



WASTE REDUCTION AND RECYCLING STRATEGY

2018 – 2027



FOREWORD



It is with great pleasure that I introduce the Cairns Regional Council Waste Reduction and Recycling Strategy 2018-2027. The strategy provides a roadmap to inspire change and shape the way waste and resource recovery is delivered and managed in the Cairns region over at least the next 10 years.

This strategy is focused on achieving better and more efficient waste and resource recovery services and infrastructure for the Cairns region through identifying opportunities to reduce waste to landfill, maximise resource recovery and grow the regional economy.

Waste is a global issue. Waste management must be seen as an essential service that plays a role in minimising impacts to our environment, community amenity and public health. It is a growing issue linked directly to the way society produces and consumes. It concerns everyone.

The importance of this is borne out by our commitment to protect our iconic natural assets including the Heritage listed Wet Tropics and the Great Barrier Reef, where the environment is highly valued and strongly linked to the Cairns region's economy.

We are beginning to treat our waste as the valuable resource it is. In order to maximise this we need to reduce waste in the first place and then reuse or recycle as much as possible. What's left over can then be used to generate low carbon energy, minimising the amount going to landfill.

Reducing waste and recovering value from more of it can provide a number of benefits including new jobs, creation of new secondary material industries and affordable low carbon energy.

I would like to thank and acknowledge the efforts of all organisations and individuals who contributed to the development of this strategy and look forward to its implementation.

A handwritten signature in black ink, appearing to read 'Bob Manning'.

Cr Bob Manning
Mayor of Cairns

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INTRODUCTION

Waste management in Australia is in transition. We are starting to accept that our current rate of consumption of natural resources is not acceptable and we need to be more efficient in managing and recovering our resources in a way that minimises environmental and public health impacts and maximises the value returned from the materials recovered.

This Waste Reduction and Recycling Strategy (WRR Strategy) builds on past achievements. It sets out how the waste and resource recovery needs of the Cairns region will be met from 2018 to 2027 and provides a strategic direction for moving Cairns towards a future in which landfills are the last option.

The WRR Strategy is informed by improved understanding of the consequences of how we use and dispose of resources. It is underpinned by making best practical use of the approach in the waste management hierarchy to identify opportunities to reduce waste to landfill, maximise the value of resources and grow the regional economy.

It looks to set the goals Cairns needs to achieve in the future, and focuses on the key areas of activity with the potential to make the greatest contribution to deliver those goals.

At the heart of the WRR Strategy is a change of perception, a need for every one of us to start viewing waste as a potential resource, and to think about how to use that resource most efficiently.

Cairns has already embarked on the journey towards a more sustainable approach to waste and resources. However, there is still much to be done in making the transition from 'end-of pipe' waste management in a linear economy, to integrated and sustainable resource and waste management in a circular economy.

WE WANT TO LIVE IN A SOCIETY WHERE THERE IS NO MORE WASTE.

VISION

INNOVATIVE WASTE MANAGEMENT PROVIDING ECONOMIC, SOCIAL AND ENVIRONMENTAL BENEFITS FOR THE TROPICAL NORTH QUEENSLAND REGION

HOW WILL WE GET THERE?

Five strategic objectives, aligned with the statewide strategic direction, have been established to provide direction for the waste and resource recovery system to 2027.

These objectives focus on addressing the current resource recovery and waste management challenges, opportunities in the Cairns region and also aims to shape the region's future direction in the management of waste as a resource.





KEY POLICY DRIVERS

There are a number of international, national and state legislative and policy requirements that guide the direction for Australia's waste and resource recovery management.

The **United Nations** 2030 Agenda for Sustainable Development includes global waste management goals within the Sustainable Development Goals (SDGs) to guide actions by Australia.

The **Federal Government** outlines plans for waste management in Australia and delivers the strategic objectives of the National Waste Policy 2009.

The **Queensland Government** sets the strategic framework for waste management in Queensland through the Queensland Waste Avoidance and Resource Productivity Strategy 2014-2024.

Cairns Regional Council develops and implements the strategic direction for waste and resource recovery infrastructure and services for its local community.

Under this framework in Queensland, the Waste Reduction and Recycling Act 2011 (WRR Act 2011) contains a key requirement for local government to adopt a Waste Reduction and Recycling Plan, which must set clear guidelines for waste management within each local government area in order to best achieve the objectives of the Act.

This strategy has been developed with international, national, state and local policies, objectives and targets in mind.

CORPORATE ALIGNMENT

The Cairns Regional Council Corporate Plan has been developed with a clear focus on shaping the future of our city to provide the optimum social, economic, environmental and cultural benefits for our residents.

Waste management is an issue that has the potential to impact all of these areas and consequently has strong linkages across a range of the Corporate Plan strategic objectives. This WRR Strategy has been developed to complement the Corporate Plan and other Council plans and strategies.

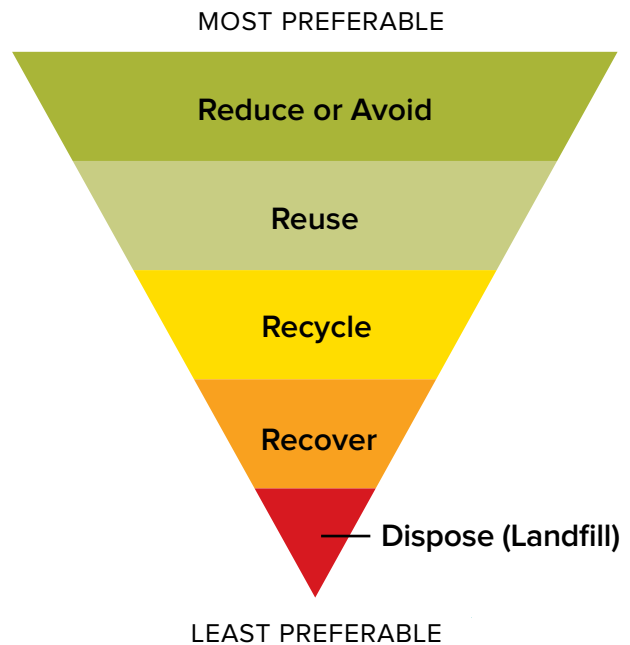


WASTE AND RESOURCE HIERARCHY

The waste hierarchy remains at the heart of international, national and state waste legislation and policy and forms the backbone of this strategy. It sets out the preferred order of priority for managing waste and is applied from the top down.

