Business as Usual (BAU) waste management

					FINANCIAL MODELLING - Scenarios						
No	Stage of waste cycle	Category	Waste Stream	Option Description	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 <u>Former QBN disposal to:</u> - Landfill (residual) - Mugga Lane Landfill - Recycling - Hume MRF - Greenwaste - Oaks Estate <u>Former Palerang dispose to:</u> - 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&I1	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

PW1	Collection	PROBLEM WASTE	MSW	Problem Wastes - Drop off of various problem wastes provided by both former QBN and Palerang 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

QPRC Waste Options

Not applicable

DWC - Domestic Waste Charge
GWC - General Waste Charge

1 - Shortlist
2 - Park for now
3 - Fatal flaw remove

No	Category	Stage of waste cycle	Waste Stream	Option Description	Timeframe for implementation	Funding Source	Indicative Cost	Potential to increase resource recovery / landfill diversion
F2	FEE STRUCTURE	-	ALL	A single fee structure for Domestic Waste Charge the whole LGA with General Waste Charge only for Former Palerang - All residents with a kerbside collection pay an annual Domestic Waste Charge - Only Former Palerang residents pay an annual General Waste Charge - Only residents paying the General Waste Charge have discounted gate fees at QPRC facilities	6 months	Not applicable	Minor administrative costs	NA
F3	FEE STRUCTURE	-	ALL	A fee structure based on service (residual, recycling, organic) Annual Domestic Waste Charge - - Rationalise Domestic Waste Charge across the LGA - Domestic Waste Charge determined by the services offered in relevant area - No Domestic Waste Charge payable in unserviced areas Annual General Waste Charge: - All residents in QPRC pay the General Waste Charge with the charge determined by whether the Domestic Waste Charge is payable on the land	6 months	Not applicable	Minor administrative costs	NA However, this initiative will provide revenue that can be used for resource recovery and landfill diversion
F4	FEE STRUCTURE	-	C&I	A mandatory fee applied to businesses which is used to fund (opt in) business waste reduction programs	6 months	Not applicable	The costs of this program would be matched to the fees (budget neutral)	Significant. Business participants in the Actsmart program have generally reduced waste to landfill by 20-90%
F5	FEE STRUCTURE	-	All	Cease charging the Landfills Charge once Braidwood Landfill is closed. Continue to provide the "Tip Pass" to eligible customers under the General Waste Charge	6-12 months	Not applicable	Administrative costs	NA
F6	FEE STRUCTURE	-	Organics	Introduce a fee to dispose of greenwaste at Council facilities and supply pasteurised mulch at no-cost to residents/ratepayers	6-12 months	Individual customer	Administrative costs	<5%
CON2	CORE	Contract	ALL	Council collection contract - QPRC in-house MSW collection services expanded from former Palerang households to whole LGA.	align timing with term of JJ Richards' contract	DWC	This would be a substantial costs (>$250K per new truck + hiring and training staff). However, QPRC's experience suggests inhouse waste collection services are likely to have a lower amortised cost that contracted services	NA
CON3	CORE	Contract	ALL	Council collection contract - QPRC LGA collection contract serviced by Private Contractor.	18-36 months	DWC	Significant cost TBC	NA
CON4	CORE	Contract	ALL	Council collection contract Undertake an analysis of the two collection providers to determine the best value provider (in-house or private) collection method	12 months	Not applicable	$100-200K (depending on scope)	NA
CON5	REGIONAL COLLABORATION	Contract	ALL	Work with CRJO member Councils to undertake joint procurement activities as the opportunity arises	On-going	Both charges	$0-$100K (depending on the procurement and capacity of existing staff	project dependent
CON6	REGIONAL COLLABORATION	Contract	ALL	Work with CRJO member Councils to develop pro-forma documentation to facilitate joint procurement	On-going	Both charges	$0-$40K (depending on scope and the capacity of existing staff)	NA
MSWC3	CORE	Collection	Organics	Expansion of the QBN greenwaste collection to include food waste.	This is dependent on finding an appropriate receival and processing facility. This could take 12-48 months	DWC	The main costs are establishing the receival cost and running the education campaign	5-30% reduction in residual household waste to landfill
MSWC4	CORE	Collection	ALL	Expansion of kerbside waste collection services to unserviced areas	1-3 years	DWC	Significant cost TBC	Low
MSWC5	CORE	Collection	Residual	Offer the community an optional 80L general waste bin for low waste generators at a reduced waste charge	12 months (Contract negotiation required for J.J. Richards to provide 80 L MGB)	DWC	Modest capital cost - some administrative costs	Low - but may result in decrease in waste generated per capita
MSWC6	CORE	Collection	Recycling, Organics	Develop and/or implement a bin contamination policy which can revoke recycling service where there are serious and continual issues	6-12 months	DWC	Moderate cost to educate and enforce	Low
MSWD2	CORE	Processing / Disposal	Landfill (residual)	Dispose of Residual (red bin) at Woodlawn Landfill by road for whole LGA	18-24 months	GWC	Disposal cost - approx. $90/tonne plus transport fee TBC	No
MSWD3	CORE	Processing / Disposal	Landfill (residual)	Dispose of Residual (red bin) at Woodlawn Landfill by rail for whole LGA	2-3 years	GWC	Disposal cost - approx. $90/tonne significant cost for rail infrastructure	No
MSWD4	CORE	Processing / Disposal	Landfill (residual)	Dispose of Residual (red bin) at Woodlawn MBT by road for whole LGA	depends on capacity at Woodland MBT 2-4 years (could fund a 1/2 day Saturday shift at the facility for QPRC waste)	GWC	$200-300/tonne vs $90/tonne to landfill	Yes (60% reduction in residual waste to landfill)
MSWD5	CORE	Processing / Disposal	Landfill (residual)	Dispose of Residual (red bin) at Woodlawn MBT by rail for whole LGA	as above.	GWC	$200-300/tonne vs $90/tonne to landfill	Yes (60% reduction in residual waste to landfill)
MSWD6	CORE	Processing / Disposal	Landfill (residual)	Disposal of Residual (red bin) at Mugga Lane for whole LGA	12-24 months (to negotiate contract variation with ACT Govt)	GWC	$145/tonne at Mugga Lane vs $90 at Woodlawn for Palerang waste	No
FAC7	FACILITIES	Processing / Disposal	Recyclables	Construction and operation of a recyclables MRF for the LGA (includes a glass crusher for reuse in roads / plastic processing to use in roads)	3-4 years	GWC	$2M-$5M CAPEX. Potentially a good return on investment with lower costs to council when amortized over 15 years	Low for MSW (because RR at Hume MRF is already good) High (in combination with C&I collection and diversion program)
FAC8	FACILITIES	Processing	Landfill (residual)	Development of a centralised Energy from Waste facility to service the whole LGA for Residual Waste	3- 5 years	GWC	$10M-$15M CAPEX	Yes. >85% diversion of residual waste from landfill. >95% possible if ash used in concrete
