc arrangements in place in rural areas of the LGA	Medium
DWM9.		Maintain the current waste collection types in each zone, excluding matters covered in DWM8.	Confirms DWM waste collection types	N/A
DWM10.		Expand the Food Organics and Garden Organics collection to the urban areas of Queanbeyan (including Googong and Jerrabomberra) once an appropriate processing facility is completed	Low diversion of food waste	High
DWM11.		Develop and implement a bin contamination policy that permits removal of services for on-going/serious contamination	Recycling and FOGO contamination rates	High
DWM12.		Purchase and staff new collection trucks as necessary as the area grows (subject to the outcome of the DWM5)	Safe provision of collection services	Low
DWM13.		Liaise with Council's Planning sections about on-going review of the Development Control Plans related to multi-unit developments and mixed use developments	Safe provision of collection services	Medium
DWM14.	MUD and Mixed Use Developments	At mixed use properties where it is not possible to keep commercial and residential waste separate, require the property to arrange their own waste collection and charge a "Mixed Use" rate, which will be the same as a residential vacant land charge (per rateable property)	Effective provision of collection services	Medium

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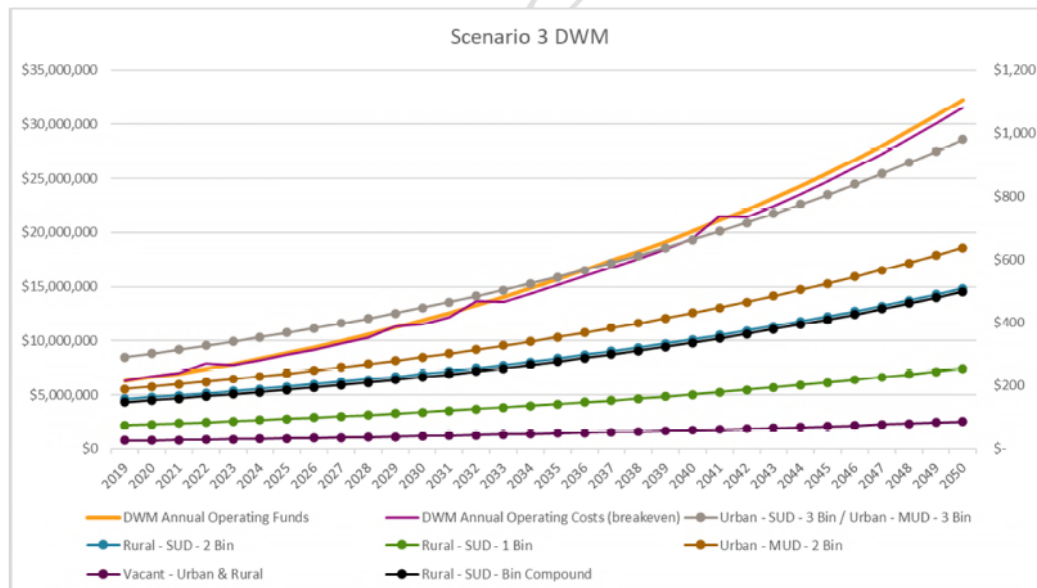
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Number	Aspect	Action	What problem is this solving?	Priority
DWM15.	Waste Disposal	Continue to use Hume Materials Recovery Facility for commingled recyclables collected by both Council and Contractor-operated collection vehicles until a new contract is prepared and awarded	Appropriate disposal of collected waste	N/A
DWM16.		Continue to use Bungendore Resource Recovery Facility for residual waste from areas serviced by Council-operated collection vehicles	Appropriate disposal of collected waste	N/A
DWM17.		Continue to use Mugga Lane for residual waste from areas serviced by Contractor-operated collection vehicles until Bungendore Resource Recovery Facility is upgraded	Appropriate disposal of collected waste	N/A
DWM18.		Once Bungendore Resource Recovery Facility is upgraded, and subject to satisfactory contractual arrangements, use Bungendore Resource Recovery Facility for residual waste from areas serviced by Contractor-operated collection vehicles	Appropriate disposal of collected waste	Following facility upgrade
DWM19.		Continue to use Bungendore Resource Recovery Facility for FOGO waste from areas serviced by Council-operated collection vehicles	Appropriate disposal of collected waste	N/A
DWM20.		Continue to use WAMI for collected GO waste from areas serviced by Contractor-operated collection vehicles until Bungendore Resource Recovery Facility is upgraded	Appropriate disposal of collected waste	N/A
DWM21.		Once a new FOGO facility is constructed, divert all FOGO collections to the new facility	Appropriate disposal of collected waste	Following facility upgrade
DWM22.	Education	Hire a dedicated Waste Officer to implement education and engagement program (Shared with Error! Reference source not found. and BWM12)	Insufficient resources to undertake tasks identified in the Strategy	High
DWM23.		Develop and implement a routine bin inspection program to reduce contamination rates in kerbside collection. (Shared with Error! Reference source not found. and BWM13)	Recycling / FOGO contamination rates, ad-hoc education activities and closing data gaps	High
DWM24.		Undertake regular bin audits to ascertain current generation rates, contamination rates and problem areas. Results to be incorporated into education programs	Recycling and FOGO contamination rates and closing data gaps	High
DWM25.		Improve digital media which provides information on the QPRC waste services available to the community (Shared with Error! Reference source not found. and BWM14)	Ad-hoc education activities	Medium
DWM26.		Prepare and implement a Community Waste Education Strategy covering schools, general public, business/industry, and initiatives identified in the strategy. (Shared with Error! Reference source not found. and BWM15)	Ad-hoc education activities	High
DWM27.	Bulky Waste	Expand the existing bulky waste collection to all properties provided with an an Urban – SUD – 3 Bin, Urban – MUD – 3 Bin or Urban – MUD – 2 Bin service.	Managing bulky waste collections	Medium
DWM28.		Cease the bulky waste collection program (including rural collections) for all other properties	Managing bulky waste collections	High
	Shared costs/resources with DWM, GWM			

Table 22 Recommended Scenario – Domestic Waste Management Annual Charges

Domestic Waste Management Code	Domestic Waste Management Charge 2019/2020*	Domestic Waste Charge 2020/2021		
		New QPRC Domestic Waste Management Code	BAU	S3
DWP1	\$385	Urban - SUD - 3 Bin	\$334	\$315
DW1	\$328			
DWP4	\$311	Rural - SUD - 2 Bin	\$218	\$170
DW15	\$355			
DW17	\$181	Rural - SUD - 1 Bin	\$97	\$82
DWP8	\$108			
DWP12	\$26	Vacant - Urban & Rural	\$28	\$28
DW10	\$26			
DW8	\$328	Urban - MUD - 3 Bin	\$334	\$315
DWP6	\$234	Rural - SUD - Bin Compound	\$208	\$160
DW7	\$299	Urban - MUD - 2 Bin	\$253	\$205
DW11	\$48	Moved to General Waste Charge		-
Not Applicable	Note Applicable	Mixed-Use – No Service	As per Vacant Rate	

Figure 10 Recommended Scenario - Domestic Waste Management Charge



7.1.3 General Waste Management

The strategy for general waste management is outlined below in Table 23. The 2021/22 charges are shown in Table 24.

The charge will be levied on all properties and businesses in the LGA.

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Table 23 Recommended Scenario – General Waste Management Annual Charges Actions and Timeframe

Number	Aspect	Action	What problem is this solving?	Priority
GWM1.	Funding	Create and maintain an internally restricted General Waste fund	Creates a transparent fund to provide certainty to ratepayers that income is being used for the agreed purpose	High
GWM2.		Levy a General Waste Management charge to all residential and non-commercial properties within the LGA	Confirms extent of GWM zone and provides on-going funding	On-going
GWM3.		Remove the 50% rebate for all properties that pay the General Waste Charge	Equity of the user pays model	On-going
GWM4.		Cease providing refunds to residents using Collector and Tarago waste facilities operated by neighbouring properties	Equity of the user pays model	High
GWM5.		Move all costs and income related to Council operated waste facilities to the General Waste Fund	Improves tracking of income and expenditure and provides certainty to ratepayers that income is being used for the agreed purpose	High
GWM6.		Maintain a minimum \$1,000,000 in the General Waste Management Fund reserve to act as a buffer for future price shocks and changes in regulatory requirements	Volatility of markets and regulatory changes	On-going
GWM7.	Facilities	Maintain and operate existing waste facilities including the current opening hours and accepted wastes unless specifically noted elsewhere in this strategy	Provides certainty for residents of the operations of waste facilities	On-going
GWM8.		Consolidate the Bungendore RRF as the primary waste management facility in the LGA	Efficiency of operations at facilities and safety of facility users	On-going
GWM9.		Continue to operate the Community Recycling Centres at Queanbeyan WAMI and Bungendore RRF	Provides certainty for residents of the operations of waste facilities	On-going
GWM10.		Reduce the public operating hours of the Queanbeyan WAMI to 4 days per week	Efficiency of operations at facilities and safety of facility users	On-going
GWM11.		Modify the Bungendore RRF to improve management of the site	Efficiency of operations at facilities and safety of facility users	High
GWM12.		Investigate the feasibility of a Council owned and operated centralised FOGO facility for the processing and treatment of all FOGO and GO materials received in the LGA. Relocate two staff from the Queanbeyan WAMI to the new facility.	Appropriate disposal of collected waste	High
GWM13.		Consult with the Nerriga community regarding their preferred replacement waste facility – either a staffed small waste	Improved regulatory and environmental outcomes	High

Number	Aspect	Action	What problem is this solving?	Priority
		transfer station similar to Macs Reef WTS or an unstaffed bin compound with access control		
GWM14.		Design and construct a replacement facility for Nerriga and surrounding localities based on the outcome of Error! Reference source not found.	Improved regulatory and environmental outcomes	High
GWM15.		Upgrade bin compound at Majors Creek	Improved regulatory and environmental outcomes	High
GWM16.		Upgrade bin compound at Araluen	Improved regulatory and environmental outcomes	High
GWM17.		Cease collection of GO at Araluen Bin Compound	Not operating in accordance with regulatory requirements	High
GWM18.		Cease collection of GO at Majors Creek Bin Compound	Not operating in accordance with regulatory requirements	High
GWM19.		Routinely monitor usage/patronage at facilities to review their on-going viability and that they are delivering value for money for ratepayers	Efficiency of operations at facilities and safety of facility users	On-going
GWM20.	Waste Facility Rehabilitation	Rehabilitate and close existing composting site at Oaks Estate following the construction of a new GO/FOGO facility. Existing staff to be divided between replacement FOGO facility and WAMI.	Environmental management and regulatory compliance	Medium
GWM21.		Rehabilitate Bungendore Landfill	Environmental management and regulatory compliance	High
GWM22.		Rehabilitate Braidwood Landfill	Environmental management and regulatory compliance	High
GWM23.		Rehabilitate Majors Creek Landfill	Environmental management and regulatory compliance	Medium
GWM24.		Rehabilitate Araluen Landfill	Environmental management and regulatory compliance	Medium
GWM25.		Close and rehabilitate Nerriga Landfill following the construction of a new facility in Nerriga	Environmental management and regulatory compliance	High
GWM26.		Monitor and maintain closed landfills	Environmental management and regulatory compliance	On-going
GWM27.	Operations	Provide all properties that pay the General Waste Charge with a "General Waste Card" as part of their rates notice	Ensuring only eligible people/businesses have accesses to the subsidised waste disposal rates	On-going

Number	Aspect	Action	What problem is this solving?	Priority
GWM28.		Cease free waste disposal at Council waste facilities on Clean Up Australia Day unless waste is generated from a registered Clean Up Australia Day event	Supports the original intention of the Clean Up Australia Day	High
GWM29.		Undertake waste audits at QPRC waste facilities to identify waste generation and composition of self-haul materials.	Improves data and knowledge of waste streams	Medium
GWM30.		Following engagement of staff identified in Error! Reference source not found. , expand Council's litter management programs to cover the entire LGA	Environmental management and regulatory compliance	Medium
GWM31.	Disposal	Prepare and award a Tender for the disposal of residual waste delivered to Council waste facilities	Procurement not currently in compliance with the Local Government Act	High
GWM32.		Prepare and award a Tender for the disposal of commingled recyclables delivered to Council waste facilities	Procurement not currently in compliance with the Local Government Act	High
GWM33.		Once new FOGO facility is completed, deliver all FOGO and GO waste to centralised facility for processing and treatment	Appropriate disposal of collected waste	High
GWM34.	Staffing	Hire one additional full time equivalent (FTE) to assist operations at Braidwood WTS	Insufficient resources to undertake tasks identified in the Strategy	High
GWM35.		Hire two additional FTE to undertake litter collection activities in the LGA and cover illness/leave in collection and facilities areas.	Insufficient resources to undertake tasks identified in the Strategy	High
GWM36.	Public Bins	Continue to place and service litter bins in public areas	Appropriate provision of services	On-going
GWM37.		Due to ongoing contamination issues, only provide residual waste bins in public areas	Recycling contamination rates	On-going
GWM38.		Undertake regular bin audits of public bins to ascertain current generation rates and materials composition.	Recycling contamination rates	On-going
GWM39.	Education	Hire a dedicated Waste Officer to implement education and engagement program (combined with DWM22 and BWM12)	Insufficient resources to undertake tasks identified in the Strategy	High
GWM40.		Develop an education and routine inspection program to reduce contamination rates at waste facilities. (Shared with DWM23 and BWM13)	Recycling and FOGO contamination rates, ad-hoc education activities and closing data gaps	High
GWM41.		Improve digital media which provides information on the QPRC waste services available to the community (Shared with DWM25 and BWM14)	Ad-hoc education activities	Medium
GWM42.		Prepare and implement a Community Waste Education Strategy covering schools, general public, business/industry,	Ad-hoc education activities	High

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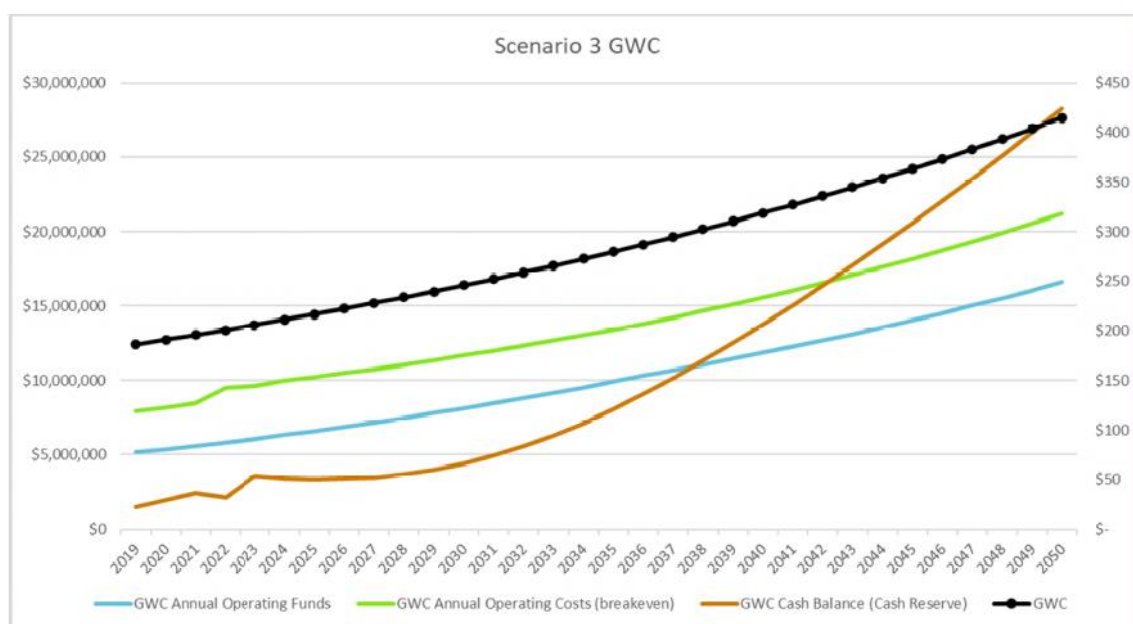
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Number	Aspect	Action	What problem is this solving?	Priority
		and initiatives identified in the strategy. (Shared with DWM26 and BWM15)		
GWM43.	General	Develop and implement an online booking and payment portal for waste related activities	Inefficiencies in processes	High
	Shared costs/resources with DWM and GWM			

Table 24 Recommended Scenario – General Waste Management Annual Charges

	General Waste Charge 2019/2020*	General Waste Charge 2020/2021	
		BAU	S3
Former Palerang	\$375-\$416	\$143	\$196
Former Queanbeyan	\$0		

Figure 11 General Waste Management Charge – Recommended Scenario



Expected gate fees payable at waste facilities are shown in Table 25. Not all facilities will accept all waste types and eligibility requirements and limitations apply in some instances.

Table 25 Recommended Scenario – General Waste Management Facility Gate Fees

Waste Type	Amount	Charge (GST Inclusive) – with General Waste Card	Charge (GST Inclusive) – without General Waste Card
General Mixed Waste	1 x 240L Bin	\$10	\$10
	Trailer or Ute	\$112	\$112
	Per tonne	\$145	\$145
Household recycling	Any	Free	\$10/cubic metre
Residential greenwaste	Any	Free	\$10/cubic metre
Mattresses	Per mattress	\$53	\$53
CRC Eligible Materials	Per item	Free	Free
Household E-waste		Free	Free

7.1.4 Business Waste Management

The strategy for business waste management is outlined below in Table 26. The 2021/22 charges are shown in Table 27.

Table 26 Recommended Scenario – Business Waste Management Actions and Timeframe

Number	Aspect	Action	What problem is this solving?	Timeframe
BWM1.	Funding	Maintain a minimum \$25,000 in the Business Waste Management Fund reserve to act as a buffer for future price shocks	Volatility in markets	On-going
BWM2.		Transfer remaining cash into the General Waste Management Fund to fund future works	Separate funds resulting from Council amalgamations	High
BWM3.		Levy a Business Waste Availability Charge on all business properties in the LGA	On-going funding of operations	On-going
BWM4.		Levy collection charges (on a per bin basis) in accordance with the adopted model for businesses that opt-in to collection services	Businesses only pay for the services they require	On-going
BWM5.	Collections	Provide weekly residual waste collection (via 240L MGB within existing domestic waste collection zones) to businesses on an optional basis.	Businesses only pay for the services they require	On-going
BWM6.		Provide fortnightly commingled recyclables collection (via 240L MGB within existing domestic waste collection zones) to businesses on an optional basis	Businesses only pay for the services they require	On-going
BWM7.		Provide fortnightly garden organics collection (via 240L MGB within existing domestic waste collection zones) to businesses on an optional basis	Businesses only pay for the services they require	On-going
BWM8.		Encourage businesses with larger waste generation rates or requiring more frequent collections to explore private collection contracts	Council does not incur large expenditure to service a small number of businesses	On-going
BWM9.	Education	Expand and promote the ACTSmart or BinTrim business waste education programs to cover the entire LGA	Equal service provision to all businesses	On-going
BWM10.		Conduct a bin audit of C&I customers in LGA to determine approximate volume of waste generated by sector and recycling rates.	Improvement in waste data	On-going
BWM11.		Following the audit identified in BWM10, develop and implement program to increase diversion	Improvement in waste diversion	Medium
BWM12.		Hire a dedicated Waste Officer to implement education and engagement program (Shared with DWM22 and Error! Reference source not found.)	Insufficient resources to undertake tasks identified in the Strategy	High

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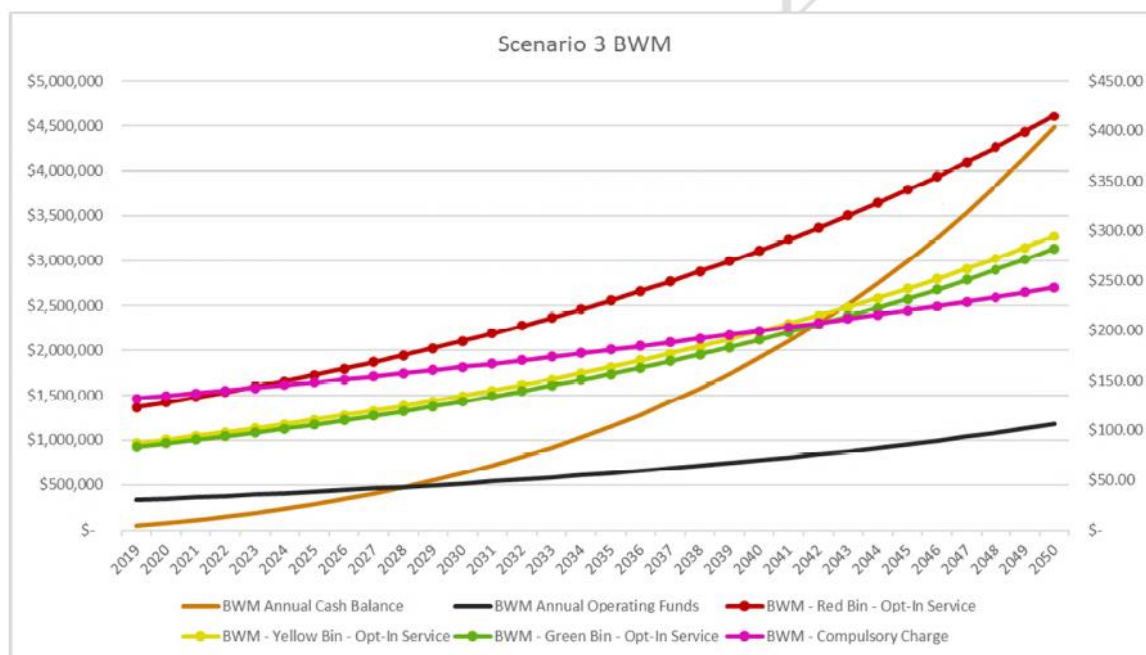
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Number	Aspect	Action	What problem is this solving?	Timeframe
BWM13.		Develop and implement a routine bin inspection program to reduce contamination rates in kerbside collection. (Shared with DWM23 and Error! Reference source not found.)	Recycling and FOGO contamination rates, ad-hoc education activities and closing data gaps	High
BWM14.		Improve digital media which provides information on the QPRC waste services available to the community (Shared with DWM25 and Error! Reference source not found.)	Ad-hoc education activities	Medium
BWM15.		Prepare and implement a Community Waste Education Strategy covering schools, general public, business/industry, and initiatives identified in the strategy. (Shared with DWM26 and Error! Reference source not found.)	Ad-hoc education activities	High
	Shared costs/resources with DWM and GWM			

Table 27 Recommended Scenario – Business Waste Management Annual Charge

Opt-in Service	QPRC Revenue Policy Business Waste Management Charge 2020/21	Business Waste Management Charge 2020/21	
		BAU	S3
Red Bin (Residual)	\$262	\$169	\$133
Yellow Bin (Recycling)	\$94	\$131	\$94
Green Bin (GO)	\$94	\$109	\$90
Compulsory Charge – all businesses	\$96	\$78	\$137

Figure 12 Recommended Scenario – Business Waste Management Charge



7.1.5 Total Annual Waste Management Charges

The summary of charges for residential and business properties are outlined in Table 28.

Table 28 Recommended Scenario – Summary Annual Waste Management Charges

Waste Management Charge	Type	Scenario 3
Domestic Waste Management	Urban - SUD - 3 Bin	\$315
	Rural - SUD - 2 Bin	\$170
	Rural - SUD - 1 Bin	\$82
	Vacant - Urban & Rural	\$28
	Urban - MUD - 3 Bin	\$315
	Rural - SUD - Bin Compound	\$160
	Urban - MUD - 2 Bin	\$205
	Moved to General Waste Charge	
	Mixed-Use – No Service	\$28
General Waste Management	ALL QPRC residential and non-commercial properties	\$196
Business Waste Management	Red Bin (Residual)	\$133
	Yellow Bin (Recycling)	\$94
	Green Bin (GO)	\$90
	All QPRC Businesses	\$137

The total waste management cost for residential properties is shown in Table 29 and total waste management costs for businesses is shown in Table 30.

Table 29 Recommended Scenario – Summary of Total Annual Waste Management Charges - Residential

Domestic Waste Management Code	New QPRC Domestic Waste Management Code	Total Waste Management Costs	Change from BAU
DWP1	Urban - SUD - 3 Bin	\$510	-\$275
DW1			\$173
DWP4	Rural - SUD - 2 Bin	\$366	-\$335
DW15			\$2
DW17	Rural - SUD - 1 Bin	\$278	\$92
DWP8			-\$223
DWP12	Vacant - Urban & Rural	\$224	-\$193
DW10			\$197
DW8	Urban - MUD - 3 Bin	\$510	\$173
DWP6	Rural - SUD - Bin Compound	\$356	-\$274
DW7	Urban - MUD - 2 Bin	\$400	+\$93
DW11	Moved to General Waste Charge	-	-
Not Applicable	Mixed-Use – No Service	\$224	+\$224
N/A	No DWM Service	\$196	-\$194

Table 30 Recommended Scenario – Summary of Total Annual Waste Management Charges - Business

New QPRC Business Waste Service	Total Waste Management Costs	Change from BAU
Compulsory Charge – Former QBN	\$137	+\$41
Compulsory Charge – Former Palerang	\$137	-\$253
Red Bin (Residual)	\$133	-\$129
Yellow Bin (Recycling)	\$94	No change
Green Bin (GO)	\$90	-\$4

8 Next Steps

To finalise the QPRC Waste Strategy the following steps are required:

- Review feedback received from the Waste Strategy Working Group and the community during public exhibition of the recommended scenario
- Finalise the Strategy based on the scenario selected
- Put forward the Strategy to Council to adopt.
- Rates and charges (2021/2022)

9 Limitations

MRA Consulting Group (MRA) has prepared this report in accordance with the usual care and thoroughness of the consulting profession for the use of Queanbeyan-Palerang City Council and only those third parties who have been authorised in writing by MRA to rely on this Report.

It is based on generally accepted practices and standards at the time it was prepared. No other warranty, expressed or implied, is made as to the professional advice included in this Report.

It is prepared in accordance with the scope of work and for the purpose outlined in the proposal dated 2 March 2018.

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Appendix A Community Consultation Report

Appendix B Long List of Options

Appendix C Waste Strategy Briefing Paper

QUEANBEYAN-PALERANG REGIONAL COUNCIL

Council Meeting Attachment

30 JUNE 2021

ITEM 5.1 ADOPTION OF QPRC WASTE STRATEGY

ATTACHMENT 3 DRAFT WASTE STRATEGY APPENDIX A



Stage 1 Community Consultation Outcomes

Waste Management Strategy

Queanbeyan-Palerang Regional Council (QPRC)

December 3, 2018

Stage 1 Community Consultation Outcomes

Queanbeyan-Palerang Council

FINAL DRAFT

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Revision History

Revision	Revision date	Details	Authorized	Name	Position
01	30 November 2018	DRAFT	QPRC	B BELCHER	Program Coordinator
02	3 December 2018	FINAL DRAFT	TBC	TBC	TBC

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Table of Contents

1.	Introduction.....	1
2.	Community Consultation	2
2.1	Consultation Activities.....	2
2.1.1	Drop in information sessions	2
2.1.2	Survey.....	2
2.1.3	Nerriga residents	2
2.1.4	Workshop	3
2.2	Communication Tools.....	4
3.	Outcomes	5
3.1	Drop in information sessions	5
3.2	Survey.....	6
3.3	Nerriga residents survey	6
3.4	Workshop participation.....	7
4.	Recommendations	8
5.	Next steps.....	8
	Appendix A - Collateral	9
	Posters.....	9
	Factsheet	9
	Webpage.....	10
	Survey Presentation	11
	Appendix B – Survey results.....	15
	Demographic Information.....	15
	Waste Management Questions	16
	Appendix C – Nerriga residents’ survey comments	20
	Appendix D – Workshop outcomes	22
	Wants versus barriers.....	22
	Vision for the next 5 to 30 years.....	23

1. Introduction

Queanbeyan-Palerang Regional Council (QPRC) are currently reviewing the waste strategies for the region as not all areas in the Local Government Area (LGA) have the same waste management and there are issues Council is facing with the existing strategies. Some of these issues relate to population growth, landfills reaching capacity as well as varying waste services and fees.



Additionally, local, state and national policies are continuously changing. A Waste Strategy is required to develop waste management programs that meet environmental and government regulations. Consolidating and improving QPRC's waste management strategies will enable Council to address the waste issues they are currently facing and manage these over the next 30 years.

AECOM was appointed by Council to prepare the Waste Strategy for the region. Stage 1 of the project included;

- a briefing paper, which identifies the existing situation with waste management in the QPRC region
- consultation with the community to understand views, perceptions and experiences on waste management in the local areas and how services can be improved.



As part Stage 1, QPRC and AECOM consulted with local residents and key community members through community information sessions and a targeted workshop. A survey was also used to collect feedback on residents and businesses experience with waste services.

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2. Community Consultation

The consultation approach involved engaging key community representatives and the general public through a combination of informal and targeted settings. The key aspect was to listen to community members and facilitate real opportunities for input into the development of options.

2.1 Consultation Activities

2.1.1 Drop in information sessions

The objective of the information sessions was to explore responses to the current outcomes on waste management in the QPRC LGA, which were identified in the QPRC Waste Strategy Briefing Paper (AECOM, 2018). These allowed the community to ask questions in one-on-one conversations with the project team. To maximise the opportunity to hear from a range of local experiences, various sessions were carried out at different townships:

Date and time	Location
Thursday 25 October 2018, 2:00pm – 6:00pm	Riverside Plaza, Morisset Street, Queanbeyan
Friday 26 October 2018, 2:00pm – 6:00pm	Bungendore IGA, Malbon Street, Bungendore
Saturday 27 October, 9:00am – 12:00pm	Braidwood Farmer's Markets, Braidwood

Representatives from QPRC and AECOM spoke to about 120 community members over the course of three sessions. Surveys were carried out with those interested in having their say.

2.1.2 Survey

Surveys were used to collect baseline data on community's attitudes towards waste management, Council's waste services, value for money and willingness to pay. Two types of surveys (Appendix A) targeting residents and businesses were made available through the following channels:

- Online through the QPRC Your Voice website
- Paper based forms at the drop in information sessions and Council administration offices
- Digital platform (iPads) at the drop in information sessions and community workshop

A total of 201 surveys were received through these channels. The level of participation through the various channels is indicated in Table 2.