It is based on a resource efficient economy model that will:

- Firstly, significantly reduce or avoid waste and encourage reuse to minimise the use of virgin resources.
- Once waste reduction and reuse opportunities have been exhausted, focus on maximising the recycling of materials that are left using closed-loop recycling.
- Generate low carbon energy from truly residual waste leaving very little waste going to landfill.

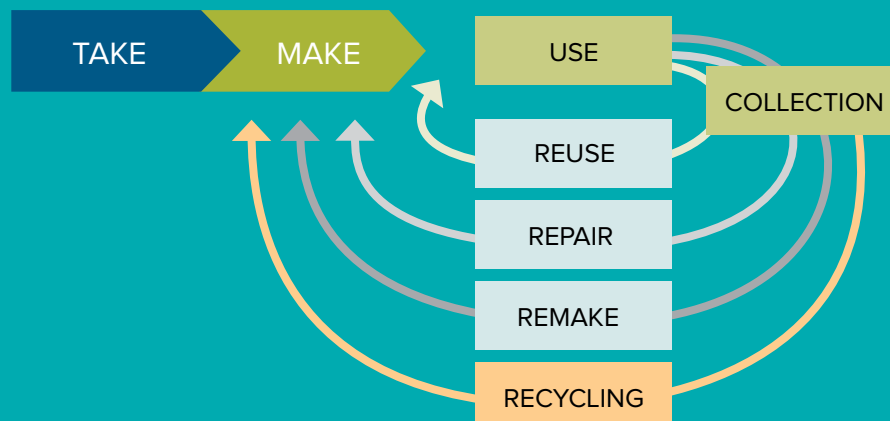


We will take a circular approach to the waste hierarchy where waste materials are kept at their highest value use in the economy for as long as possible, rather than being seen as having no value and buried in landfill.

LINEAR ECONOMY



RESOURCE EFFICIENT ECONOMY



WHERE ARE WE NOW?

With an estimated resident population of 162,451 people (as of 30 June 2016), Cairns Regional Council is the ninth largest local government in Queensland. The Cairns area is located in Tropical Far North Queensland (FNQ) region, about 1,700 kilometres north of the Brisbane CBD.

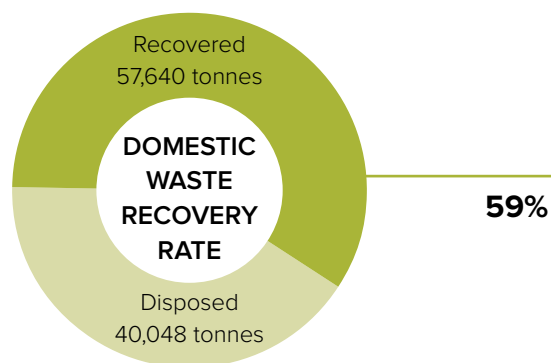
We are generating more waste

The Cairns region population is projected to grow to 209,000 by 2036. That is a projected 28% or 46,000 person/21,000 household increase from 2016 to 2036 or an expected annual average increase of 1.4%.

Over the past decade the amount of domestic waste we handle has increased from 84,000 tonnes in 2007 to 100,000 tonnes in 2017, and at the current growth rate is forecast to grow to 145,000 tonnes per year by 2036. That is a forecast 48% or 45,000 tonnes increase from 2017 to 2036 or an expected annual average increase of 2.5%.

Resource recovery performance

The overall recovery rate for domestic waste is 59% for 2016/2017 with approximately 60,000 tonnes of waste recovered. This also means that approximately 40,000 tonnes is landfilled.



Services & Infrastructure

We currently provide a weekly kerbside waste collection and fortnightly kerbside recycling collection using 240 litre mobile bins. There is a network of four transfer stations and one drop bin site where residents can take household waste, and a Buy Back Shop retail outlet. Kerbside recycling is delivered to the Council owned and operated Materials Recovery Facility (MRF) and kerbside waste is delivered to an Alternative Waste Treatment (AWT) facility (drum composting mechanical biological treatment (MBT)) where the organic fraction is processed into compost.

Further details can be found in Appendix 1 – waste performance data.

