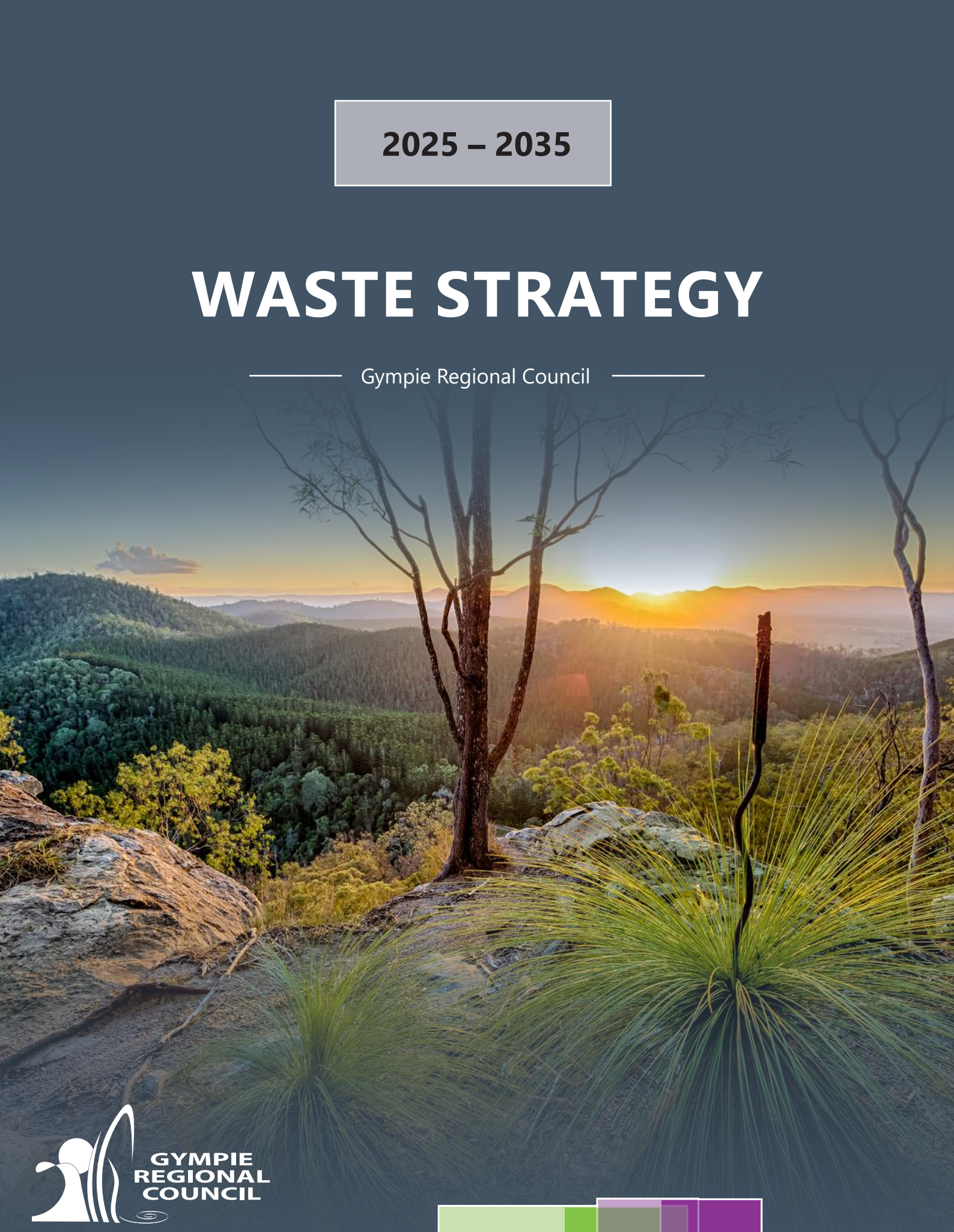
2025 – 2035

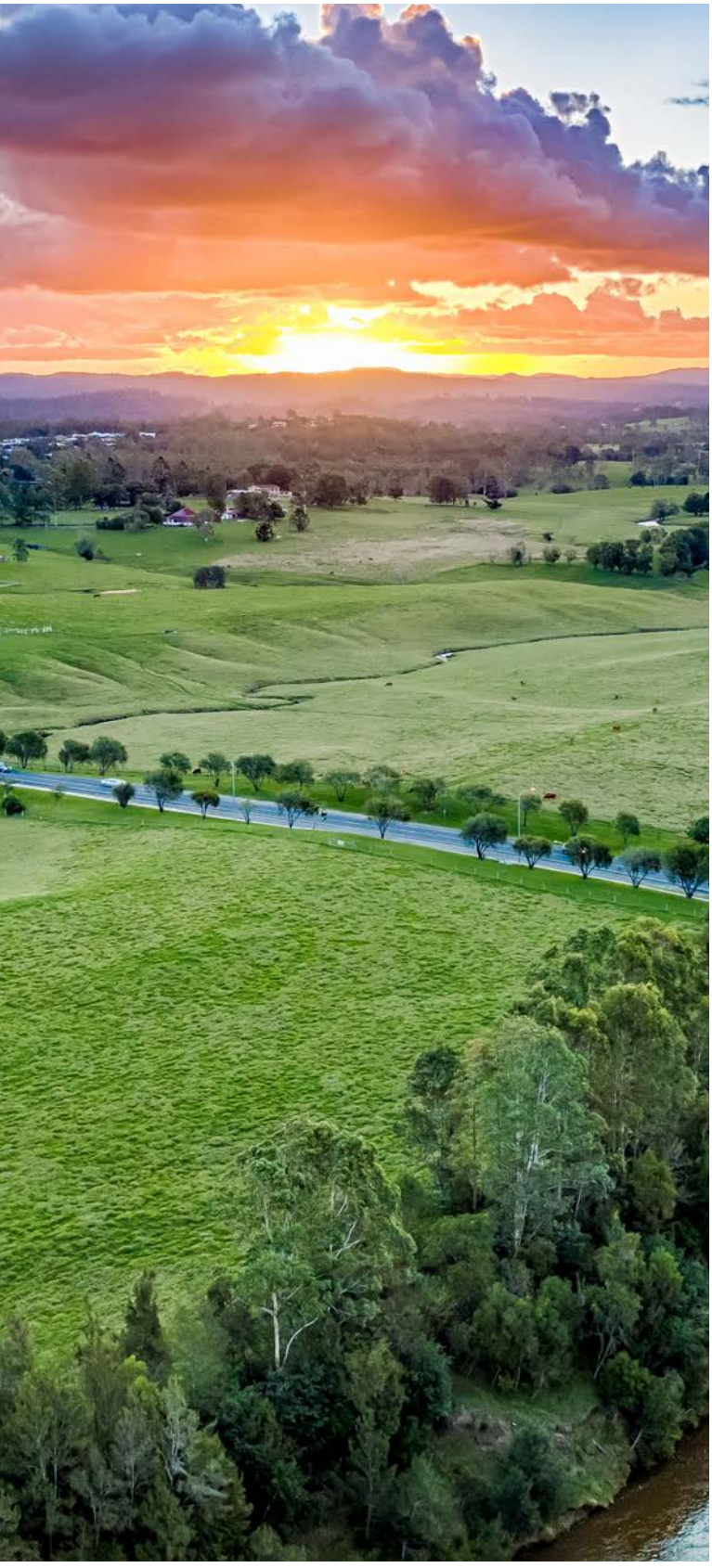
WASTE STRATEGY

Gympie Regional Council



GYMPIE REGIONAL COUNCIL

CONTENTS



Foreword

Acknowledgment of Country

Gympie Regional Council acknowledges the Kabi Kabi, Wakka Wakka and Butchulla people as the Traditional Owners and Custodians of the land upon which we stand, work and play. We recognise their continuing connection to the land, waters and country and that the Gympie region has always been a place of social, cultural and spiritual significance. We pay respect to their Elders past, present, and future and extend that respect to all other Aboriginal and Torres Strait Islander people within our region.

Executive Summary

The Gympie Regional Council Waste Strategy 2025-2035 provides a framework for transforming waste management in the Region over the next decade. Our vision is to build a waste infrastructure system that promotes circular services and practices to foster a resilient and resource-efficient community.

The Gympie Region faces challenges such as limited landfill space, high transport costs, and a dispersed population that needs to increase its understanding of how to recycle and increase recovery, and decrease contamination. Combined, these challenges complicate service delivery and achieving cost-efficiencies. With this Strategy, the Council aims to boost recycling rates and increase community understanding of how to recycle effectively to create high-quality end products to develop a local circular economy that benefits both the community and the environment. The Council will focus on meeting regional targets while viewing state goals as aspirational, and embark on a journey to increase its landfill diversion rate to 65% or more by 2035.