FAC9	FACILITIES	Processing / Disposal	Organics	Construct and operate of a centralised organics composting facility (GO) to service the whole LGA	1-3 years	GWC	$3M - $5M	Low (high resource recovery already achieved)
FAC10	FACILITIES	Processing / Disposal	Organics	Construct and operate of a centralised organics composting facility (FOGO) to service the whole LGA	2-4 years	GWC	$3M - $5M	High (in combination with FOGO being rolled out across QPRC)
FAC11	FACILITIES	Processing / Disposal	Organics	Construct and operate of a centralised organics composting facility (FOGO + biosolids) to service the whole LGA	as above. Possible staged construction	GWC	$3-$6M	High (in combination with FOGO being rolled out across QPRC) Note biosolids are not going to landfill
FAC12	FACILITIES	Processing / Disposal	Organics	Construct and operate of a centralised organics composting facility (FOGO + biosolids) to service the whole LGA and ACT/region	2-6 years (likely staged construction)	GWC	$20M - $50M	High (see above)
FAC13	FACILITIES	Processing / Disposal	Organics	Construct and operate of a centralised organics anaerobic digestion facility (FOGO +biosolids) to service the whole LGA and ACT/region	as above	GWC	$30-$60M	High (see above)
FAC14	FACILITIES	Processing	All	Undertake a feasibility study into the construction and operation of a "dirty" MRF to handle all kerbside collections and/or waste collected from public bins and events	6 months	GWC	$150K	study (low) dirty MRF (high)
FAC15	FACILITIES	Processing	All	Construct and operate a new centralised "dirty" MRF and replace three bin collection system with single bin	2-5 years	GWC	$10M - $15M. However, this could save costs on collections	High (for residual waste), negative (for kerb-side recyclable if mixed with residual waste)
FAC16	FACILITIES	Processing	All	Construct and operate a new centralised "dirty" MRF for separation of waste collected from public bins and events	2-3 years	GWC	$1M-$2M	20-30% of public /events waste
FAC17	FACILITIES	Collection, Processing	Organics	Construct and operate a new GO collection and processing facility in the Queanbeyan area and sell existing facility at Lorn Road	2-5 years	GWC	$5.5M - $8M	Low (high resource recovery already achieved)
FAC18	FACILITIES	Collection, Processing	Organics	Construct and operate a new FOGO collection and processing facility in the Queanbeyan area and sell existing facility at Lorn Road	2-5 years	GWC	$5.5 - $10M	High (in combination with FOGO being rolled out across QPRC)
FAC19	FACILITIES	Collection, Processing	All	Construct and operate a new resource recovery facility in the Queanbeyan area and sell existing facility at Lorn Road	2-5 years	GWC	$15M	Variable depending on facility type
FAC20	FACILITIES	Processing	Organics	Rehabilitate and close existing composting site at Oaks Estate following the construction of a new GO/FOGO facility	2-5 years	GWC	$500K	NA
FAC21	FACILITIES	Processing	All	Design and construct a replacement facility for Nerriga and surrounding localities	6 - 24 months	GWC	$600K	5-10% from Nerriga residents
FAC22	FACILITIES	Disposal	ALL	Upgrade bin compounds at Majors Creek and Araluen with concrete pads, security fencing and cameras	3 - 6 months	GWC	$50K - $250K	<5%
C-C&I 2	CORE	Collection	C&I	C&I Kerbside collection - QPRC in-house MSW collection services expanded from former Palerang households to provide C&I collection services in house to whole LGA	18-24 months	DWC	Significant cost TBC	High (in combination with business recycling programs and appropriate price signals on sorted vs mixed waste)
C-C&I 3	CORE	Collection	C&I	C&I Kerbside collection - Private contractor provide C&I collection services to whole QPRC LGA	18-36 months (depending on the complexity of the procurement process)	DWC	Significant cost TBC	As above
C-C&I 4	CORE	Collection	C&I	C&I Kerbside collection - No C&I kerbside collection provided in LGA	6 months	DWC	Cost saving to Council	Dependant on private contractor service provided. Potential to decrease if private contractor does not offer recycling
C-C&I 5	CORE	Collection	C&I	C&I Kerbside collection - Provide C&I food waste kerbside collection service	18-36 months (depending on the complexity of the procurement process)	DWC	Significant cost TBC	High
C-C&I 6	CORE	Collection	C&I	Council collection of C&I waste - Review existing commercial collection services (contracted and in-house) and determine appropriate scope of Council involvement in the operation and management of commercial collection services	12 months	Not applicable	$100-200K (depending on scope)	NA
C-C&D2	CORE	Processing	C&D	Construction and operation of a C&D MRF in the LGA	2-3 years	GWC	$2-5 million CAPEX. Potentially a highly profitable venture that the private sector would provide	High

No	Compliant with Regulatory requirements	Technology Options: Proven in Australia Proven Internationally Not Proven	Benefits	Opportunities	Risks	Challenges	Traffic light
F2	Yes	NA	Minimal change Easy to implement	To raise waste charges to deliver new initiatives	Rate payer push back against increased fees and charges. Potential for perception that fees are increasing without an commensurate increase in services	Communicating to the Palerang region residents why they pay a General Waste Charge but other QPRC residents do not	
F3	Yes	NA	Clear linking of the fee structure to services	To raise waste charges to deliver new initiatives	Rate payer push back against increased fees and charges. Potential for perception that fees are increasing without a commensurate increase in services	Communicating to the non-Palerang region residents why they must now pay a General Waste Charge	
F4	Yes	NA	Reduced waste by participating businesses Potential improvements in efficiency by participating businesses	To develop new innovative waste programs for QPRC businesses To market sustainability credentials of QPRC businesses	Business group push back against new fees and charges Low participation in voluntary business waste reduction programs	Developing and rolling out new business programs	
F5	Yes	NA	Provides an option for residents to drop off waste at Council facilities for appropriate disposal - therefore may reduce illegal dumping	To encourage the reduction in waste generated by residents by setting fees based on weight and/or volume of waste disposed of at Council facilities	None identified	Equity of services to residents	
F6	Yes - mulch product would be required to meet NSW EPA Orders and Exemptions requirements	Yes	Community engagement in resource recovery process Clear linkages between Council investment and return of product back to the community	To operate a GO facility which is profitable to Council by sale of product to industry or can be used for Council operations reducing Council landscaping costs	Regulatory compliance with NSW Orders and Exemptions required for product to be applied to land.	Regulatory compliance with NSW Orders and Exemptions required for product to be applied to land.	