CHALLENGES AND OPPORTUNITIES

Challenges	Opportunities
Waste generation	
At the simplest level the challenge is that the amount of waste we produce is growing.	We want to reduce the volume of waste we create to help protect our environment, preserve our valuable resources and reduce the costs of handling, transporting and managing this waste.
Protect the rainforest and reef	
The Cairns region is unique and framed by World Heritage listed Great Barrier Reef Marine Park & Wet Tropics rainforest, which need to be maintained and enhanced.	Waste management activities should have no detrimental effect on the health and resilience of our iconic natural assets, which are recognised as a significant economic driver for the Cairns region.
State policy framework	
The current state policy framework is in transition and it is important that we monitor key policies and strategies for changes, and are able to respond.	Recovering value and creating markets for the material and energy we produce from the waste handled should become the principal policy drivers.
Markets for recovered materials	
The lack of existing developed markets for recovered materials in the Cairns region limits our ability to improve resource recovery.	Local markets need to be identified and closed loop recycling established. Treating waste as a resource refocuses the way in which we see waste management.
Resource efficiency (the circular economy)	
Our linear economy (take, make and dispose) is unsustainable. It produces too much waste.	In the circular economy, the role of waste management is to collect, treat and return secondary resources and recovered energy back into the cycle of production and consumption.
Infrastructure	
Some gaps in capacity and outdated infrastructure are currently limiting the extent to which material can be recovered.	How we design, manage and operate our waste management infrastructure is important in order to maximise efficiencies and minimise costs.
Landfill	
The preferred location for any future landfill facilities is the western side of the Great Dividing Range, removed from World Heritage listed areas.	While increasing resource recovery is a priority, it is recognised landfills will continue to play a necessary role in the future infrastructure network.
Land use planning	
It is critical to manage the interface between waste and resource recovery facilities and surrounding land uses.	Rationalisation of key infrastructure into resource recovery hubs provides easy access to markets.
Data	
Incomplete data sets across all waste sectors (MSW, C&I and C&D) limits the development of some action plans.	Establish a complete waste data set to improve and inform actions.

01

OBJECTIVE 1

PROVIDE EDUCATION AND AWARENESS

EMPOWER OUR COMMUNITY TO EMBRACE WASTE AVOIDANCE, REDUCTION AND REUSE

Success will depend on everyone playing their part, recognising and taking responsibility for their own use of resources.

All households, businesses and organisations produce waste. Without the active participation from all sectors of our community the WRR Strategy will not be able to meet its objectives and as our growing population generates greater volumes of waste, additional pressure is placed on our waste infrastructure.

Waste education performs a vital role in helping Cairns residents play their part in preventing, minimising and managing waste effectively, and reducing the need to manage waste.

The education and awareness plan is a fundamental, overarching element of this WRR Strategy, which supports the actions and performance across all other objectives.

KEY ACTIONS

1.1 Develop and deliver a clear and targeted education and awareness action plan

Over recent years Cairns Regional Council has successfully engaged in effective education and awareness campaigns targeting recycling and contamination.

The aim of this action will build on the existing work and expand the education scope to reduce waste, improve resource recovery and increase awareness and understanding of waste and resource recovery and available infrastructure and services.

We will:

1.1.1 Deliver education and awareness programs to:

- Communities, and
- Schools and early learning education centres;

As well as focusing on:

- Litter and illegal dumping (Action 2.2), and
- Events management.

1.1.2 Investigate opportunities to develop and deliver internal programs for waste generated by Council activities (Action 3.6).

1.1.3 Assist the Commercial & Industrial and Construction & Demolition sectors to improve their reduction and recycling performance.



02

OBJECTIVE 2

REDUCE WASTE

OUR COMMUNITY AND COUNCIL TAKE RESPONSIBILITY FOR REDUCING THEIR OWN WASTE AND USING RESOURCES EFFECTIVELY

A change in mindset is required, to a society where everyone tries to avoid and reduce waste generation in the first place.

Our first priority is to implement initiatives that encourage and support our residents to take responsibility to reduce the overall amount of waste they produce.

Where reducing or avoiding waste is not possible, the next most preferable option is to reuse items. Plenty of items people currently see as waste could actually be reused, repaired or refurbished.

Litter and illegal dumping continues to pose a significant problem for councils, including environmental and amenity impacts, clean up and collection costs. While community education has reduced littering, more work is still needed to tackle and reduce littering and illegal dumping.

KEY ACTIONS

2.1 Increase the avoidance, reduction and reuse of items

The aim of this action is to reduce overall waste generated by encouraging waste producers (including businesses, tourists and organisations) to minimise the amount of waste they generate.

We will look to provide services and initiatives that encourage the reduction and reuse of items, therefore diverting these materials from final disposal and supporting the development of possible employment opportunities in repair, refurbishment and remanufacturing.

We will:

- 2.1.1** Increase reuse of materials collected through the transfer station network and continue to encourage and expand reuse through the Buy Back Shop in Portsmith (Action 4.1).
- 2.1.2** Initiate and participate in innovative projects that increase the Cairns region's capacity to reduce and reuse items and assist residents in reducing and reusing their waste even further.
- 2.1.3** Develop a range of initiatives for Council purchasing practises and processes to support increased reduction and reuse (Action 3.6).

2.2 Reduce littering and illegal dumping incidents

Litter and illegal dumping of household and industrial waste is a persistent problem. Attitudes and behaviours have improved, but we need continued action to reduce littering and illegal dumping across the Cairns region.

Communities, businesses and government pay significant costs to clean up litter and illegally dumped materials. Litter and illegal dumping is managed through a wide range of infrastructure, education and enforcement actions across state and local government authorities.

We will:

- 2.2.1** Develop a litter and illegal dumping action plan including local and regional relevance (Actions 1.1).
- 2.2.2** Investigate options to provide public place recycling across the Cairns region and develop a public place recycling plan.

03

OBJECTIVE 3

MAXIMISE RESOURCE RECOVERY

REDUCE LANDFILL DISPOSAL THROUGH MAXIMISING RESOURCE RECOVERY OPPORTUNITIES

Every one of us needs to start viewing waste as a potential valuable resource, and think about how to use that resource most efficiently.

When reducing or avoiding waste generation is not possible, implementing initiatives that support recycling and resource recovery is the next most preferable option.

One of the key constraints for improving resource recovery in the Cairns region is the lack of developed secondary markets for the recovered material. Creating a strong demand for all recovered materials and the products made from them is fundamental to the success of resource recovery solutions and will be a primary focus.

Initiatives to support and develop secondary markets can also bring significant benefits for the local community through new employment and training opportunities, and by retaining expenditure within the Cairns region.

KEY ACTIONS

3.1 Improve performance of kerbside collections

Whilst the community recycling efforts have reduced contamination in the recycling bins, there is a significant amount of recyclable material still placed in the waste bins.