Table 2 Survey responses

Survey platform	Level of participation
Information sessions (iPads)	64
Council's 'Your Voice' website	130
Paper based forms	7

2.1.3 Nerriga residents

In addition, Council specifically surveyed the Nerriga residents to understand their specific waste management issues. Eighty-three responses were received.

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2.1.4 Workshop

A community workshop was designed as an interactive approach to understand the community's attitude to existing waste management. A workshop facilitator navigated community members through group activities to discuss their ideas for improvement, and explore their attitudes towards value for money and willingness to pay.



The workshop was held on Friday 26 October 2018 at the Queanbeyan RSL Arcade between 10:00am and 12:00pm. Representatives from key community groups were invited to take part in the workshop to gain region wide perspectives around these topics. Table 1 identifies the key stakeholders that were invited to participate in the consultation process.

Table 1 Stakeholders invited to participate in the workshop

Stakeholder Category	Stakeholder Group
Environment	Landcare – Upper Murrumbidgee: Queanbeyan, Carwoola, Hoskinstown, Captains Flat, Fernleigh Park, Little Burra, Royalla, Burra, Smiths Road Landcare - Wamboin
Agriculture	Southern NSW Harvest Association
Commercial	Bungendore Chamber of Commerce and Industry
Residents and ratepayers	Queanbeyan Ratepayers' and Residents' Association Burra Urila Residents' and Ratepayers' Association Jerrabomberra Residents Association Googong Residents Association Bungendore Residents Group
Community associations	Wamboin Community Association Carwoola Community Association Braidwood Community Association Captains Flat Community Association Royalla Community Association Hoskinstown Community Association Nerriga Progress and Sporting Association Araluen Progress Association Majors Creek Progress Association Oaks Estate Progress Association Burra Community Association Bywong Community Association
Community services	Queanbeyan Men's Shed
Local clubs	Queanbeyan Lions Club Rotary Club of Bungendore Rotary Club of Queanbeyan Rotary Club of Queanbeyan West Rotary Club of Jerrabomberra

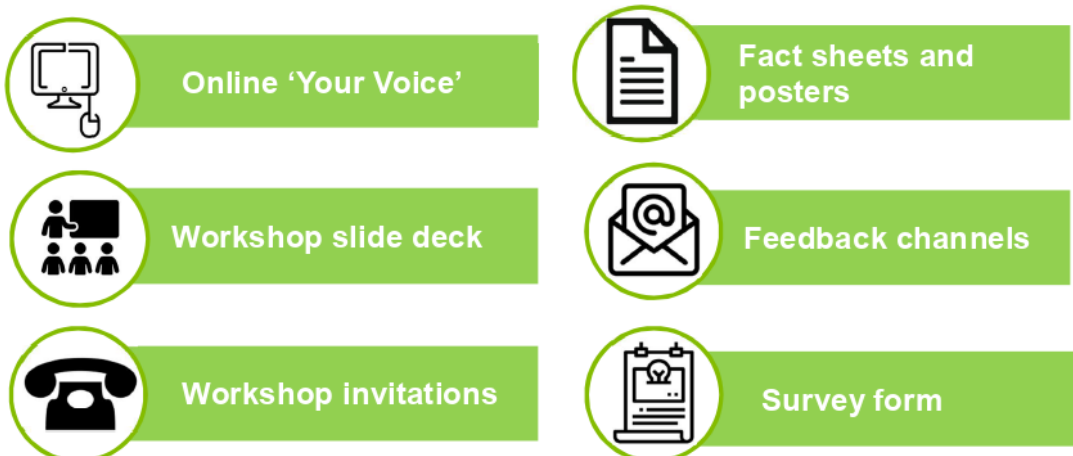
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A total of seven representatives from six community organisations in the QPRC region attended. They were from the following groups:

- Braidwood Community Association
- Burra Community Association
- Captains Flat Community Association
- Nerriga Progress and Sporting Association
- Jerrabomberra Residents Association
- Wamboin Community Association

2.2 Communication Tools

Supporting communication tools (Appendix A) were used at the drop in information sessions and workshop to inform community members, prompt discussions around waste management promote the project and advertise engagement opportunities.



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3. Outcomes

3.1 Drop in information sessions

Representatives from QPRC and AECOM spoke to approximately 120 community members over the course of three sessions and carried out a survey with those interested in having their say. The key recurring themes and comments that arose from conversations are outlined in Table 3.



Table 3 Drop in session outcomes

Themes	Conversations with Community
Education	<ul style="list-style-type: none"> Lack of understanding about what can be composted and recycled due to changing messages in advertising campaigns and communication by operational staff at some facilities (e.g. soft plastics, composting food waste such as meat, removing bottle lids before disposal) or general ignorance despite labelling on bins. Further education required promoting awareness of existing Council services and encouraging better recycling practices. Importance of education on better waste minimisation and recycling practices at a school level was highlighted.
Community perception	<ul style="list-style-type: none"> Community perception that waste at the transfer stations are not correctly processed as there are times where it accumulates without adequate separation of materials by staff. This acts as a deterrent to many members of the community who drop off their waste at these facilities and develop distrust towards the system.
Rates and fees	<ul style="list-style-type: none"> One individual at Braidwood suggested that kerbside collection waste services rates should be assessed based on weight of waste generated to be fair towards community members that do not use this service frequently due to minimal waste generated.
Accessibility	<ul style="list-style-type: none"> Concerns about the opening hours of the transfer station at Queanbeyan and the difficulty to access during work hours. A few community members indicated the ease of mattress disposal ('soft landing' contractor service).
Additional services	<ul style="list-style-type: none"> Request for a return and earn facility at Bungendore.
Communication	<ul style="list-style-type: none"> Request for the regular kerbside bin collection schedule to be communicated in the Council section of the local newspaper (Bungendore weekly).
Benchmarking	<ul style="list-style-type: none"> Suggestion to adopt Canberra's green shed service at Bungendore and Braidwood.
Former strategies	<ul style="list-style-type: none"> Queries were raised about Braidwood tip closing and when the new tip is opening. Issues raised by those not receiving a regular bin collection service and the requirement to self-haul to transfer station instead.
Other queries	<ul style="list-style-type: none"> Queries were raised around the buy-back scheme at Bungendore. Queries were raised around where the green waste from the local area of Bungendore gets transferred. Queries were raised around where hazardous waste can be disposed.

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3.2 Survey

Due to changes between the survey at the information sessions and the survey produce online and in hard copy, AECOM has consolidated the results. This has been done to ensure all feedback has been considered. Key outcomes from the survey include:

Waste Management Questions

- Self-haul facilities and kerbside bin collection (residual, recycling and green waste) was the most common service utilised by respondents and recognised as Council run services.
- Majority of respondents indicated that they thought all of Council's waste services were worthwhile. Just over 10 per cent specified services that are not worthwhile.
- Over 87 per cent of respondents felt they were between fairly and absolutely confident in deciding what goes into what bin.
- Whilst the majority of respondents confirmed a high level of confidence in waste separation, there was a high interest (over 60 per cent) amongst the respondents in receiving between a bit to a lot more waste education from Council.
- There was a high level of uncertainty amongst respondents as to how much they pay for waste services each quarter with over 50 per cent indicating they were unsure.
- Despite this level of uncertainty around quarterly rates, majority of respondents confirmed that the level of waste services received was good in relation to how much they were paying. Just over 20 per cent of respondents rated the level of service as poor to very poor in relation to how much they were paying.
- About 80 per cent of respondents indicated that they would like Council to provide other waste services and specified their preferences. The top three results included requests for:
 1. more composting services and options to dispose of food waste into green bins
 2. soft plastics recycling services
 3. increased availability of kerbside bin collection for rural residents and changes to the frequency for current receivers.
- The assessment of respondents' willingness to pay for these extra services showed that majority (over 47 per cent) would want to pay the same rates and almost 15 per cent wanting to pay less. Thirty-seven per cent were willing to pay between \$5 to \$10+ more per quarter.

Demographics

- Majority of respondents that participated in the survey were female and comprised of almost 60 per cent.
- The main age group that respondents fit within was the 41-45 years bracket.
- Almost 90 per cent of respondents were property owners or owner-occupiers.
- Majority of respondents indicated that their households earned the higher income bracket of more than \$140,000 per year.
- Over 55 per cent of respondents confirmed that 1-2 people live in their home. Only 2 respondents indicated a household size of over 6 people.

See Appendix B for the detailed results of the survey carried out during this initial phase.

3.3 Nerriga residents survey

Council sent a survey to homes in the Nerriga area to understand their preferred options for waste collection in their area. Five options were presented in the survey for residents to rank in order of preference. These options were:

- Do nothing
- Rural recycling station
- Bin compound
- Kerbside collection
- Transfer station

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In total, 83 community members responded to the survey. Of the 83, 13 entries were not included as community members did not correctly fill in the survey. The following chart captures the responses by 70 participants and compares each of the options as they were ranked by respondents.

Respondents were requested to rank their preference against the options from 1 (most preferred) to 5 (least preferred). Most respondents, 47, rated the 'Do nothing' option as least preferred. The most preferred option is the transfer station, with 21 respondents.

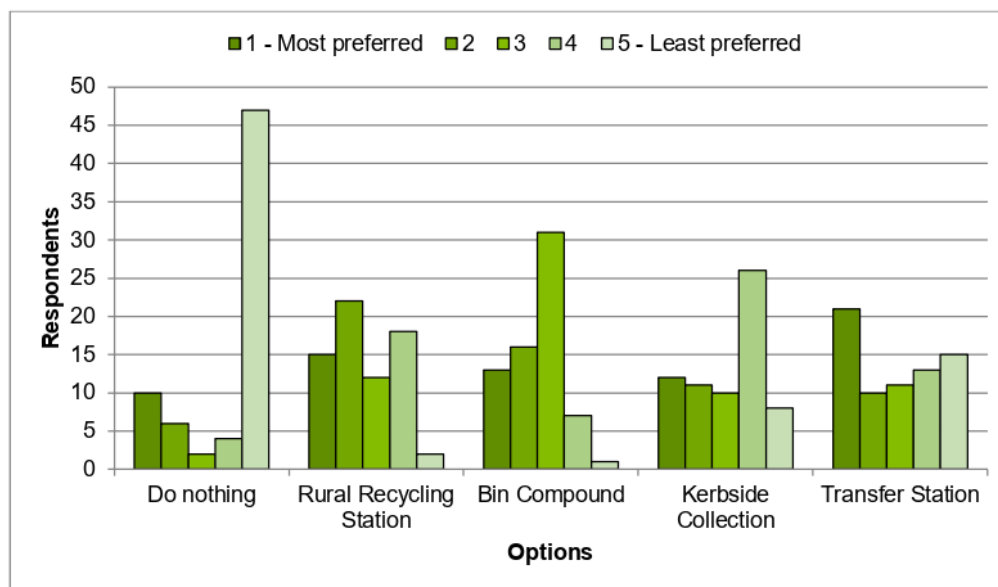


Figure 1 Nerriga residents survey options response

Comments made in the survey are detailed in Appendix C.

3.4 Workshop participation

All stakeholders that attended the workshop were very passionate about waste management and quite active within their communities in promoting messages about waste reduction. Discussions around the waste topic during group activities demonstrated a strong sense of unity amongst community members and motivation towards involving the local community in organised initiatives to improve the outlook on waste.

All attendees agreed that education programs were central to reinforcing better waste management practices and the foundation for this begins at schools. Discussions on the role that technology plays in developing innovative solutions arose frequently when considering the community vision for the next 30 years. Community members conveyed a strong interest in lobbying companies to reduce over-packing of products in stores and believed Council should support such campaigns.

Appendix D provides more details on the discussion held during the workshop.

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4. Recommendations

In light of the survey results, outcomes of the community workshop and conversations with the community during drop in information sessions, the following recommendations have been suggested for consideration in the development of the draft Waste Strategy:

- General improvement and expansion of waste-related education activities
- organise local waste management initiatives to involve community in the 30 year strategy so they can be part of the solution
- implement traditional forms of advertising through static displays, local newspapers and mail distribution within high traffic areas (such as shopping centres, existing council facilities, etc.) to promote an awareness of Council services
- implement an active behaviour change and education program to empower residents to proactively and sustainably manage waste through schools and community groups
- review options for collection and processing of organics waste
- consider enhancement of Council's branding throughout waste management facilities provided by Council to increase community's association of existing services to the provider

The main limitation in implementing additional services however is the low level of willingness to pay increased costs. To achieve suggestions by community members, the objectives of the 30 year Waste Strategy and balance this financial outcome, Council may consider:

- restructuring rates and fees
- minimising the frequency of waste services to areas that do not consider them to be worthwhile allowing reallocation of funds towards more favourable services
- incentivising recycling practices
- partnering with organisations to support community events and initiatives such as composting or local clean up events.

5. Next steps

The findings from this report will support the development of options by Council and AECOM to address the existing waste management issues. A draft Waste Strategy will be prepared outlining the preferred management options arising from the options development process. The draft Waste Strategy will incorporate input from Council's Waste Strategy Working Group, targeted community groups and feedback received from the community. The draft Waste Strategy will be on public display in 2019 at which time community members will have an opportunity to view and provide comment before it is finalised.

Appendix A - Collateral Posters

QPRC

**QUEANBEYAN-PALERANG REGIONAL COUNCIL
WASTE MANAGEMENT STRATEGY**

Where are we now?

- Site visits and staff @Queanbeyan
- Prepare briefing paper - Community consultation
- Prepare Draft Strategy - Community consultation
- Council review including Council's Waste Strategy Group
- Prepare final Strategy

We want to know more about how you use Council's waste management services

What services do you currently use?
What other services would benefit you?

Surveys are available for you to provide your feedback, free time to have your say.

Collecting meaningful feedback

We have set up a Waste Strategy Working Group which brings residents, business leaders and elected representatives together to help us workshop ideas and progress the new strategy.

What would you like to see in the new Waste Management Strategy?

We want your opinions, suggestions and thoughts for consideration. Have your say online at the QPRC Your Voice website: www.qprc.nsw.gov.au. You can also mail your submission to: PO Box 99, Queanbeyan NSW 2620. Email: yourvoice@qprc.nsw.gov.au

We are planning for how we manage waste now and for the next 30 years.

QPRC

**QUEANBEYAN-PALERANG REGIONAL COUNCIL
WASTE MANAGEMENT STRATEGY**

What is happening?

Just as busy in our region have the same waste management. Queanbeyan-Palerang Regional Council is reviewing and improving the current waste strategies for the entire LGA.

Currently, we do not meet the targets set out in NSW Waste Avoidance and Resource Recovery Strategy 2014-2021.

Key issues we are facing

- population growth
- limited recycling capacity
- different waste services
- different delivery of these services
- different fees

What makes up our waste

Commercial waste, Domestic waste, Green waste, Export waste

Waste is estimated to roughly double from 2016 to 2050 which means our waste services need to be improved.

Tonnes generated in 2016

12,200 (Landfill), 4,000 (Recycling), 2,000 (Organics)

Tonnes generated in 2050

20,500 (Landfill), 4,000 (Recycling), 2,000 (Organics)

We want to be a sustainable, "clean green" community and create the right solutions for our local residents, businesses, service providers and community groups.

Factsheet

QPRC

**QUEANBEYAN-PALERANG REGIONAL COUNCIL
WASTE MANAGEMENT STRATEGY**

We are planning for how we manage waste now and for the next 30 years.

Where are we now?

- Site visits and staff @Queanbeyan
- Prepare briefing paper - Community consultation
- Prepare Draft Strategy - Community consultation
- Council review including Council's Waste Strategy Group
- Prepare final Strategy

Why are we developing a new Waste Management Strategy?

Considering and improving our waste management strategies will have a positive impact on our community and region. As local, state and national policies are continuously changing, we need to plan ahead to make sure our waste management meets environmental and government regulations.

What are the key issues we are facing?

- population growth
- limited recycling capacity
- different waste services
- different delivery of these services
- different fees
- not achieving Waste Avoidance and Resource Recovery Strategy targets

What services do we currently provide?

- kerbside collection
- bulky waste collection
- waste disposal
- access to well-lit facilities
- education programs

What makes up our waste?

On average, the waste generated by residents is 21 per cent landfill, 28 per cent organics and 51 per cent organics (food and garden). (G216 household audit). Our waste is estimated to roughly double from 2016 to 2050. That's a lot to manage.

We are also thinking about how to best manage waste from local businesses, construction and commercial industries that produce similar types of waste as well as councils, waste, soil and other mixed products.

QPRC

**QUEANBEYAN-PALERANG REGIONAL COUNCIL
WASTE MANAGEMENT STRATEGY**

Where does our waste get disposed?

- residual waste is disposed at Woodlawn Waste Management Facility, Endwood Landfill or Hermita Landfill, Mugga Lane Landfill
- recyclables are processed at the Waste Materials Recovery Facility
- organics are transferred to Oak Estate, Woodlawn and G-Terra Worm Farm
- bulky waste is currently collected by residents of the former Palerang LGA to Waste Transfer Station, while waste generated by residents of the former Queanbeyan LGA is transferred to Mugga Lane Landfill

What regulations have changed?

The Waste Avoidance and Resource Recovery (WARR) Strategy released by the NSW EPA in 2014 set new recycling targets to be achieved by the year 2021-2022. The targets relate to avoidance and reduction of waste, increasing recycling, diverting more waste from landfill, managing problem waste better as well as reducing litter and illegal dumping.

Currently, we do not meet the targets set out in this strategy.

What steps are we taking?

As part of the strategy, we're looking at what we do to meet the WARR Strategy targets and our growing waste. Actions and areas we are looking at include:

- range, price, access and convenience of waste services
- additional waste services and/or facilities
- facilities and services on a user pays basis or through resident and business rates
- land available for developing and operating waste management and resource recovery facilities
- resource recovery in both the residential and non-residential sectors
- educating residents and businesses on what can and cannot be recycled, reducing litter and how to avoid generating waste

What is the role of the community?

We want your opinions, suggestions and thoughts to help us shape the draft strategy. By helping us to understand what our community wants from our waste services, we can better balance community wants with budget, regulatory and legislative constraints.

How do we collect feedback?

We have set up a Waste Strategy Working Group which brings together residents, business leaders and elected representatives to help us workshop ideas and prepare the new strategy.

We are also seeking feedback from residents, ratepayers and businesses. We want your opinions, suggestions and thoughts.

You can have your say online at the QPRC Your Voice website: www.qprc.nsw.gov.au. You can also mail your submission to: PO Box 99, Queanbeyan NSW 2620. Email: yourvoice@qprc.nsw.gov.au or deliver to any of our customer service centres.

FAST FACT

Our recycling rate across the region is around 46 per cent. In comparison, the ACT recycles almost 70 per cent of their waste.

Webpage

QPRC

Search

About Your Voice Current Consultations Staff portal All Projects Sign In Register

QPRC

HAVE YOUR SAY

Welcome to Your Voice QPRC

Council is committed to consulting and engaging with the community about important projects and initiatives. There are many ways members of the community can have their say, including focus groups, making submissions and comments on matters on exhibition, attending community forums and much more.

To participate, simply click on any of the topics listed below.

Register as a member to participate in engagement activities and discussions. You will also be notified about new projects and further opportunities for you to be involved.

REGISTER to get involved!

FAQ

Why do I have to register?

Is it anonymous?

What happens to my feedback / comments?

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Survey

QPRC QPRC Waste Management Survey

1. What is your gender?

☐ Female ☐ Male ☐ Other

2. What is your age?

☐ Less than 20 ☐ 41-45 ☐ 66-70
☐ 21-25 ☐ 46-50 ☐ 71-75
☐ 26-30 ☐ 51-55 ☐ Older than 75
☐ 31-35 ☐ 56-60
☐ 36-40 ☐ 61-65

3. Do you rent or own your home?

☐ Rent ☐ Owner ☐ Owner-occupier
☐ Other (please specify)

4. What is your yearly combined household income?

☐ Less than \$20,000 ☐ \$80,000 - \$100,000 ☐ \$120,000 - \$140,000
☐ \$20,000 - \$40,000 ☐ \$100,000 - \$120,000 ☐ More than \$140,000
☐ \$40,000 - \$60,000 ☐ \$120,000 - \$140,000

5. How many people live in your home?

☐ 1-2 people ☐ 5-6 people
☐ 3-4 people ☐ More than 6 people

1

QPRC QPRC Waste Management Survey

6. What Council waste services do you currently receive or use?

7. Looking at the list below, what other Council waste services do you currently receive or use?

☐ Recycle ☐ Weekly ☐ Weekly ☐ Fast ☐ Comm ☐ House ☐ Turn ☐ Inter ☐ Comm
☐ kerbside ☐ kerbside ☐ kerbside ☐ kerbside ☐ kerbside ☐ kerbside ☐ kerbside ☐ kerbside
☐ n- ☐ n- ☐ n- ☐ n- ☐ n- ☐ n- ☐ n- ☐ n-
☐ kerbside ☐ Recycle ☐ kerbside ☐ kerbside ☐ kerbside ☐ kerbside ☐ kerbside ☐ kerbside
☐ kerbside ☐ kerbside ☐ kerbside ☐ kerbside ☐ kerbside ☐ kerbside ☐ kerbside ☐ kerbside

☐ Other (please specify)

8. Are there any Council waste services that you don't think are worthwhile?

☐ No
☐ Yes (please specify)

QPRC QPRC Waste Management Survey

2

9. How confident are you in deciding what goes into what bin?

☐ 1. I have no idea what goes into what bin
☐ 2. Not very confident
☐ 3. Neither confident nor unconfident
☐ 4. Fairly confident
☐ 5. Absolutely confident

10. How much waste education do you want from Council?

☐ 1. A lot less
☐ 2. A bit less
☐ 3. About the same
☐ 4. A bit more
☐ 5. A lot more

11. Thinking about your quarterly rates bill, how much do you pay for waste services?

☐ I receive ☐ I don't own the property
☐ I pay less than \$100 per quarter

13. Would you like Council to provide other waste services?

☐ No, I am satisfied with the current waste services provided by Council.
☐ Yes, I would like Council to provide more services (please specify)

14. How much would you pay for these extra services?

☐ Less than \$10 per quarter ☐ Between \$10 and \$20 per quarter ☐ Between \$20 and \$30 per quarter ☐ More than \$30 per quarter

QPRC QPRC Waste Management Survey

12. Thinking about how much you pay each quarter, do you think the level of waste services you are receiving is:

☐ 1. Excellent ☐ 2. Good ☐ 3. Neutral ☐ 4. Poor ☐ 5. Very poor

3

4

FINAL DRAFT

Presentation

Waste management **QPRC**

How can we manage waste in our community now and for the next 30 years?



Ice breaker **QPRC**

- ☐ Name?
- ☐ What do you love most about your community?
- ☐ What do you expect from this workshop?



Group expectations **QPRC**

- ☐ Share your thoughts
- ☐ Be respectful and considerate of everyone's opinions
- ☐ Build and contribute to the conversation
- ☐ Stay focussed on the discussion topic
- ☐ Keep phones on silent or switched off
- ☐ Ask questions!

What role do you play in the waste system? **QPRC**

- How do you use waste services now?
- What good experiences have you had?
- What bad experiences have you had?



What we'll focus on today **QPRC**

1. Getting to know each other
 - Ice breaker
2. What role do you play in the waste system?
 - Group discussion
3. How do we produce and manage waste?
 - Small group activity
4. What could happen in the future?
 - Small group activity
 - Group discussion



Break into groups

3 – 4 people per group

How do we produce and manage waste? QPRC



Using pens and paper, tell us:

- Where waste comes from in your home or business
- What different types of waste is produced in the home or business

What happens to your waste? QPRC



What's in our waste? QPRC


Each week, the average household in the QRPC region produces:



Waste Type	Weight
Residual (landfill)	3.6kg
Recycling	4.5kg
Organics	8.5kg

What happens to your waste? QPRC

- Different waste services
- Different delivery
- Different fees and charges
- Different gate fees at material recycling facilities
- Different disposal facilities



What's in our bins? QPRC

Each week, the average household with kerbside collection in the QRPC region disposes of the following:



Waste Type	Weight
Residual (landfill)	8.4kg
Recycling	4.1kg
Organics	4.7kg

Break

15 minutes

What could happen in the future? QPRC

What could our waste management look like in 30 years?

(15 minutes)

In groups, write, draw or use pictures to show:


- How you would like our waste management to support our community?
- What changes you would like to see?
- How you see the community being more (or less) involved?




What could happen in the future? QPRC

In groups, discuss and use sticky notes to capture:

- What needs to happen in the next 30 years for your vision to become reality?
- What are the barriers preventing your vision being achieved?



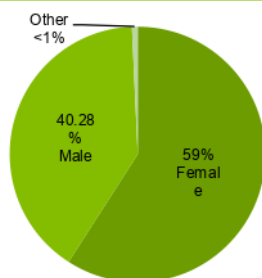
Thank you for your feedback QPRC



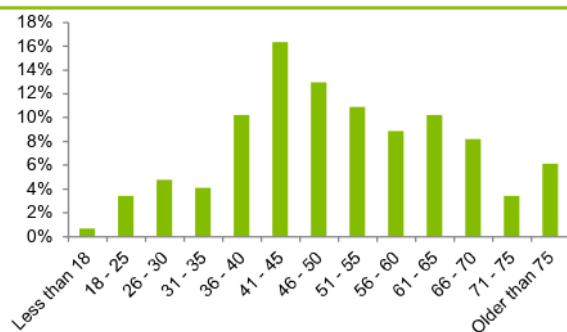
Appendix B – Survey results

Demographic Information

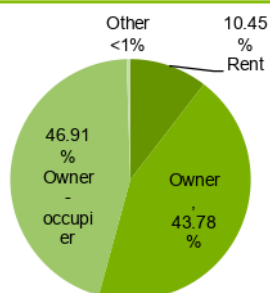
Gender



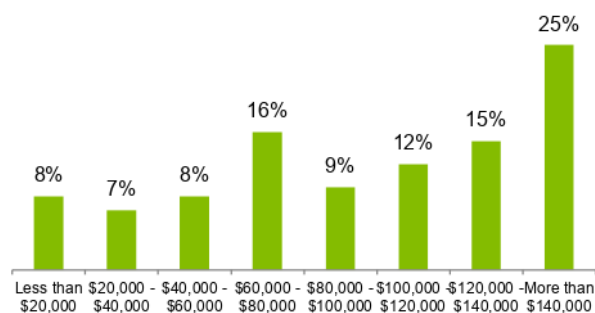
Age



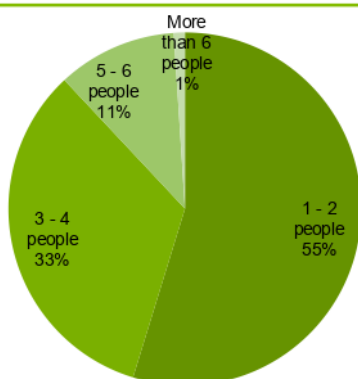
Do you own or rent your home?



Yearly combined household income

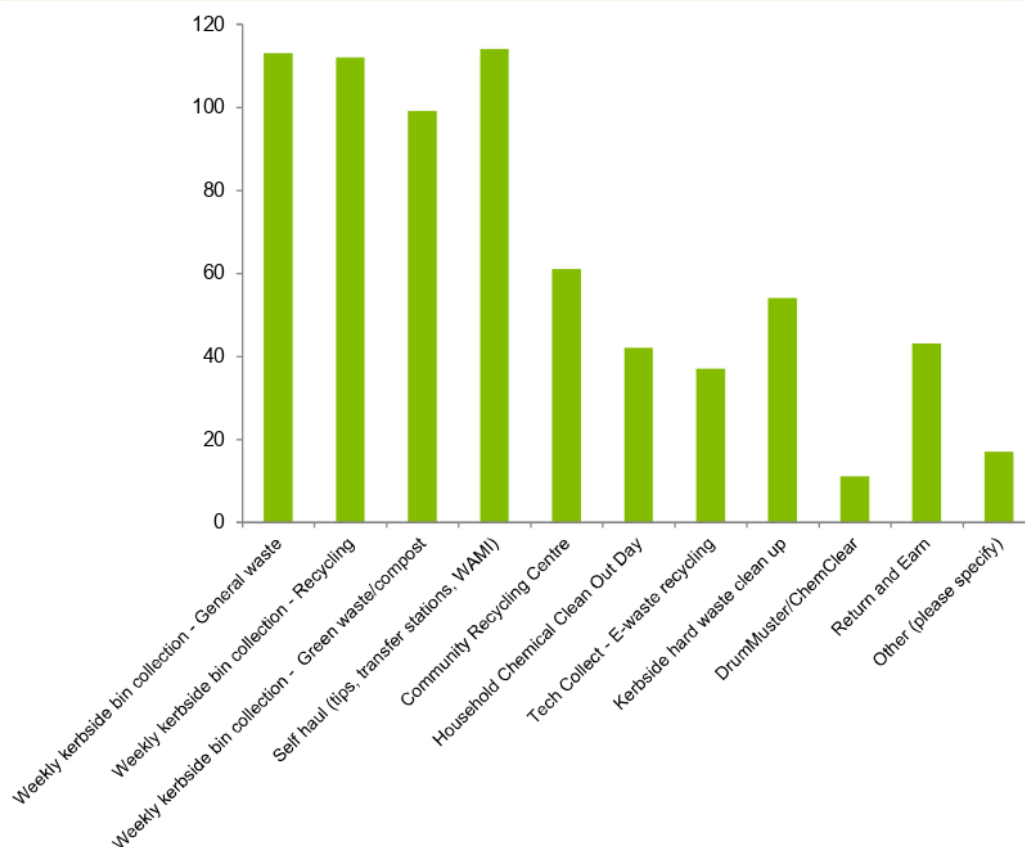


How many people live in your home?

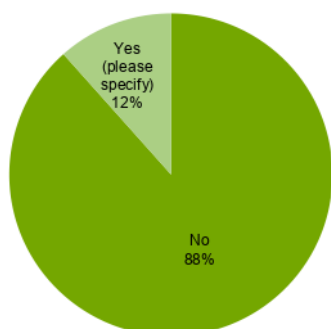


Waste Management Questions

What Council waste services do you currently receive or use?