CON2	Yes	Proven in Australia	Keeps jobs and profits in the region. Greater control and flexibility to change services going forward	Purchase trucks with weigh cells to capture more information or support other programs.	Procurement risks. Less opportunity to outsource operational risk to the private contractor.	Budget approval - with large upfront capital cost	
CON3	Yes	Proven in Australia	Reduced staff and administration burden for QPRC Greater certainty over long term costs	Specify trucks with weigh cells to capture more information or support other programs	Procurement risk (complex contract)	Redundancies from existing Palerang truck drivers	
CON4	Yes	NA	Gives greater information which to base a commercial decision on	To deliver better services at lower costs	Partial data makes rigorous analysis difficult	getting accurate and honest feedback data from all stakeholders	
CON5	Yes	NA	Reduced costs of procurement, better responses from industry, economies of scale in projects, diversity of views on teams should give more rigorous outcomes	To look for synergies and efficiencies with other Councils in CRJO Provide scale for making feasibility of projects favourable	Shared project risks and timeframes	Getting buy in from all parties and management structures to make join procurement processes work effectively	
CON6	Yes	NA	Potential to reduce the cost of procurement and to make it easier for industry to respond.	To build momentum and consensus on joint Procurement	This may become a time wasting exercise, especially if it doesn't lead to joint procurement activities	Getting the right team including high level buy in from member Councils	
MSWC3	Yes	Proven in Australia	Less waste to landfill More consistent service across QPRC	Establish a new waste processing facility that can also take biosolids an ACT FOGO waste in the future	Increased contamination of the third bin material. Odour (esp. with fortnightly collection)	Educating community to participate and use the system effectively	
MSWC4	Yes	Proven in Australia	Greater convenience for the households receiving the service	Introduce as part of QPRC taking over the provision of waste collection services in house. Use small low-cost trucks for these routes	Large garbage truck damaging minor roads	Providing these services cost effectively	
MSWC5	Yes	Implemented in Australia	Price signal to those who generate less waste Educational because people with large bins see others are getting by with small ones		Requires administrative controls to implement appropriate bins and associated fees Residents generate more waste than they are able to dispose of in 80L bin	Offering this service to Former QBN (J.J.Richards) and former Palerang residents based on available service capabilities Applying the same fee reduction to both former QBN and Palerang residents	
MSWC6	Yes	Implemented in Australia	Reduced contamination of bins	Use positive rewards not just negative messages	Legal obligation to provide garbage services (making it hard to revoke service)	enforcement	
MSWD2	TBC - regulatory approval would need to be sought from NSW EPA	Proven in Australia	Less cost to rate payers. Greater capture of CH4 capture from QPRC waste	To negotiate better gate fee for QPRC waste to Mugga Lane by threatening to take the waste to Woodlawn	NSW EPA does not grant approval Damage to QPRC roads from trucks	Additional truck movements for Former QBN waste	
MSWD3	Yes. Regulatory approval from ACT Planning would be required if Fyshwick rail head was used.	Proven in Australia	Less cost to rate payers. Lower GHG emission profile. No extra truck movements		ACT Planning does not grant approval Community backlash against Fyshwick site		
MSWD4	Yes. Note MBT's are currently discussions with NSW EPA regarding the use of the MBT compost in mine-site rehabilitation	Proven in Australia	Resource recovery. Lower GHG emissions. Contribute to the rehabilitation of Woodlawn		EPA does not allow MBT compost to be used in mine site rehabilitation. Reducing resource recovery and increasing costs	Justifying the expense to ratepayers and councillors in the absence of a landfill levy	
MSWD5	Yes. Note MBT's are currently discussions with NSW EPA regarding the use of the MBT compost in mine-site rehabilitation	Proven in Australia	Resource recovery. Lower GHG emissions. Contribute to the rehabilitation of Woodlawn. No additional truck movements		EPA does not allow MBT compost to be used in mine site rehabilitation. Reducing resource recovery and increasing costs	Justifying the expense to ratepayers and councillors in the absence of a landfill levy	
MSWD6	Yes	Proven in Australia	Single contract for QPRC to manage	To negotiate better gate fee for QPRC waste to Mugga Lane as part of this arrangement	increased truck movements and distance to get waste to Mugga Lane	Justifying the expense to ratepayers and councillors in the absence of any benefits	
FAC7	Yes	Proven in Australia	Greater investment and jobs in local region. Better recycling in region (rather than exporting recyclables)	Establish a profitable business Get better C&I recycling outcomes by integrating business recycling initiative (including waste collection services) with this facility	Design, construction and operation of MRF has technical and process risks Owner exposes QPRC to financial and market risks	This initiative requires QPRC to acquire new skill sets in procurement and business management	
FAC8	TBC - regulatory approval would need to be sought from NSW DPE and EPA	Proven Internationally	Local investment and job creation. Very high rate of resource recovery.	To process ACT and CRJO waste. To establish at Woodlawn and rail freight QPRC and ACT waste to the facility	Community resistances Regulatory approvals	Establishing a viable business case for council	
FAC9	Yes	Proven in Australia	Better RR and HSE outcomes at new site Jobs and investment in the region	To provide services to ACT Produce high value (bagged) potting mixes install small-scale (<1MW) thermal EfW facility to processes larger woody waste &/or reject stream	Odour, dust, noise issues if poorly located, designed or managed	Finding the right site.	
FAC10	Yes for the right site - regulatory approval would need to be sought from NSW EPA	Proven in Australia	Better RR and HSE outcomes at new site Jobs and investment in the region	To provide services to ACT	Odour, dust, noise issues if poorly located, designed or managed	Finding the right site.	
FAC11	Yes for the right site - regulatory approval would need to be sought from NSW EPA	Proven in Australia	As above. Reduce environmental risk and outcomes associated with current biosolids management practices	Reduce odour profile of Queanbeyan's current WWTP. Eliminate biosolids stockpiles Include bioenergy generation (biological and/or thermal)	Odour, dust, noise issues if poorly located, designed or managed	Finding the right site.	
FAC12	as above	Proven in Australia	as above. Significantly more economic benefits associated with scale	As above	Community resistance to truck movements from ACT	Gaining support of the ACT Government and community	
FAC13	as above	Proven in Australia (but with a mixed track record)	as above with greater investment and more high skilled jobs. Generation of renewable energy	The production of renewable transport fuels (biomethane) Receiving wet and dry commercial wastes for processing	Higher technical complexity than composting	As above. Large, complex project to procure and manage	
FAC14	Yes	dirty MRFs proven in Australia (with mixed results)					
FAC15	Yes- EPA approvals dependent	No known case studies in Aust or overseas	Simplicity for education and operation		Regulatory and community push back against moving away from the well established kerbside collection of recyclables Not inline with the waste heirarchy	Bringing the community and regulators along Recovering quality product for the market	
FAC16	Yes	Proven in Australia	Capture of CDS containers increase recycling Does not require behavioural change	To recover CDS rebate	achieving scale of waste inputs to have a viable facility	May require regulatory approval depending on the scale of the facility	
FAC17	Yes	Proven in Australia	Better RR and HSE outcomes at new site Jobs and investment in the region	To provide services to ACT Produce high value (bagged) potting mixes install small-scale (<1MW) thermal EfW facility to processes larger woody waste &/or reject stream	Odour, dust, noise issues if poorly located, designed or managed	Finding the right site.	
FAC18	Yes for the right site - regulatory approval would need to be sought from NSW EPA	Proven in Australia	Better RR and HSE outcomes at new site Jobs and investment in the region	To provide services to ACT	Odour, dust, noise issues if poorly located, designed or managed	Finding the right site.	
FAC19	Yes for the right site - regulatory approval would need to be sought from NSW EPA	Proven in Australia	Better RR and HSE outcomes at new site Jobs and investment in the region	To provide services to ACT	Odour, dust, noise issues if poorly located, designed or managed	Finding the right site.	
FAC20	Yes	NA	Sale of land can fund other works	Use this site for other Council activities	unknown land contamination	Identifying alternative site prior to closing Lorn Road	
FAC21	Yes	NA	Waste facilities provided can be structure around increase resource recovery	Look at technology options which reduce collection frequency (compaction containers)	Improper use of infrastructure Need to man facilities	Education of infrastructure changes	
FAC22	Yes	Proven in Australia	Increase service provision to rural communities through more advance waste collection service technologies in bin compounds	RFID technology mobile compaction containers reduce illegal dumping	Minor	Education of infrastructure changes	
C-C&I 2	Need to check compliance with Competition regulations i.e. Does QPRC have a competitive advantage over private contractors who may be interested in this contract?..Is it allowed under NSW Local Government Act	Proven in Australia	More control of waste services. Better value for money over the medium term	To integrate QPRC waste services with business recycling programs to achieve on-site sorting of waste	Exposure to full price risk e.g. increasing cost of fuel, unforeseen maintenance costs for trucks etc.	Compliance with LGA Act / Competition policy	
C-C&I 3	Yes	Proven in Australia	Economies of scale should lead to benefits for QPRC businesses. Project management and risks are largely outsourced	as above	Less control over service provision may lead to less recycling and 1 bin "solutions" Additional trucks on the road	less influence of Council on C&I	
C-C&I 4	Yes	Proven in Australia	Reduced costs to Govt.	Market competition may achieve innovation solutions and cost reductions. Govt could seek to support innovative models (awards, subsidies etc.)	business recycling rates will fall		
C-C&I 5	Yes	Proven in Australia	Diversion of organics from landfill and associated GHG emissions Remaining waste become much easier to sort for recycling e.g. paper and cardboard not contaminated	Introduce as part of wider business recycling program	organics collected are contaminated and difficult to process in higher value composts	effective education and enforcement programs	
C-C&I 6	Yes	NA	Gives greater information which to base a commercial decision on	To deliver better services at lower costs To capture larger volume of feedstock for council operated facilities (if constructed)	Partial data makes rigorous analysis difficult	Getting accurate and honest feedback data from all stakeholders	
C-C&D2	Yes	Proven in Australia	Local investment and job creation. Very high rate of resource recovery for beneficial reuse locally.	- Locate the facility near Googong and this one of the areas with the most significant growth predicted. This would also greatly reduce truck movements along old Cooma road	Poor operators can stockpile waste and the close up shop - leaving the Government to clean up the site	Finding the right operator.	