The Strategy revolves around five key focus areas, each with individual key strategic actions:

1. Optimise Waste and Resource Recovery Infrastructure
2. Promoting an Organics Circular Economy
3. Championing Behaviour to Reduce Waste and Increase Resource Recovery
4. Creating a Resource Efficient Community
5. Governance and Regional Collaboration

Improving waste management infrastructure is essential for Council, especially with limited landfill capacity, and it requires exploring alternative waste processing methods such as Resource Recovery Centres and Energy from Waste. Addressing organic waste recovery through implementing a three-bin system for food organics and/or garden organics (FOGO,GO, FO) accompanied by reduction programs similar to Love Food Hate Waste is proposed to be a major component, that will not only increase recycling rates but also reduce greenhouse gas emissions and support agriculture with quality compost. Education and behaviour change initiatives and interventions on waste reduction and circular behaviour for the community will play a central role in delivering this Strategy as well as expanding waste collection services and integrating new and smart technologies to support resource and cost-efficient service delivery. These services will provide a non-contaminated source-separated feedstock to develop secondary markets for recycled products, possibly in future local Resource Recovery Precincts to reduce transport costs and increase socio-economics for the Region. Finally, Gympie will need to develop a strong governance system, with supportive guidelines and planning policies. Effective governance is to be supported by robust data management, regional partnerships, and a sustainable financial structure that encourages waste reduction and curbs illegal dumping.

By embracing the actions and opportunities outlined in this Strategy, Council will ensure future compliance and assist to secure funding to build a long-term waste management infrastructure that has the capacity to manage future waste and resources in a resilient and circular way. In summary, the Strategy sets a proactive course and a Road Map filled with practical actions for the Council to cost-efficiently transition to a circular economy and a resilient waste management system that supports economic growth while protecting the environment, paving the way for a cleaner, sustainable future for the Region.

Key Focus Areas

Gympie will be a region where resilient infrastructure and resource efficient practices drive waste minimisation and maximise resource recovery. Embracing personal responsibility, we aim to create economic opportunities through the reuse and recycling of materials while protecting and valuing our natural environment to leave a positive legacy for future generations.

To improve our waste management outcomes for the Gympie Region over the next ten years, we will prioritise our efforts on the following five Key Focus Areas:

1

Optimise Waste and Resource Recovery Infrastructure

Deliver compliant, accessible, scalable, and cost-effective waste and resource recovery infrastructure to meet evolving future regional demands.

2

Promoting an Organics Circular Economy

By providing a service to the community to recover food organics and garden organics (FOGO) and turning this resource into valuable end products which can be beneficially used to enhance our soils.

3

Championing Behaviour to Reduce Waste and Increase Resource Recovery

Educating the community with the knowledge and tools to minimise their waste generation and to correctly recycle.

4

Creating a Resource Efficient Community

Provide user friendly services to our community that increase resource recovery and reduce waste disposed to landfill.

5

Governance and Regional Collaboration

A strong waste management governance system to promote and encourage resource recovery and partnerships with surrounding regional communities to enhance our collective waste services to meet State and National targets.

Gympie Regional Council Local Government Area Profile

The Gympie Regional Council LGA, located in Queensland's Wide Bay Burnett Region, spans a diverse and ecologically rich landscape from Imbil to Inskip Point and Tansey to Tin Can Bay. It lies within the traditional lands of the Kabi Kabi/Gubbi Gubbi, Wakka Wakka, and Butchulla peoples and shares borders with six neighbouring councils.

The region holds significant environmental and cultural value, with over 3,600 native plant and animal species and critical ecosystems located at the intersection of tropical and temperate zones.

Key environmental features include:

- The UNESCO-recognised Great Sandy Biosphere Reserve
- Internationally protected wetlands supporting migratory bird species
- The Great Barrier Reef catchment, via the Burnett and Mary rivers
- Legally protected threatened species like the Mary River Cod and Turtle, Australian Lungfish, koalas, and wild macadamias
- Vital coastal nesting areas for the endangered Loggerhead Turtle

These natural assets are closely tied to cultural heritage, community wellbeing, and economic activity, particularly for First Nations communities.

Given this context, Gympie's Waste Strategy must emphasise resource recovery, environmental protection, and sustainable development to preserve the region's ecological integrity and cultural significance for future generations.

The Gympie Region had an estimated population of 56,000 residents in 2023 which is expected to grow to over 67,000 residents by 2031. Most of the population live in the Gympie township area with approximately fifteen percent living in the townships of Tin Can Bay, Cooloola Cove, and Rainbow Beach.