We will:

- 3.1.1** Decrease recyclables and contamination in the waste bin and minimise contamination in the recycling bin (Action 1.1).
- 3.1.2** Investigate kerbside collection system options to optimise the recovery of materials and complement future recovery and treatment solutions (Action 4.2).
- 3.1.3** Improve recycling practices and recycling infrastructure in businesses (Action 1.1).

3.2 Improve recycling in high density and multi-unit dwellings

A growing percentage of dwellings in the Cairns region are multi-unit dwellings. Residents in units and apartments sometimes face additional barriers to recycling when there are insufficient or poor recycling facilities available.

We will:

- 3.2.1** Identify areas across planning codes, guidance material and waste management plans, to strengthen and provide consistency to waste and recycling infrastructure provisions.
- 3.2.2** Increase participation in recycling at high density and multi-unit dwellings (Action 1.1).

3.3 Maximise resource recovery at transfer stations

The current transfer station network has developed over time and does not necessarily reflect current or future community needs or maximise resource recovery.

The design of the current infrastructure is focused on 'residual waste' disposal rather than 'resource recovery' that provides a customer flow sequence consistent with reduce, reuse and recycle.

We will:

- 3.3.1** Identify and deliver opportunities to increase resource recovery throughout the transfer station network.
- 3.3.2** Identify opportunities to establish new or expand existing resource recovery facilities (Action 4.1).

3.4 Maximise resource recovery of dry recyclables

The Materials Recovery Facility (MRF) in Portsmith has served the Cairns region and Tropical FNQ region well over the past decade, however, it is becoming outdated and not of an optimal design to maximise performance.

It plays a vital role in recycling in the region, allowing dry recycling material to be received from the Cairns community as well as from surrounding local government areas.

We will:

3.4.1 Identify and deliver opportunities to increase resource recovery of dry recyclables at the MRF.

3.4.2 Identify opportunities to establish new or expand the existing MRF facility (Action 4.1).

3.4.3 Improve the marketability of recycled material and identify secondary markets and regional partnership options (Action 5.3).

3.5 Increase organic waste recovery

Organic waste can have significant environmental impacts when landfilled.

Food organics (FO) and garden organics (GO) material make up more than 60% of all materials in the kerbside waste bins. In the absence of organic processing infrastructure after 2026 this material will end up in landfill.

The current Bedminster Alternative Waste Treatment (AWT) facility is due to finish operating in 2026 and by then a new organics solution will need to be ready to take the place of this important recovery infrastructure.

We will:

3.5.1 Explore market demand, options and potential local partnerships for closed loop management of organics (Action 5.3).

3.5.2 Undertake a detailed feasibility study for introducing organic waste (both food and/or garden waste) collection service (Action 4.2).

3.6 Increase recycling and minimise waste generated by Council activities

As a leading community organisation, Cairns Regional Council has an important role to promote resource recovery and resource efficiency, not only through the services provided to the residents of Cairns, but in the way we manage our own waste.

Council generates waste through its own operations and has a responsibility to minimising the amount of waste generated and maximising diversion of waste from landfill.

We will:

- 3.6.1** Raise awareness and understanding of waste issues across all internal departments and lead by example (Action 1.1).
- 3.6.2** Determine baseline waste generation, composition and recycling rates for all Council generated waste and improve data capture.
- 3.6.3** Strengthen and support Council's policies, purchasing practises and internal processes to ensure sustainable waste solutions.

3.7 Improve events' waste and recycling

The Cairns region is increasingly becoming a popular destination for local, regional and larger events and in managing these events we should embrace the principles of waste avoidance and resource recovery.

We will:

- 3.7.1** Develop an events plan guideline to reduce waste and maximise resource recovery (Action 1.1).
- 3.7.2** Develop collaborative partnerships with public event organisers and implement initiatives to reduce waste and increase recycling.

3.8 Minimise emissions from waste

A range of potential sources of carbon emissions are associated with waste management activities from fuel used in collection vehicles through to processing and disposal emissions.

The largest sources of council generated carbon emissions are attributable to methane from the disposal of organic waste in landfill. Landfill gas is responsible for nearly 3% of Australia's total greenhouse gas emissions.

We will:

- 3.8.1** Identify the need for and improve landfill gas emissions capture systems.
- 3.8.2** Reduce the amount of organics disposal to landfill (Action 3.5).
- 3.8.3** Reduce carbon emissions from waste operations and facilities.

04

OBJECTIVE 4

SECURE OUR FUTURE NEEDS

OUR CAPACITY AND CAPABILITY TO MANAGE FUTURE WASTE IS SECURED

Waste and resource recovery systems provide an essential service and encompass many activities, including collecting, sorting, transport, reprocessing (extracting both materials and energy) and exporting recoverable materials, as well as safely managing and disposing of residual waste.

Key infrastructure currently employed by Council includes the Bedminster AWT, Materials Recovery Facility and Council's network of Transfer Stations placed throughout the community. These facilities are generally outdated and reaching their design capacity. In addition, Council's existing transfer station network had been designed to receive waste and not to maximise recovery.

Planning for resource recovery and waste infrastructure is inherently linked with planning for other essential services, particularly land use and transport planning. This linkage ensures the availability of enough suitably located land to encourage industry investment in resource recovery and waste management into the future.

KEY ACTIONS

4.1 Plan and deliver necessary infrastructure to ensure facilities are capable of meeting future waste management demands

The capacity of existing facilities is generally limited by current site and space constraints. Future facilities need secure sites close to freight corridors, population and growth nodes (or collection points), and markets for the end products.

Alignment with land use planning is also essential to minimise conflicts with incompatible land uses and sensitive areas.