Are there any Council waste services that you don't think are worthwhile?

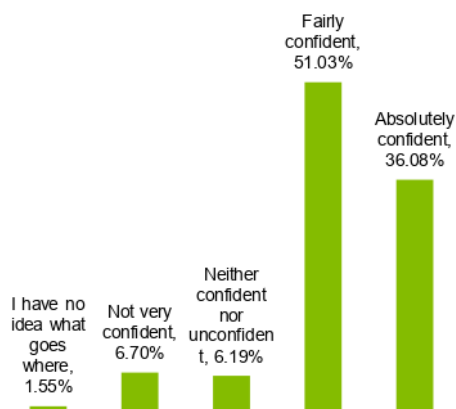


Of the 12 per cent of respondents indicated that the following Council services are not worthwhile:

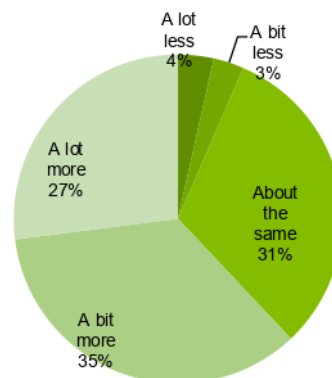
- Return and earn service as noted by three respondents.
- The waste transfer station as it is not cost effective - the discount received is minor compared to rates paid.
- Individual, weekly bin pickup services.
- Kerbside garbage pickup services in rural areas.
- Green waste bins due as noted by two respondents.
- A physical tip pass.
- Council rubbish collection services in Carwoola, as residents already have Sullivans.

FINAL DRAFT

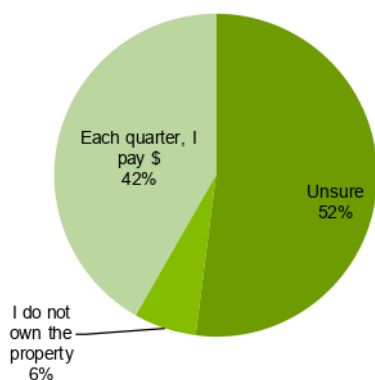
How confident are you in deciding what goes into what bin?



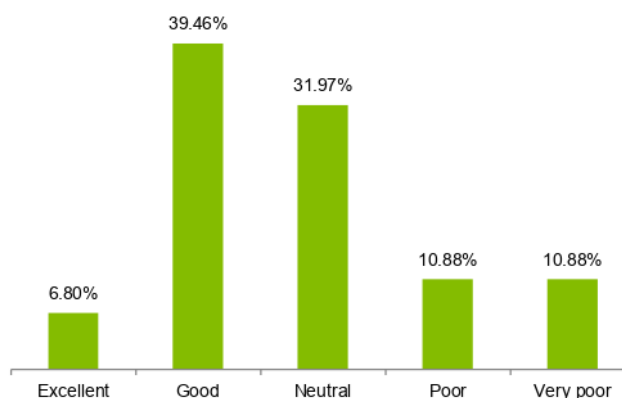
How much waste education do you want from Council?



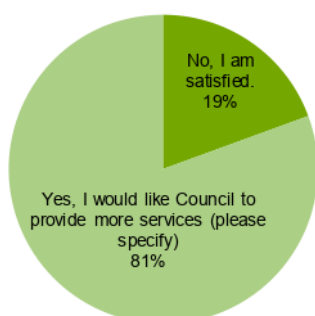
Thinking about your quarterly rates bill, how much do you pay for waste services?



Thinking about how much you pay each quarter, how would you rate the level of waste services you are receiving?



Would you like Council to provide other waste services?



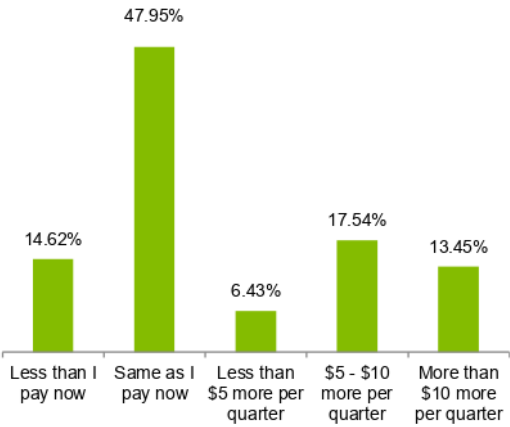
Majority of respondents indicated that they would like Council to provide more services in their local communities. The requests made by community members and the number of times they were made are outlined in Table 4.

FINAL DRAFT

Table 4 Survey responses

Community requests	Frequency
Composting service for kitchen waste and ability for food waste to be put into green bins.	43
Soft plastics recycling service.	17
Kerbside waste collection: <ul style="list-style-type: none"> Provision of bins and kerbside pick-up for residents of Old Cooma Road, Lake Road, Wamboin and rural/farming communities. Three respondents suggested changing the red bin service to fortnightly suggested weekly recycling bins and weekly green waste collection in summer. One respondent requested for lockable bins. One respondent requested for complimentary additional bins as required between collection services. One respondent request for recycling bins at Wamboin. Provision of calendar with schedule. 	17
Hard waste/bulky goods collection: <ul style="list-style-type: none"> Occasional kerbside pickup or availability of a communal skip. One respondent requested this for Carwoola. 	8
E-waste: <ul style="list-style-type: none"> More convenient e-waste and battery recycling service. E-waste bin at the transfer centre needed. 	5
Improvements to the tip sites <ul style="list-style-type: none"> Prioritise disposal at the buy-back shed first before vehicles travel over the weight bridge to dispose of residual waste. Fix conditions of the tip sites (potholes). Recycle materials left here more often. Improved staff processes. Collector tip (Upper Lachlan Shire) is no longer taking larger items of waste 	6
Transfer stations: <ul style="list-style-type: none"> More accessible smaller transfer station for weekly waste in the community. Transfer stations that have better facilities for added separation of materials, such as in Braidwood. Extend availability of tip sites with few options to access during the week, including Bungendore Waste Transfer Station. Improved processing of garbage so that more materials get recycled at facilities. 	6
Better education for community members	5
Regular road side and local community spaces such as parks to have clean-up services, including at the park with the oval in Warrenlittle.	4
Option to purchase compost/collect organics deposited at relevant facilities to recycle organic waste.	3
Return and earn to be more positioned at more accessible locations and a request made for one at Braidwood	3
Building materials: <ul style="list-style-type: none"> Request for pick-up service Concrete disposal option Central recyclable metal drop off points. 	3
Clean up events and initiatives funded by Council (such as Clean Up Australia Day)	1
Green shed service	2
All of council's services listed to be accessible by all	1
More convenient household rubbish disposal service for those out of town or nominated bin collection point for rural areas .	2
Better advertising of available services, for example, paint/oil collection day in Carwoola.	2
Rebate system to encourage use of reusable items such as nappies to prevent landfill disposal.	1
Provision of green bags for food scraps and green bins for apartments.	1
Household chemicals collection service once a year.	1
Central skip bin for townhouses instead of individual sets of bins.	1
Rates system based on weight	1
Utilisation of organic waste produced in biogas system .	1

How much would you pay for these extra services?



Majority of respondent would want to pay the same rates, with 37 per cent willing to pay between \$5 to \$10+ more per quarter.

FINAL DRAFT

Appendix C – Nerriga residents' survey comments

COMMENTS

Cost recovery needs to be carefully designed so that people don't pay for services they can or don't use - especially non-permanent ratepayers

Keep existing facility. The only problem with this site is proper maintenance from QPRC. With better and improved management, this site has longevity and will have significant savings for ratepayers.

Our property is a weekend and we take all our waste back to Bundanoon where we live, we do want Council to provide a service for waste management for residents for good environmental stewardship and will pay our contribution to this.

History shows in areas such as Campbeltown that when a rubbish tip is closed or waste facilities attract a cost, rubbish is dumped roadside and costs the council even more! Keep the tip open and free.

Your council never provides any services or improvements in Nerriga so I'm puzzled at the rush of blood you are having so just leave it as it is.

Prefer no form of waste collection and dispose of rubbish as we go to Braidwood

Have a tip the same as Braidwood. Anyway to burn it all as recycle energy with filters for the smoke? Create a small power station? Recycle all plastic and glass bottles etc. Good Luck

Preferred option would be to keep a landfill site in the area. Additional waste collection charges should only apply to participating properties.

What a joke. What will be next

Support for option 2 only.

A new land fill with appropriate recycling available would be the best option. All of the above are likely to encourage dumping of rubbish in the area. In our area we look after our own water supply and sewage but we need suitable, acceptable waste management by council. Travelling waste all the way to Braidwood is not a suitable option and people with resort to dumping and burning.

We do not live there permanently. More rate charges not welcomed pay too much now for services (provided?)

Having a rural property, bins would not work as I would have 1km transit from cabin to roadside (Corang Post Office Road) or 3km to Braidwood Road. Any decision needs to consider those in remote rural. Preference is a transfer station for general and recyclable waste.

Nerriga tip remain open 2 days minimum and better organised with large steel bins - recycling paper, glass, plastic and aluminium. New bins for residents to drop off - collection not needed.

We are happy with the current arrangements due to our property only being for holidays and weekend getaways. The cost of rates in 10 years has grown ridiculously already.

My property has more than one title, waste charged on more than one title. We don't get much for the cost we pay now.

Just local recycle and red bin waste needed the organic waste is good for the farm environment.

My experience is that people are likely to take an option that feels "simple" which could lead to illegal dumping and inappropriate disposal of waste, thank you for soliciting my opinion.

Please do the right thing; we are paying for this service.

No 2 but bins must be emptied much more frequently over holidays eg: Christmas and long weekend. Our local bins are overfilled by campers and visitors over holidays., we do not want more recycling bins at Tomboye

Always pay my rates on time and what do I get for that, no water, no electricity, a dirt road, no garbage pickup. But that's ok. I say keep the tip and manage it better, surely that can't be hard. Spend our money and fix the tip like Nowra has done. Recycle everything and turn it into a good Business. That's what people want. That's what I want not going to drive 100k to a tip. Fix it and give people a job, give our new tip and new name.

Wants to leave as it is.

FINAL DRAFT

COMMENTS

Option 1 - Do nothing and remove the charges from the waste program and landfill as for landowners like myself do not use it at all. It is too inconvenient to use Braidwood anyway or else just replace it with another tip.

We are casual visitors at our lot and would not be going near Braidwood Waste Transfer station, when coming back to our Kiama Residence. Therefore, if the closure at Nerriga goes ahead we would expect our rates on our garbage to be cancelled.

Extend the current tip at Nerriga

The list breakdown would make it easier to rate the options. Rubbish dumping from weekenders may become a significant issue, what are the plans to combat this???

As ours and many other properties in the area are weekenders and not permanently resided in, the kerbside option just isn't an option for us. We already feel like the rates we pay give us no services other than the Nerriga tip in return as we do not have access to power or sewer facilities. Many of the properties surrounding ours are owned by people from the Shoalhaven area therefore driving to Braidwood to dispose of waste is impractical.

You must provide some sort of service because people are NATURALLY Lazy and will just dump their waste anywhere

I propose a landfill be constructed at the Nerriga motocross track. No Civil works or occupation certificates are required. In general compliance with FA will not be necessary.

DO NOT RATES TO INCREASE

Does not apply to users/owners of above address. All our waste is removed on return to our home (Wollongong) for disposal. Limited use at this property. No permanent residence.

If you have to travel 50kms to a waste centre, it is also an expensive option. IF this is the case then am I right to assume no charge at entry for these ratepayers?

Keep services as is just tighten up the use of tip passes for residents not actually living on properties as they leaving other rubbish from their homes in faraway property and businesses and some friends

Unable to make a choice as more information needed re costs and re current landfill tip

Local comment is - "Why bother, they will do what they want. Our opinions don't count. It's a mere public formality before doing exactly what Council wants!" I hope not, I do wonder.

You give us no costing so how can we make comment {about the options}. We need large & bulky item disposal, glass/tin and swap centre.

We sort out our own food/green/light waste. We use the tip for glass, some tins and big items. We need facility for these.

We always bring back bits - nails + screws (containers of) and odd things others are clearing out. So we want a swap facility which is a 5-star environmentally friendly disposal by people with similar needs. Run the tip properly - everyone - and it will last lots longer.

We think the Huskisson Tip is the best model and Tarago the worst. Sure there are holes can still fill. Don't tell us it is too expensive. It is the only utility the Council has given us for years for the rates we pay. You and we know few/no projects have been provided other than the tip so don't focus on finance!




Why do we have tip fees and Queanbeyan does not?

Why close our landfill system. What is the cost of running the tip the way it is. What happen when the subdivision is completed with no tip. We at Nerriga would like answers from Council before agreeing to any changes when we do not know what any of the fees will cost for any changes. We have been paying extra in our tip fees for years because Council said it was for a transfer station and now what has our extra money on our tip fees been paying for. Certainly nothing for Nerriga

FINAL DRAFT

Appendix D – Workshop outcomes

Experiences with waste services and how to manage issues

		
<ul style="list-style-type: none"> • Macs Reef transfer station • Proactive clean-up of litter by residents • Great local schools that are conscious of environment • Bins placed in the park • Doggie bag containers at park • Kitchen food waste bags • Kerbside collection in Captains Flat • Recycling bin system • Fishing areas emptied regularly • Litter pick up and gardening (J'Berace) 	<ul style="list-style-type: none"> • Dumping around the park (Captains Flat) • Bins removed from park (Captains Flat) • Missing pick-ups in Captains Flat • Green bags not widely use or known about • No differentiation with landfill and recyclable materials (Bungendore) • A lot of litter observed • Knowledge of what waste can be taken to transfer stations • Return and earn in wrong locations • Customer service at transfer stations • Waste calendars not provided • Knowing about how to arrange replacement lids for bins • Nerriga tip site limited opening hours • Comingling recycling and perception by people/lack of education (Nerriga) • Tip sites filling quickly 	<ul style="list-style-type: none"> • Increase efficiency of waste facilities • Decrease use of plastics and creation of rubbish towards zero waste approach • Education that starts with children and is reinforced through lots of mediums • 'Train' the supermarkets, food outlets/shops to decrease plastics • Better structured rubbish facility • Improved use of council services • Community compost bins and education on use • Recycling facility for soft plastics • Technology and innovation

Wants versus barriers

Wants

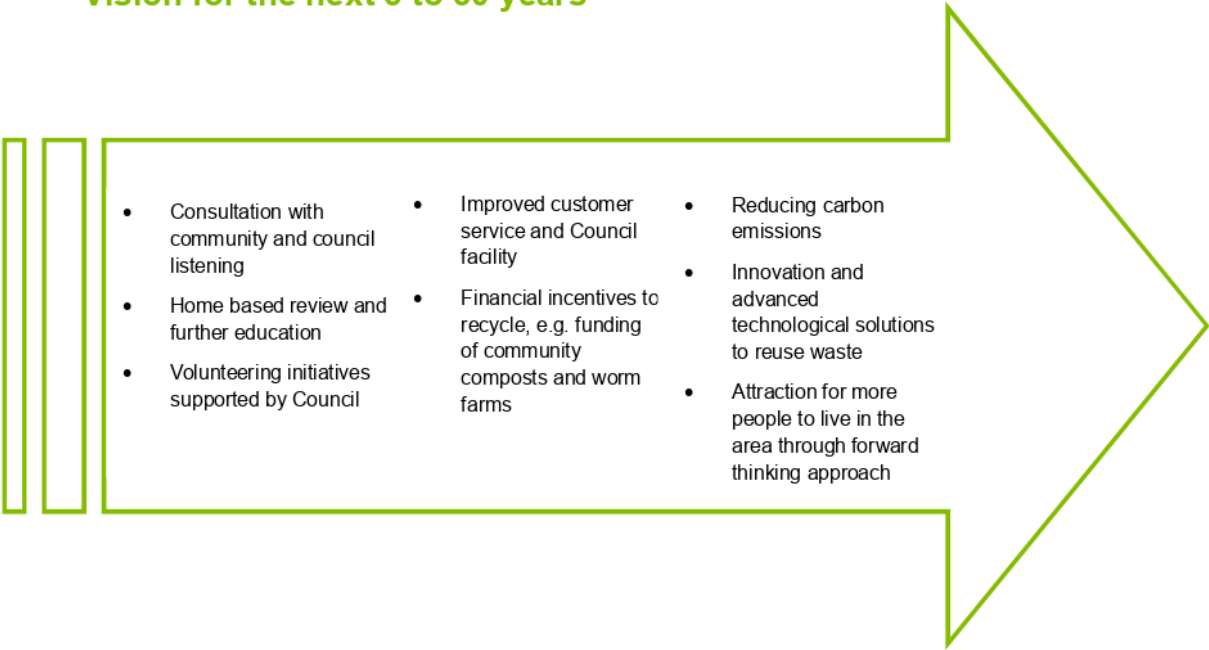
- Roadside litter management/signs
- Targeted education for residents and schools
- Better ways to reuse old tyres and printer cartridges
- Manufacturers to take responsibility for end of life products
- Less into landfill
- Reduce, reuse, recycle
- To make all plastic containers recyclable
- Less product packaging in shops
- Clean up Australia Event and Captains Flat



Barrier

- Intergenerational culture
- Information from council
- Human behaviours and personal responsibility
- Red tape
- Mindful purchasing practices – power of community
- Affordability/increased rates
- Companies not taking action on reduced packaging
- Reducing synthetic fibres
- Better information and knowledge on buying items

Vision for the next 5 to 30 years



aecon.com

QUEANBEYAN-PALERANG REGIONAL COUNCIL

Council Meeting Attachment

30 JUNE 2021

ITEM 5.1 ADOPTION OF QPRC WASTE STRATEGY

ATTACHMENT 4 DRAFT WASTE STRATEGY APPENDIX B

5.1 Adoption of QPRC Waste Strategy
Attachment 4 - Draft Waste Strategy Appendix B (Continued)

Business as Usual (BAU) waste management

No	Stage of waste cycle	Category	Waste Stream	Option Description	FINANCIAL MODELLING - Scenarios						
					BAU	S1 - IMPROVE ILLEGAL DUMPING AND REDUCE LITTER IN LGA	S2 - IMPROVE WASTE EDUCATION IN LGA	S3 - IMPROVE ORGANICS COLLECTION AND PROCESSING	S4 - IMPROVE C&I AND C&D DIVERSION	S5 - THE WHOLE ENCHILADA	ALL OPTIONS
F1	ALL	FEE	MSW	Separate fee structures for former QBN and Palerang LGAs - Former Palerang residents with a kerbside collection are charged the annual domestic waste charge and the general waste charge. - Majority of former Palerang residents are charged the general waste charge. - Majority of former Palerang residents are provided a tip pass and they pay a Landfill Charge to cover costs of disposal of waste within landfills in the former Palerang LGA. - Former QBN residents pay an annual domestic waste charge. - Businesses in the former QBN LGA pay a business waste charge. - Businesses in the former Palerang LGA are charged for a business waste collection service should they register for a collection service.	Yes	Yes	Yes	Yes	Yes	Yes	YES
CON_1	Collection	COLLECTION CONTRACT		Council collection contract - Former QBN contract collection services to a private contractor. - Former Palerang provide collection services in house.	Yes	Yes	Yes	Yes	Yes	Yes	YES
MSWC1	Collection	CORE	MSW	MSW Kerbside collection (URBAN) - Former QBN residents have a residual, recyclables and greenwaste kerbside bin. - Some areas of the former Palerang LGA have kerbside collection comprising a combination of residual, recyclables and FOGO collections. MSW collection (RURAL) - Former QBN Not applicable - Former Palerang provide rural recycling stations, bin compounds (for landfill and recyclables) and drop-off at WTS for residents.	Yes	Yes	Yes	Yes	Yes	Yes	YES
MSWC2	CORE	Collection	All	Purchase and staff new collection trucks as necessary as the area grows	Yes	Yes	Yes	Yes	Yes	Yes	YES
MSWD1	Transport / Disposal	CORE	MSW	MSW Disposal Former QBN disposal to: - Landfill (residual) - Mugga Lane Landfill - Recycling - Hume MRF - Greenwaste - Oaks Estate Former Palerang dispose to: - Landfill (residual) - Woodlawn Landfill, Braidwood Landfill and Nerriga Landfill - Recycling - Mugga Lane - Greenwaste - Woodlawn - Foodwaste - GoTerra Worm Farm	Yes	No	No	No	No	No	NO
FAC1	FACILITIES	Disposal	ALL	Rehabilitate Bungendore Landfill	Yes	Yes	Yes	Yes	Yes	Yes	YES
FAC2	FACILITIES	Disposal	ALL	Rehabilitate Braidwood Landfill	Yes	Yes	Yes	Yes	Yes	Yes	YES
FAC3	FACILITIES	Disposal	ALL	Rehabilitate Majors Creek and Araluen Landfill	Yes	Yes	Yes	Yes	Yes	Yes	YES
FAC4	FACILITIES	Processing	Landfill (residual)	Close and rehabilitate Nerriga Tip	Yes	Yes	Yes	Yes	Yes	Yes	YES
FAC5	FACILITIES	Operations	All	Maintain and operate existing waste facilities	Yes	Yes	Yes	Yes	Yes	Yes	YES
FAC6	FACILITIES	Operations	All	Monitor and maintain closed landfills	Yes	Yes	Yes	Yes	Yes	Yes	YES
C-C&I	Collection	CORE	C&I	C&I Kerbside collection - Former QBN provide C&I waste collection services via a private contractor. - Former Palerang provide C&I collection services in house.	Yes	Yes	Yes	Yes	Yes	Yes	YES
C-C&D1	Collection	CORE	C&D	C&D Services - Former Queanbeyan utilise ACT facilities (no cost to Council). - Former Palerang provide C&D disposal (drop-off) at the Bungendore WTS for a gate fee. Wastes are sorted for recycling or disposal.	Yes	Yes	Yes	Yes	No	No	NO
BULKY1	Collection	BULKY WASTE	MSW	Bulky Waste - Former QBN provides two kerbside clean-ups per financial year for SUDs, or two collections on set dates for MUDs and rural areas. - Former Palerang - No bulky waste collection provided. Self-haul to WTS available to residents.	Yes	No	Yes	Yes	Yes	No	NO

5.1 Adoption of QPRC Waste Strategy
Attachment 4 - Draft Waste Strategy Appendix B (Continued)

PW1	Collection	PROBLEM WASTE	MSW	Problem Wastes - Drop off of various problem wastes provided by both former QBN and Paierang Councils - Chemical waste clean-out - mattress drop off at Bungendore and collection by Soft Landing - tyres - e-waste - Fluorescent tubes	Yes	Yes	Yes	Yes	Yes	Yes	YES
E1	Education	EDUCATION / RESOURCES	MSW and C&I	Education Resources and Programs - Limited and ad-hoc. A number of school programs supported. One full time resource for education within Council providing education services to business units covering waste, water, sewer and environmental management.	Yes	No	No	No	No	No	NO
E2	CORE	Collection	ALL	Undertake regular bin audits to ascertain current generation rates, contamination rates and problem areas. Results to be incorporated into education programs	Yes	Yes	Yes	Yes	Yes	Yes	YES
E3	EDUCATION / RESOURCES	Avoidance	ALL	Hire an additional staff member to operate the Braidwood Waste Transfer Station	Yes	Yes	Yes	Yes	Yes	Yes	YES
E4	EDUCATION/ RESOURCES	Avoidance	ALL	Work with community members/organisations to identify appropriate sites for Clean Up Australia Day events and assist in the delivery of these events	YES	Yes	Yes	Yes	Yes	Yes	YES
PUBLIC4	Collection	PUBLIC WASTE	Public Waste	Bins provided in public areas with the contents taken to landfill	Yes	Yes	Yes	Yes	Yes	Yes	YES

*Domestic waste charge = covers costs such as wages of waste operational and management staff, loan repayment, waste contracts, waste disposal fees and educational activities

*General waste charge = this funds a number of Council's waste management activities including design and construction costs for new facilities, loan repayments and rehabilitation of closed landfills

5.1 Adoption of QPRC Waste Strategy

Attachment 4 - Draft Waste Strategy Appendix B (Continued)

BRI, Beyond the Box 2023-2024 (BRI-2024)													BRI-2024 2023-2024		BRI-2024 2023-2024																
ID	Project	Project Name	Project Description	Project Status	Project Type	Project Category	Project Sub-Category	Project Phase	Project Milestone	Project Deliverable	Project Outcome	Project Impact	Project Benefit	Project Risk	Project Challenge	Project Solution	Project Timeline	Project Budget	Project Cost	Project Revenue	Project Profit	Project Loss	Project ROI	Project NPV	Project IRR	Project Payback	Project Break-Even	Project Sensitivity	Project Scenario	Project Assumption	Project Note
1	1000000000	Project A	Project A Description	Project A Status	Project A Type	Project A Category	Project A Sub-Category	Project A Phase	Project A Milestone	Project A Deliverable	Project A Outcome	Project A Impact	Project A Benefit	Project A Risk	Project A Challenge	Project A Solution	Project A Timeline	Project A Budget	Project A Cost	Project A Revenue	Project A Profit	Project A Loss	Project A ROI	Project A NPV	Project A IRR	Project A Payback	Project A Break-Even	Project A Sensitivity	Project A Scenario	Project A Assumption	Project A Note
2	1000000000	Project B	Project B Description	Project B Status	Project B Type	Project B Category	Project B Sub-Category	Project B Phase	Project B Milestone	Project B Deliverable	Project B Outcome	Project B Impact	Project B Benefit	Project B Risk	Project B Challenge	Project B Solution	Project B Timeline	Project B Budget	Project B Cost	Project B Revenue	Project B Profit	Project B Loss	Project B ROI	Project B NPV	Project B IRR	Project B Payback	Project B Break-Even	Project B Sensitivity	Project B Scenario	Project B Assumption	Project B Note
3	1000000000	Project C	Project C Description	Project C Status	Project C Type	Project C Category	Project C Sub-Category	Project C Phase	Project C Milestone	Project C Deliverable	Project C Outcome	Project C Impact	Project C Benefit	Project C Risk	Project C Challenge	Project C Solution	Project C Timeline	Project C Budget	Project C Cost	Project C Revenue	Project C Profit	Project C Loss	Project C ROI	Project C NPV	Project C IRR	Project C Payback	Project C Break-Even	Project C Sensitivity	Project C Scenario	Project C Assumption	Project C Note
4	1000000000	Project D	Project D Description	Project D Status	Project D Type	Project D Category	Project D Sub-Category	Project D Phase	Project D Milestone	Project D Deliverable	Project D Outcome	Project D Impact	Project D Benefit	Project D Risk	Project D Challenge	Project D Solution	Project D Timeline	Project D Budget	Project D Cost	Project D Revenue	Project D Profit	Project D Loss	Project D ROI	Project D NPV	Project D IRR	Project D Payback	Project D Break-Even	Project D Sensitivity	Project D Scenario	Project D Assumption	Project D Note
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5.1 Adoption of QPRC Waste Strategy

Attachment 4 - Draft Waste Strategy Appendix B (Continued)

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QUEANBEYAN-PALERANG REGIONAL COUNCIL

Council Meeting Attachment

30 JUNE 2021

ITEM 5.1 ADOPTION OF QPRC WASTE STRATEGY

ATTACHMENT 5 DRAFT WASTE STRATEGY APPENDIX C

AECOM Imagine it.
Delivered.