No	Notes on traffic light evaluation	Link to technology	Comment on Waste Strategy	Comment on Financial Modelling	Include in strategy	Separately costed	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	MUTUALLY EXCLUSIVE OPTIONS	ALL OPTIONS
F2	This option will not address legacy charges and perceptions of inequality between former Palerang residents and all other QPRC residents			Not modelled within this Strategy	No	No	NO	NO	NO	NO	NO	F3	NO
F3	This option provides a framework for consistent waste fees and charges across the QPRC which is clearly linked to services				YES	YES	YES	YES	YES	YES	YES	F2	YES
F4	This would be a major initiative. However, C&I contributes a significant volume of waste to landfill and achieving improvements in this area is often easier than for MSW with a smaller stakeholder group				YES	YES	YES	YES	YES	YES	YES		YES
F5	Braidwood landfill will be closing therefore this change in offering is required				YES	YES	YES	YES	YES	YES	YES		YES
F6	Will be appropriate to implement if Council constructs and operates a GO or FOGO processing facility			Would be looked at for the chosen final option for the Waste Strategy	YES	YES	NO	NO	YES	NO	YES		NO
CON2	This would be a major initiative. However, it would likely reduce QPRC costs over the medium term and offer benefits including keeping rate payers money within the region	-	Qualitative discussion included on where Council may look to change collection contract arrangements - actioned by business case identified below	Not modelled within this Strategy	No	No	NO	NO	NO	NO	NO		NO
CON3		-	Qualitative discussion included on where Council may look to change collection contract arrangements - actioned by business case identified below	Not modelled within this Strategy	No	No	NO	NO	NO	NO	NO		NO
CON4	Low cost exercise to ensure significant decision (outsourcing or insourcing truck collection) is made with the best available information	-	Identify action in Strategy to complete a business case	To be modelled	YES	YES	YES	YES	YES	YES	YES		YES
CON5	CRJO have a mixed record of achieving this. For this to be successful there needs to be buy in at the highest levels of the CRJO member councils. Otherwise it is likely to add bureaucracy without improving outcomes	-	Qualitative discussion on QPRCs desire to work proactively with CRJO actioned through development of pro-forma discussed below	Not modelled within this Strategy	YES	No	NO	NO	NO	NO	NO		NO
CON6	This is a good place to start exploring support in CRJO member councils for joint procurement activities	-	Identify action in Strategy to complete a pro-forma	Not required to be modelled - developed as part of Council normal functions	YES	No	NO	NO	NO	NO	NO		NO
MSWC3	This is an expensive initiative that requires sustained education efforts to achieve a good outcome i.e. high food waste capture and low contamination rates		-	Could be included as an alternative option or under a scenario	YES	YES	NO	NO	YES	NO	YES		NO
MSWC4	This is not a complex initiative, but it is relatively expensive. Costs and damage to roads can be reduced by using smaller trucks.		-	Not modelled within this Strategy	No	NO	NO	NO	NO	NO	NO		NO
MSWC5	Small change required but provides a positive price signal to the community to reduce waste generated		Include as action in Waste Strategy to offer 80 L to residents on an opt-in basis.	will not be modelled	YES	NO	NO	NO	NO	NO	NO		NO
MSWC6	Assess how much of a problem contamination is (via audits etc.) prior to undertaking action to reduce this		Discuss qualitatively within the Strategy as an action for Council to develop policy and enforce in short term.	Can be include in a combined fee for educational / resourcing fund	YES	YES	YES	YES	YES	NO	YES		NO
MSWD2	Potential to save money for an equivalent or better environmental outcome (subject to regulatory approval)		Alternative option that can be included as option investigated	model as option see what outcome results in	YES	YES	YES	YES	YES	YES	YES	MSWD3, MSWD4, MSWD5, MSWD6	YES
MSWD3	Cost for rail infrastructure would outweigh benefits give short transport distance (typically feasible >200km transport distance)		-	Will not be modelled	No	No	NO	NO	NO	NO	NO	MSWD2, MSWD4, MSWD5, MSWD6	NO
MSWD4	Costs and current regulatory risks		-	Will not be modelled	No	No	NO	NO	NO	NO	NO	MSWD2, MSWD3, MSWD5, MSWD6	NO
MSWD5	Costs and current regulatory risks		-	Will not be modelled	No	No	NO	NO	NO	NO	NO	MSWD2, MSWD3, MSWD4, MSWD6	NO
MSWD6	High costs for no benefit		-	Will not be modelled	No	No	NO	NO	NO	NO	NO	MSWD2, MSWD3, MSWD4, MSWD5	NO
FAC7	This initiative could achieve excellent triple bottom line outcomes for QPRC but it is a relatively complex undertaking with a significant risk profile		Discussed based on choosing it as an option for modelling	Could be included as an alternative option under a scenario	YES	YES	NO	NO	NO	NO	YES		NO
FAC8	Difficult to establish a viable business case at QPRC's scale especially when low cost landfill is available at Woodlawn.		-	Will not be modelled	No	No	NO	NO	NO	NO	NO		NO
FAC9	Current sites are sub-optimal.				YES	YES	NO	NO	YES	NO	YES	FAC10, FAC11, FAC12, FAC13, FAC17, FAC18, FAC19	NO
FAC10	Current sites are sub-optimal.				YES	YES	NO	NO	YES	NO	YES	FAC9, FAC11, FAC12, FAC13, FAC17, FAC18, FAC19	NO
FAC11	Further investigation required			Will not be modelled	No	No	NO	NO	NO	NO	NO	FAC9, FAC10, FAC12, FAC13, FAC17, FAC18, FAC19	NO
FAC12	Further investigation required Consultation with ACT Govt and community			Will not be modelled	No	No	NO	NO	NO	NO	NO	FAC9, FAC10, FAC11, FAC13, FAC17, FAC18, FAC19	NO
FAC13	Further investigation required including full business case			Will not be modelled	No	No	NO	NO	NO	NO	NO	FAC9, FAC10, FAC11, FAC12, FAC17, FAC18, FAC19	NO
FAC14	A dirty MRF would increase resource recovery outcome, however, this would not be cheap and the the product from dirty MRFs are of poor quality and no viable market.			Will not be modelled	No	No	NO	NO	NO	NO	NO		NO
FAC15	A dirty MRF for a single bin may reduce community support for other recycling activities and is not considered best practice in line with the waste hierarhcy . Market for lower quality products recovered at MRF would need to be identified to be viable.			Will not be modelled	No	No	NO	NO	NO	NO	NO		NO
FAC16	Impact of public and events waste probably not significant enough to operate a standalone Dirty MRF. Other options such as CDS collection points and recycling receptacles at public events may be more effective when considering the cost		-	Will not be modelled	No	No	NO	NO	NO	NO	NO		NO
FAC17	Similar to option in Line 30 - to determine with Brendan if both are required or can be rolled into one			to confirm with Brendan	YES	YES	NO	NO	YES	NO	YES	FAC9, FAC10, FAC11, FAC12, FAC13, FAC18, FAC19	NO
FAC18	Similar to option in Line 31 - to determine with Brendan if both are required or can be rolled into one			to confirm with Brendan	YES	YES	NO	NO	YES	NO	YES	FAC9, FAC10, FAC11, FAC12, FAC13, FAC17, FAC19	NO
FAC19	Similar to option in Line 27 - to determine with Brendan if both are required or can be rolled into one			to confirm with Brendan	YES	YES	NO	NO	YES	NO	YES	FAC9, FAC10, FAC11, FAC12, FAC13, FAC17, FAC18	NO
FAC20	Med-long term cost could be included in option to construct a new facility. Does not require a stand a lone option unless the option to close Lorn Road and not replace it.		-	Would be included as a cost in construction of a new facility at alternative location	YES	YES	NO	NO	YES	NO	YES		NO
FAC21					YES	YES	YES	YES	YES	YES	YES		YES
FAC22					YES	YES	YES	YES	YES	YES	YES	FAC22, OFI13	YES
C-C&I 2	Potential cost savings over the medium term. Potential to support programs with triple bottom line benefits. Need to check compliance issues before shortlisting as an option. Could be considered during review of business case for in-house versus private contractor servcing identified above.		Can be discussed as an option for Council to provide C&I services to whole LGA in Medium to Long Term	Will not be modelled	No	No	NO	NO	NO	NO	NO		NO