We will:

4.1.1 Identify and develop areas suitable for resource recovery precincts and hubs.

4.1.2 Review and upgrade capacity and capability for key waste management infrastructure.

4.1.3 Identify and implement viable funding and operating models for Council's key waste management infrastructure.

4.1.4 Develop contingency plans to address Council's ongoing landfill dependency for residual wastes.

4.1.5 Investigate and deliver options for upgrading and increasing education infrastructure and resources to include broader sustainability topics.

4.2 Assess the feasibility of advanced waste treatment (AWT) options

The Bedminster AWT is a key item of infrastructure enabling Council to meet State waste reduction and recovery targets and will need to be replaced within the life of this WRR Strategy.

We will:

4.2.1 Investigate options and develop a detailed feasibility study for a range of suitable long term solutions to treat the Cairns region's waste.

4.2.2 Secure arrangements for suitable long term solutions to treat the Cairns region's waste.

4.1.3 Design and implement future collection systems to suit the required feedstock of any chosen solution.

An underwater photograph of a coral reef. The water is clear and blue. In the foreground, there are various types of coral, including branching corals and some purple soft corals. The background shows more coral and the surface of the water.

OBJECTIVE 5

ADVOCACY AND COLLABORATION

A LEADER IN STRATEGIC ALLIANCES AND PARTNERSHIPS PROVIDING EFFECTIVE ADVOCACY FOR BEST PRACTICES IN WASTE MANAGEMENT

Cairns and the Tropical FNQ region have a unique set of circumstances including our geography and environment. To benefit from and have influence in the policy arena, and attract important and necessary funding, it is important that our voice is heard in regional, state and national settings.

Economic instruments can provide significant incentives to invest in waste management policies and practices aligned to the waste hierarchy.

Regional collaboration with neighbouring councils, industry and with governments and universities will be essential in attaining economy of scale, solutions and funding sources to achieve best practices.

05

KEY ACTIONS

5.1 Act as key regional advocate on important waste and resource recovery issues

We need to be committed to long term planning for effective waste management to cater for the needs of our growing population and will continue to research and advocate for appropriate waste management solutions.

The ongoing development of the Cairns region depends on the strength and ability to influence outcomes, compete for public and private investment, secure community solutions, and capitalise on opportunities.

We will:

5.1.1 Promote waste management as an essential service that plays a role in minimising impacts to the environment, community amenity and public health.

5.1.2 Lead and influence legislation and policy change towards a greater focus on resource efficiency.

5.1.3 Lead and influence the development of secondary markets, rather than leaving it entirely to the private sector (Action 1.2, 3.10).

5.1.4 Partner with industry, universities and government in innovative waste management solutions and advocate for assistance and funding.

5.2 Maximise collaboration options with industry and governments

We need to operate at a local and regional level to maximise Council and the community's efforts to conserve our resources and avoid, reduce and recycle wastes.

We will:

5.2.1 Investigate and access possible funding sources to assist in ongoing collaboration, infrastructure and diversion programs.

5.2.2 Work to address a range of waste management issues including identified initiatives in the FNQ Regional Waste Resource Recovery Options Report 2016.

5.2.3 Establish and encourage alliances to lobby governments and organisations with influence for positive changes (Action 1.2).

5.2.4 Investigate regional approaches to education and messaging (Action 1.1).

5.3 Support the development of local markets for recovered materials

One of the key constraints identified for improving resource recovery in the Cairns region, is a lack of developed markets for secondary resources.

Secondary markets are critical for the long term viability of resource recovery solutions, but can also bring significant benefits for the local community through new employment and training opportunities, and by retaining expenditure within the Cairns region.

We will:

5.3.1 Undertake assessments and research to identify quantities of recoverable material and increase the range of items recycled.

5.3.2 Investigate viable market development opportunities to increase recycling capacity in the Cairns region in line with relevant strategies.

5.3.3 Develop initiatives to attract new business to the Cairns region, or support existing businesses, in the resource recovery sector.



IMPLEMENTING THE STRATEGY

This WRR Strategy sets out 16 key actions under five objectives to achieve the targets set for the next 10 years.

Actions and outcomes		3 year review of WRR Strategy									
		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
1	Provide education and awareness Empower our community to embrace waste avoidance, reduction and reuse										
1.1	Develop and deliver a clear and targeted education and awareness action plan	Plan	Implement	Implement	Maintain	Maintain	Maintain	Maintain	Plan	Implement	Implement
2	Reduce waste Our community and Council take responsibility for reducing their own waste and using resources effectively										
2.1	Increase the avoidance, reduction and reuse of items	Maintain	Maintain	Plan	Plan	Implement	Implement	Implement	Implement	Maintain	Maintain
2.2	Reduce littering and illegal dumping incidents	Plan	Implement	Implement	Implement	Implement	Maintain	Maintain	Maintain	Maintain	Maintain
3	Maximise resource recovery Reduce landfill disposal through maximising resource recovery opportunities										
3.1	Improve performance of kerbside collections	Plan	Plan	Maintain	Maintain	Maintain	Maintain	Maintain	Plan	Implement	Implement
3.2	Improve recycling in high density and multi-unit dwellings (MUDs)	Plan	Implement	Implement	Implement	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain
3.3	Maximise resource recovery at transfer stations	Plan	Plan	Implement	Implement	Implement	Implement	Implement	Maintain	Maintain	Maintain
3.4	Maximise resource recovery of dry recyclables	Plan	Implement	Implement	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain
3.5	Increase organic waste recovery	Plan	Implement	Plan	Plan	Implement	Implement	Plan	Implement	Implement	Maintain
3.6	Increase recycling and minimise waste generated by Council activities	Plan	Implement	Implement	Implement	Plan	Implement	Implement	Maintain	Maintain	Maintain
3.7	Improve events' waste and recycling	Plan	Plan	Implement	Implement	Implement	Implement	Implement	Implement	Implement	Implement
3.8	Minimise emissions from waste	Plan	Implement	Implement	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain
4	Secure our future needs Our capacity and capability to manage future waste is secured										
4.1	Plan and deliver necessary infrastructure to ensure facilities are capable of meeting future waste management demands	Plan	Plan	Implement	Implement	Plan	Implement	Implement	Maintain	Maintain	Maintain
4.2	Assess the feasibility of advanced waste treatment (AWT) options	Plan	Plan	Plan	Plan	Plan	Plan	Plan	Plan	Implement	Implement
5	Advocacy and collaboration A leader in strategic alliances and partnerships providing effective advocacy for best practices in waste management										
5.1	Act as key regional advocate on important waste and resource recovery issues	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain
5.2	Maximise collaboration options with industry and governments	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain
5.3	Support the development of local markets for recovered materials	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain	Maintain