Waste Strategy for QPRC
Queanbeyan-Palerang Regional Council
24-Sep-2018
Doc No. 60578100/02

QPRC Waste Strategy - Briefing Paper

Current status of waste management in the QPRC region



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Waste Strategy for QPRC
QPRC Waste Strategy - Briefing Paper – Current status of waste management in the
QPRC region

QPRC Waste Strategy - Briefing Paper

Current status of waste management in the QPRC region

Client: Queanbeyan-Palerang Regional Council

ABN: 95 933 070 982

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Revision 01 – 24-Sep-2018
Prepared for – Queanbeyan-Palerang Regional Council – ABN: 95 933 070 982

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QPRC Waste Strategy - Briefing Paper – Current status of waste management in the
QPRC region

Quality Information

Document QPRC Waste Strategy - Briefing Paper
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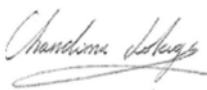
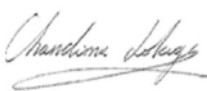
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Date 24-Sep-2018

Prepared by Project Team

Reviewed by Chani Lokuge, Technical Director, Waste Management

Revision History

Rev	Revision Date	Details	Authorised	
			Name/Position	Signature
A	8-Aug-2018	Draft for Client Review	Chani Lokuge Technical Director Waste Management	
01	23-Aug-2018	Final	Chani Lokuge Technical Director - Waste Management	
02	24-Sept-2018	Final – Incorporating Waste Strategy Working Group Meeting 1	Chani Lokuge Technical Director - Waste Management	

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QPRC Waste Strategy - Briefing Paper – Current status of waste management in the QPRC region

Table of Contents

Abbreviations / Glossary	i
Executive Summary	ii
1.0 Why is QPRC developing a Waste Strategy?	1
1.1 Significant projects arising from previous waste strategies	1
2.0 National, State and Regional Waste Management	4
2.1 National Waste Market Factors	4
2.1.1 China "National Sword" Policy	4
2.1.2 Growing Community Awareness	5
2.2 ACT Waste Market Factors	6
2.2.1 The Hume MRF	6
2.2.2 ACT Landfill	6
2.2.3 ACT Cooperation with QPRC	6
2.3 NSW Waste Market Factors	7
2.3.1 Regional Cooperation	7
2.3.2 Energy from Waste (EfW)	8
2.3.3 Woodlawn Mechanical Biological Treatment Facility	8
2.3.4 NSW Waste Less Recycle More 2017-2021 Extension	8
3.0 Regulatory Context	11
3.1 New South Wales Regulation	11
3.1.1 Protection of the Environment Operations (POEO) Act 1997	11
3.1.2 Protection of the Environment Operations Waste Regulation 2014	11
3.1.3 Waste Avoidance and Resource Recovery (WARR) Strategy	13
3.1.4 NSW Landfill Levy	15
3.1.5 Container Deposit Schemes	15
3.2 ACT Waste Legislation	15
3.3 Australian Government (Cwth)	16
4.0 Existing Services in the QPRC LGA	17
4.1 Residential Waste Services	17
4.1.1 Kerbside Collection	17
4.1.2 Bulky Waste	18
4.1.3 Waste Disposal	18
4.1.4 Access to Self-Haul Facilities	21
4.1.5 Education	23
4.2 Council Provided Waste Services for Business	23
4.2.1 Business Recycling Programs	23
4.2.2 Food Rescue	24
4.3 Construction and Demolition Waste	24
4.4 Planned Changes to Waste Infrastructure	24
5.0 Council Fees and Charges	26
5.1 Existing Domestic Waste Management Charges	26
5.2 General Waste Charge (former Palarang LGA)	27
5.3 Landfills Charge (former Palarang LGA)	27
5.4 Business Waste Management Charge (Former QCC LGA)	28
6.0 Population, Waste Generation and Resource Recovery	29
6.1 Population and Households	29
6.1.1 Population Data	29
6.1.2 Household Data	29
6.2 QPRC Waste Generation Rates	30
6.2.1 Municipal Solid Waste	30
6.2.2 Commercial and Industrial Waste Generation	32
6.2.3 Construction and Demolition Waste Generation	32
6.3 Resource Recovery	32
7.0 Benchmarking in the Region	34
7.1 MSW Recycling Rates	34
7.2 Garden and Food Organics Recovery Rates	35

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QPRC Waste Strategy - Briefing Paper – Current status of waste management in the QPRC region

7.3	Waste and Recycling Service Providers	36
7.4	Waste Fees and Charges	36
8.0	What Can / Cannot QPRC Influence in the Waste Sector?	38
8.1	What QPRC Can Influence	38
8.2	What QPRC Cannot Influence	38
9.0	Next Steps	39
10.0	Limitations	40
Appendix A		
	Benchmarking Table	A
Appendix B		
	Implementation Strategies: Queanbeyan City Council	B
Appendix C		
	Implementation Strategies: Palerang Council	C

List of Tables

Table 1	Key waste facility projects	2
Table 2	Summary of market trends in waste management	4
Table 3	2007 WARR Strategy targets and QPRC performance	14
Table 4	QPRC waste collection services	17
Table 5	Approximate number of bulky good collections in former QCC LGA	18
Table 6	Waste disposal summary	19
Table 7	Summary of waste services for the main townships in the QPRC	19
Table 8	Council provided waste services for local businesses	23
Table 9	Completed and planned changes to waste management infrastructure	25
Table 10	Domestic waste charges former QCC 2018-19	26
Table 11	Domestic waste charges former Palerang Council 2018-19	26
Table 12	Number of households with domestic waste charge from 2016 to 2050	29
Table 13	Number of households without a domestic waste collection service	30
Table 14	Total number of households QPRC LGA	30
Table 15	Household waste generation rates (source: EC Sustainable, 2018)	30
Table 16	Waste generation 2016 – 2050 (tonnes per annum)	31
Table 17	Council drop-off facility information (source: QPRC WARR Survey 2016-17)	32
Table 18	Estimates of average resource recovery in Australia and NSW 2014-15	33
Table 19	Diversion rates - current and potential (source: EC Sustainable, 2018)	33
Table 20	Waste and recycling service providers (source: CRJO Regional Strategy 2017)	36
Table 21	Waste fees and charges (source: councils published annual rates and fees/charges 2018)	37

List of Figures

Figure 1	QPRC local government area and waste facilities	3
Figure 2	NSW EPA Waste Less, Recycle More funding initiatives	9
Figure 3	The NSW EPA waste hierarchy (source: NSW WARR Strategy 2014-2021)	13
Figure 4	Waste facilities in the QPRC	20
Figure 5	Population distribution map (source: Australian Bureau of Statistics, 2016)	21
Figure 6	Illustrative map – travel time in minutes to the nearest waste facility	22
Figure 7	Estimated Waste Generation in QPRC LGA based on current generation rates	31
Figure 8	MSW Recycling rate per council in percentage (source: CRJO Waste Strategy 2017 unless noted otherwise)	34
Figure 9	Annual organics recycling per council in tonnes per capita	35
Figure 10	Annual organics recycling per council in tonnes total	35

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Waste Strategy for QPRC
QPRC Waste Strategy - Briefing Paper – Current status of waste management in the
QPRC region

i

Abbreviations / Glossary

Abbreviation	Description
ABS	Australian Bureau of Statistics
ACT	Australian Capital Territory
C&D	Construction & Demolition
C&I	Commercial & Industrial
CDS	Container Deposit Scheme
Commingled	Materials that are able to be recycled or reprocessed through a materials
Recyclables	recovery facility
CRJO	Canberra Region Joint Organisation
DWM	Domestic Waste Charge – Charge levied for the kerbside collection of bins
EfW	Energy from Waste
EPA	Environment Protection Authority
ERP	Quarterly Population Estimates
FOGO	Food and Garden Organics
GHG	Greenhouse Gas
GO	Garden Organics
GST	Goods and Services Tax
GWC	General Waste Charge – Charge levied to cover waste management costs not directly related to kerbside collections
LGA	Local Government Area
MBT	Mechanical Biological Treatment
MRF	Materials Recovery Facility
MSW	Municipal Solid Waste
NSW	New South Wales
NTCRS	National Television and Computer Recycling Scheme
Organic waste	Waste from plants or animals that can be composted into material suitable for reuse
PEF	Process Engineered Fuel
PET	Polyethylene Terephthalate
POEO	NSW Protection of the Environment Operations Act 1997
QCC	Former Queanbeyan City Council
QPRC	Queanbeyan-Palerang Regional Council
Residential Waste	Waste sent to landfill
RRC	Resource Recovery Centre
WARR	Waste and Resource Recovery
WTS	Waste Transfer Station

Executive Summary

The Queanbeyan-Palerang Regional Council (QPRC or the Council) is located in the Southern Tablelands region of New South Wales and covers an area of about 5,300 km². The Council was formed in May 2016 after the amalgamation of former Queanbeyan City Council and Palerang Council, and serves a population of approximately 58,100 people. Major townships include Queanbeyan, Bungendore, Braidwood and Googong. There are also several rural villages and a number of large residential populations living in rural-residential to the west near the ACT border.

In light of the amalgamation, Council is reviewing and consolidating its existing waste strategies. This will provide an opportunity to address key issues the Council is facing including pressures on existing waste services from forecast population growth, the need to increase resource recovery rates, streamline waste services and charges and address key national and regional waste issues which may impact on the Council.

A number of actions identified in the Palerang Council Waste Strategy and the former Queanbeyan City Council Waste Strategy have been implemented or completed. Key projects related to the construction or improvement to facilities and their costs are outlined in the table below.

Table Ex 1 Major waste project implemented in QPRC LGA

Facility	Description	Approximate Cost
Braidwood Waste Transfer Station	Facility accepting residual waste, recyclables and organics from municipal, commercial & industrial and construction & demolition sources	\$5,500,000
Bungendore Resource Recovery Facility	Largest facility in LGA. Facility accepting residual waste, recyclables and organics from municipal, commercial & industrial and construction & demolition sources	\$4,500,000
Captains Flat Waste Transfer Station	Local facility accepting mainly residential waste streams	\$400,000
Macs Reef Road Waste Transfer Station	Local facility accepting residential waste streams.	\$2,000,000
Queanbeyan Waste Minimisation Centre	Purchase of new mulcher	\$1,000,000
Queanbeyan Waste Minimisation Centre	Construction of a Community Recycling Centre	\$200,000

In addition, Council has implemented a number of other key actions such as commencing construction of the Braidwood Waste Transfer Station, entered into a contract with J.J. Richards & Sons for the delivery of waste collection services within the former QCC LGA, entered into a contract with Soft Landings for the processing of mattresses from the QPRC LGA and completing a comprehensive waste audit for the QPRC LGA. It is noted that following amalgamation, some actions identified in the previous strategies may no longer be relevant or supported.

QPRC Waste Collection Services

QPRC provides waste services broadly consistent with those offered by other CRJO councils, however, it should be noted there are considerable variations across the region. Within the QPRC LGA there are also variations in waste services and practices between the former Queanbeyan and Palerang councils. The current kerbside collection services provided within QPRC LGA are summarised in the table below.

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QPRC Waste Strategy - Briefing Paper – Current status of waste management in the
QPRC region

iii

Table Ex 2 QPRC kerbside waste collection services

Catchment	Number of Services	Residual	Recycling	GO	FOGO	Collection Contractor
Braidwood	768	140L (W)	240L (F)	N/A	240L (F)	Council
Bungendore	1,441	140L (W)	240L (F)	N/A	240L (F)	Council
Burra/Royalla/Urila	628	240L (F)	240L (F)	N/A	N/A	Council
Captains Flat	275	140L (W)	240L (F)	N/A	240L (F)	Council
Carwoola/Primrose Valley	367	N/A	240L (F)	N/A	N/A	Council
Majors Creek/Araluen	376	240L (F)	240L (F)	N/A	N/A	Council
Queanbeyan – Urban	15,856	140L (W)	240L (F)	240L (F)	N/A	J.J. Richards
Queanbeyan –Urban	1568	240L (W)	240L (F)	240L (F)	N/A	J.J. Richards
Queanbeyan – Multi-unit shared^	2,898	240L (W)	240L (F)	240L (F)	N/A	J.J. Richards
Queanbeyan – Rural	869	240L (F)	240L (F)	N/A	N/A	J.J. Richards
Sutton Acres	177	N/A	240L (F)	N/A	N/A	J.J. Richards
Vacant (no service)	4,218					

Waste Fees and Charges

A number of households in the QPRC LGA pay a domestic waste management charge which covers costs associated with kerbside waste collection such as wages of waste operational and management staff, loan repayment; waste contracts waste disposal fees and educational activities.

The majority of residents in the former Palerang LGA also pay a general waste charge. This charge funds a number Council's waste management activities including design and construction costs for new facilities, loan repayments and rehabilitation of closed landfills. In addition, former Palerang LGA residents issued with a 'tip pass' pay a Landfill Charge to cover costs of disposal of waste within landfills in the former Palerang LGA.

Council imposes a mandatory charge for businesses in the former QCC LGA for the availability of business related waste services provided by Council.

Number of Households and Waste Generation Rates

The total number of households in the QPRC LGA is given in the table below.

Table Ex 3 Total number of households QPRC LGA

	2016	2021	2026	2031	2036	2050	Difference (2016-2050)
Total LGA	27,180	28,898	31,365	34,040	36,453	40,552	13,372

MSW generation was estimated based on average generation rates provided in the QPRC Household Kerbside Bin System Audit as given below. Waste generation has not been modelled based on current diversion rates but on estimated generation per waste type.

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iv

Table Ex 4 Household waste generation rates (source: EC Sustainable, 2018)

Waste Type	Rate	Unit
Residual	3.6	kg/household/week
Recycling	4.8	kg/household/week
Organics	8.8	kg/household/week

To identify the estimated volume of waste generated by the LGA up to 2050, the rates of waste generation in Table 15 were applied to:

- the number of households per year (refer to Table 14)
- 0.7% waste growth rate per year¹

The estimated waste generation for the QPRC LGA from 2016 through to 2050 is given in the table below. This assumes business as usual in relation to ongoing waste management activities.

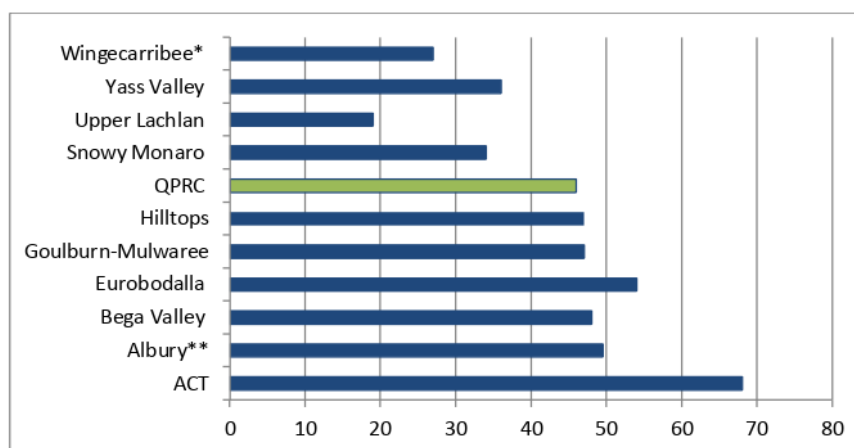
Table Ex 5 QPRC Waste generation 2016 – 2050 (tonnes per annum)

	2016	2021	2026	2031	2036	2041	2046	2050
Residual	6,692	7,381	8,295	9,322	10,338	11,150	11,981	12,680
Recycling	5,019	5,536	6,221	6,992	7,753	8,363	8,986	9,510
Organics	12,269	13,532	15,208	17,091	18,952	20,442	21,966	23,246
Total	23,980	26,448	29,725	33,405	37,043	39,955	42,933	45,435

Recycling Rate Compared to Other Similar Councils

Figure Ex 1 summarises the MSW recycling rates of comparable councils and the ACT, and highlights QPRC to illustrate how Council currently performs with respect to similar LGA's in the region.

Figure Ex 1 MSW recycling rate % per council (source: CRJO Waste Strategy 2017 unless noted otherwise)



*Sourced from Wingecarribee 2016-17 WARR Survey

** Sourced from 2014-15 NSW Local Government Waste and Resource Recovery Data Report 2014-15

¹ Australian National Waste Report 2016, identified that over nine years, excluding fly ash, waste generation increased by about 19% or an average of 1.9% per year and per capita generation trended upwards with a 7% overall increase over nine years or an average increase of 0.7% per year (REC & Blue Environment, 2016, page 42).

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QPRC Waste Strategy - Briefing Paper – Current status of waste management in the
QPRC region

v

As highlighted in the above figure QPRC is currently performing at around the median when compared to other Councils in the local region with a recycling rate of around 46%. The NSW EPA reported an overall recycling rate across NSW for MSW of 58% in the latest Progress Report.

Next Steps

This discussion paper will support the following key next steps in the preparation of the new Waste Strategy for QPRC:

- Provide background information to the first QPRC Waste Strategy Working Group (WSWG) Meeting currently scheduled for the early September
- Provide background information for a Council meeting currently scheduled for mid-October to seek Council endorsement prior to proceeding with the first Community Consultation session.
- Provide background information for the first Community Consultation sessions to be held in mid-October
- Support identification of alternative waste management and resource recovery options. These options will be identified based on findings from our site inspections, discussions with QPRC staff, information in the background briefing paper, and outcomes of the initial WSWG meeting and Community Consultation sessions.

1.0 Why is QPRC developing a Waste Strategy?

The Queanbeyan-Palerang Regional Council (QPRC or the Council) is located in the Southern Tablelands region of New South Wales (NSW) and covers an area of about 5,300 km². The Council was formed in May 2016 after the amalgamation of former Queanbeyan City Council and Palerang Council, and serves a population of approximately 58,100 people. Major townships include Queanbeyan, Bungendore, Braidwood and Googong. There are also several rural villages and a number of large residential populations living in rural-residential to the west near the ACT border. The Council LGA and main waste facilities are shown in Figure 1.

In light of the amalgamation, Council is reviewing and consolidating its existing waste strategies. This will also provide an opportunity to address key issues the Council is facing:

- To assist QPRC to meet the objective of a sustainable, “clean green” community outlined in the QPRC 2017 Strategic Directions paper.
- Predicted population growth in the LGA to grow to 76,000 people by 2031²
- Not achieving *NSW Waste Avoidance and Resource Recovery Strategy 2014-2021* (WARR Strategy) targets
- Different fees and charges regimes based on the former LGA boundaries
- Different waste services provided across the local government area (LGA)
- Delivery of the same service by Council staff in some areas and by Contractors in other areas
- Sporadic, adhoc waste education activities
- Differences in gate fees at disposal and recycling facilities for the same materials from different areas

1.1 Significant projects arising from previous waste strategies

A number of actions identified in the Palerang Council Waste Strategy³ and the former Queanbeyan City Council Waste Strategy⁴ have been implemented or completed. Key projects related to the construction or improvement to facilities and their costs are identified in Table 1. In addition, Council has implemented or completed the following actions:

- Entered into a contract to construct the Braidwood Waste Transfer Station
- Entered into a contract with J.J. Richards & Sons for the delivery of waste collection services within the former QCC LGA
- Entered into a contract with Soft Landings for the processing of mattresses from the QPRC LGA
- Active participation in a Regional Illegal Dumping squad and associated enforcement activities
- Offered businesses within the QCC LGA access to the ACTSmart waste reduction program (now expanded to cover the entire QPRC LGA)
- Carried out a comprehensive waste audit for the QPRC LGA

A full list of identified actions and the status of each action from the previous strategies are contained in Appendix B and C. Following amalgamation, some actions identified in the previous strategies are no longer relevant or supported.

² QPRC (2017), Strategic Directions Discussion Paper, published March 2017 <https://yourvoice.qprc.nsw.gov.au/strategic-directions-discussion-paper>

³ URS (2015), Waste Management Strategy 2015-2035 for Palerang Council

⁴ APC (2013), Waste and Resource Recovery Strategy 2013-2023 for Queanbeyan City Council

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2

Table 1 Key waste facility projects

Facility	Description	Approximate Cost
Braidwood Waste Transfer Station	Facility accepting residual waste, recyclables and organics from municipal, commercial & industrial and construction & demolition sources	\$5,500,000
Bungendore Resource Recovery Facility	Largest facility in LGA. Facility accepting residual waste, recyclables and organics from municipal, commercial & industrial and construction & demolition sources	\$4,500,000
Captains Flat Waste Transfer Station	Local facility accepting mainly residential waste streams	\$400,000
Macs Reef Road Waste Transfer Station	Local facility accepting residential waste streams.	\$2,000,000
Queanbeyan Waste Minimisation Centre	Purchase of new mulcher	\$1,000,000
Queanbeyan Waste Minimisation Centre	Construction of a Community Recycling Centre	\$200,000

AECOM was appointed by Council to develop the new Waste Management Strategy for the region.

The objectives of the project are to:

- provide an overview of the existing waste management practices and services offered.
- engage and gauge community views on waste and potential waste management options.
- develop potential future waste management and resource recovery options for the Council over a 30-year timeframe, including an estimate of the cost to implement each option.
- develop a strategy to assist Council in meeting the WARR Strategy targets.
- develop a strategic business plan and financial model to ensure the sustainability of the Waste Strategy over a 30-year timeframe including quantification of a typical residential bill.

This briefing paper responds to the first objective above, and explores the range of existing waste services and facilities provided across QPRC and how they compare to services provided by neighbouring councils within the Canberra Region Joint Organisation (CRJO⁵).

The briefing paper includes the following information:

Section 1: Background and overview to why the waste strategy is being prepared

Section 2: National, State and Regional Waste Management

Section 3: Regulatory Context

Section 4: Existing Services in the QPRC Local Government Area (LGA)

Section 5: Council Fees and Charges

Section 6: Population, Waste Generation and Resource Recovery

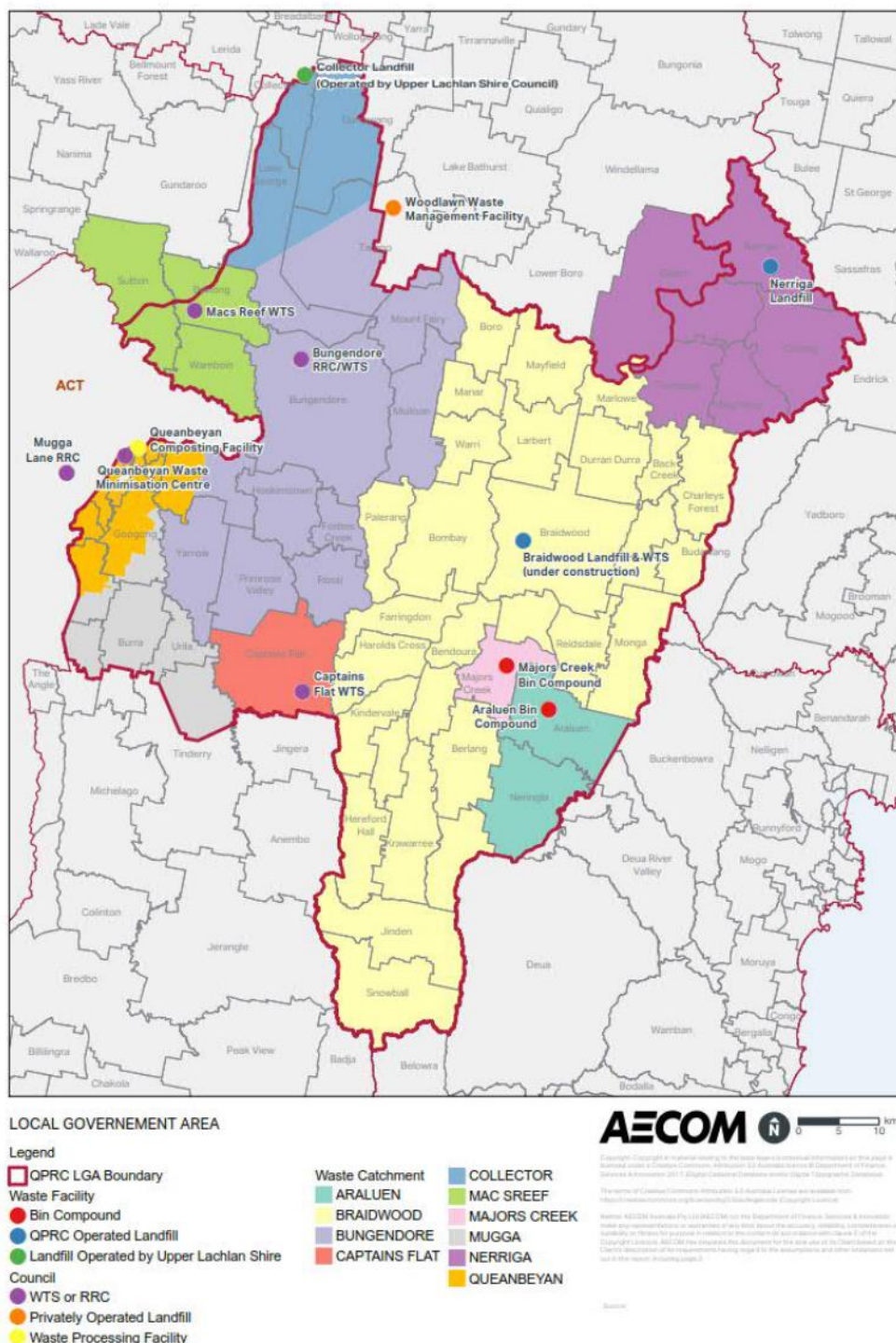
Section 7: Benchmarking in the Region

Section 8: What Can / Cannot QPRC Influence

Section 9: Next Steps

⁵ CRJO: Canberra Region Joint Organisation comprises of Bega Valley, Eurobodalla, Hilltops, Goulburn Mulwaree, Queanbeyan-Palerang, Snowy Monaro, Upper Lachlan, Wingecarribee and Yass Valley Councils along with the ACT Government.

Figure 1 QPRC local government area and waste facilities



2.0 National, State and Regional Waste Management

This section provides an overview of the current National, State and Regional waste management environment, including consideration of key trends, constraints and opportunities of potential relevance to QPRC.

Table 2 Summary of market trends in waste management

Market	Factor	Potential Impact to QPRC
National	China Sword Policy – National recyclable materials price volatility	Potential increases in gate fee for recyclables sent to Hume MRF. Greater incentive to establish local markets for reuse/recycling of materials rather than export.
	Growing Community Awareness from media coverage (e.g. War on Waste)	Increasing local community awareness and pressure to increase resource recovery and reduce waste to landfill.
ACT	The Hume MRF	Variances in gate fee charged to former Palerang and Queanbeyan Councils. Potential increases in gate fees due to National recyclables price volatility. Impact of CDS on recyclable volumes, materials and costs.
	ACT Mugga Lane Landfill	Former QCC LGA sent kerbside collected waste to Mugga Lane Landfill in the ACT. Increases in gate fees expected at Mugga Lane Landfill which will impact QPRC.
	ACT and Cooperation with QPRC	ACT Government is looking for a processing site to take Food and Garden Organics (FOGO). QPRC could potentially co-operate with ACT to establish a site able to take FOGO from both the ACT and QPRC LGA.
NSW	Regional Cooperation	QPRC is a member of the CRJO, which is made up of nine NSW councils and the ACT Government. Potential to investigate shared services leading to cost efficiencies across the region.
	Energy from Waste (EfW)	Regulatory and market uncertainty in NSW regarding EfW in the state, which may influence QPRC position on sending residual waste to an EfW facility in the region.
	Woodlawn Mechanical Biological Treatment Facility	QPRC MSW processed at the Woodlawn MBT would enable the Council to achieve its WARR target for MSW with a single initiative.
	NSW Waste Less Recycle More 2017-2021 Extension	Potential NSW Government funding available to support initiatives identified in the new Strategy.

2.1 National Waste Market Factors

2.1.1 China “National Sword” Policy

Australia has an open export-orientated economy that operates within global supply chains. It is typically not possible for an Australian jurisdiction to achieve full resource recovery within its own boundaries. A circular economy requires some waste streams to be transported outside of regional economies for processing and provision back into national and global supply chains. This does not preclude significant local economic benefits being achieved via well targeted policies favouring local processing and purchasing.

Nonetheless, the prices of most recyclable materials are set in global commodity markets. For example, the value of recovered steel and aluminium is closely linked to the international price of newly smelted steel and aluminium, and recovered plastics prices are linked to the price of crude oil. Until very recently, much of the reprocessing of recyclable materials has been undertaken in China.

In 2013, China launched “Operation Green Fence”, a wide sweeping national program aimed at improving local environmental outcomes and industry restructuring by reducing waste importation and contamination of recyclable materials. The latest phase of this operation called “National Sword” bans the import of many materials along with increased enforcement. On 1 January 2018 China implemented the National Sword policy, which restricts the import of 24 categories of solid waste including types of plastic, unsorted paper and metals. Furthermore, the National Sword also imposes a new 0.5% contamination limit for the remaining recyclable materials not covered by the ban, and restricts the number of import licences issued. Most Material Recovery Facilities (MRFs), including the Hume MRF used by QPRC, cannot readily meet these requirements.

As the ACT MRF sends most of the materials it processes to local manufacturers, its direct exposure to “National Sword” is reduced. Following the recent upgrades at the MRF, it also produces some of the highest quality product in the country. Nonetheless, given the global fluctuations in prices, “National Sword” is having an impact on their revenue.

The policy change in China has greatly dented the demand in global markets for recycled materials, impacting not just Australia but also North America and many Asian and European countries. For example, earlier this year Visy stopped accepting kerbside recycling material collected from eleven western Victorian councils, leaving councils uncertain about where to send their yellow-bin recyclables⁶.

Global prices for many recycled materials started falling when the Chinese government reconfirmed National Sword to the World Trade Organisation in September 2017. For example, mixed paper has dropped from its decade-long range of \$200-250/tonne to between \$0-80/tonne. Mixed plastic has dropped from \$250-350/tonne to around \$50/tonne⁷.

The domestic market for glass has also collapsed across Australia although this related as much to the net importation of bottled beverages as to the National Sword policy. Net importation of bottles leads to Australia having more recycled glass than it needs for local manufacture. Improved recovery of glass containers via the various state and territory Container Deposit Schemes (CDS) will only exacerbate this problem.

Global market volatility creates significant risks for Australian companies and councils seeking to invest in resource recovery and reprocessing infrastructure.

However, the recent developments present a number of opportunities to repurpose waste for beneficial use locally, thus avoiding global market pressures. For example, crushing glass to replace sand and gravel in civil works or processing tyres to replace bitumen in road construction and resurfacing. If such initiatives are undertaken with agreements to ensure supply of tyres and glass and the purchase of asphalt produced then an attractive investment environment can be created. Such approaches can have positive economic and social benefits within the local community as well as achieving waste policy outcomes.

2.1.2 Growing Community Awareness

Over the last year there has been growing interest among the general community across Australia in waste management and resource recovery driven by increasing media coverage of the sector in particular the ABCs popular series *War on Waste*, which first premiered in May 2017 and recently concluded its second series in August 2018. Reflecting the popularity of the subject, the program recently won the 2018 Logie Award for most outstanding Factual or Documentary program.

⁶ <https://www.theage.com.au/national/victoria/recycling-on-the-brink-of-collapse-in-victoria-20180131-p4yz5f.html>

⁷ *The National Sword Crisis* (2018) https://www.insidewaste.com.au/digital_assets/87d277c6-9778-4399-8b35-a59f99c40db3/1W_FEB-MAR18_PREBIND3.pdf

The show has cast a spotlight on a number of key areas which can be influenced by QPRC in their new waste strategy including:

- Reducing plastic bags and associated litter
- Increasing e-waste recycling
- Re-use / sale of second hand items such as furniture
- Community education programmes designed to reduce contamination rates in kerbside recyclables and organics
- Reducing food waste to landfill

2.2 ACT Waste Market Factors

Closer to the QPRC region, changes in the ACT can have implications for waste management in QPRC. QPRC uses a number of ACT waste facilities including:

- the Materials Recovery Facility (MRF) for co-mingled (yellow bin) recyclables in Hume; and
- the putrescible landfill at Mugga Lane, Symonston.

Recent changes in the waste market in the ACT which will influence the QPRC waste strategy are discussed below.

2.2.1 The Hume MRF

The ACT's clean MRF is currently run by Re.Group for the ACT Government. Re.Group upgraded the MRF over 2016-17 to count beverage containers to ensure maximisation of returns from the recently introduced ACT Container Deposit Scheme. The upgrades also include installing a glass processing facility that can make a clean glass suitable for civil applications such as sand or gravel replacement.

Neither former Queanbeyan or Palerang councils had a contract with the MRF, each council paid a historical gate fee agreed with the previous MRF operator. The two councils are currently charged substantially different gate fees by Re.Group under these informal arrangements.

2.2.2 ACT Landfill

The ACT has only one putrescible landfill which is located at Mugga Lane, Symonston. Currently, MSW from the former Queanbeyan City Council (QCC) LGA is sent to Mugga Lane while MSW from the former Palerang LGA is sent to Veolia's Woodlawn landfill at Tarago.