C-C&I 3	Need to evaluate the different cost structure between QPRC provision (as noted above) and private sector provision of waste collection services but attentional trucks on the road and reduced influence over recycling have removed this option from further analysis. Also a private contractor can negotiate direclty with C&I businessess and collect waste currently		-	Will not be modelled	No	No	NO	NO	NO	NO	NO		NO
C-C&I 4	Likely to lead to higher costs to business than the options outlined above and reduce recycling rates		-	Will not be modelled	No	No	NO	NO	NO	NO	NO		NO
C-C&I 5	Shouldn't be progressed until an appropriate receival facility has been established (e.g. FOGO composting facility). Establish		Could be considered in the Waste Strategy as a Medium-Long Term opportunity as available additional feedstock for an organics processing facility?	-	No	No	NO	NO	NO	NO	NO		NO
C-C&I 6	Low cost exercise to ensure significant decision (outsourcing or insourcing truck collection) is made with the best available information	-	Identify action in Strategy to complete a business case	Will not be modelled	YES	No	NO	NO	NO	NO	NO		NO
C-C&D2	Excellent opportunity to establish a business than achieve triple bottom line benefits for the QPRC community				YES	YES	NO	NO	NO	YES	YES		NO

E4	EDUCATION / RESOURCES	Avoidance	ALL	Prepare and implement a Community Waste Education Strategy covering schools, general public and business/industry and fund initiatives identified in the strategy for example: - Love Food, Hate Waste program - Bin-trim and other small business food waste reduction programs - Home composting subsidy and education programs - General community and school targeted education - Waste audit rewards (vouchers for not putting bin out or half full bins) incentivise reduction in waste generation	1-2 years	Both charges	$50 - $100 K (preparation) - implementation would depending on the strategy agreed	serious, depending on the program. School programs tend to help achieve a community recycling culture - but there is little evidence to show an increase in funding increases recycling rates. Business recycling programs have been shown to greatly increase recycling (20-90% measured per site).	Yes	Proven in Australia	Upstream sorting and recycling delivers increased recycling at decreased (negative) costs. Effective education programs change business, school or household habits practices and behaviours to achieve this.	Integrating education programs with new services (e.g. FOGO, public bins for CDS, an organics waste collection for C&I waste)	Many education programs are ineffective.	Getting programs to cut through. Getting culture to change.		Increased education will be necessary to support an number of new initiatives outlined in this options paper				Can include combined cost for educational activities to be undertaken by Council each year (annual cost allocated)	YES	YES	YES	YES	YES	YES	YES	YES
E5	EDUCATION / RESOURCES	Avoidance	ALL	Hire a dedicated waste officer to implement education and engagement program	6-9 months (budget cycle constraints)	Both charges	$70-90K/year	Moderate	Yes		see above	see above	see above	Finding the right person		see above				Can include combined cost for educational activities to be undertaken by Council each year (annual cost allocated)	YES	YES	YES	YES	YES	YES	YES	YES
E6	EDUCATION / RESOURCES	Avoidance	ALL	Implement an education and routine inspection program to reduce contamination rates in kerbside collection systems	6 months	GWC	$70-90K/year (assuming 1 staff or 2 staff 1/2 time on this project)	moderate	Yes		reduced contamination improved the quality of recycling and reduced the cost of the MRF. While ReGroup owns the MRF under contract to the ACT Govt - any benefits will flow to these parties	Negotiated a reduced gate fee with the MRF if the education program yields demonstrably improved recyclables	people fined for contaminating recycling may stop trying to recycling and put all waste in the residual bin	Getting the message right to change behaviours for the better						Can include combined cost for educational activities to be undertaken by Council each year (annual cost allocated)	YES	YES	YES	YES	YES	NO	YES	NO
E7	EDUCATION / RESOURCES	Collection, Processing	ALL	Hire additional staff to undertake litter collection activities around the LGA and coverage for illness/leave in collection and facilities areas	6 months	GWC	$60-90K per staff	Low to moderate	YES- but significant OHS issues		Better litter management	Train staff for multiple rolls - including issues fines for littering and dumping	OHS			AECOM community consultation found litter to be a issue of concern for QPRC residence				Can include combined cost for Litter activities to be undertaken by Council each year (annual cost allocated)	YES	YES	YES	NO	NO	NO	YES	NO
E8	EDUCATION/ RESOURCES	Avoidance	ALL	Develop a multi-unit dwelling/rental property education program to reduce illegal dumping and misuse of bins	12-24 months	Both charges	$2K-$40K (depending on scope and the capacity of existing staff)	Low to moderate	Yes		Better recycling from MUDs, reduced costs and increased amenity associated with decline in dumping	Incorporate into a more ambitious program (e.g. weight based charging)	Education efforts don't lead to behaviour change							Can include combined cost for educational activities to be undertaken by Council each year (annual cost allocated)	YES	No	NO	NO	NO	ND	NO	NO
E9	EDUCATION/ RESOURCES	Avoidance	All	Provide training opportunities to internal Council stakeholders on waste management at events and facilities	12-24 months	Both charges	$10K - $15K per year	Low	Yes		Better-educated and engaged stakeholders and staff.	Opportunities are likely to grow organically from training events	No return on investment. Staff poached by other organisations			Networking and continuous education at lower cost events tends to be an easy way to motivate staff and find innovative- connected solutions				Can include combined cost for educational activities to be undertaken by Council each year (annual cost allocated)	YES	No	NO	NO	NO	NO	NO	NO
E10	EDUCATION/ RESOURCES	Avoidance	ALL	Expand the ACTSmart or BinTrim business waste education programs to cover the entire LGA	6-12 months	GWC	Time required for grants from NSW EPA	20%-50%	Yes		Potential to increase resource recovery from the C&I sector	Lack of QPRC control over ACT program (it may be defunded or changed to meet ACT requirements that don't translate to QPRC)	"Buy" the rights to the program and run a tailored version of it directly out of QPRC	Agreeing to appropriate terms with Actsmart		Worth progressing in appropriate terms can be agreed with Actsmart				Can include a combined cost for monitoring and improving C&I waste management / recycling at annual cost?	YES	YES	NO	YES	YES	NO	YES	NO
E11	EDUCATION/ RESOURCES	Avoidance	ALL	Undertake waste audits at QPRC waste facilities to identify waste generation and composition of self-haul materials	3 - 12 months	GWC	$15K-$35K	NA	Yes		QPRC needs to measure to manage and to develop evidence based policies	Establish a long term contract for regular audits	Poorly designed audit scope and timing will give poor information	Getting the right scope and right consultants		You need to measure to manage, current data is weak.				Can include a combined cost for monitoring and improving C&I waste management / recycling at council facilities as annual cost?	YES	YES	YES	YES	YES	YES	YES	YES
E12	EDUCATION/ RESOURCES	Avoidance	ALL	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	3 - 22 months	GWC	$15K-$35K	NA	Yes		QPRC needs to measure to manage and to develop evidence based policies	Conduct with other waste audits (same contract)	Poorly designed audit scope and timing will give poor information	Getting the right scope and right consultants		You need to measure to manage, current data is weak.				Can include a combined cost for monitoring and improving C&I waste management / recycling at annual cost?	YES	YES	NO	NO	NO	NO	YES	NO