Council boasts a strong agricultural and tourism economy. The agriculture industry contributed $150 million in economic value to the Gympie Region in 2020/21 with key agricultural industries including beef, dairy, livestock and horticulture. The largest commodity produced was livestock slaughtering (47.8% of total agricultural output) as well as production of fruits, vegetables, nuts and cereal crops. The tourism and hospitality industry had an economic value of $91.5 million in 2021/22 and the Gympie Region receives an average of over 1.5 million domestic visitors and approximately 200,000 international visitors each year[1].

Key statistics for GRC

Population of
56,166 in 2023
to grow to
67,000 by 2031

Land area
6,897 sq.km

Population density
8.14 persons per sq.km

Demographics

Some key insights about the population dynamics of the Gympie Region are highlighted below:

38% of the population resides within the Gympie township area

12% of residents live in the coastal townships of Tin Can Bay, Cooloola Cove, and Rainbow Beach

The median age of people in Gympie is 48 years

Children aged 0 – 14 years, constitute 17% of the population

Adults aged 15-65 constitute 58% of the population

Adults aged 65 years and over, constitute 25% of the population

1 Based on average data pre-COVID.

Context and Challenges

Key challenges for the Gympie Region

Council faces several key waste management challenges including:

1. Low population density spread over a large geographic area resulting in long travel distances. Upgrades to road infrastructure is required to increase the kerbside collection service area. This increases costs when introducing new source-separated service provision (e.g. kerbside recycling services).
2. Highly transient/touristic population contributes to incorrect recycling practices in affected areas.
3. Access to reprocessing (secondary markets) in the Region is limited (including organics) leading to high logistics costs when introducing source separation of recyclable streams
4. The landfill at the Gympie Regional Waste Management Facility has limited airspace capacity and is expected to close by 2028. An alternative long-term sustainable waste disposal solution needs to be identified.
5. There is poor community understanding of recycling requirements and overall benefits of recycling and this leads to contamination in the recycling stream.
6. Competing Council priorities for resources and funding e.g. waste management staff and skills shortages.
7. There are increasing environmental compliance requirements on waste facilities.
8. Gympie is one of the most flood-prone towns in Southeast Queensland and, with an ongoing flood threat to the Region, and future population growth forecast, building a resilient region from a waste management perspective is important.

The Cost of Waste and the Need for Action

Managing waste in the Gympie region costs the community more than $15 million annually. However, waste management is more than just weekly bin collections—it's a shared responsibility that impacts our environment, economy, and future.

Ratepayers contribute to waste services through kerbside collection fees and disposal charges for self-hauled waste. With less than five years of landfill space remaining, Council faces a critical decision: invest in a new landfill or transport waste to another region—both of which come with significant costs for the community.

To reduce future disposal costs, residents and businesses can play a key role by rethinking waste, recovering valuable resources, and minimising what goes to landfill—ultimately saving money while supporting a more sustainable future.

Council's Role in Waste Management

Gympie Regional Council plays a vital role in managing waste and promoting sustainability through a range of services and initiatives, including:

- Kerbside waste and recycling collection
- Waste disposal and landfill management
- Public litter bin maintenance and waste collection
- Community education on waste reduction and recycling
- Environmental protection initiatives
- Litter and illegal dumping prevention and enforcement
- Providing resource recovery facilities and services
- Collaborating with regional councils to improve waste management outcomes
- Assessing development applications to ensure efficient waste collection and resource recovery
- Supporting community-driven programs, such as Clean Up Australia Day

Strategic Alignment of the Waste Strategy

This Waste Strategy has been developed to align with broader strategic goals at the local, state, national, and international levels. It outlines Council's key priorities and actions for the next decade, guiding the Gympie Region towards a resource-efficient, resilient, and sustainable future.

Over the past decade, there has been a growing shift towards waste minimisation, resource recovery, climate change mitigation, and circular economy principles. This Strategy marks Council's commitment to accelerating this transition, embedding circular economy principles into local waste management and infrastructure planning.

This transformation is being driven by key regulatory and legislative frameworks at global, national, state, and regional levels, ensuring Gympie remains at the forefront of sustainable resource management and environmental stewardship.

Alignment to the Corporate Plan

Council's Corporate Plan 2022-2027 provides a roadmap for Council to deliver on the vision and key priorities for the short, medium and long-term goals for the Region. Council has a vision for embracing opportunities, promoting wellbeing and celebrating strong communities. The mission is to leave a positive legacy for future generations by embracing progress through good planning and efficient service delivery.

Waste minimisation and recycling initiatives are identified as a key response area to ensure reliable and safe waste disposal options. Waste targets are to be developed to meet short, medium and long term demand. Waste reduction and circular economy opportunities to reduce waste in the Region are to be identified and implemented.