The commercial gate fees at Mugga Lane landfill are currently \$155.05/tonne⁸. The ACT Government "Waste Roadmap" discussion paper, released in May 2018, implies gate fees will need to increase further⁹.

Meanwhile, waste sent to Veolia's Woodlawn facility from the former Palerang LGA has a gate fee of less than \$90/tonne (refer to Section 2.3.3 below for further details on the Woodlawn facility). Veolia's greenhouse gas (GHG) emission reporting also indicate that Woodlawn achieves better GHG capture than Mugga Lane landfill. This means that the carbon footprint of disposing of former QCC LGAs waste to Woodlawn may be lower than for disposal to Mugga Lane landfill in the ACT, even with freight¹⁰.

2.2.3 ACT Cooperation with QPRC

In August 2016 the ACT Chief Minister and Administrator of the QPRC signed the first ACT – QPRC Letter of Intent¹¹. This Letter signals the intention of the ACT Government and QPRC to formalise a relationship underpinned by the NSW/ACT Memorandum of Understanding and the NSW South East Regional Plan, and outlines the principles and priority areas to be progressed between the ACT and the former QCC LGA.

⁸ https://www.tccs.act.gov.au/about-us/fees_and_charges

⁹ https://www.yoursay.act.gov.au/application/files/8615/2575/8129/WFS_roadmap.pdf

¹⁰ A carbon footprint assessment (ISO 14067) would be required to confirm this.

¹¹ http://www.cmd.act.gov.au/_data/assets/pdf_file/0020/1017335/2016-08-19-ACT-QPRC-Letter-of-Intent-SIGNED.PDF

The principles for engagement include:

- optimising best for region outcomes;
- pursuing a borderless approach to key infrastructure; and
- sharing information and data to inform planning and policy development and initiatives.

The ACT Government is currently rolling out an opt-in fortnightly third-bin garden-waste collection service across the Territory. The 2018 Waste Roadmap discussion paper suggests that this should be expanded to take food waste, commonly known as a FOGO service in NSW.

The ACT has not yet established a suitable site to take the ACT's garden waste. A site capable of processing FOGO would cost millions of dollars. If the site were to utilise windrow composting rather than in-vessel processing then a large site will need to be found. Given the price of land in the ACT, proximity to adjoining residential areas and site slopes around the ACT, it is possible that a suitable site will not be able to be found within the ACT boundary. This is an area where QPRC and the ACT could potentially work together to locate and develop an organics processing facility which can accommodate FOGO from both regions.

2.3 NSW Waste Market Factors

According to the NSW WARR Progress Report 2014-15 there are six material categories that are responsible for over 80% of the waste produced in NSW by weight. These are:

- masonry (29% of total waste);
- organics (29%);
- metals (11%);
- paper and cardboard (8%);
- plastics (4%); and
- glass (2%).

There are readily accessible markets for the first three categories of waste in the QPRC surrounds. The markets for plastics are weak, particularly since the implementation of China's National Sword project. The market for recycled glass is also weak, however it should be possible to establish local markets for the beneficial reuse of glass.

2.3.1 Regional Cooperation

QPRC is a member of the CRJO, which is made up of nine NSW councils and the ACT Government¹². In 2016 the CRJO councils had a combined population of 228,141¹³ people or 625,538 with the ACT.

The CRJO has released its Regional Waste Strategy for 2018-2023. In summary, significant transition has occurred in the waste industry over the last decade, and there now exists 'pull' and 'push' mechanisms to drive change. Regional waste strategies, such as the one developed by CRJO, are one component, facilitated and supported by the NSW EPA, to achieve quantum change in waste management performance.

The Regional Waste Strategy has been based on a medium term five (5) year period to drive more rapid initial change towards greater recycling and waste diversion from landfill; particularly for NSW Council members. It is suggested the region first maximises performance of existing services and assets before analysing options for new and improved regional infrastructure to deliver continued long-term improvement.

The Regional Waste Strategy aims for greater efficiency from existing services, reducing litter, and reducing illegal dumping followed by evaluating new regional services and supporting infrastructure to recover more resources from the waste stream.

¹² <http://www.canberraregion.org.au/>

¹³ Forecast.id

The CRJO will be eligible for government investment to establish new joint organisations in regional NSW that provide a cooperative working arrangement with the NSW Government to address regional challenges and opportunities.

As a part of this study, AECOM is benchmarking the range and performance of waste services delivered by councils within the CRJO (refer to Section 6). AECOMs initial investigations have found the limited data of variable quality with waste generation totals appears to be particularly weak with regard to C&D and C&I waste generation and recycling rates.

2.3.2 Energy from Waste (EfW)

In 2015 the NSW EPA released the NSW Energy from Waste Policy Statement¹⁴. This policy is broadly supportive of EfW but is quite prescriptive and creates a relatively complex regulatory environment for potential projects. In 2017, the NSW parliament established an enquiry into EfW¹⁵. Recently the development application for a 552,500 tonne per annum EfW facility proposed by Dial-a-Dump Industries at Eastern Creek in Western Sydney was refused by the NSW Independent Planning Commission. Hence, the regulatory framework for EfW project in NSW remains somewhat uncertain.

Nevertheless, new EfW projects – particularly for the use of refuse derived fuels – are progressing. Two of potential relevance to QPRC are:

- the cement kiln in Berrima which is now using a Solid Waste Derived Fuel as well as coal to power the facility¹⁶; and
- EfW facility to be integrated with the Mt Piper power station near Lithgow¹⁷

These facilities will create a domestic market for contaminated paper and cardboard, timber from the C&D sector, as well as film and mixed plastics.

2.3.3 Woodlawn Mechanical Biological Treatment Facility

In July 2017 Veolia commissioned Stage 1 of a Mechanical Biological Treatment (MBT)¹⁸ facility at Woodlawn with a capacity of 144,000 tonnes per year. The capacity of Stage 1 has been taken up by contracts from the Sydney region. Currently, waste sent to Woodlawn from QPRC is sent to the landfill rather than the MBT. This facility can recover 50-60% of MSW producing a compost/soil amendment and sorted materials for recycling. The gate fees for this facility are commercial-in-confidence but are likely to be more than twice the cost of landfill at the same facility¹⁹.

Nonetheless, having QPRC MSW processed at the Woodlawn MBT would enable the Council to achieve its WARR target for MSW with a single initiative.

Veolia is also looking to make a refuse derived fuel from its MBT residuals. This could increase the resource recovery rate of the facility to over 80%.

2.3.4 NSW Waste Less Recycle More 2017-2021 Extension

Since 2012 the NSW Government has allocated over \$800 million under the Waste Less, Recycle More initiative to fund resource recovery, litter reduction and other waste related projects. The NSW EPA Waste Less Recycle More Phase 2 (also referred to as 2017-2021 Extension) provides \$337 million in grants to eligible projects as summarised in Figure 2 below.

¹⁴ <https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/epa/150011enfromwasteps.pdf>

¹⁵ <https://www.parliament.nsw.gov.au/committees/inquiries/Pages/inquiry-details.aspx?pk=2436>

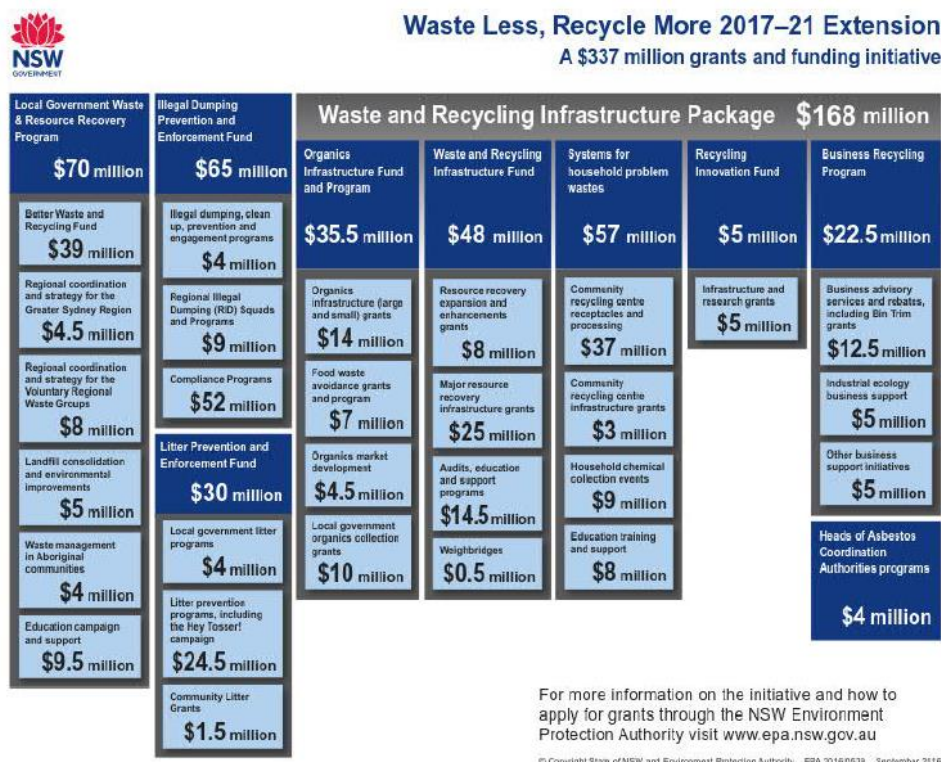
¹⁶ https://www.boral.com.au/sites/default/files/media/field_document/Berrima-Cement-cmtty-meeting-presentation-270717.pdf

¹⁷ <https://www.energyaustralia.com.au/about-us/media/news/energy-recovery-plant-could-supply-40000-homes-create-300-jobs>

¹⁸ MBT is the common name used in Europe for these facilities. In NSW they are often called Advance Waste Treatment (AWT) facilities. In the ACT they are often called residual-waste or dirty Material Recovery Facilities (Dirty MRFs).

¹⁹ Personal communications, Jim Hennessey, Sales Manager Veolia, 2 July 2018

Figure 2 NSW EPA Waste Less, Recycle More funding initiatives



In addition to the grant programs noted in the above graphic, more recently the NSW EPA has announced new programs under the Waste Less Recycle More initiative designed to support local recycling sector address issues arising from the China Sword policy. There are several programs of direct relevance to QPRC, which may assist in funding initiatives recommended through the QPRC strategy. The key programs of potential interest are noted below:

- Better Waste and Recycling Fund
- Bin Trim business grants
- Circulate, NSW EPA Industrial Ecology Program
- Civil Construction Market Program
- Combatting Illegal Dumping: Clean Up and Prevention Program
- Community Recycling Centre Fund
- Council litter grants
- Funding for regional collaboration
- Funding for voluntary regional waste groups
- Landfill consolidation and environmental improvements
- Local Government Organics Collection System Grants Program
- Love Food Hate Waste education

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QPRC Waste Strategy - Briefing Paper – Current status of waste management in the
QPRC region

10

- Major Resource Recovery Infrastructure Program
- Pilot Program to Reduce Illegal Dumping on Charitable Recyclers
- Product Improvement Program Grants
- Waste Recovery Facility Expansion and Enhancement Program
- Weighbridge Fund.

3.0 Regulatory Context

This section summarises the current legislative and regulatory environment at a State and National level including likely changes in the short to medium term which may influence the QPRC waste strategy.

3.1 New South Wales Regulation

3.1.1 Protection of the Environment Operations (POEO) Act 1997

The *Protection of the Environment Operations (POEO) Act 1997* establishes management and licensing requirements along with other provisions to deliver environmentally appropriate outcomes. The POEO Act also establishes the ability to set various waste management requirements via the regulations. It is the primary piece of legislation regulating pollution control and waste disposal in NSW.

The POEO Act defines waste as:

- something that is discharged or deposited in the environment such that it causes an alteration in the environment; or
- something that is discarded, rejected, unwanted, surplus or abandoned; or
- any processed, recycled, re-used or recovered substance produced wholly or partly from waste that is applied to land, or used as fuel, but only in the circumstances prescribed by the regulations; or,
- anything prescribed by the regulations to be waste.

A material or product is not precluded from being waste under NSW law merely because it may be processed, recycled, re-used or recovered.

Waste is generally categorised into three groups:

- Municipal Solid Waste (MSW) – largely comprising of household waste but often including other council wastes such as street sweepings and rubbish collection from bins in parks and public spaces;
- Commercial and Industrial (C&I) waste – the waste made by businesses or industry. However, if business waste is collected by the local council it may be categorised as MSW; and
- Construction and Demolition (C&D) waste – the waste produced in construction and building activities including demolition.

Across Australia C&D waste from the building sector and C&I waste from other businesses are generally larger sources of waste than MSW from households.

QPRC manage predominately MSW, however additional C&I services are provided to small businesses and some waste facilities operated by QPRC accept C&D waste. Therefore management of all three categories of waste are discussed in this briefing paper.

QPRC operates the Bungendore Resource Recovery Facility on Tarago Road. The Bungendore facility was issued an environment protection licence (EPL no. 21023) in August 2018. The EPL includes requirements for groundwater monitoring and noise monitoring.

3.1.2 Protection of the Environment Operations Waste Regulation 2014

The *Protection of the Environment Operations Waste Regulation 2014* (the Waste Regulations) was introduced on 1 November 2014. The Waste Regulations sets out provisions covering the way waste is managed in terms of storage and transportation as well as reporting and record keeping requirements for waste facilities. The Waste Regulation also makes special requirements relating to asbestos and clinical waste.

The key areas of the Waste Regulations of importance to QPRC include:

- Management of tyres
- Illegal dumping
- Unlicensed landfills

These are discussed in further detail below.

Tyres

Since July 2015, consignors and transporters of waste tyres have been required to monitor the movement of waste tyres within NSW. These requirements apply to loads of waste tyres greater than 200 kilograms or more than 20 waste tyres, whichever weighs less. The disposal facility is required to record all details of receiving waste tyres.

The EPA has developed an electronic system called WasteLocate²⁰ to make this a simple and transparent process that can be used by all relevant parties to meet reporting obligations.

In addition, the threshold for storing waste tyres has been significantly reduced. A site which stores more than 5 tonnes of tyres or 500 waste tyres on site at any time requires an environment protection license (EPL).

Illegal Dumping

Since November 2014, the *Protection of the Environment Operations (General) Regulation 2009* contains a list of wastes that automatically constitute land pollution under section 142A of the POEO Act. These wastes include:

- hazardous waste
- restricted solid waste
- >10 tonnes of asbestos waste; and
- >5 tonnes of waste tyres or more than 500 waste tyres.

This amendment is designed to send a strong signal to polluters that dumping waste poses a risk to the community and the environment and is unacceptable in NSW.

To support efforts to reduce illegal dumping and littering the NSW EPA has developed the Don't be a Tosser campaign, which enables the public to report litterers and dumpers online. If provided with enough information, the NSW EPA then issues fines accordingly.

Unlicensed Landfills

Clause 111 of the *Protection of the Environment Operations (Waste) Amendment Regulation 2017* introduces a defence to land pollution at unlicensed landfills. The clause provides minimum operational standards which must be implemented at an unlicensed landfill site. The minimum standards require landfill operators to:

- manage and reduce the risk of fire, odour, noise, and dust emissions;
- control public access to the premises; and
- undertake general maintenance.

This clause is relevant to the ongoing operation of Nerriga and Braidwood landfills which need to be operated in accordance with clause 111 until their closure and rehabilitation.

²⁰ <https://wastelocate.epa.nsw.gov.au/>

3.1.3 Waste Avoidance and Resource Recovery (WARR) Strategy

The *NSW Waste Avoidance and Resource Recovery Act 2001* reflects the importance the community places on minimising waste and maximising resource recovery by requiring the WARR Strategy to be reviewed and replaced every five years.

Section 12 of the Act specifies that the strategy must:

- include targets that address waste reduction, resource recovery and diversion of waste from landfill
- be benchmarked against international best practice
- undergo a public consultation process.

The WARR strategy promotes the waste hierarchy, which is often paraphrased as “*reduce, reuse, and recycle*”.

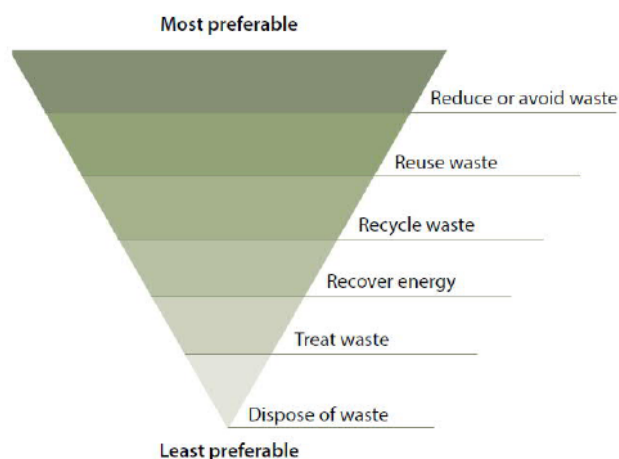


Figure 3 The NSW EPA waste hierarchy (source: NSW WARR Strategy 2014-2021)

The waste hierarchy should be understood as a ‘heuristic’ or ‘rule of thumb’. It provides a guideline for considering options prior to more detailed analyses. There are wastes the Government would not seek to reduce the generation of, such as end-of-life tyres, because protecting public safety is more important. With regards to reuse or recycling, glass containers can be recycled into new glass containers, or crushed to make sand and gravel replacements. The most sustainable option may depend on the specific location of the product and the distance required to transport it to eligible recycling markets. In this instance, the more sustainable waste management option for QPRC may differ between Braidwood and Googong.

WARR Strategy Performance Report

The most recent WARR Strategy Progress Report 2014-15 was released in 2017 and summarises the improvements NSW has made towards meeting the 2014 targets set out in Waste Avoidance and Resource Recovery Strategy 2007 (‘2007 WARR Strategy’). This progress report is the first since the 2014 target year passed and as such is the first opportunity to measure the state’s progress against the targets set in 2007.

The following table outlines 2007 WARR Strategy Targets, versus the resource recovery performance in metropolitan NSW, the non-levy area of NSW, the former QCC LGA and former Palerang LGA as provided in the WARR Strategy Progress Report. It should be noted that former Queanbeyan and Palerang Councils existed separately during this time, and therefore the WARR data is also separate. QPRC performance is also provided based on the recycling rate achieved in 2016/17 as report in the CRJO Regional Waste Strategy 2018-2023.

Table 3 2007 WARR Strategy targets and QPRC performance

Waste Category	2014 WARR target	Sydney Metro 2014-15	Non-levy 2014-15	Former Palerang LGA 2014-15	Former Queanbeyan LGA 2014-15	QPRC 2016/17
Municipal Solid Waste (MSW)	66%	58.2%	56%	43.4%	48.8%	46%**
Commercial and Industrial Waste (C&I)	63%	61.2%	50%	-	-	Not available*
Construction and Demolition Waste (C&D)	76%	72.7%	57%	-	-	Not available*

* C&I or C&D recycling collection services are delivered primarily by the private sector and limited data is available for QPRC to measure overall performance against these targets.

** Source: CRJO, Regional Waste Strategy (2018-2023), Appendix 6

The Waste Avoidance and Resource Recovery (WARR) Strategy 2014-2021

The latest WARR strategy was released by the NSW EPA in 2014 and sets new recycling targets to be achieved by the year 2021-22 as summarised below.

The Waste Avoidance and Resource Recovery Strategy 2014-2021

Avoid and reduce waste generation

By 2021–22, reduce the rate of waste generation per capita

Increase recycling

By 2021–22, increase recycling rates for:

- municipal solid waste from 52% (in 2010–11) to 70%
- commercial and industrial waste from 57% (in 2010–11) to 70%
- construction and demolition waste from 75% (in 2010–11) to 80%

Divert more waste from landfill

By 2021–22, increase the waste diverted from landfill from 63% (in 2010–11) to 75%

Manage problem wastes better

By 2021–22, establish or upgrade 86 drop-off facilities or services for managing household problem wastes statewide

Reduce litter

By 2016–17, reduce the number of litter items by 40% compared with 2011–12 levels and then continue to reduce litter items to 2021–22

Reduce illegal dumping

From 2013–14, implement the NSW Illegal Dumping Strategy 2014–16 to reduce the incidence of illegal dumping statewide

As part of this strategy, by 2016–17:

- reduce the incidence of illegal dumping in Sydney and the Illawarra, Hunter and Central Coast regions by 30% compared with 2010–11
- establish baseline data to allow target-setting in other parts of the state

3.1.4 NSW Landfill Levy

The landfill levy is one of the key instruments that the NSW Government uses to encourage less waste generation and increased resource recovery. Some of the revenue collected from the landfill levy is used to help fund resource recovery initiatives by industry and local Governments.

The 2018-19 NSW waste levy is currently:

- \$141.20/tonne in the Metropolitan Levy Area
- \$81.30/tonne in the Regional Levy Area.

The concessional waste levy rate for virgin excavated natural material is:

- \$127.08/tonne in the Metropolitan Levy Area
- \$73.17/tonne in the Regional Levy Area.

The levy on trackable liquid waste for 2018-19 is \$75.60/tonne.

QPRC is currently not located within the levy paying area. While a review conducted by consultancy firm KPMG in 2012 for the NSW EPA recommended extending the regional levy to the QPRC area²¹, AECOM understands this is unlikely in the medium term.

Nonetheless, the existing levy structure impacts the Council and changes the market conditions for recycling operations and waste movement. This is due to recyclers charging a small margin below landfill cost and the large amounts of waste that are being moved from NSW to Queensland and from the ACT to Veolia's Woodlawn Landfill (near Tarago). It is now likely that the movement of waste to Queensland may greatly reduce given the proposed introduction of a \$70/tonne waste levy in south east Queensland from early 2019²². This will lead to further changes in the NSW waste market.

3.1.5 Container Deposit Schemes

The NSW container deposit scheme (CDS), Return and Earn, began rolling out across NSW on 1 December 2017. The scheme was established under the *Waste Avoidance and Resource Recovery Amendment (Container Deposit Scheme) Act 2016 No 57* and the *Waste Avoidance and Resource Recovery (Container Deposit Scheme) Regulation 2017*.

The scheme enables individuals and businesses to return eligible containers and receive 10c per container. As of June 2018 there are three drop-off points in Queanbeyan/Jerrabomberra but none across the rest of the QPRC.

The ACT is implementing a complementary CDS via the *Waste Management and Resource Recovery Amendment Act 2017*, which commenced on 30 June 2018.

CDS radically transforms the value of used beverage containers to councils. For example eligible glass beverage containers have gone from less than \$100 a tonne, at times costing the Hume MRF over \$80/tonne to recycle, to being worth over \$500/tonne²³. PET bottles, which might have been worth \$50-350/tonne, could now earn \$5,000-\$10,000/tonne under the CDS²⁴.

QPRC is able to claim the 10c from containers collected through kerbside recycling collections once a revenue sharing model is agreed with the MRF. This is a potential opportunity to offset costs related to waste management.

3.2 ACT Waste Legislation

The ACT passed the *Waste Management and Resource Recovery Act 2016* (the Waste Act) in August 2016. The Waste Act requires all waste facilities to be licenced and all waste transporters to be registered. Rigorous reporting requirements are stipulated for waste facilities and transporters. The ACT is currently implementing the Waste Act and its various requirements.

²¹ <https://www.epa.nsw.gov.au/your-environment/recycling-and-reuse/warr-strategy/policy-makers>

²² <https://www.brisbanetimes.com.au/politics/queensland/waste-levy-announced-for-queensland-to-stem-interstate-dumping-20180601-p4ziv3.html>

²³ Assuming a typical 375ml bottle weight of 170grams.

²⁴ Assuming a weight range of 10-20g per eligible container

For some time the ACT has been home to poor waste operators with facilities that practiced uncontrolled stockpiling or 'above ground landfilling'. Waste stockpiling has resulted in many fires in the ACT. The progressive enforcement of the new Waste Act's provisions are likely to result in some of these poor waste operators shutting down their ACT sites and seeking to establish new facilities interstate, potentially in QPRC.

Under the Waste Act, Council is considered both a waste management business (as Council operates the composting facility located at Oaks Estate in the ACT) and a waste transporter. For example, when a Council waste vehicle travels from Queanbeyan to Bungendore along the Kings Highway (within the ACT) the Waste Act is triggered. The fact that Council is subject to conditions of the Waste Act leaves Council vulnerable to potential changes to this Act and Regulations enacted under it. For example, under the Waste Act the ACT Government may decide to implement a waste levy in the future for waste transporters and waste management businesses. This will have a potential impact on Council in particular related transport of recyclables from QPRC to the Hume MRF in the ACT.

3.3 Australian Government (Cwth)

At the National level the key Federal responsibilities that impact on waste management in the QPRC are corporations' law, the *Environment Protection and Biodiversity Conservation Act 1999*, and national product stewards schemes.

Product stewardship schemes involve businesses taking responsibly for the full lifecycle of their products and materials to ensure they are appropriately managed to minimise impact on the environment and human health. In Australia the Commonwealth's *Product Stewardship Act 2011* can be used to establish mandatory, coregulatory and voluntary schemes.

Paintback, established in 2016, is an example of a voluntary product stewardship scheme. It allows households and professional painters to drop off their paint containers and any unwanted paint for free. The scheme is funded by a 15c/L (excl. GST) levy applied to the paint wholesalers. Unfortunately, at present the nearest free drop-offs for QPRC residents are in Canberra and Wollongong.

The National Television and Computer Recycling Scheme (NCRS) is the only example of a co-regulatory product stewardship scheme in Australia presently. The NCRS was established in 2011 and to date, more than 1,800 collection services have been made available to the public with more than 230,000 tonnes of TV and computer e-waste collected and recycled under the scheme²⁵. Individuals and businesses can drop off up to 15 items at a time (a keyboard, mouse and monitor equals one item). Unfortunately, at present the nearest free drop off to QPRC residents are in the ACT.

New product stewardship schemes are under consideration or development. The Minister for the Environment and Energy (Cwth) has listed the following product classes as priorities for assessment during 2017-18:

- batteries
- electrical and electronic products
- elastic oil containers
- photovoltaic systems and
- plastic microbeads and products containing them.

²⁵Evaluation of the National Television and Computer Recycling Scheme (NCRS) ACIG for the Dept of the Environment and Energy. October 2017
Department of the Environment and Energy <http://www.environment.gov.au/system/files/resources/407f8a95-080b-4daa-8189-747c00d5fa3/files/ntcrs-evaluation-report.pdf>

4.0 Existing Services in the QPRC LGA

4.1 Residential Waste Services

QPRC provides waste services broadly consistent with those offered by other CRJO councils. Nevertheless, there are considerable variations across the CRJO and within QPRC where waste services and practices between the former Queanbeyan and Palerang councils.

4.1.1 Kerbside Collection

Former QCC residents receive a three bin kerbside service. This includes a 240L fortnightly collection for recyclables, a 240L fortnightly collection of garden waste and a 140L or 240L weekly collection of residual waste. Kerbside collections in the former QCC LGA are provided under contract by J.J. Richards. The contract with J.J. Richards commenced in April 2015 and will conclude in April 2022. The contract includes an optional extension to 2025.

Former Palerang LGA residents living in Braidwood, Bungendore and Captains Flat also receive a three bin service consisting of 140L weekly collect for residual, a 240L fortnightly collection for recyclables and a 240L fortnightly collection for food and garden waste (FOGO) service.

Former Palerang LGA residents living in Royalla/Burra/Urila receive a two bin service consisting of 240L fortnightly collection for residual waste and a 240L fortnightly collection for co-mingled recycling. Residents living in Carwoola/Primrose Valley receive one 240L fortnightly collection for co-mingled recycling and currently self-haul their residual waste, which is also the case for Sutton Acres. Residents living in Majors Creek/Araluen receive a 240L fortnightly residual waste collection and a 240L fortnightly co-mingled recycling service.

The current waste collection services and the associated catchment services in QPRC are summarised in Table 4 below. The former Palerang LGA collection services are provided directly by Council staff using Council-owned trucks.

More remote rural residents within the QPRC are required to self-haul all their wastes to council provided collection points (e.g. bin compounds, rural recycling stations, waste transfer stations (WTSS) and landfills) which are located across the LGA as shown in Table 7. The location of these facilities is shown in Figure 4.

Table 4 QPRC waste collection services

Catchment	Number of Services	Residual	Recycling	GO	FOGO	Collection Contractor
Braidwood	768	140L (W)	240L (F)	N/A	240L (F)	Council
Bungendore	1,441	140L (W)	240L (F)	N/A	240L (F)	Council
Burra/Royalla/Urila	628	240L (F)	240L (F)	N/A	N/A	Council
Captains Flat	275	140L (W)	240L (F)	N/A	240L (F)	Council
Carwoola/Primrose Valley	367	N/A	240L (F)	N/A	N/A	Council
Majors Creek/Araluen	376	240L (F)	240L (F)	N/A	N/A	Council
Queanbeyan – Urban	15,856	140L (W)	240L (F)	240L (F)	N/A	J.J. Richards
Queanbeyan – Urban	1568	240L (W)	240L (F)	240L (F)	N/A	J.J. Richards
Queanbeyan – Multi-unit shared [^]	2,898	240L (W)	240L (F)	240L (F)	N/A	J.J. Richards
Queanbeyan – Rural	869	240L (F)	240L (F)	N/A	N/A	J.J. Richards
Sutton Acres	177	N/A	240L (F)	N/A	N/A	J.J. Richards
Vacant (no service)	4,218					

(W) Weekly collection, (F) Fortnightly collection, N/A Collection service not offered

[^] Some shared multi-unit bins are collected twice weekly

4.1.2 Bulky Waste

Households in the former Queanbeyan LGA are provided two kerbside clean-ups per financial year, the cost of this service is covered through rates. These are accessed by contacting Council and booking in their collection, and are able to place one trailer load of materials out for collection. For residents living in either multi-unit dwellings or rural areas of the former QCC LGA, two collections are provided on fixed dates.

The approximate number of annual bulky good collections undertaken by Council in the former QCC LGA are summarised below.

Table 5 Approximate number of bulky good collections in former QCC LGA

Year	Loads
2012-13	3206
2013-14	2888
2014-15	2564
2015-16	2717
2016-17	2582
2017-18	2792

Given there around 18,000 dwellings in the former QCC LGA, it would appear that the number of residents utilising the bulky goods collection service is relatively small.