E13	EDUCATION/ RESOURCES	Avoidance	ALL	Design and implement an education facility at a new centralised waste facility	1 - 2 years	GWC	$30-$300,000	<5%	Yes		Better recycling by QPRC residence and associated reduced costs	Expand tours by community groups and schools	Education efforts don't lead to behaviour change	Designing and implementing a program that "cuts through" and generates change		If these decision is made to make major investment in new waste infrastructure, then an education room is a relatively low cost addition that helps with communicating key messages to the public					YES	YES	NO	NO	NO	NO	YES	NO
E14	EDUCATION/ RESOURCES	ALL	ALL	Design and implement a digital Waste App for the QPRC waste services available to the community	3-12 months	GWC	$50K to $100K plus ongoing maintenance of the app	<5%	Yes	Proven in Australia	Consolidated source of information for the community Ability to notify community of waste events, changes to services etc.	To engage the community	Low	To cover waste services which differ between former Council regions, urban versus rural etc. Maintaining the app with update information		May be considered in the medium to long term when services provided to former Queanbeyan and Palerang have been streamlined where possible in accordance with this Strategy		Consider as a medium to long term action within the Strategy		Can include general line items for education / community events costs (annual cost)	YES	YES	YES	YES	YES	YES	YES	YES
PUBLIC2	PUBLIC WASTE	Collection	Public waste	Roll-out of public recycling bins (MGBs) across the LGA	6 months	GWC	$200K per year	Moderate	Moderate	Proven in Australia	Less litter. Reinforcing recycling education messages via away from home recycling	Sort bins to recover CDS containers	Contamination. Recycling bins must be visibly collected and taken to recycling- or it contributes to common held views that the material in recycling bins isn't recycled	Servicing bins when full. Scheduled collections do not always anticipate rate of filling each bin. Full bins can lead to increased litter if not collected enough. Equally bins may not be full and collection would be undertaken		Good initiative but with the instruction of the CDS would be better directed towards supporting CDS collection			-	Will not be modelled	No	No	NO	NO	NO	NO	NO	NO
PUBLIC3	PUBLIC WASTE	Collection	Public waste	Roll-out of public bins (smart bins/compaction bins (solar)) across the LGA	6-12 months	GWC	TBC	Low	Yes	Proven in Australia (but with a mixed track record)	Less frequent collection (saves costs and emissions associated with collection). High profile bins encourage use and discourage littering	To conduct a trial on where these bins may be best used	Damage and vandalism. Businesses dumping commercial waste in them (generally only in commercial areas)	With CDS may be best not to have compaction of recyclables		Could be worth conducting a trial of waste bins in parallel to CDS collection points to collect the recyclables	https://www.solarbins.com.au/	Can be included as qualitative option in 30 plan as diensity of LGA increases.			No	No	NO	NO	NO	NO	NO	NO
PUBLIC4	PUBLIC WASTE	Collection	Public waste	Roll-out of public recycling bins (CDS collection points) across the LGA	18-24 months	GWC	Low to negative cost. CDS fees are likely to pay for it	Moderate	Yes	Proven in Australia	Recovery of high value sorted CDS containers. Extends CDS education, behaviours and awareness	Use CDS revenue to fund litter initiatives to clean up public places.	vandalism, potentially to steel the containers	Educating community to participate and use the system effectively		Low cost (positive revenue?) roll out of public place recycling and CDS education campaign				Cost of roll out could be included- will need to determine number of collection points across LGA	YES	No	NO	NO	NO	NO	NO	NO
PUBLIC5	PUBLIC WASTE	Collection, Processing	Public waste	Bio digester units in public spaces to power lights etc.	2-4 years	GWC	$10K to $20K per unit	Low	TBC - regulatory approval may be needed from NSW EPA		Education around sustainable organic waste management		Technology failure, vandalism, misuse (e.g. putting dog poo in while still in its plastic bag)	Educating community to participate and use the system effectively		May be considered as a medium to long term option but probably not as part of this Waste Strategy		May be option for future consideration		Will not be modelled	No	No	NO	NO	NO	NO	NO	NO
PUBLIC6	PUBLIC WASTE	Collection	Recycling, Organics	QPRC provide recycling and organics bins to all council and privately-run events at no cost to the organiser. All costs covered by the General Waste Charge	6-18 months	GWC	$50K per year	Low	Yes		Better recycling and less litter from public events	Education opportunity	Recovered material is contaminated and has to go to landfill	Educating people to use the bins properly		Relatively low cost education activity that may also lead to resource recovery.				Can include an annual fee for public events management	YES	YES	NO	NO	NO	NO	NO	NO
PUBLIC7	PUBLIC WASTE	Collection	Recycling, Organics	QPRC provide recycling and organics bins to all council and privately-run events at no cost to the organiser. All costs covered by Council's Donation Policy and funded by General Fund	3 months	Rates	$50K per year	Low	Yes		Better recycling and less litter from public events	Education opportunity	Recovered material is contaminated and has to go to landfill	Educating people to use the bins properly		Relatively low cost education activity that may also lead to resource recovery.				Can include an annual fee for public events management	YES	YES	NO	NO	NO	NO	PUBLIC6	NO
BULKY2	PROBLEM WASTE	Collection	Bulky waste	Deliver bulky waste collections to urban areas (Bungendore, Queanbeyan, Braidwood, Captains Flat, Googong township) on the same arrangements as exist for the current bulky waste collections – 1 or 2 per property per year AND Provide a voucher for other areas of LGA not serviced by the collections – 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	18-24 months	GWC	$100K per year	negative to low - depending on how collected bulky waste is recovered or disposed	Yes	Proven in Australia	convenience, especially beneficial for disadvantaged and vulnerable members of the community Opportunity for people to get low cost furniture etc.	To recover and restore material for sale into 2nd hand markets locally or outside the QPRC	Dumping (of hazardous materials etc.). Public injury or liabilities associated. Encourages a disposable society.	Running a cost-effective bulky waste collection systems with reasonable resource recovery rates is very difficult and quite expensive						Can include in the model as an option	No	No	NO	NO	NO	NO	BULKY2A, BULKY4A, BULKY3, BULKY4	NO
BULKY2A	PROBLEM WASTE	Collection	Bulky waste	Deliver bulky waste collections to existing kerbside serviced areas only (Queanbeyan and Googong Township) – 1 or 2 per property per year AND Provide a voucher for all other areas of LGA not serviced by the collections – 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																	No	No	NO	NO	NO	NO	BULKY2, BULKY4A BULKY3, BULKY4	NO