Plan



Implement



Maintain

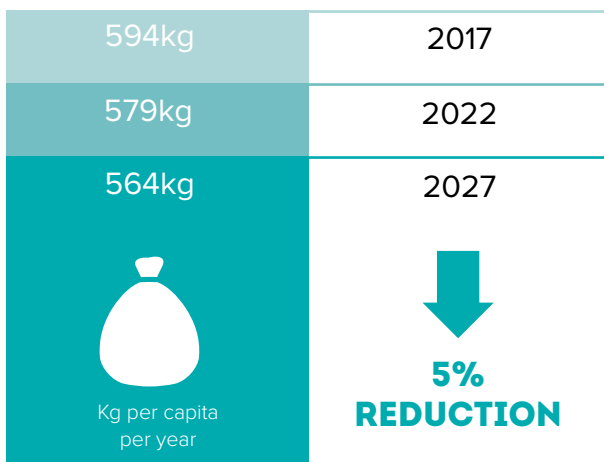
MEASURING OUR SUCCESS

Over the lifetime of this strategy we will implement relevant elements of the key actions and work with the community, businesses and industry to help achieve the vision and objectives within this strategy.

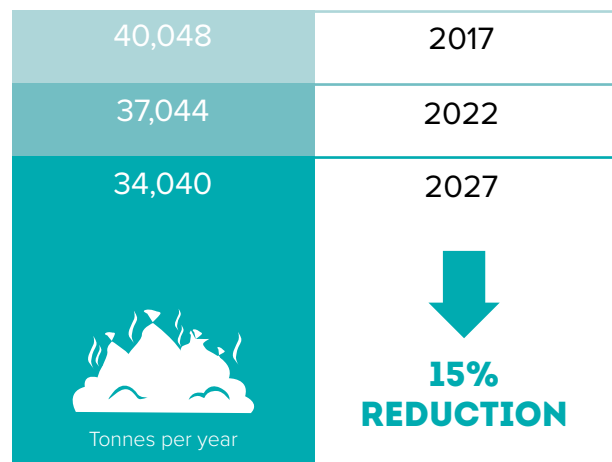
This may include establishing new collection and recovery infrastructure, supporting local community initiatives, developing better ways of working together and improving the data available.

Some actions will be quicker and easier to track and identify success factors than others. Monitoring of how we have performed against delivery of the vision and objectives in the strategy will take place on an annual basis according to the following set of performance measures:

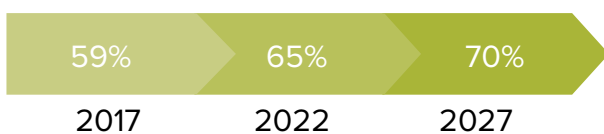
REDUCE MSW (DOMESTIC) WASTE GENERATION PER CAPITA



REDUCE MSW (DOMESTIC) WASTE TO LANDFILL



INCREASE THE MSW (DOMESTIC) RECOVERY RATE



11% INCREASE

INCREASE THE COUNCIL (COUNCIL GENERATED) RECOVERY RATE



The WRR Strategy will be reviewed every three years and the key actions reviewed on an annual basis. Waste management is undergoing a period of rapid development and any significant changes may trigger a need for an early review.

APPENDIX 1

WASTE PERFORMANCE DATA

TYPES OF WASTE

COMMERCIAL & INDUSTRIAL (C&I)

Waste generated from businesses, including waste from schools, restaurants, retail, offices, agriculture, manufacturing, community groups and sporting clubs.

CONSTRUCTION & DEMOLITION (C&D)

Waste generated from construction and demolition activity, usually including brick, timber, concrete and metal.

MUNICIPAL SOLID WASTE (MSW)

Waste generated from a combination of household and council activities e.g. parks and gardens, collection of waste from public places and illegal dumping.



SCOPE

This WRR Strategy is focused on improving how we manage MSW as Cairns Regional Council is the primary manager for this waste stream. We will also drive improvements through leadership and advocacy within the C&I and C&D waste streams.

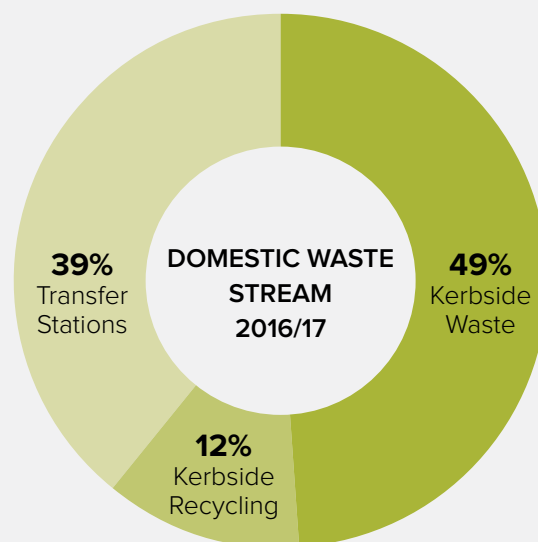


The waste infrastructure in the Cairns region can be summarised as follows:

- Four (4) council run transfer stations and one (1) private commercial waste transfer station (other than smaller depots for oils and regulated waste);
- One (1) council run drop bin site;
- One (1) council run retail shop (Buy Back Shop);
- Two (2) MRFs, one (1) council run and one (1) privately run;
- One (1) AWT facility processing mixed putrescible waste; and
- Zero (0) council run landfills, four (4) private inert landfills and one (1) major putrescible landfill (outside Cairns region boundaries).