Bulky goods collections were included in the previous Palerang Waste Management Strategy. Due to significant safety issues and resourcing constraints it has not yet been implemented. Former Palerang LGA residents currently self-haul their bulky waste to transfer stations.

4.1.3 Waste Disposal

Residual waste collected from the former Palerang LGA through kerbside collection, WTS's and bin compounds are disposed of at Woodlawn Waste Management Facility or Braidwood Landfill. Recycling collected by Council from kerbside collections or at WTS's and bin compounds is taken to the Hume MRF.

Residual waste collected from the former QCC LGA catchments are sent to Mugga Lane Landfill in the ACT. Recycling collected by Council from kerbside collections is taken to the Hume MRF.

FOGO material from the former Palerang LGA was previously sent to Landtasia Organic Farm in Mulloon for composting. However, this arrangement ended in 2017 and Council is currently investigating alternative arrangements for processing this material. In the interim, FOGO collections are taken to Bungendore RRF where the food waste component is extracted. The green waste components go to Council's green waste pile and food waste is sent to GoTerra, a worm-farming business. The former QCC LGAs garden waste was composted at Oaks estate near the sewage treatment plant.

A summary of where MSW is currently disposed of by QPRC is provided in Table 6.

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19

Table 6 Waste disposal summary

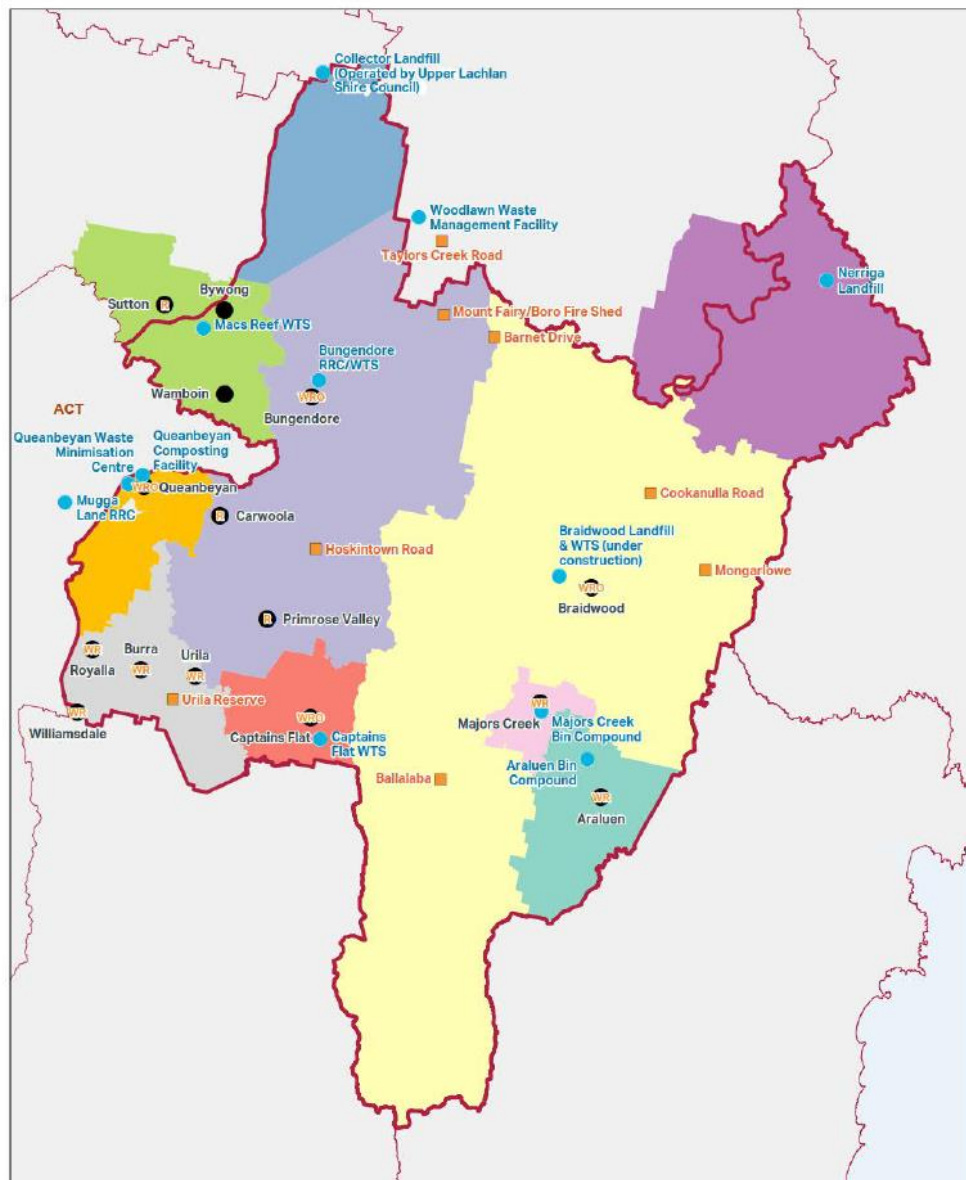
	Former Palerang LGA	Former QCC LGA
Waste Category	Disposal Facility	Disposal Facility
Residual	Woodlawn Waste Management Facility, Braidwood Landfill or Nerriga Landfill	Mugga Lane Landfill, ACT
Recycling	Hume MRF	Hume MRF
Organics	Green waste – Woodlawn for reuse as mine rehabilitation material Food waste – GoTerra Worm Farm	Oaks estate near the sewage treatment plant
Bulky Waste	Self-haul by residents to WTS	Bungendore Resource Recovery Facility and Braidwood Landfill

The waste services provided by the QPRC for each waste catchment are summarised in Table 7.

Table 7 Summary of waste services for the main townships in the QPRC

Waste Catchment	Township/ Locality	Residual Kerbside Collection	Recycling Kerbside Collection	Bin Compound	Rural Recycling Station	WTS	RRC	Landfill
Araluen	Araluen	✓	✓	✓				
Bungendore	Bungendore	✓	✓			✓	✓	
	Primrose Valley		✓					
	Carwoola		✓					
	Hoskinstown				✓			
	Mount Fairy				✓ (2 sites)			
	Tarago				✓			
Braidwood	Braidwood	✓	✓					✓
	Durran Durran				✓			
	Mongarlowne				✓			
	Ballalaba				✓			
Captains Flat	Captains Flat	✓	✓			✓		
Collector	-							✓
Macs Reef	Bywong/ Wamboin					✓		
	Sutton East		✓					
Majors Creek	Majors Creek	✓	✓	✓				
Nerriga	Nerriga							✓
Burra District	Royalla	✓	✓					
	Burra	✓	✓					
	Urila	✓ (select areas)	✓ (select areas)		✓			
	Williamsdale	✓ (select areas)	✓					
Queanbeyan	Queanbeyan	✓	✓				✓	

Figure 4 Waste facilities in the QPRC



QUEANBEYAN-PALERANG REGIONAL COUNCIL WASTE STRATEGY 2018-2048



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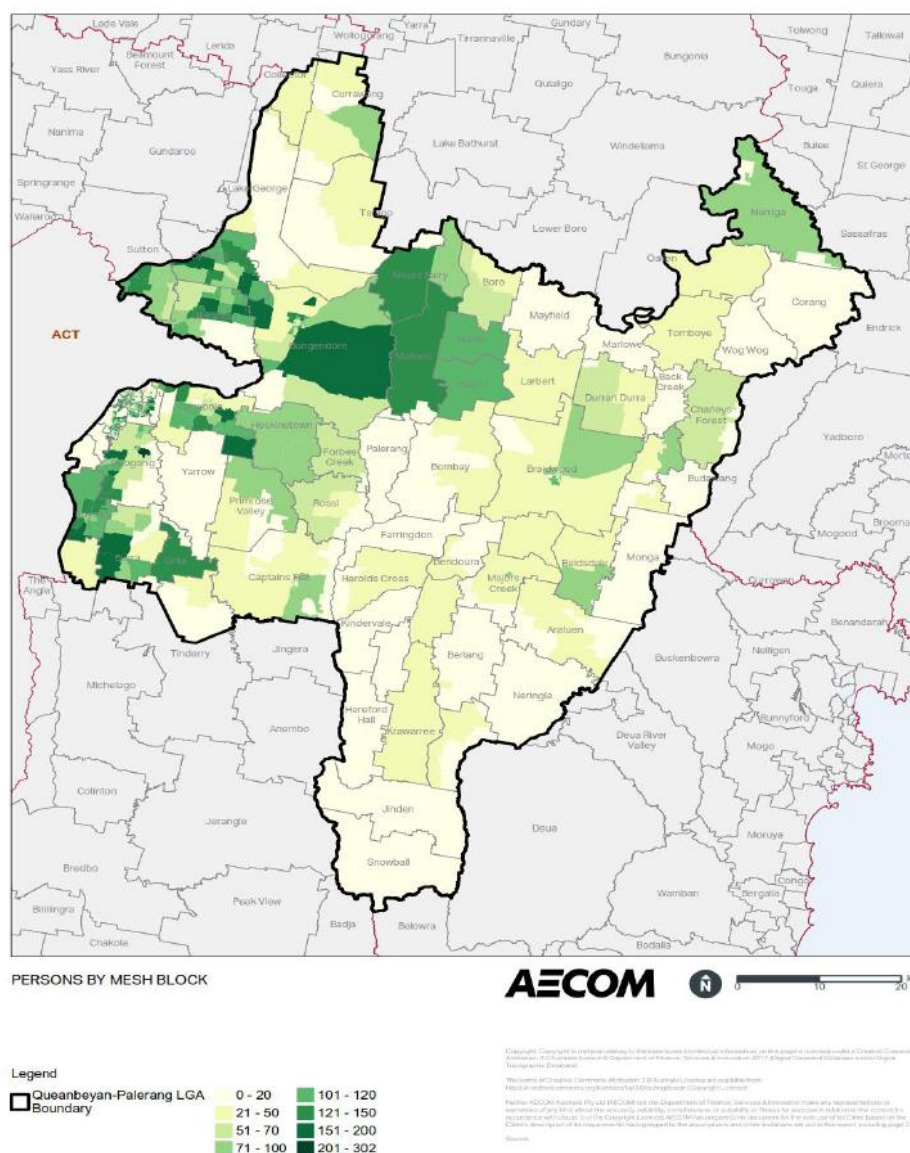
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Prepared for – Queanbeyan-Palerang Regional Council – ABN: 95 933 070 982

4.1.4 Access to Self-Haul Facilities

AECOM undertook an analysis of residents' access to existing waste facilities. Waste facilities in the QPRC were plotted in ArcGIS and the population was overlaid using ABS 2016 Census data. ArcGIS was used to calculate the distance of each household to a landfill-resource management centre or transfer station. Average speeds of 95km/h were assumed for the main roads; 75km/hr for secondary roads; and 45 km/hr for urban areas. The distribution of population in the LGA is shown in Figure 5. The time (minutes) required for residents to access a waste facility is shown in Figure 6.

Figure 5 Population distribution map (source: Australian Bureau of Statistics, 2016)



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22

Figure 6 Illustrative map – travel time in minutes to the nearest waste facility

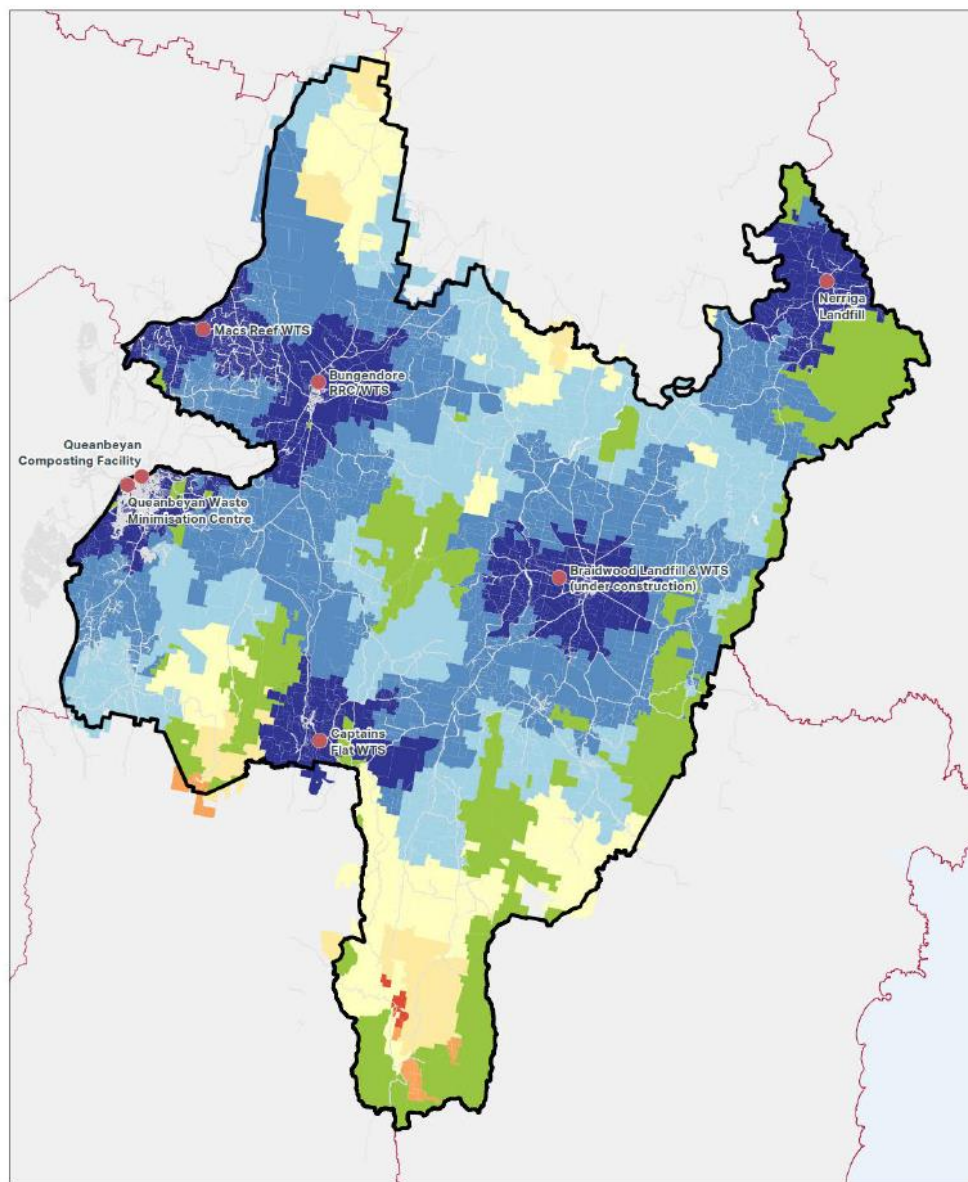


FIGURE 6: ILLUSTRATIVE MAP
TRAVEL TIME IN MINUTES TO NEAREST WASTE FACILITY

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Legend

- Queanbeyan-Palerang LGA
 - Waste facility
 - National Parks & Wildlife
 - Service reserve
- | | |
|---------|---------|
| 0 - 10 | 41 - 50 |
| 11 - 20 | 51 - 60 |
| 21 - 30 | 61 - 70 |
| 31 - 40 | 71 - 80 |

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Source:

4.1.5 Education

Education activities are limited within the QPRC LGA and often occur in an adhoc fashion. QPRC funds Keep NSW Beautiful to run the EnviroMentors program²⁶ in local primary schools. In March 2018 five local primary schools chose to participate. The Bournda Environmental Education program²⁷ also runs waste education activities for QPRC schools (via the CRJO). Bournda helped two QPRC schools undertake waste audits in 2017-18.

QPRC staff also provides presentations to local schools, if requested, on an adhoc basis. In addition, QPRC staff also attend community events such as local shows to provide community education and undertake occasional bin inspection programs.

4.2 Council Provided Waste Services for Business

Businesses located in the former QCC LGA can access the following QPRC waste services:

- 1 x 240 L residual waste bin
- 240 L co-mingled recycling bins provided based need and storage space available
- 240 L co-mingled greenwaste bins provided based need and storage space available

If they generate more residual waste than this then they are required to organise their own waste services.

The former Palerang region of QPRC provides approximately 123 services to the commercial and non-residential sector according to the 2016-17 WARR survey.

The services currently offered to businesses in the region are summarised in Table 8.

Table 8 Council provided waste services for local businesses

Service	Former Palerang LGA	Former Queanbeyan LGA
Residual	Yes	Yes
Recycling	Yes	Yes
FOGO	No	No
GO	No	Yes
Bulky good drop-off	Yes	No
Waste reduction education	No	Yes

4.2.1 Business Recycling Programs

Within the former QCC LGA, QPRC has also been supporting business participation the ActSmart business recycling program²⁸ since 2012. Approximately 20-30 new business have participated in the program each year since then with some 32 choosing to remain accredited in the system - voluntarily recording and sharing waste and recycling data.

A further 76 former QCC LGA businesses have participated in the NSW EPA Bin Trim²⁹ program. Recently further Bin Trim funding was allocated to the region and local businesses are being encouraged to participate.

These businesses recycling and waste reduction programs have been shown to significantly reduce waste to landfill from participating businesses. However, the participation rate remains a relatively

²⁶ <http://knswb.org.au/our-programs/enviromentors/>

²⁷ <http://bourndaec.nsw.edu.au/>

²⁸ <https://www.actsmart.act.gov.au/what-can-i-do/business/recycling>

²⁹ <https://www.epa.nsw.gov.au/your-environment/recycling-and-reuse/business-government-recycling/bin-trim>

small portion of the 4,500 or so business in the QPRC area³⁰. Hence, the overall impact of these programs, on resource recovery in the QPRC, at their current participation rates, is likely to be modest.

4.2.2 Food Rescue

QPRC recently received a funding grant through the EPA Waste Less Recycle More program to help reduce food waste and rescue food for provision to vulnerable groups via OzHarvest. A Food Rescue Project Officer will be appointed in 2018 who will work with QPRC businesses and OzHarvest to progress this valuable initiative.

While the quantities of waste diverted through food rescue tend to be relatively small – they provide significant social benefits to disadvantaged members of the community, educational benefits for all involved and often provide economic benefits to the participating businesses.

4.3 Construction and Demolition Waste

C&D waste from the former QCC LGA is taken to the ACT C&D MRF at Mugga Lane or the Capital Concrete Recycling (CCR) Facility at Pialligo. Soil is also taken to the CCR facility. In 2018-19 a new soil facility is expected to open at Mugga Lane.

Building operations in the former Palerang LGA take C&D waste to the Bungendore WTS. C&D businesses are encouraged to separate materials through pricing mechanisms. Concrete and metals are sent to appropriate facilities for recycling, and residual waste is transported to Woodlawn for disposal. A relatively small amount of C&D waste is also received at the Braidwood landfill. Council does not currently accurately and comprehensively track overall C&D waste volumes and recycling/diversion rates.

The largest new area of development in the QPRC is the Googong estate which is expected to grow from 892 to 3,748 households by 2031³¹. C&D waste from this area is currently transported approximately 20 km to the Re.Group MRF in Canberra through Jerrabomberra, or to CCR through Karabar and Queanbeyan.

4.4 Planned Changes to Waste Infrastructure

The former Palerang Council has been undertaking a staged plan to close the rural landfills servicing the former Palerang waste catchments. The closure of these rural landfills will reduce the potential long term environmental liabilities for Council although there are significant costs associated with closing these facilities. The landfills listed in Table 9 have been closed or have been identified by Council for closure. In place of the landfill sites, Council has developed a plan to construct a series of RRC, WTS's and bin compounds. Construction of the RRCs and WTS's will improve Council's ability to track resource recovery rates and therefore develop programs to increase diversion rates. Table 9 details the planned closure and rehabilitation dates for these facilities, and the planned waste management practices which will service the communities over the next 20 years.

³⁰

http://stat.abs.gov.au/itt/r.jsp?RegionSummary®ion=10102&dataset=ABS_REGIONAL_ASGS&geoconcept=REGION&measure=MEASURE&datasetASGS=ABS_REGIONAL_ASGS&datasetLGA=ABS_NRP9_LGA®ionLGA=REGION®ionASGS=REGION

³¹ .idcommunity (2018), Googong: Population, households and dwellings. <<https://forecast.id.com.au/queanbeyan-palerang/population-households-dwellings?WebID=150>>

AECOM

Waste Strategy for QPRC
QPRC Waste Strategy - Briefing Paper – Current status of waste management in the
QPRC region

25

Table 9 Completed and planned changes to waste management infrastructure

Landfill	Planned Closure Date	Rehabilitation Date	Proposed/Implemented Waste Management Practice	Actual/Estimated Costs to Close Old Landfill
Araluen	Closed	2019/20	Roadside domestic waste collection service supplemented by a bin compound.	\$500,000 (estimated)
Bungendore	Closed	2018/19	The Bungendore RRC and WTS opened in December 2014.	\$1,500,000 (estimated)
Braidwood	2018/19	2019/20	Council has begun construction of a RRC and WTS on Bombay Road immediately west of the sewerage treatment works.	\$2,000,000 (estimated)
Captains Flat	Closed	2015/16	WTS in operation.	\$500,000 (actual)
Collector	-	-	Landfill to remain open for foreseeable future. Operated by Upper Lachlan Shire.	-
Macs Reef	Closed	2018/19	Macs Reef WTS was opened in December 2014.	\$1,500,000 (actual)
Majors Creek	Closed	2019/20	Roadside domestic waste collection service supplemented by a bin compound.	\$500,000 (estimated)
Nerriga	2019/20	2020/21	Nerriga Landfill will continue to operate until 2018/19 dependent on public consultation. In association with closure of the landfill an alternative waste management service will be investigated.	\$500,000 (estimated)

5.0 Council Fees and Charges

5.1 Existing Domestic Waste Management Charges

Council has a number of different fees and charges which are applicable depending on the location of the property. A summary of the domestic waste charges applicable in 2018/19 is shown in Table 10 and Table 11. Domestic waste management charges are applied to residents with a kerbside waste collection. Additional charges for extra or larger bins are not shown. The full Revenue Policy is available from Council's website.

Table 10 Domestic waste charges former QCC 2018-19

Code	Description	Domestic Waste Charge	Number of services
DW1	Domestic Waste 140L waste bin, 240L recycling and 240L green waste	\$319	12,056
DW2	Domestic Waste 240L waste bin, 240L recycling and 240L green waste	\$425	1,606
DW7	Multi unit Shared service 240L waste bin, 240L recycling	\$291	3,245
DW8	Multi unit Shared service including shared greenwaste (requested by body corporate)	\$319	58
DW10	Vacant Domestic Waste Charge	\$25	620
DW11	Rural Waste Availability Charge for occupied premises outside of the urban Domestic Waste Collection areas	\$47	326
DW 15	Rural Waste Collection - Optional fortnightly 240L waste bin and 240L recycling per annum	\$346	38
DW17	Rural Waste Collection - Optional fortnightly 240L recycling only per annum	\$176	8

Table 11 Domestic waste charges former Palerang Council 2018-19

Type	Description	Domestic Waste Charge	Number of services
DWP1	Domestic Waste Urban - 140L waste bin collected weekly, 240L recycling and 240L Green Waste collected fortnightly	\$375	2,060
DWP4	Domestic Waste Rural 240L waste bin collected fortnightly and 240L recycling bin collected fortnightly	\$303	735
DWP6	Domestic Waste Rural – Bin compound 240L waste bin and 240L recycling bin collected fortnightly	\$228	49
DWP8	Sutton East, Carwoola, Urila and Primrose Valley – 240L Recycling Bin collected fortnightly	\$105	508
DWP10	Sutton East, Carwoola, Urila and Primrose Valley – Additional 240L Recycling Bin collected fortnightly	\$85	16
DWP12	Annual Domestic Waste Charge – Vacant Land (urban)	\$25	11

The domestic waste management charge covers the following costs associated with management of residential waste:

- Wages of operational and management staff
- Corporate overheads
- Loan repayments
- Insurance
- Depreciation
- Vehicle operational and maintenance costs
- Waste Contracts
- Purchase of bins and other assets
- Waste disposal fees
- Education activities

Further detail on costs will be provided at later stages of the waste strategy project.

5.2 General Waste Charge (former Palerang LGA)

The majority of residents in the former Palerang LGA pay a general waste charge. In 2018/19 this charge is either \$25 (for vacant properties without a 'tip pass'), \$361 or \$400 per rateable property. This charge funds the following components of Council's waste management activities:

- Design and construction costs for new facilities
- Wages of operational and management staff
- Corporate overheads
- Loan repayments
- Insurance
- Depreciation
- Vehicle operational and maintenance costs
- Waste Contracts
- Rehabilitation of closed landfills
- Maintenance of facilities
- Waste disposal fees
- Education activities

Further detail on costs will be provided at later stages of the waste strategy project.

5.3 Landfills Charge (former Palerang LGA)

Any property issued with a 'tip pass' within the former Palerang LGA pays a Landfill Charge. This charge covers the cost of disposing of waste at landfills within the former Palerang LGA. This cost is separated from the General Waste Charge following a ruling by the Australian Taxation Office.

The Landfill Charge is \$52 for the 2018/19 financial year. It is expected that this cost will be removed following closure of the remaining landfills in the Palerang LGA.

5.4 Business Waste Management Charge (Former QCC LGA)

Council recognises that many businesses operate private waste removal services because of the nature of their manufacturing or business processes. In these premises Council's waste service is not required. However, Council incurs costs in the administration and provision of the waste and recycling bins in business premises. As a result, Council imposes a mandatory charge for businesses in the former QCC LGA for the availability of the service and an optional charge if the owner chooses to actually have a waste or recycling bin collected from the premises. The business waste management charge covers the following costs:

- Access to the ACTSmart business and office recycling program
 - Access to School Waste Education Program (schools only)
 - Access to Queanbeyan WAMI
 - Loan repayments
 - Insurance
 - Depreciation
 - Wages
 - Overheads
 - Vehicles costs
 - Waste Contracts
 - Purchase of bins and other assets
 - Waste disposal fees
- Further detail on costs will be provided at later stages of the waste strategy project.

6.0 Population, Waste Generation and Resource Recovery

6.1 Population and Households

6.1.1 Population Data

According to the Australian Bureau of Statistics 2016 Census, QPRC LGA population currently stands at 59,136. Council's population is forecast to increase by 32.4% to a total of 78,756 by 2031³². Most of this population growth is expected to occur in greater Queanbeyan and the new estates of Tralee and Googong and the township of Bungendore. These trends are reflected in the number of growth in households over the next 30 years in the QPRC LGA.

6.1.2 Household Data

QPRC provided their modelling for growth in household numbers across a number of localities. The estimated number of households in QPRC from 2016 to 2050 with and without a Domestic Waste charge is provided in Table 12 and Table 13.

Table 12 Number of households with domestic waste charge from 2016 to 2050

Locality	Number of Households with Domestic Waste charge						
	2016	2021	2026	2031	2036	2050	Difference (2016-2050)
Carwoola-Greenleigh-The Ridgeway	827	844	907	980	1,055	1,131	304
Crestwood	2,439	2,556	2,608	2,642	2,672	2,864	425
Googong	866	1,682	2,672	3,812	4,928	6,190	5,324
Jerrabomberra	3,284	3,292	3,299	3,306	3,312	3,551	267
Karabar	3,483	3,495	3,525	3,547	3,572	3,830	347
Queanbeyan	3,221	3,399	3,449	3,489	3,529	3,783	562
Queanbeyan East	2,176	2,332	2,368	2,395	2,420	2,594	418
Queanbeyan West	1,323	1,333	1,345	1,360	1,375	1,474	151
Royalla - Burra	614	629	639	649	659	706	92
Tralee - Environa	7	105	510	1,075	1,500	1,608	1,601
Bungendore	1,792	1,912	2,549	3,111	3,572	4,410	2,618
Braidwood	772	819	869	922	978	1,154	382
Captains Flat	278	280	282	284	286	292	14
Araluen	166	170	174	178	182	193	27
Burra/Williamsdale	453	458	463	468	473	490	37
Carwoola	330	341	352	363	375	409	79
Majors Creek	212	217	222	227	232	246	34
Primrose Valley	42	43	44	45	46	48	6
Royalla	219	224	229	234	239	256	37
Sutton Acres	177	181	185	189	193	205	28
Urila	30	30	30	30	30	30	0
Total	22,711	24,342	26,721	29,306	31,628	35,464	12,753

³² Queanbeyan-Palerang Regional Council | population forecast, idcommunity – demographic resources. Viewed 31 May 2018, <<https://forecast.id.com.au/queanbeyan-palerang>>

Table 13 Number of households without a domestic waste collection service

Locality	Number of households without Domestic Waste Charge						Difference (2016- 2050)
	2016	2021	2026	2031	2036	2050	
Bungendore	783	799	815	831	847	893	110
Braidwood	1539	1564	1590	1617	1644	1718	179
Captains Flat	70	71	72	73	74	77	7
Araluen	97	98	99	100	101	104	7
Burra/Williamsdale	251	256	261	266	271	288	37
Carwoola	17	17	17	17	17	17	0
Majors Creek	48	49	50	51	52	55	7
Mac's Reef	1231	1261	1291	1322	1354	1447	216
Collector	91	93	95	97	99	105	14
Nerriga	342	348	354	360	366	384	42
Total	4,469	4,556	4,644	4,734	4,825	5,088	619

The approximate total number of households in the QPRC LGA (including households with and without the domestic waste charge) is given in the table below.

Table 14 Total number of households QPRC LGA

	2016	2021	2026	2031	2036	2050	Difference (2016-2050)
Total LGA	27,180	28,898	31,365	34,040	36,453	40,552	13,372

6.2 QPRC Waste Generation Rates

6.2.1 Municipal Solid Waste

QPRC commissioned the QPRC Household Kerbside Bin System Audit (EC Sustainable, 2018) of kerbside waste bins in 2018. The results from this report have been used to model waste generation for the QPRC LGA. The audit identified that on average the composition of waste generated by residents is residual to landfill (21%), recyclables (28%) and organics (food and garden) (51%). Based on the average kilograms of waste type per household per week (kg/hh/wk), as shown in Table 15, the total waste generation for all households in the LGA was modelled. Waste generation has not been modelled based on current diversion rates but on estimated generation per waste type.