BULKY3	PROBLEM WASTE	Collection	Bulky waste	Roll-out bulky waste collection to urban and rural areas of the former Palerang Council (call-out or periodically)	18-24 months	GWC	$250K per year	negative to low - depending on how collected bulky waste is recovered or disposed	Yes	Proven in Australia	convenience, especially beneficial for disadvantaged and vulnerable members of the community Opportunity for people to get low cost furniture etc.	To recover and restore material for sale into 2nd hand markets locally or outside the QPRC	Dumping (of hazardous materials etc.). Public injury or liabilities associated. Encourages a disposable society.	Transport and cost over long distances Running a cost-effective bulky waste collection systems with reasonable resource recovery rates is very difficult and quite expensive		Transport distances and costs associated would make provision of a bulky waste collection service to all residents with QPRC prohibitive.				Will not be modelled	No	No	NO	NO	NO	NO	BULKY2, BULKY4A, BULKY2A, BULKY4	NO
BULKY4	PROBLEM WASTE	Collection	Bulky waste	Cease provision of bulky waste collection service to LGA. Provide a voucher system to pensioners/disability/low income to have discounted collection from their household. All remaining properties have access to existing facilities and pay applicable gate fees All areas pay General Waste Charge	6-18 months (already service provider in ACT to model this on. But use a competitive process)	Not applicable	$30-$200K (dependant on volume of waste requiring disposal)	yes - greater opportunity to divert materials to 2nd hand shops	Yes (workers need working with vulnerable people accreditation)	NA	More control of the flow of material collected, avoids dumping and hazardous waste contamination.	Initiates to recover and restore bulky waste Allows more target free service (to the elderly or disabled etc.)	Potential for dumping of bulky waste	Finding the right service provider and distributon network for 2nd hand materials						Can include in the model as an option	YES	YES	NO	NO	NO	NO	BULKY2, BULKY4A BULKY3, BULKY2A	NO
BULKY4A	PROBLEM WASTE	Collection	Bulky waste	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															WSWG decided to proceed to BULKY4A		YES	YES	NO	NO	NO	NO	BULKY2, BULKY4, BULKY3, BULKY2A	NO
PW2	PROBLEM WASTE	Collection	Litter	Improvements to and expansion of Council's litter management programs	1-2 years (budget cycle)	GWC	$400K - $600K	NA - reduces littering	Yes	NA	Improve litter management processes and associated WHS issues Reduce littering Remove littering in a more timely fashion									Can include in the model as a annual fee for Litter Improvement - can do low medium and high cost?	YES	YES	YES	YES	NO	NO	YES	NO
PW3	PROBLEM WASTE	Collection	Litter	In consultation with the community, develop and implement a Roadside Litter Collection Program	6 - 12 months	GWC	$100K - $300	NA - reduces littering	Yes	NA								include in waste strategy as general a		Not modelled	YES	No	NO	NO	NO	NO	NO	NO
PW4	PROBLEM WASTE	Reuse	Textiles	Identify appropriate sites in Bungendore and Braidwood and invite NACRO accredited charities to provide appropriate clothing bins in town centres	6 - 12 months	GWC	Low cost/ administrative	<5%	YES	Demonstrated in Australia and NZ	Triple bottom line benefits particularly accruing to the most disadvantaged elements of society	Develop export from QPRC to other lower socio-economic communities (e.g. Wagga Wagga)	Dumping around the charity bins			Triple bottom line benefits and relatively low cost make this a worthwhile initiative.		Include in Waste Strategy as an option to investigate and implement		Not required to be modelled would be included as part of Waste Officer role / tasks	YES	No	NO	NO	NO	NO	NO	NO
PW5	PROBLEM WASTE	Avoidance	Illegal Dumping	Recruit an additional illegal dumping officer to monitor, investigate and prosecute illegal dumping activities	6 - 12 months	GWC	$100K per year	NA - reduces littering	Yes	NA	Enforce penalties for litter and as a result the LGA may experience less instances of illegal dumping	Use dob in a tosser program (or similar) to get the public to help		The size of the LGA is significant and enforcing and identify offenders is difficult						Can include in the model as a annual fee for Litter Improvement - can do low medium and high cost?	YES	YES	YES	YES	NO	ND	YES	NO
OP1	OPPORTUNITIES FOR IMPROVEMENT		CDS	Council program to collect CDS from commercial / retail - profits go to charity	6-18 months	GWC	Low to negative cost. CDS fees are likely to pay for it.	Moderate	Yes	NA	Increased recycling for hotels etc. into high value recycling markets	Education campaign about CDS in pubs and hotels	Businesses will only recycle beverages and ignore other opportunities	Educating community to participate and use the system effectively		Low cost initiative to improve business recycling and educate the community about CDS and sorting benefits				Can include as a standalone option	No	No	NO	NO	NO	NO	NO	NO
OP2	OPPORTUNITIES FOR IMPROVEMENT		Recyclables	LGA plastic bag / plastic straws, beverage containers ban, re-fill stations for water bottles	6-18 months	GWC	Low cost to council assuming modest regulatory enforcement effort	Low	Probably - hasn't been tested in court (limits to Local Council powers)		Litter reduction. Educational benefit. Modest reduction in waste generation	Education campaign	Community and/or business backlash against "tokenistic nanny state" to paraphrase ACT Senator Zed Seselja	Bringing the community along		These initiatives need wide community support to be rolled out effectively. Consultation and champions are required.				Not modelled separately - Can be options within the education / resources budget where the activities selected as flexible within the budget	YES	No	NO	NO	NO	NO	NO	NO
OP13	OPPORTUNITIES FOR IMPROVEMENT		Organics	Engage with Food Rescue organisations (operating in ACT) to roll-out across LGA	6-18 months	GWC	Low cost	Low to moderate	Yes (similar schemes operate in NSW)		Triple bottom line benefits particularly accruing to the most disadvantaged elements of society	Work with local charities to establish better "Soup kitchens" and food parcel services in QPRC - follow ACT lead	Business are not encouraged to reduce waste and can loose focus on the value of this	Educating businesses to properly sort and store the food for collection (e.g. freeze the most first)		Excellent initiative, with wide community support that reduces waste and helps those most in need in our community	https://www.ozharvest.org/canberra/			Not modelled separately - Can be options within the education / resources budget where the activities selected as flexible within the budget	YES	No	NO	NO	NO	NO	NO	NO
OP14	OPPORTUNITIES FOR IMPROVEMENT		ALL	Review Council procurement policies and procedures to look at reuse of recycled products in Council activities	1-2 years	Not applicable	$20K - $50K (resources to investigate and implement changes)	Low to high (e.g. if all roads were built using the maximum amount of recycled material possible)	Yes (but standards for asphalt, concrete, road base etc. still have to be followed and some of these are still evolving e.g. in draft form)	Demonstrated in Australia.	Creates markets for products that otherwise may go to landfill. Makes wider recycling initiatives more viable	To integrate QPRC MRF and C&D waste sorting facility with purchasing practices to ensure the entire process is cost effective / cost negative for QPRC over the medium term	Compromising the quality of roads or other activities by trying to inappropriately use recycled materials	Upskilling the engineering teams to new standards and practices required to effectively use recycled materials		Potential to achieve triple bottom line benefits and significant amounts of resource recovery in cost-effective manner		Discussed qualitatively in Waste Strategy		Not modelled separately - but discussed qualitatively in Waste Strategy - would be undertaken as a task with the role of Waste Resource at Council	YES	No	NO	NO	NO	NO	NO	NO