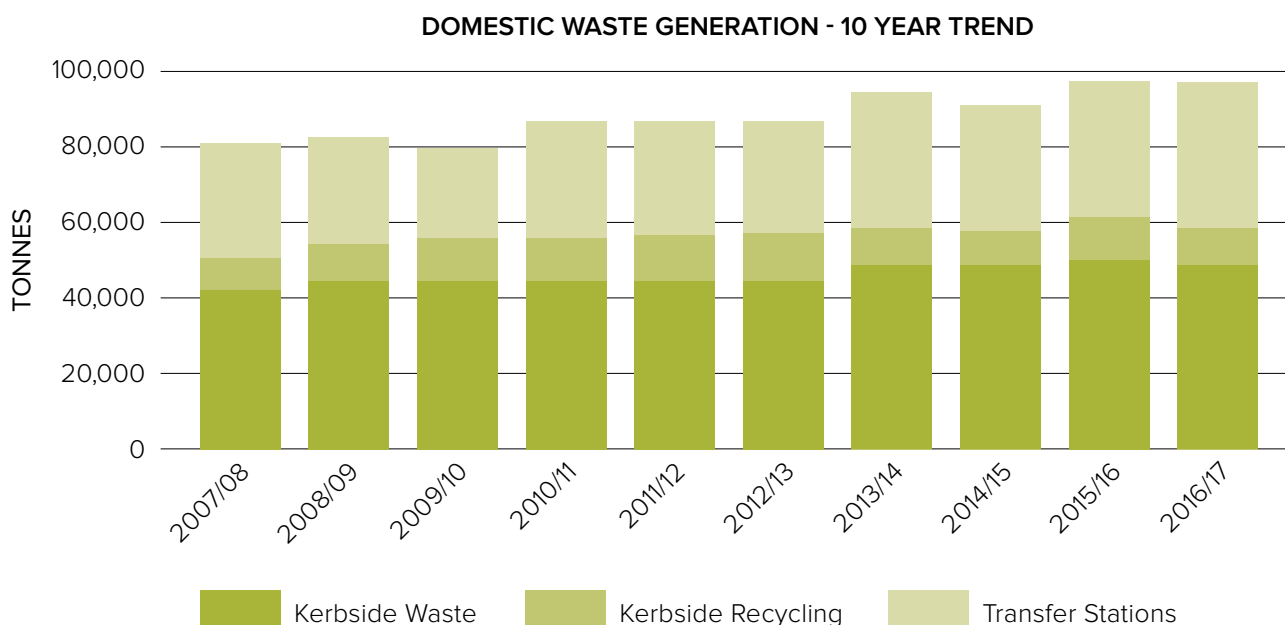
Cairns Regional Council primarily provides services and infrastructure to cater for domestic waste and managed approximately 100,000 tonnes of domestic waste in 2016/17.

This material comes from the kerbside waste (49%, 50,000 tonnes), recycling collections (12%, 12,000 tonnes) and delivered to transfer stations (39%, 38,000 tonnes).



Domestic Waste Generation

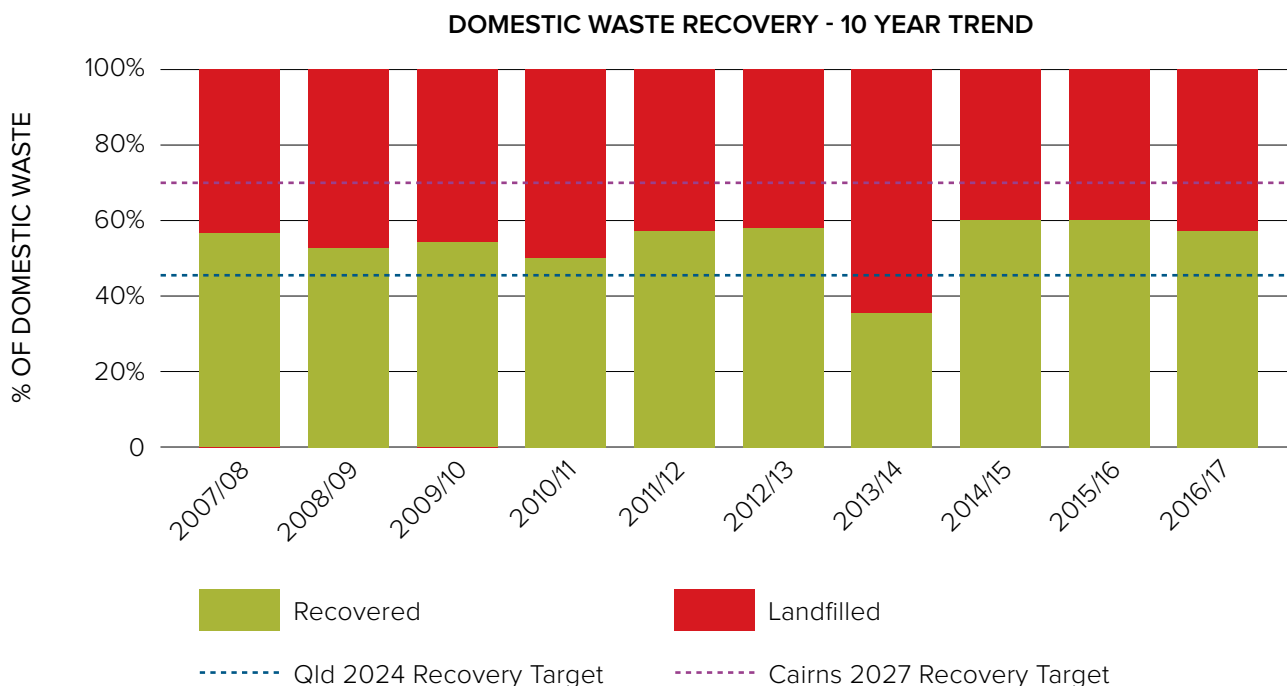
Over the past decade annual domestic waste generation has increased from approximately 80,000 tonnes in 2006/07 to just less than 100,000 tonnes in 2016/17. This is a 20% or almost 20,000 tonne increase experienced over 10 years.