Table 15 Household waste generation rates (source: EC Sustainable, 2018)

Waste Type	Rate	Unit
Residual	3.6	kg/household/week
Recycling	4.8	kg/household/week
Organics	8.8	kg/household/week
Total	17.2	kg/household/week

To identify the estimated volume of waste generated by the LGA up to 2050, the rates of waste generation in Table 15 were applied to:

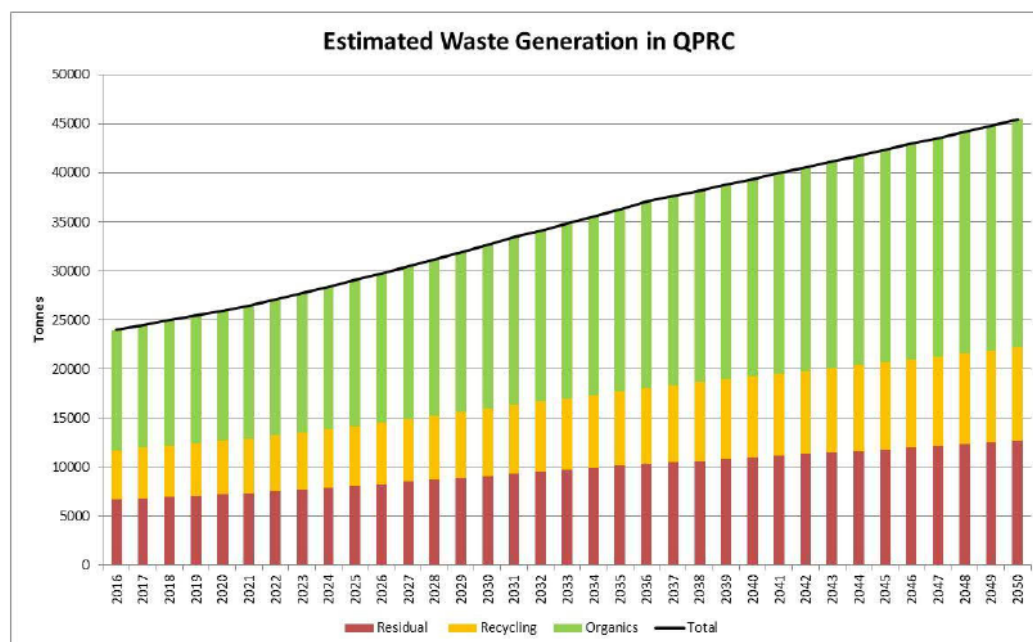
- the number of households per year (refer to Table 14)
- a 0.7% waste growth rate per year³³

The estimated waste generation from 2016 through to 2050 is given in Table 16 and illustrated in Figure 7.

Table 16 Waste generation 2016 – 2050 (tonnes per annum)

	2016	2021	2026	2031	2036	2041	2046	2050
Residual	6,692	7,381	8,295	9,322	10,338	11,150	11,981	12,680
Recycling	5,019	5,536	6,221	6,992	7,753	8,363	8,986	9,510
Organics	12,269	13,532	15,208	17,091	18,952	20,442	21,966	23,246
Total	23,980	26,448	29,725	33,405	37,043	39,955	42,933	45,435

Figure 7 Estimated Waste Generation in QPRC LGA based on current generation rates



6.2.1.1 Council Drop-off Facility Information

Drop off (self-haul) is domestic material delivered by residents directly from households to a council drop off facility or a council mobile service(s). This includes material dropped off by residents such as Residual Waste, Dry Recycling, Garden Organics, E-waste, Mattresses, Metals, Hazardous, other (e.g.; Batteries, Globes, Cartridges, etc.). The following information is from the QPRC 2016-17 WARR survey.

³³ Australian National Waste Report 2016, identified that over nine years, excluding fly ash, waste generation increased by about 19% or an average of 1.9% per year and per capita generation trended upwards with a 7% overall increase over nine years or an average increase of 0.7% per year (REC & Blue Environment, 2016, page 42).

Table 17 Council drop-off facility information (source: QPRC WARR Survey 2016-17)

Name of Facility	Tonnes Received	Tonnes disposed of to Landfill	Measurement Method
Queanbeyan Waste Minimisation Centre	2,436	24	Council Methodology
Bungendore Resource Recovery Centre	3,588	2,213	Weighbridge
Macs Reef Waste Transfer Station	500	391	Weighbridge
Braidwood Landfill	1,149	939	Council Methodology
Captains Flat Waste Transfer Station	0	0	Council Methodology
Nerriga Landfill	169	67	Council Methodology
	7,842	3,634	-

6.2.2 Commercial and Industrial Waste Generation

As noted in Section 4.2 a commercial service is offered by QPRC to businesses in the former QCC LGA. According to the QPRC 2016-2017 WARR Survey the following waste quantities were collected by Council from the commercial and non-residential sector:

- Residual Waste –from 667 premises – 570 tonnes
- Recyclables – from 447 premises – 135 tonnes
- Greenwaste – 48 premises - 0.004 tonnes

QPRC provide the former Palerang LGA with 123 waste and recycling services to the commercial and non-residential sector however does not separately record these quantities from municipal waste.

The above quantities based on services provided by QPRC to the C&I sector, are expected to represent only a small percentage of the overall C&I waste generation in the LGA, with the majority collected by private waste contractors and delivered to facilities in the ACT region.

6.2.3 Construction and Demolition Waste Generation

As noted in Section 4.3 C&D waste is currently received at Bungendore Transfer Station and Braidwood landfill. The following figures are noted in the 2016-17 WARR Survey:

- Concrete 53.8 tonnes - passed onto external processor
- Mixed C&D: 584.6 tonnes – landfilled
- Sand, soil and rubble – 584 tonnes – Internal council use (recycled/reused)

The quantities noted above are expected to represent only a small percentage of the overall C&D waste generation in the LGA with the majority delivered to processing facilities in the ACT region as noted in Section 4.3.

6.3 Resource Recovery

Average resource recovery rates for the whole of Australia and NSW are presented in Table 18. As noted in Section 3.1.2 QPRC achieves around 46% resource recovery from the MSW sector, which is in-line with the average for the NSW Regional regulated area.

Table 18 Estimates of average resource recovery in Australia and NSW 2014-15³⁴

Waste Category	Australia	Sydney Metro	Rest of NSW (no levy)
Municipal Solid Waste (MSW)	51%	58%	56%
Commercial and Industrial Waste (C&I)	64%	61%	50%
Construction and Demolition Waste (C&D)	64%	73%	57%

Based on the waste bin audits undertaken in 2018 (EC Sustainable, 2018) the current kerbside diversion rates and potential diversion rates based on improved additional resource recovery is given in Table 19. As shown in Table 19 with improved resource recovery there is potential to increase the kerbside diversion rate from 46% to around 78%.

Table 19 Diversion rates - current and potential (source: EC Sustainable, 2018)

Diversion rate type		Diversion rate (% by weight)				
		Former QCC LGA		Former Palerang LGA		
		Urban	Rural	Urban	Rural – 1-bin	Rural 2-bin
Current kerbside diversion rate		45.1	35.5	54.8	73.4	38.8
With additional recovery of these material types from the waste bins	Recyclables	52.7	40.7	61.3	-	45.3
	Garden organics	45.5	36.0	55.4	-	43.8
	Other FOGO compliant material	69.9	53.4	72.0	-	69.8
	All above	77.9	59.2	79.2	-	81.4

³⁴ Based on Table 3 NSW WARR progress report 2017 <https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/waste/17p0083-warr-strategy-progress-report-2014-15.pdf?la=en&hash=6C52BEF220E9C0EB2BF63368EE965E1673B0EDF8> and the Australian National Waste Report 2013 <<http://www.environment.gov.au/system/files/resources/4b666638-1103-490e-bdef-480581a38d93/files/wgrra.pdf>>

7.0 Benchmarking in the Region

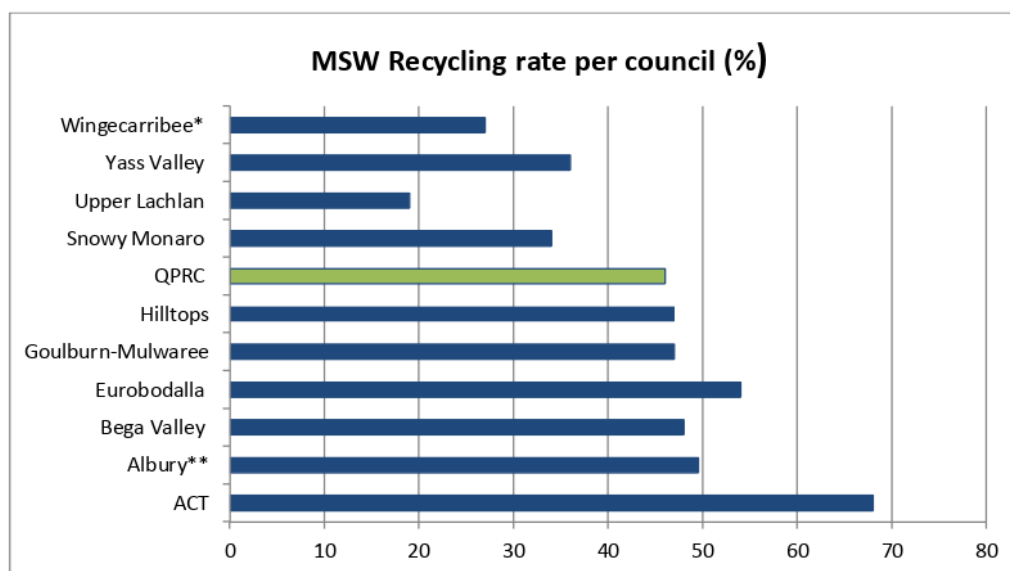
Waste generation and services data for other councils in the QPRC region and beyond has been provided by the CRJO by way of their Regional Waste Strategy³⁵. This information was supplemented by consultation with individual councils who provided additional information and findings from the latest NSW Local Government Waste and Resource Recovery Data Report 2014-15. AECOM has compiled this data into a benchmarking table, which can be found in **Appendix A**. Key findings are summarised below and in the following sub-sections:

- All councils in the region provide a weekly residual waste collection service however some townships don't receive the service such as Carwoola, Primrose Valley and Sutton Acres.
- All councils in the region provide a 240L fortnightly recycling collection service, except for Snowy Monaro which offers varying bin sizes (120L, 240L, or 360L).
- All councils except for Yass and Upper Lachlan provide either a 240L Garden Organics (GO) or Food and Garden Organics (FOGO) service.
- All councils in the region offer a bulky waste collection service to sections of the community.

7.1 MSW Recycling Rates

Figure 8 summarises the MSW recycling rates of comparable councils and the ACT, and highlights QPRC in green to understand how Council currently performs with respect to the surrounding LGA's in the region.

Figure 8 MSW Recycling rate per council in percentage (source: CRJO Waste Strategy 2017 unless noted otherwise)



* Sourced from Wingecarribee 2016-17 WARR Survey

** Sourced from 2014-15 NSW Local Government Waste and Resource Recovery Data Report 2014-15

As highlighted in the above figure QPRC is currently performing at around the median when compared to other Councils in the local region with a recycling rate of around 46%. The NSW EPA reported an overall recycling rate across NSW for MSW of 58% in the latest Progress Report.

³⁵ Wright (2018), Regional Waste Strategy for the Canberra Region Joint Organisation (CRJO), June 2018

7.2 Garden and Food Organics Recovery Rates

Figure 9 presents the quantity of organics (Garden and / or Food Organics) that each comparable council is recovering.

Figure 9 Annual organics recycling per council in tonnes per capita

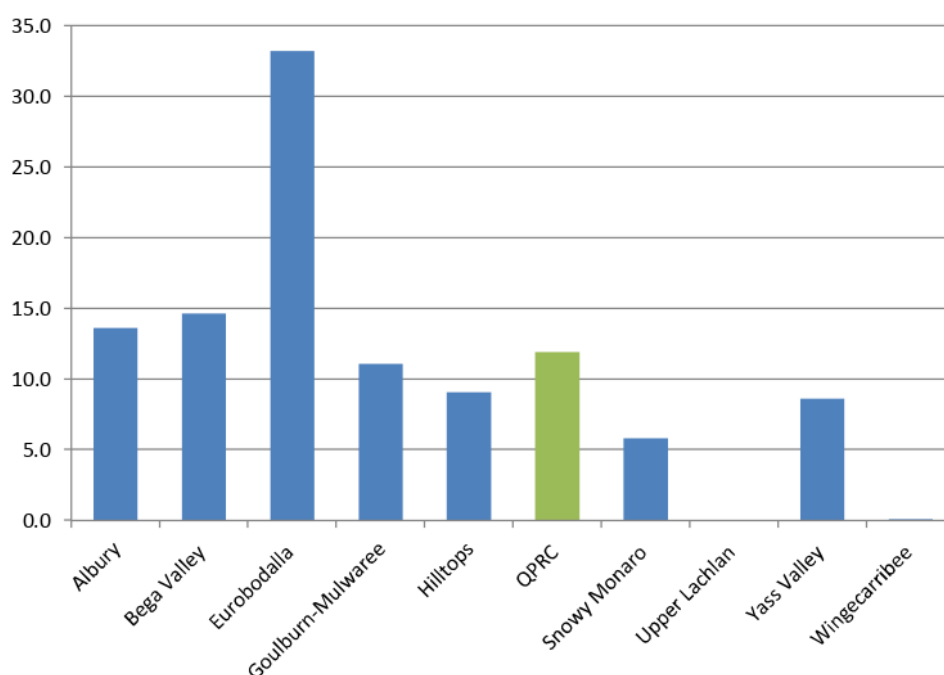
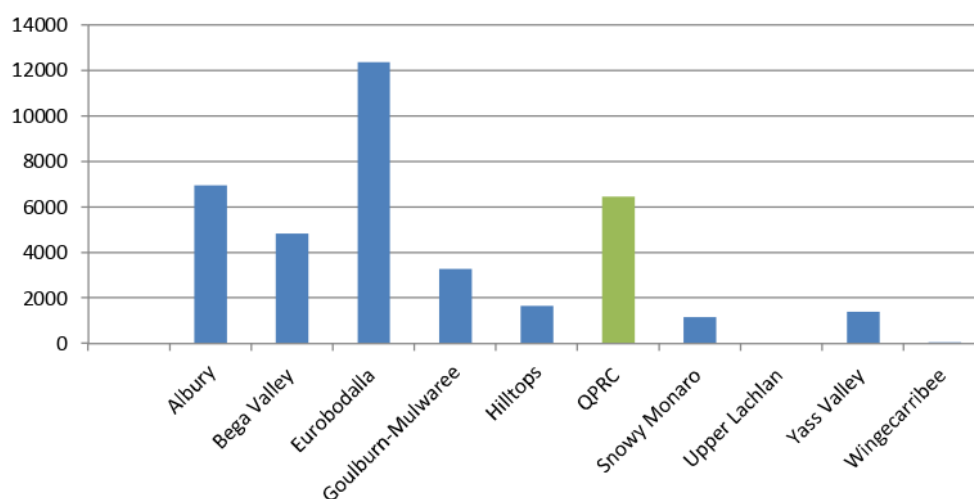


Figure 10 Annual organics recycling per council in tonnes total



7.3 Waste and Recycling Service Providers

Table 20 provides a summary of who (In House or Contractor) provides the waste collection services in each LGA.

Table 20 Waste and recycling service providers (source: CRJO Regional Strategy 2017)

Member	Waste/Recycling Contractor	Organics Contractor
Yass	In House	No Service
Bega ¹	Cleanaway	Cleanaway
Eurobodalla	Suez	Suez
Goulburn-Mulwaree	In House	In House
Upper Lachlan ²	In House	No Service
Hilltops	Elouera Industries	Cleanaway
QPRC	JJ Richards (Former QCC LGA) In House (Former Palerang LGA)	JJ Richards (Former QCC LGA) In House (Former Palerang LGA)
Snowy Monaro	Remondis / In House	In House
ACT	Suez	Corkhill Brothers
Wingecaribee	JJ Richards	JJ Richards
Albury	Cleanaway	Cleanaway

Note 1. Bega Recently tendered its waste, recycling and FOGO collections, to start July 2018

Note 2. Will review/re-new their recycling contract in June/July 2018

As shown in Table 20 generally Councils in the region contract out their waste, recycling and organics collection services.

7.4 Waste Fees and Charges

Benchmarking waste rates, fees and charges in the region needs to be treated with caution given the varying methods for developing and assigning fees in each region.

Table 21 outlines current residual (mixed) waste disposal fees and annual domestic waste charges at a number of facilities in the CRJO region and similar Councils.

Table 21 Waste fees and charges (source: councils published annual rates and fees/charges 2018)

Member	Residual Waste Drop Off Domestic Rate (\$/tonne)	Residual Waste Drop Off Rate Commercial (\$/tonne)	Annual General Domestic Waste Charge Rateable Residential Properties
Yass	\$30	\$90	\$387
Bega	\$156	\$218	Standard Residential - \$473.65 Standard Rural - \$416.15 Standard Multi-Unit \$473.65
Eurobodalla	\$135	\$135	\$313.90
Goulburn-Mulwaree	\$208	\$208	Rural Waste Card \$320
Upper Lachlan	Not Available	Not Available	Condobolin - \$459 Other Areas - \$345
Hilltops	No Charge for Rate payer/Residents	\$140	Varies: Harden/ Murrumburrah \$438 Boorowa \$200 Galong \$350 Young \$322
QPRC	Queanbeyan WMC Utes and Trailers \$7 per visit	Queanbeyan WMC Utes and Trailers \$7 per visit	Varies: Former QCC LGA – DW1 - 2018/19 - \$319 (140L waste, 240L recycling, 240L greenwaste)
	Former Palerang LGA facilities Varies depending on load size	Former Palerang LGA facilities \$155 per tonne without Tip Pass \$100 per tonne with Tip Pass	Varies: Former Palerang LGA – DWP1 – 2018/19 - \$375 (140L waste, 240L recycling, 240L greenwaste)
Snowy Monaro	\$155	\$195	\$440 (Domestic Waste and Recycling Collection) \$539 (Domestic Waste, Recycling & FOGO Collection Cooma only)
ACT	\$96.05	\$155.05	No separate Domestic Waste Charge (included in General Rate)
Wingecarribee	\$323.60	\$323.60	80L Waste Service - \$422 140L Weekly Waste Service \$526 240L Weekly Waste Service \$680
Albury	\$153	\$153	\$250 Default Service Option

As can be seen from the above table the QPRC General Waste Charges are generally in-line (if not lower) that other similar Councils in the CRJO region. Further details on the QPRC waste management charges are provided in Section 5.0.

8.0 What Can / Cannot QPRC Influence in the Waste Sector?

8.1 What QPRC Can Influence

QPRC can control the range, price, accessibility and convenience of waste services provided to households in the region.

While most waste services to the C&I and C&D sectors in the QPRC are provided by the private sector, Council can choose to intervene in these markets using planning controls, by subsidising additional waste services and/or infrastructure.

Council can provide infrastructure and services on a user pays basis or fund these initiatives through specific levies within the rates bills to residents or businesses.

Council can ensure that suitably zoned and located land is made available for developing and operating waste management and resource recovery infrastructure.

Council can improve resource recovery in both the residential and non-residential sectors through delivering and supporting targeted education campaigns designed to raise awareness on what can and cannot be recycled, reducing litter and avoiding waste generation.

8.2 What QPRC Cannot Influence

QPRC cannot influence national and global consumer trends that lead the quantities and composition of waste generated. It can, however support individuals, families, school, community organisations and businesses to make better decisions around purchasing and waste disposal to reduce local waste generation.

In general, local councils have only limited influence over the State and Federal regulatory environment. The QPRC agreement with the ACT Government and relationship through the CRJO provide QPRC will direct channel to progress its views to the highest levels of the ACT Government.

QPRC cannot influence national and global markets for recyclable materials. It can, however, create stable markets for various local recyclable streams through its purchasing policies and programs.

9.0 Next Steps

This discussion paper will support the following key next steps in the preparation of the new Waste Strategy for QPRC:

- Provide background information to the first QPRC Waste Strategy Working Group (WSWG) Meeting currently scheduled for the early September
- Provide background information for a Council meeting currently scheduled for mid-October to seek Council endorsement prior to proceeding with the first Community Consultation session.
- Provide background information for the first Community Consultation sessions to be held in mid-October
- Support identification of alternative waste management and resource recovery options. These options will be identified based on findings from our site inspections, discussions with QPRC staff, information in the background briefing paper, and outcomes of the initial WSWG meeting and Community Consultation sessions. Based on our initial research and discussions with Council, provided below are some preliminary options for consideration by Council and the WSWG:
 - Sending QPRC MSW to Veolia's Woodlawn MBT.
 - Negotiating formal arrangements with Re.Group (current Hume MRF owner and operator) for the use of the Hume MRF. This agreement could cover CDS eligible containers. A lower gate fee may be achieved via QPRC agreeing to purchase MRF glass for use in roads and civil works.
 - Supporting the objectives of the NSW CDS scheme through:
 - Establishing a sorting facility to remove CDS containers from yellow-bin collections prior to its provision to the Hume MRF
 - Promoting and supporting staff and residents participation in the NSW EPA "dob in a tosser" campaign.
 - Installing public place recycling bins for CDS containers.
 - Establishing CDS waste collection services at commercial operations including hotels and clubs.
 - Assisting sporting clubs or community groups to establish CDS collection operations.
 - Establishing a facility to restore and refurbish the better pieces of furniture, recovered from bulky waste collection or drop-off at local transfer stations. This furniture could be resold within the region or more widely.
 - Gaining better access to existing product stewardship schemes as well as earlier access to new schemes as they are established. Options include establishing Council run drop off centres for items covered under product stewardship schemes and then transporting this waste to free drop off centres³⁶.
 - Expanding former QCC LGAs third bin service to take food waste. This could be done on a fortnightly or weekly basis. Such a change should be introduced in combination with a community education campaign.
 - Co-operation with the ACT Government to establish an organics processing site able to take food and garden organics from both QPRC region and the ACT.
 - QPRC may wish to further investigate opportunities to support local business development through their purchasing practices, waste management contracts, the provision of appropriately zoned land, increased education activities and/or direct investment.

³⁶ This would need to be done regularly enough to ensure each load was below any threshold for commercial waste (e.g. less than 15 computers at a time taken to the Mugga lane drop offs or less than X L of paint).

10.0 Limitations

AECOM Services Pty Limited (AECOM) has prepared this report in accordance with the usual care and thoroughness of the consulting profession for the use of Queanbeyan Palerang Regional Council and only those third parties who have been authorised in writing by AECOM to rely on this Report.

It is based on generally accepted practices and standards at the time it was prepared. No other warranty, expressed or implied, is made as to the professional advice included in this Report.

It is prepared in accordance with the scope of work and for the purpose outlined in the AECOM conditions of tendering included in the proposal dated 17 March 2018.

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Any estimates of potential costs which have been provided are presented as estimates only as at the date of the Report. Any cost estimates that have been provided may therefore vary from actual costs at the time of expenditure.

Appendix A

Benchmarking Table

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Waste Strategy for QPRC
QPRC Waste Strategy - Briefing Paper – Current status of waste management in the QPRC region

Appendix A Benchmarking Table

Jurisdiction	Population (2016 census) Area (ha) Towns with >1000 people	Waste Facilities Utilised by each Council	Waste Facilities in the LGA	WARR Performance	Dedicated waste resources / Initiatives
Bega Valley Shire Council	33, 253 6,279km ² Bega – 4,668 Merimbula – 3,544 Tura Beach – 2,921 Tathra – 1,675	Shoalhaven Recycling MRF in Bomaderry	<u>Landfills</u> CWF Eden <u>Transfer Stations</u> Bermagui Cobargo Candelo Bemboka Wallagoot Merimbula Eden	MSW Recycling Rate: 48% Organics recycled: 4,833t	No dedicated resource
Eurobodalla Shire Council	37, 232 3,422 km ² Batemans Bay – 11,294 Moruya – 3,982 Narooma – 3,342 Tuross Head – 2,120 Dalmeny – 1,932 Malua Bay – 1,929 Batehaven – 1,776 Broulee – 1,717 Tomakin – 1,001	Suez Recycling MRF in Moruya	<u>Landfills</u> Surf Beach Brou <u>Transfer Stations</u> Yarragee Road Moruya	MSW Recycling Rate: 54% Organics recycled: 12,377t	As required Own initiatives: Review existing strategy

5.1 Adoption of QPRC Waste Strategy
Attachment 5 - Draft Waste Strategy Appendix C (Continued)

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Waste Strategy for QPRC
QPRC Waste Strategy - Briefing Paper – Current status of waste management in the QPRC region

Jurisdiction	Population (2016 census) Area (ha) Towns with >1000 people	Waste Facilities Utilised by each Council	Waste Facilities in the LGA	WARR Performance	Dedicated waste resources / Initiatives
Goulburn-Mulwaree Council	29,609 3,220km ² Goulburn – 22,890 Marulan – 1,178	Endeavour Industries Recycling MRF in Goulburn	<u>Landfills</u> Marulan WMC Goulburn WMC <u>Transfer Stations</u> Tarago	MSW Recycling Rate: 47% Organics recycled: 3,282t	Waste Education & Project Officer Own initiatives: new recycling infrastructure
Hilltops Council	18,498 7,139km ² Young – 7,170 Harden – 2,030 Boorowa – 1,211	Elouera Industries Recycling MRF in Cootamundra Ecofill Landfill in Jugiong	<u>Landfills</u> Boorowa Young Bendick Murrell Koorawatha Reids Hill Bribbaree Rye Park Milvale Tubbul <u>Transfer Stations</u> Young Boorowa Harden	MSW Recycling Rate: 47% Organics recycled: 1,660t	Limited resources Own initiatives: Developing new strategy

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Waste Strategy for QPRC
QPRC Waste Strategy - Briefing Paper – Current status of waste management in the QPRC region

Jurisdiction	Population (2016 census) Area (ha) Towns with >1000 people	Waste Facilities Utilised by each Council	Waste Facilities in the LGA	WARR Performance	Dedicated waste resources / Initiatives
Queanbeyan-Palerang Regional Council	56,368 5,319km ² Queanbeyan – 26,162 Jerrabomberra – 9,528 Bungendore – 4,178 Googong/Tralee – 2,759 Braidwood – 1,651	Re.Group Recycling MRF in ACT Queanbeyan Waste Minimisation Centre (WAMI) ACT Govt. Landfill in ACT	<u>Landfills</u> Braidwood Nerriga <u>Transfer Stations</u> Bungendore Macs Reef Captains Flat	MSW Recycling Rate: 46% Organics recycled: 6,460t	Limited resources
Snowy Monaro Shire Council	20,218 15,162km ² Cooma – 6,742 Jindabyne – 2,629 Bombala – 1,387 Berridale – 1,197	Re.Group Recycling MRF in ACT	<u>Landfills</u> Bombala Cooma Jindabyne <u>Transfer Stations</u> Adaminaby Berridale Bredbo Cathcart Nimmitabel Numeralla Delegate	MSW Recycling Rate: 34% Organics recycled: 1,175t	One full time employee Own initiatives: FOGO kerbside expansion to Bredbo, Michelago, Nimmitabel Mobile CRC to rural areas

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Waste Strategy for QPRC
QPRC Waste Strategy - Briefing Paper – Current status of waste management in the QPRC region

Jurisdiction	Population (2016 census) Area (ha) Towns with >1000 people	Waste Facilities Utilised by each Council	Waste Facilities in the LGA	WARR Performance	Dedicated waste resources / Initiatives
Upper Lachlan Shire Council	7,695 7,102km ² Crookwell – 2,641	Re.Group Recycling MRF in ACT	<u>Landfills</u> Crookwell Gunning Tuena Bigga <u>Transfer Stations</u> Collector Taralga	MSW Recycling Rate: 19% Organics recycled: 0t	Education Campaign to support planned improvements to kerbside services No recorded initiatives.
Yass Valley Council	16,142 3,999km ² Yass – 6,506 Murrumbateman – 3,219 Sutton – 1,660	Re.Group Recycling MRF in ACT Ecofill Landfill in Jugiong	<u>Landfills</u> Gundaroo Eco-Fill Jugiong <u>Transfer Stations</u> Binalong Bookham Bowling Yass Murrumbateman Wee Jasper	MSW Recycling Rate: 36% Organics recycled: 1,389t	No recorded resources No recorded initiatives
ACT	396,397 168km ² Canberra	Re.Group Recycling MRF in ACT Corkhill Brothers GO processing in ACT ACT Govt. Landfill in ACT	<u>Landfills</u> ACT Government Landfill <u>Transfer Stations</u> Corkhill Brothers Re.Group MRF	MSW Recycling Rate: 68*% Organics recycled: -**	

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Waste Strategy for QPRC
QPRC Waste Strategy - Briefing Paper – Current status of waste management in the QPRC region

Jurisdiction	Population (2016 census) Area (ha) Towns with >1000 people	Waste Facilities Utilised by each Council	Waste Facilities in the LGA	WARR Performance	Dedicated waste resources / Initiatives
Wingecarribee	47, 882 2,689 km ² Bowral – 12,949 Mittagong – 8,999 Moss Vale – 8,579 Bundanoon – 2,729 Robertson – 1,865		<u>Landfills</u> Wingecarribee RRC <u>Transfer Stations</u> Wingecarribee RRC	MSW Recycling Rate: 27% Organics recycled: 45t	Waste Education Officer No recorded initiatives

Appendix B

Implementation Strategies: Queanbeyan City Council

5.1 Adoption of QPRC Waste Strategy
Attachment 5 - Draft Waste Strategy Appendix C (Continued)

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Waste Strategy for QPRC
QPRC Waste Strategy - Briefing Paper – Current status of waste management in the QPRC region