OP15	OPPORTUNITIES FOR IMPROVEMENT		MSW	Conduct a trial of weight based billing of MSW bins to assess financial impacts, community acceptance, contamination rates and diversion rates	1 year	GWC	$100K - $200K	5% - 10%	Yes	Demonstrated Internationally	Provides a cost signal to residents to reduce waste generated Motivated people who are not motivated by education campaigns. Economically efficient price signal Provides data on waste / recycling generated, transported and managed by Council	Look at options for grants from State government	Community backlash	This would be a pioneering initiative for Australia that would require significant resources		This option could be considered as part of a review of the collection contracts for the Former LGAs but not costed / modelled as part of this waste strategy		Discussed as an option for further investigation when council review the collection service options (i.e. private contractor versus in-house)	Not modelled in this strategy	YES	No	NO	NO	NO	NO	NO	NO
OP16	OPPORTUNITIES FOR IMPROVEMENT		MSW	Introduce weight based billing of MSW	2-5 years	GWC	Not identified	low to fairly high - depending on prices, design and education approach	Yes	This approach has not been effectively applied in Australia	Reduces waste generation. Motivated people who are not motivated by education campaigns. Economically efficient price signal Provides data on waste / recycling generated, transported and managed by Council		Community backlash	This would be a pioneering initiative for Australia that would require significant resources		This would be a pioneering initiative for Australia that would require significant resources		Discussed as an option for further investigation when council review the collection service options (i.e. private contractor versus in-house)	Not modelled in this strategy	No	No	NO	NO	NO	NO	NO	NO
OP17	OPPORTUNITIES FOR IMPROVEMENT		C&D	Review Council requirements for C&D industry / developments e.g. update the LGA Development Control Plan for waste management	18-24 months	GWC	$50K-$100K	High	Probably - hasn't been tested in court (limits to Local Council powers)		On-site recycling leads to much higher resource recovery rates of higher value material than sending mixed waste to C&D MRFs. Avoids environmental issues associated with expanded polystyrene etc.	Introduce at one estate (e.g. Googong) in combination with a small, low cost C&D MRF capable of handling the semi sorted materials from the building sites. Reducing disposal costs for builders, traffic movements for residence and creating a profitable business that then supplied the builders and council with materials.	Builder resistance and non-compliance requiring large regulatory effort. Court challenge to legality	Brinning the community and builders along with the concept		Large benefits make it worth the risk		Discussed qualitatively in Waste Strategy	Not modelled separately - but discussed qualitatively in Waste Strategy - would be undertaken as a task with the role of Waste Resource at Council	YES	No	NO	NO	NO	NO	NO	NO
OP18	OPPORTUNITIES FOR IMPROVEMENT		Bulky Waste	Work with community groups (e.g. Salvos and Vinnies) to facilitate transfer bulky items for reuse	6-24 months	GWC	Low to negative cost	Low to moderate	YES	Demonstrated in Australia and NZ	Triple bottom line benefits particularly accruing to the most disadvantaged elements of society	Develop export from QPRC to other lower socio-economic communities (e.g. Wagga Wagga)	Low - but the "business" may fail	Finding the right team of people to make it work		Triple bottom line benefits and relatively low cost make this worth trying. However, it needs the right people, location and funding to be successful.		Include as qualitative discussion around options for Council actions	Not modelled in this strategy	YES	No	NO	NO	NO	NO	NO	NO
OP19	OPPORTUNITIES FOR IMPROVEMENT		Bulky Waste / Problem Waste	Men's Shed - work with existing opportunities to expand reuse market	6-24 months	GWC	Low to negative cost	Low to moderate	YES	Demonstrated in Australia and NZ	Triple bottom line benefits particularly accruing to the most disadvantaged elements of society	Develop export from QPRC to other lower socio-economic communities (e.g. Wagga Wagga)	Low - but the "business" may fail	Finding the right team of people to make it work		Triple bottom line benefits and relatively low cost make this worth trying. However, it needs the right people, location and funding to be successful.		Include as qualitative discussion around options for Council actions	Not modelled in this strategy	YES	No	NO	NO	NO	NO	NO	NO
OP10	OPPORTUNITIES FOR IMPROVEMENT		Tyres	Purchase a tyre shredder - to use shredded tyres in Council operations or more cost effective transport	6-18 months (budget dependant)	GWC	$350K-$500K	Low to moderate	Yes	Proven in Australia	Reduce stockpile and transport cost. Low cost drainage and bedding material for council with low OHS issues associated with use.	Explore wider markets beyond council use	Low (if the council agrees to use the material before the shredder is purchased) OHS issues with use of the shredder	Learning to use the new product		Need to evaluate costs and benefits of purchasing shredder including market for shredded tires					YES	YES	YES	NO	NO	YES	YES	NO
OP11	OPPORTUNITIES FOR IMPROVEMENT		Wood	Energy from Waste - Wood waste - small scale - pelletised	18-24 months	GWC	$1M - 2M	Moderate to high	Yes - but EPA permitting will take time	Proven in Australia (but with few examples), used extensively OS	Reduce timber stockpiles and fire risk. Improved recycling from the C&D sector.	Use the pellets and boiler for Low cost heating for QPRC buildings (e.g. hospital, council chambers and/or swimming pool) Use a long term power purchase agreement to have a company run the electricity circuit	Regulatory or community concern	Moderately complex procurement and permitting issues		A useful initiative but moderately complex task. QPRC's limited staff resources and time may be better focused on high priority issues			Not modelled in this strategy	No	No	NO	NO	NO	NO	NO	NO
OP12	OPPORTUNITIES FOR IMPROVEMENT		ALL	Modifications to the Bungendore WTS to improve efficiencies with design and operation / staffing	1-2 years	GWC	$100K - $800K	5% - 10%	Yes	Proven in Australia	Better RR and HSE outcomes at WTS Correct issues with the Bungendore WTS which result in recyclables being sent to landfill due to operational constraints with the current facility	To give community confidence that their source separated recyclables are being recycled	Low risk	Working with all stakeholders to achieve the optimal design		Upgrade required to meet growing community demand, optimise site performance and meet regulatory requirements into the future			Include provisional cost in Financial Model for improvements to Bungendore WTS	YES	YES	YES	YES	YES	YES	YES	YES
OP13	OPPORTUNITIES FOR IMPROVEMENT		ALL	Use of compactors for rural waste and recycling stations RFID access for residents	18-24 months	GWC	$50K-$200K per unit	Low	Yes	Proven in Australia	Less frequent collection (saves costs, emissions and road damage associated with collection)	Improve signage and site layout at the same time	Vandalism, heavier trucks required for collection (on minor roads)	Working with all stakeholders to achieve the optimal design		Evaluate further to determine the costs and benefits					YES	YES	YES	YES	YES	YES	YES	YES
OP14	OPPORTUNITIES FOR IMPROVEMENT		Bulky Waste / Problem Waste	Consider the feasibility of co-location of community groups at waste facility sites to facilitate reuse of materials in a safe and efficient manner	6-12 months	GWC	Administrative costs	Low										Include in waste Strategy		Modelling not required but would be considered in the design of new waste facilities or significant upgrades to exsitine facilities	YES	No	NO	NO	NO	NO	NO	NO
OP125	OPPORTUNITIES FOR IMPROVEMENT		ALL	Develop and implement an on-line booking and payment portal for waste related activities (e.g. tours, kerbside clean-up, missed collections)	6-12 months	Both charges	Administrative costs	Low										Include as qualitative discussion around options for Council actions	Can include a provisional cost in model	YES	YES	YES	YES	YES	YES	YES	YES