Domestic Waste Recovery Rate

The overall recovery rate for domestic waste is 59% for 2016/2017 with around 60,000 tonnes of waste recovered. This also means that around 40,000 tonnes is landfilled.

The recovery rate has remained fairly constant at around 55-60% over the last 10 years with a low of 37% in 2012/13 and peak of 60% in 2014/15 and 2015/16.



At the highest level this recovery performance is admirable and is comfortably ahead of the State Government 2024 recovery target of 45% for MSW. However, it falls short of the current Cairns Regional Council Waste Strategy target of 70% recovery by 2027.



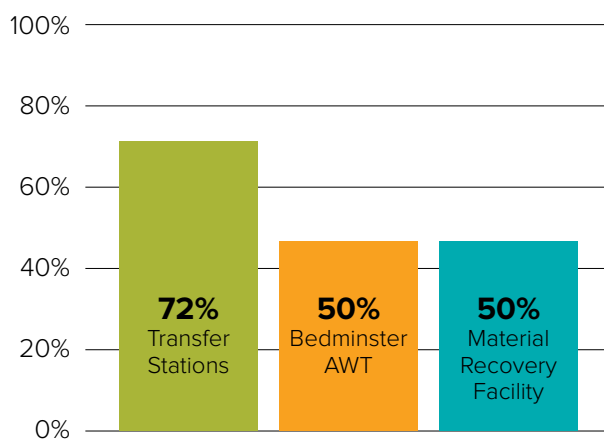
Current Service Performance

Breaking down the overall recovery rate reveals the efficiency of the current key waste and resource recovery infrastructure.

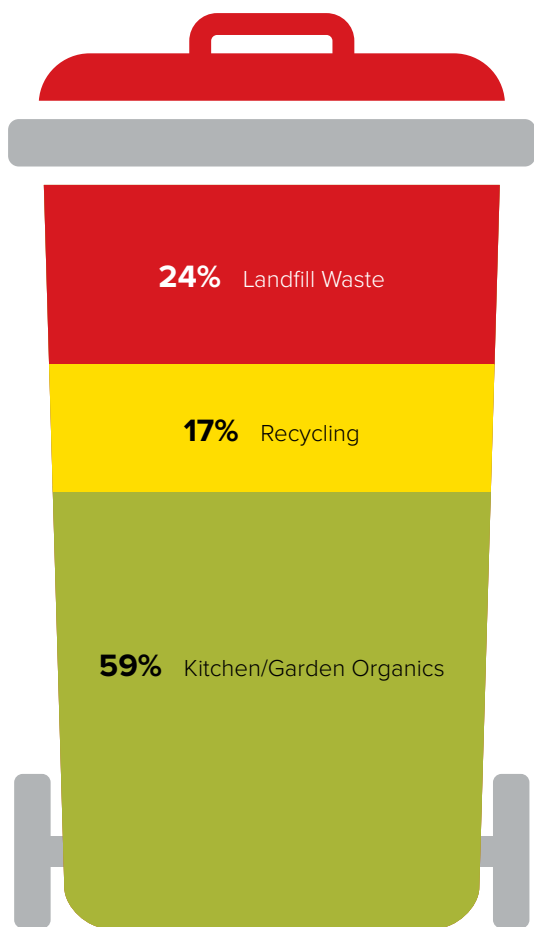
This shows the transfer stations recovery rate is 72%. This looks very good, but the large volume of green waste received masks the other waste stream recovery, which is estimated at around 30%.

The Material Recovery Facility (MRF) recovery rate is 50%, which shows the facility is outdated and not of optimal design to maximise resource recovery. The Bedminster AWT is 50%; this arrangement expires in 2026 and by then a new organics solution will need to be in place and operational.

DOMESTIC WASTE RECOVERY RATE 2016/17



Kerbside Waste & Recycling Composition



COMPOSITION OF KERBSIDE WASTE



COMPOSITION OF KERBSIDE RECYCLING

Kerbside waste and recycling stream audits to measure waste and recycling stream composition are conducted on a regular basis.

The 2016 audit shows the kerbside waste contains:

- 59% or equivalent to 29,000 tonnes of kitchen/garden organics;
- 24% or equivalent to 12,000 tonnes of non-recoverable landfill waste; and
- 17% or equivalent to 8,500 tonnes of compliant recycling.

There is still a significant amount of recycling material placed in waste bins, which needs to be improved. The most prominent recyclables found were paper/cardboard, plastics and glass.

The 2016 audit shows the kerbside recycling contains:

- 91% or equivalent to 13,000 tonnes of compliant recycling; and
- 9% or equivalent to 1,200 tonnes of landfill waste (contamination).

This contamination rate is relatively low, however, there is still a large amount of non-recyclable waste found in the recycling bins, which needs to be improved. The most significant contamination found was from compliant recycling placed in bags and kitchen/garden organics.



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