Number		Number	Action	Status
Rural Waste Services				
1	QCC	QCC1	Offer the rural community an optional 240L garbage service and/or 240L recycling bin, serviced on alternate fortnights	Completed
2	QCC	QCC2	Close the recycling drop-off facility at Femleigh Park following introduction of the above services	Completed
General Waste				
3	QCC	QCC3	Offer the community an optional 80L general waste bin for low waste generators at a reduced waste charge – linked to 2015 contract	Not incorporated into the waste collection contract
Recycling Services				
4	QCC	QCC4	Improve recycling recovery through increased awareness/education programs – endeavour to capture 50% of current recyclables in general waste bin and reduce contamination to <10%	Ad hoc education activities but no structured program
5	QCC	QCC5	Develop and/or implement a recycling bin contamination policy which can revoke service where there are serious and continual issues	Not commenced
6	QCC	QCC6	Council engage a bin auditor to routinely inspect every recycling bin prior to collection to identify offending households (earlier if funds permit)	Not commenced
7	QCC	QCC7	Where additional recycling bin capacity is required, provide as an option a 360L recycling bin at minimal additional charge.	Implemented
			In preparation for the next waste collection contract, specify that the collection fleet must be capable of collecting bins ranging 240-360L for recycling	Implemented
8	QCC	QCC8	Maintain the current contractual arrangements with ACT NOWaste and Remondis in relation to acceptance and processing of all recyclables generated by Council.	Council maintains contractual arrangements in line with our legislative and regulatory requirements
Garden Waste Service				
9	QCC	QCC9	Where additional garden waste bin capacity is required, Council provide additional 240L bin on cost-recovery basis	Implemented
10	QCC	QCC10	Develop a comprehensive business plan to consider all options, costs and risks in relation to collection, transport, processing and marketing of the finished product from both the self-hauled and existing garden waste collection.	Not commenced
11	QCC	QCC11	Promote mulch sales to the community	Ad-hoc promotions but no structured program
Garden and food waste				
12	QCC	QCC12	Undertake a comprehensive business plan to consider the full range of options, costs and risks for a combined food and garden waste service	Not commenced
13	QCC	QCC13	Apply to the State Government 'Waste Less Recycle More' grant funding to offset the cost of implementation based on \$35/Hhd and \$20,000 for waste audit	Not commenced
14	QCC	QCC14	Conduct a trial to ascertain the take-up rate, contamination rates and issues associated with food/ green waste collection and services.	Not commenced

Revision 01 – 24-Sep-2018
Prepared for – Queanbeyan-Palerang Regional Council – ABN: 95 933 070 982

5.1 Adoption of QPRC Waste Strategy
Attachment 5 - Draft Waste Strategy Appendix C (Continued)

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Waste Strategy for QPRC
QPRC Waste Strategy - Briefing Paper – Current status of waste management in the QPRC region

Number		Number	Action	Status
Rural Waste Services				
15	QCC	QCC15	Council review trial by: <ul style="list-style-type: none"> conduct a waste audit to quantify participation, contamination, diversion, recovery and carbon reduction impact conduct survey regarding collection frequency to determine if changes should be introduced to the garden/food and general waste bins 	Not commenced
16	QCC	QCC16	Introduce a source-separated food waste collection service to all households with an existing garden waste bin	Not commenced
17	QCC	QCC17	Provide each householder with a new 240L ventilated MGB, kitchen caddy and supply of bio-bags – March 2015	Not commenced
18	QCC	QCC18	Engage a full-time waste education officer on contract for 12 months	Not commenced
19	QCC	QCC19	Offer an 'opt in' service for med-density housing where the body corporate nominate their building to be part of the program	Not commenced
WAMI				
20	QCC	QCC20	Install new and improved directional signage regarding the location of the WAMI	Completed
21	QCC	QCC21	Investigate reconfiguration of the existing site to offer an expanded drop-off area for low toxic problem wastes as defined by the NSW EPA – gas bottles/fire extinguishers, paint, lead acid batteries, fluorescent tubes, smoke detectors and used motor oil	Community Recycling Centre to open before Christmas 2018
22	QCC	QCC22	Apply for 'Waste Less Recycle More' funding grant funding to provide new and upgrade existing drop-off facilities for low toxic problematic waste	Completed. Community Recycling Centre to open before Christmas 2018
23	QCC	QCC23	Council enter into negotiations with SEROC and DHL in relation to providing a permanent e-waste (computer, peripherals and televisions) collection point at the WAMI	E-waste product stewardship program has effectively collapsed in the area. One-off collection events held annually in Queanbeyan and E-waste facilities provided at Mugga Lane
24	QCC	QCC24	Support SEROC/SERRG to coordinate a regional tender for processing of mattresses	Not commenced. Mattresses sent to Soft Landings for processing
25	QCC	QCC25	Provide expanded facilities at the WAMI for mobile phones, toner cartridges, scrap metal, used chemicals, unwanted but reusable household items, clothing and textiles .	CRC constructed. Additional items provided for depending on available space
26	QCC	QCC26	Investigate an alternative location for the operation of the Men's Shed	Not commenced
27	QCC	QCC27	Install weighbridge for accurate data recording of all deliveries in and out of the facility	No longer supported as site constraints mean that a weighbridge cannot be installed in a safe and efficient location.
28	QCC	QCC28	Establish a DrumMuster compound for used plastic agricultural containers	Not commenced

Revision 01 – 24-Sep-2018
Prepared for – Queanbeyan-Palerang Regional Council – ABN: 95 933 070 982

5.1 Adoption of QPRC Waste Strategy
Attachment 5 - Draft Waste Strategy Appendix C (Continued)

AECOM

Waste Strategy for QPRC
QPRC Waste Strategy - Briefing Paper – Current status of waste management in the QPRC region

Number		Number	Action	Status
Rural Waste Services				
29	QCC	QCC29	Lobby the federal government to extend EPR on all e-waste, mattresses, gas bottles, fire extinguishers, paint and smoke detectors	Not commenced
30	QCC	QCC30	Council support and promote the introduction of a regional mattress recycling program.	Completed. Mattresses sent to Soft Landings for processing
31	QCC	QCC31	Conduct a feasibility study into the various operating models in other locations to assist in determining the preferred structure to suit Council's risk profile in relation to the future operation of a reuse shop.	Not commenced
32	QCC	QCC32	Engage with local charities and undertake an EOI with the local community to determine the level of interest in operation of a reuse shop at a Council-provided facility as social enterprise	Not commenced
33	QCC	QCC33	Investigate an alternative larger site and develop a master plan for all recycling/reuse activities in the same location	Not commenced
Bulky Waste Clean-Up Service				
34	QCC	QCC34	Maintain bulky waste service to twice per annum for single households in the urban areas with additional services on a fee for service or 'pay as you go' basis	On-going
35	QCC	QCC35	Maintain bulky waste service in med-density areas to two per year	On-going
36	QCC	QCC36	Maintain the current service level to rural community of two scheduled services per year.	On-going
37	QCC	QCC37	Promote trash-and-treasure days or second-hand Saturday/Sunday to encourage reuse	Council supports the Garage Sale Trail
38	QCC	QCC38	Continue to review opportunities to maximise diversion of hard waste from landfill	On-going
Litter Management				
39	QCC	QCC39	Council continue to support and promote litter reduction initiatives	On-going
40	QCC	QCC40	Council monitor developments re national CDS program.	Completed. CDS implemented in ACT and NSW
Illegal Dumping				
41	QCC	QCC41	Contact ACT Government and local police to determine interest in working cooperatively as a dedicated group of officers in tackling illegal dumping and pursuing offenders.	Completed. Regional Illegal Dumping squad created.
42	QCC	QCC42	Seek funding if appropriate from 'Waste Less Recycle More' funding package	On-going
43	QCC	QCC43	Establish and maintain a database and map to identify incidences of repeat illegal dumping activity	Completed. EPA portal utilised for this purpose
44	QCC	QCC44	Install motion activated cameras in target 'hot spots' in an effort to reduce activity	Implemented. Cameras installed as necessary at problem locations
45	QCC	QCC45	Work cooperatively with real estate agents ensuring all new tenancies and home-owners aware of the services and penalties	On-going
46	QCC	QCC46	Encourage ongoing dialogue between rangers, health surveyors, real estate agents and strata managers to reduce dumping incidents.	On-going

Revision 01 – 24-Sep-2018
Prepared for – Queanbeyan-Palerang Regional Council – ABN: 95 933 070 982

5.1 Adoption of QPRC Waste Strategy
Attachment 5 - Draft Waste Strategy Appendix C (Continued)

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Waste Strategy for QPRC
QPRC Waste Strategy - Briefing Paper – Current status of waste management in the
QPRC region

Number		Number	Action	Status
Rural Waste Services				
47	QCC	QCC47	Undertake a media campaign to raise awareness of the issue of dumping and the penalties and enforcement activities of Council rangers	Not commenced
Event Waste Management				
48	QCC	QCC48	Apply waste-wise event management principles for events organised at Council venues.	On-going
49	QCC	QCC49	Provide recycling opportunities at shopping precincts, swimming pool, sports fields and parks	On-going
50	QCC	QCC50	Council consider the purchase of specific bins, hoods and signage to clearly differentiate what products go where for use at events and sporting functions.	Completed
Tender for collection and processing				
51	QCC	QCC51	Prepare tender documents for a new waste collection contract for urban areas with variable bin size including: <ul style="list-style-type: none"> General waste 80L–240L, recycling 240L–360L & garden organics 240L Provide options based on existing and alternative destinations based on extra time/ distance for: <ul style="list-style-type: none"> garden organics/food residual waste from general waste bin Seek prices to: <ul style="list-style-type: none"> deliver and service special event activities provide recycling services to C&I require a financial commitment to education include RFID for bins and vehicles fuel-efficient vehicles 	Tender conducted and Contract awarded
52	QCC	QCC52	Issue an EOI for med/long-term waste processing options of residual waste	Not commenced
53	QCC	QCC53	Ensure contractual arrangements in place with ACT NOWaste/Remondis in relation to acceptance and processing of all recyclables	Council maintains contractual arrangements in line with our legislative and regulatory requirements
54	QCC	QCC54	That Council seek EOI from interested parties to: <ul style="list-style-type: none"> process the existing stockpile of 7,000– 10,000m3 of garden waste into grades suitable for sale receive and process the estimated 3,000t garden organics delivered to the WAMI Receive and process the anticipated 1800t of garden waste arising from the garden organics kerbside collection OR 3,500t garden/food waste from kerbside collection 4,000t stockpile of bio-solids from QCC STP 850tpa of bio-solids from QCC STP 	Not commenced
Education				
55	QCC	QCC55	Communicate to the community the range of bin sizes and fee options available	On-going through Council communications
56	QCC	QCC56	Engage KABC to deliver the annual school education program to all public and private schools within the Council area	On-going
57	QCC	QCC57	Market test all graphics and educational material to gauge community understanding prior to release.	Not commenced

Revision 01 – 24-Sep-2018
Prepared for – Queanbeyan-Palerang Regional Council – ABN: 95 933 070 982

5.1 Adoption of QPRC Waste Strategy
Attachment 5 - Draft Waste Strategy Appendix C (Continued)

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Waste Strategy for QPRC
 QPRC Waste Strategy - Briefing Paper – Current status of waste management in the QPRC region

Number		Number	Action	Status
Rural Waste Services				
58	QCC	QCC58	Continue to provide education in a range of mediums for all ages and demographics	On-going, however no structured program
59	QCC	QCC59	Develop bin stickers for placement on either the outside of all bin lids or front of bin.	Not commenced
60	QCC	QCC60	Develop, promote and implement training in organics management including low waste gardening, composting, worm farming	Not commenced
61	QCC	QCC61	Provide subsidised worm farms and compost bins for those households attending training and seeking to manage organics on site	Not commenced
62	QCC	QCC62	Provide worm farms and compost bins at cost for the broader community	Not commenced
63	QCC	QCC63	Promote the State Government 'Love Food Hate Waste' program and website	Participated in LFHW program in 2017
64	QCC	QCC64	Promote businesses and solutions for people wishing to donate or recycle items.	On-going
Regional collaboration				
65	QCC	QCC65	Continue to work collaboratively within the region for the benefit of the region	On-going
66	QCC	QCC66	In partnership with SERRG & SEROC, consider the opportunity for a Sustainability Hub to co-locate resource recovery, education facilities, reuse centre and small business opportunities	Action no longer supported by regional group
Development Control Plan				
67	QCC	QCC67	Develop a DCP for garbage storage areas for to ensure sufficient space and access for servicing	Not commenced
Commercial and industrial				
68	QCC	QCC68	Conduct waste audit to determine weight and composition	Not commenced
69	QCC	QCC69	Review pricing policy based on audit results	Not commenced
70	QCC	QCC70	Promote waste collection services to the C&I sector by offering multiple lifts of 240L bins	Council provides multiple recycling bins to C&I sector at their cost
71	QCC	QCC71	Council to promote existing recycling and organics services offered to the C&I sector	Not commenced. Action no longer supported due to difficulty in ensuring promoted businesses are complying with best practices
72	QCC	QCC72	Council continue to promote and support the Free ACTSmart Business Program	On-going
73	QCC	QCC73	Support the training of a Council staff member in the Bin Trim tool and then undertake outreach to the business community on waste management	Council is utilising the Southern Region Business Enterprise Centre for this action
74	QCC	QCC74	Council promote the Bin Trim and Sustainability Advantage programs to the business community as free or government-assisted programs	On-going

Revision 01 – 24-Sep-2018
 Prepared for – Queanbeyan-Palerang Regional Council – ABN: 95 933 070 982

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Waste Strategy for QPRC
QPRC Waste Strategy - Briefing Paper – Current status of waste management in the
QPRC region

Appendix C

Implementation Strategies: Palerang Council

5.1 Adoption of QPRC Waste Strategy
Attachment 5 - Draft Waste Strategy Appendix C (Continued)

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Waste Strategy for QPRC
QPRC Waste Strategy - Briefing Paper – Current status of waste management in the QPRC region

Strategy	Service	Waste Management Aspect	Action	Expected outcome	Estimated Diversion Potential	Priority	Status
PC1	Residential	Putrescible	Conduct surveys of rural areas which are not currently serviced by a residual garbage collection service to determine best waste management services for these areas	Surveys on whether to introduce kerbside collections, transfer stations or bin compounds	N/A	Medium	Not commenced
PC2	Residential	Putrescible	conduct regular spot inspections of kerbside residual bins and bin compounds to identify where recyclables and/or organics are being incorrectly placed in the residual bin (where recycling/greenwaste bins are provided)	feedback to individuals and/or community on issues/areas for improvement. Consider rewards/penalty system	5%	High	Ad hoc inspection carried out, however no structured program of inspections
PC3	Residential	Recycling	Conduct surveys of rural areas which are not currently serviced by a recycling collection service to determine best waste management services for these areas	Surveys on whether to introduce kerbside collections, transfer stations or bin compounds	N/A	Medium	Not commenced
PC4	Residential	Recycling	conduct regular spot inspections of kerbside recycling bins and bin compounds to identify contamination levels	feedback to individuals and/or community on issues/areas for improvement. Consider rewards/penalty system	5%	High	Ad hoc inspection carried out, however no structured program of inspections
PC5	Residential	Putrescible/Recycling/ Organics	Conduct formal audits (2-3 year interval) of kerbside bins and compounds to measure diversion from landfill.	Diversions rates input to education programs feedback to public on areas for improvements	5%	Medium	Audit conducted in early 2018
PC6	Residential	Organics	Continue City to Soil Undertake audit of kerbside collections to assess performance Invest in education efforts to increase diversion of organics and reduce contamination Investigate options to determine best triple bottom line solution for food and organic garden waste including investigation of new greenwaste/depot site	Diversions rates input to education programs feedback to public on areas for improvements new greenwaste/depot site	57%	High	City to Soil continues with different processors Audit conducted in early 2018 Ad hoc education activities but no structured program

Revision 01 – 24-Sep-2018
Prepared for – Queanbeyan-Palerang Regional Council – ABN: 95 933 070 982

5.1 Adoption of QPRC Waste Strategy
Attachment 5 - Draft Waste Strategy Appendix C (Continued)

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Waste Strategy for QPRC
QPRC Waste Strategy - Briefing Paper – Current status of waste management in the QPRC region

Strategy	Service	Waste Management Aspect	Action	Expected outcome	Estimated Diversion Potential	Priority	Status
PC7	Residential	Organics	Conduct viability study for implementation of "Compost Revolution" program and/or education workshops for maintaining chickens for areas outside green waste collection areas	implementation study	33%	Medium	Not commenced
PC8	Residential	Bulky Waste	Conduct feasibility study to assess the implementation of a bulky waste collection for urban and rural residents	implementation study	decreased illegal dumping	Medium	Not commenced
PC9	C&D	Data	create a program for tracking C&D waste disposed at Council facilities Based on data, develop C&D diversion plans Investigate feasibility of new C&D waste storage and recycling facility near Bungendore	C&D diversion plans feasibility study	70%	Medium	C&D disposal information enhanced through improved data capture at facilities
PC10	C&I	Data	Conduct a bin audit of all C&I customers in LGA to determine approximate volume of waste generated by sector and recycling rates. Following audit, develop and implement program to increase diversion	Audit Diversion plans	70%	Medium	Not commenced
PC11	Public	Putrescible	Conduct a review of public waste management services provided. This may include surveying where public bins are currently located and auditing their utilisation/collection frequency	Audit	N/A	Medium	Not commenced
PC12	Public	Recycling	place recycling bins in public places where putrescible bins are located	additional recycling bins	29%	High	Recycling bins being installed in Bungendore and Braidwood town centres
PC13	Public	Recycling	investigate the use of reverse vending machines in public places, at community events or as part of education programs. Investigate options for participating in NSW government program to provide 800 RVM across NSW	investigation report	increase in public space recycling and provides education and community engagement	Low	CDS commenced, however no drop off locations within the former Palerang LGA. 3 locations within former Queanbeyan LGA

Revision 01 – 24-Sep-2018
Prepared for – Queanbeyan-Palerang Regional Council – ABN: 95 933 070 982

5.1 Adoption of QPRC Waste Strategy
Attachment 5 - Draft Waste Strategy Appendix C (Continued)

AECOM

Waste Strategy for QPRC
QPRC Waste Strategy - Briefing Paper – Current status of waste management in the QPRC region

Strategy	Service	Waste Management Aspect	Action	Expected outcome	Estimated Diversion Potential	Priority	Status
PC14	Public	Green waste	Review and implement a plan to comply with relevant orders at all facilities to allow sale and distribution of mulch and/or garden organics to public investigate viability of establishing new facility near Bungendore	management plan feasibility study		High	Preliminary investigations commenced for new site for composting activities, however, delayed following amalgamation
PC15	Public	Events	continue operating events as "waste wise" events with deployment of additional recycling bins to service the events and develop a method for collecting data to measure recycling rates	monitoring measures		High	On-going
PC16	Public	Illegal dumping	Prepare an illegal dumping management plan which identifies methods Council will use to address illegal dumping continue to monitor the success of illegal dumping efforts implemented by Council, following receiving a grant under the Combatting Illegal Dumping program. investigate additional options for reducing illegal dumping and review grant program	illegal dumping management plan		High	Not commenced, however, Council involved in the Regional Illegal Dumping Squad.
PC17	Public	Reuse	investigate options for installing a NACRO accredited charity clothing bin in town centres develop "Clothing Collection Bin Placement Policy"	Clothing Bin Placement Policy identified bin locations		High	Not commenced
PC18	General Practices	Education/Workshops	key to implementing an effective waste management strategy and any resource recovery initiatives is ensure the community has appropriate training and education	waste reductions, community workshops, education campaigns	10%	High	Ad hoc education activities but no structured program
PC19	General Practices	Data	Create a program for improving data collection at Council waste facilities. Based on data collected, review diversion plans for all waste streams	improved data collection improved diversion plans		High	Improved data collection through installation of weighbridges at major facilities and more frequent data collation.

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Strategy	Service	Waste Management Aspect	Action	Expected outcome	Estimated Diversion Potential	Priority	Status
PC20	General Practices	Operation of Nerriga and Braidwood Landfills	Review operations of Nerriga and Braidwood Landfills in accordance with clause 111 of the POEO Waste Regulation 2014	compliant landfills		High	Both landfills scheduled for closure. Improved management practices at each facility through actions of Program Coordinator – Waste
PC21	General Practices	Plastic free	identify community support for implementing a plastic bag and/or bottle free local government area			Medium	Not commenced
PC22	General Practices	Waste Facilities and Services Officer	To ensure that waste management is fully integrated with Council activities and goals, Council should review hiring a dedicated resource with Council to manage waste infrastructure, conduct regular surveys of the community, design and provide waste education material and workshops				Program Coordinator - Waste engaged to manage waste infrastructure and waste operations. Following amalgamation, activities identified in this action will be shared amongst a number of Council employees
PC23	General Practices	SERRG	Work with SERRG to identify a regional approach to some (or all) problem waste streams in order to access greater funding under the <i>Waste Less, Recycle More</i> initiative				On-going

QUEANBEYAN-PALERANG REGIONAL COUNCIL

Council Meeting Attachment

30 JUNE 2021

ITEM 5.1 ADOPTION OF QPRC WASTE STRATEGY

ATTACHMENT 6 QPRC WASTE STRATEGY GENERAL WASTE CHARGE
RATING APPROACH



Memo

To: Councillors
Executive
Service Manager, Finance

Cc: Service Manager, Utilities

From: Program Coordinator, Utilities Technical

Subject: **QPRC Waste Strategy – Transitional Rating Approach for General Waste Charge**

Date: 19 April 2021

Doc Set ID: 1211629

The draft Waste Strategy recommends expanding the general waste charge to all residential and non-business properties within QPRC. To reduce the immediate impact of the introduction of the general waste charge within the former Queanbeyan City Council area, a number of rating approaches were considered.

Based on Scenario 3 of the draft Strategy, the following ratings approaches were assessed:

Rating Approach	Description^
Rating Approach A	Phase GWC into QCC residential and non-business properties over 3 years AND Increase GWC paid by Palerang residential and non-business properties to be revenue neutral
Rating Approach B	Phase GWC into QCC residential and non-business properties over 3 years AND Increase GWC (by current inflation projection) paid by Palerang residential and non-business properties at Year 1 and phase down to new fee at Year 3
Rating Approach C	Phase GWC into QCC residential and non-business properties over 3 years AND Reduce GWC paid by Palerang residential and non-business properties at Year 1 and phase down to new fee at Year 3

Rating Approach	Description^
Rating Approach D*	Phase GWC into QCC residential and non-business properties over 3 years AND Reduce GWC paid by Palerang residential and non-business properties at Year 1 and phase down to new fee at Year 3 AND Adjust Year 2 and 3 charges to be revenue neutral across the 3 years (i.e. provide the same amount of funds over the 3 years)
^ Business properties pay a compulsory Business Waste Management charge rather than the General Waste Charge. * For Rating Approach D, the General Waste Charge will reduce for all properties in Year 4.	

The impact of the proposed approaches is shown in the attached tables.

Table 1 shows the proposed general waste charge over the first three years of the strategy for each rating approach, total income and the shortfall from the modelled income for each year.

Table 2 shows the total waste charges based on the recommended Waste Strategy (Scenario 3). Where applicable, the total cost includes the domestic waste management charge.

Table 3 shows the nett change by property type based on the recommended Waste Strategy (Scenario 3). Red numbers represent an increase in total waste management charges from the current arrangements.

It is recommended that Rating Approach D is adopted as it provides a phased transition for all residential and non-business properties and also provides the same revenue as the draft Waste Strategy.

Brendan Belcher
Program Coordinator, Utilities Technical
Queanbeyan-Palerang Regional Council

Attachments
Draft Waste Strategy General Waste Charge Ratings Approach

5.1 Adoption of QPRC Waste Strategy
Attachment 6 - QPRC Waste Strategy General Waste Charge Rating Approach (Continued)

Draft Waste Strategy General Waste Charge Ratings Approach

Table 1 - Rating Approaches													
		Rating Approach A			Rating Approach B			Rating Approach C			Rating Approach D		
	Year 1 QCC GWC Charge	\$	80	\$	80	\$	80	\$	80	\$	80	\$	80
	Year 1 Palarang charge reduction	\$	-					\$	80	\$	80		
	QCC Rate	\$	80	\$	143	\$	206	\$	80	\$	143	\$	206
	Palarang Rate	\$	509	\$	346	\$	206	\$	362	\$	314	\$	267
	Total Income	\$	5,421,793	\$	5,558,069	\$	5,874,090	\$	4,920,834	\$	5,621,186	\$	6,341,196
	Shortfall	\$	2,467	\$	1,023	\$	175,433	-\$	498,492.00	\$	64,140	\$	642,539
	Total Shortfall over life of model	\$			178,923	\$			208,187	-\$			693,573

Table 2 - Total Waste Charge based on Waste Strategy Scenario 3																	
		Rating Approach A				Rating Approach B				Rating Approach C				Rating Approach D			
Former DWM Code	Total current Charge 2020/21	QPRC DWM Code	2021	2022	2023	2021	2022	2023	2021	2022	2023	2021	2022	2023	2021	2022	2023
DWP1	\$785	Urban - SUD - 3 Bin	\$ 824	\$ 673	\$ 546	\$ 757	\$ 682	\$ 607	\$ 677	\$ 642	\$ 607	\$ 677	\$ 634	\$ 566			
DW1	\$337		\$ 395	\$ 470	\$ 546	\$ 395	\$ 470	\$ 546	\$ 395	\$ 470	\$ 546	\$ 395	\$ 470	\$ 546	\$ 395	\$ 493	\$ 566
DWP4	\$701		\$ 679	\$ 523	\$ 390	\$ 612	\$ 531	\$ 451	\$ 532	\$ 491	\$ 451	\$ 532	\$ 484	\$ 409			
DW15	\$364	Rural - SUD - 2 Bin	\$ 250	\$ 320	\$ 390	\$ 250	\$ 320	\$ 390	\$ 250	\$ 320	\$ 390	\$ 250	\$ 320	\$ 390	\$ 250	\$ 343	\$ 409
DW17	\$186		\$ 162	\$ 228	\$ 295	\$ 162	\$ 228	\$ 295	\$ 162	\$ 228	\$ 295	\$ 162	\$ 228	\$ 295	\$ 162	\$ 251	\$ 314
DWP8	\$501		\$ 591	\$ 431	\$ 295	\$ 524	\$ 440	\$ 355	\$ 444	\$ 400	\$ 355	\$ 444	\$ 392	\$ 314			
DWP12	\$417	Rural - SUD - 1 Bin	\$ 537	\$ 375	\$ 236	\$ 470	\$ 384	\$ 297	\$ 390	\$ 344	\$ 297	\$ 390	\$ 336	\$ 256			
DW10	\$27		\$ 108	\$ 172	\$ 236	\$ 108	\$ 172	\$ 236	\$ 108	\$ 172	\$ 236	\$ 108	\$ 172	\$ 236	\$ 108	\$ 195	\$ 256
DW8	\$337		\$ 395	\$ 470	\$ 546	\$ 395	\$ 470	\$ 546	\$ 395	\$ 470	\$ 546	\$ 395	\$ 470	\$ 546	\$ 395	\$ 493	\$ 566
DWP6	\$630	Rural - SUD - Bin Compound	\$ 669	\$ 512	\$ 379	\$ 602	\$ 521	\$ 440	\$ 522	\$ 481	\$ 440	\$ 522	\$ 473	\$ 399			
DW7	\$307		\$ 285	\$ 356	\$ 427	\$ 285	\$ 356	\$ 427	\$ 285	\$ 356	\$ 427	\$ 285	\$ 356	\$ 427	\$ 285	\$ 379	\$ 447
DW11	\$49																
Not applicable	\$390	Moved to GWC															
		No DWM Service	\$ 509	\$ 346	\$ 206	\$ 442	\$ 354	\$ 267	\$ 362	\$ 314	\$ 267	\$ 362	\$ 307	\$ 225			

Table 3 - Total Waste Charge based on Waste Strategy Scenario 3 - Nett change																										
Former DWM Code	Total current Charge 2020/21	QPRC DWM Code	Rating Approach A			Rating Approach B			Rating Approach C			Rating Approach D														
			2021	2022	2023	2021	2022	2023	2021	2022	2023	2021	2022	2023												
DWP1	\$785	Urban - SUD - 3 Bin	\$	39	-\$	112	-\$	239	-\$	28	-\$	103	-\$	178	-\$	108	-\$	143	-\$	178	-\$	108	-\$	151	-\$	219
DW1	\$337		\$	58	\$	133	\$	209	\$	58	\$	133	\$	209	\$	58	\$	133	\$	209	\$	58	\$	156	\$	229
DWP4	\$701		-\$	22	-\$	178	-\$	311	-\$	89	-\$	170	-\$	250	-\$	169	-\$	210	-\$	250	-\$	169	-\$	217	-\$	292
DW15	\$364	Rural - SUD - 2 Bin	-\$	114	-\$	44	\$	26	-\$	114	-\$	44	\$	26	-\$	114	-\$	44	\$	26	-\$	114	-\$	21	\$	45
DW17	\$186		-\$	24	\$	42	\$	109	-\$	24	\$	42	\$	109	-\$	24	\$	42	\$	109	-\$	24	\$	65	\$	128
DWP8	\$501	Rural - SUD - 1 Bin	\$	90	-\$	70	-\$	206	\$	23	-\$	61	-\$	146	-\$	57	-\$	101	-\$	146	-\$	57	-\$	109	-\$	187
DWP12	\$417		\$	120	-\$	42	-\$	181	\$	53	-\$	33	-\$	120	-\$	27	-\$	73	-\$	120	-\$	27	-\$	81	-\$	161
DW10	\$27	Vacant - Urban & Rural	\$	81	\$	145	\$	209	\$	81	\$	145	\$	209	\$	81	\$	145	\$	209	\$	81	\$	168	\$	229
DW8	\$337		\$	58	\$	133	\$	209	\$	58	\$	133	\$	209	\$	58	\$	133	\$	209	\$	58	\$	156	\$	229
DWP6	\$630	Rural - SUD - Bin Compound	\$	39	-\$	118	-\$	251	-\$	28	-\$	109	-\$	190	-\$	108	-\$	149	-\$	190	-\$	108	-\$	157	-\$	231
DW7	\$307	Urban - MUD - 2 Bin	-\$	22	\$	49	\$	120	-\$	22	\$	49	\$	120	-\$	22	\$	49	\$	120	-\$	22	\$	72	\$	140
DW11	\$49	Moved to GWC																								
Not applicable	\$390	No DWM Service	\$	119	-\$	44	-\$	184	\$	52	-\$	36	-\$	123	-\$	28	-\$	76	-\$	123	-\$	28	-\$	83	-\$	165