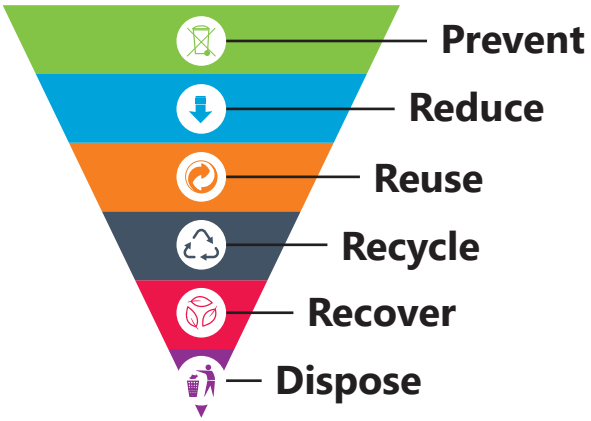
Guiding Principles for the Strategy

The Waste Strategy is guided by strategic principles outlined in the *Waste Reduction and Recycling Act 2011*. These principles include:

- **The Polluter Pays Principle:** The responsibility for all waste management costs lies with the individuals or entities generating the waste, including expenses for treatment and remediation of any environmental harm caused.
- **The Proximity Principle:** Waste and recovered resources should be managed as close as possible to where they are generated.
- **The Product Stewardship Principle:** All parties involved in a product's lifecycle are to share the responsibility for managing its environmental, social, and economic impacts effectively.
- **The User Pays Principle:** The full costs of resource use should be reflected in the pricing of the related goods and services, to ensure that those benefiting from the resources contribute to their usage and end-of-life management.

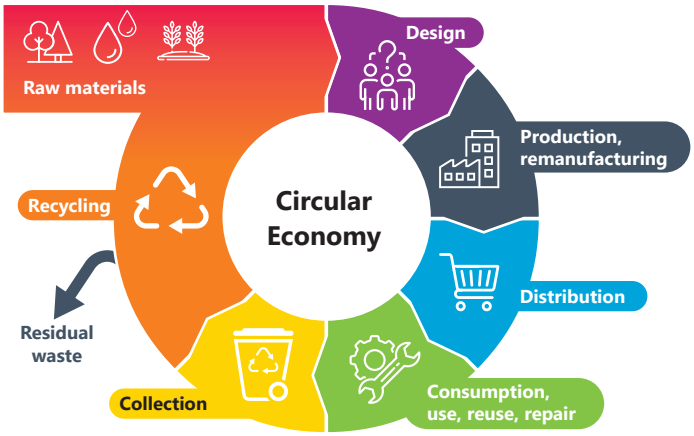
Waste Hierarchy

The waste hierarchy lists the preferred order in which waste and resource management options should be considered and forms a guiding principle for this Strategy.



Circular Economy

The circular economy is a system where materials never become waste and nature is regenerated. Products and materials are kept in circulation through processes like maintenance, reuse, refurbishment, remanufacture, recycling, and composting.



What is solid waste?

The following list outlines the waste streams included in this Strategy. The waste originates from municipal solid waste (MSW), such as households, commercial and industrial premises (C&I), or construction and demolition (C&D) activities. This material is either collected via household kerbside bins or dropped off at waste management facilities. It addresses various types of waste, including those listed below:

What is solid waste?

- Garden and food organics
- Wood and timber
- Comingled kerbside recyclables (plastics, paper, glass, metals, cardboard)
- Textiles and clothing
- E-waste and whitegoods
- Batteries
- Paint, gas cylinders, fire extinguishers
- Household waste
- Bulky goods, furniture and mattresses
- Building and construction materials including concrete and masonry
- Scrap metal
- Rock, soil, and aggregate
- Tyres
- Engine oil
- Clean soils, asphalt, silt and rocks
- Product Stewardship Scheme items – DrumMuster, Paintback, Container Deposit Scheme, Mobile Muster, Batteries, FluoroCycle
- Asbestos.

Waste Performance

A total of 83,384 tonnes of waste was managed in the 2022/23 FY. Approximately 52% of this waste was recovered, meaning almost half of the material collected is currently sent to landfill (48%).

The largest current source of waste material is MSW (33,635 tonnes, 40%), followed by C&D waste (30,987 tonnes, 37%) and finally C&I waste (19,763 tonnes, 23%).

Total waste managed by all streams 2022-23 (tpa,%)

MSW

Domestic waste

Collected **33,635 tpa**

Recovered **40%**

C&I

Commercial waste

Collected **19,763 tpa**

Recovered **23%**

C&D

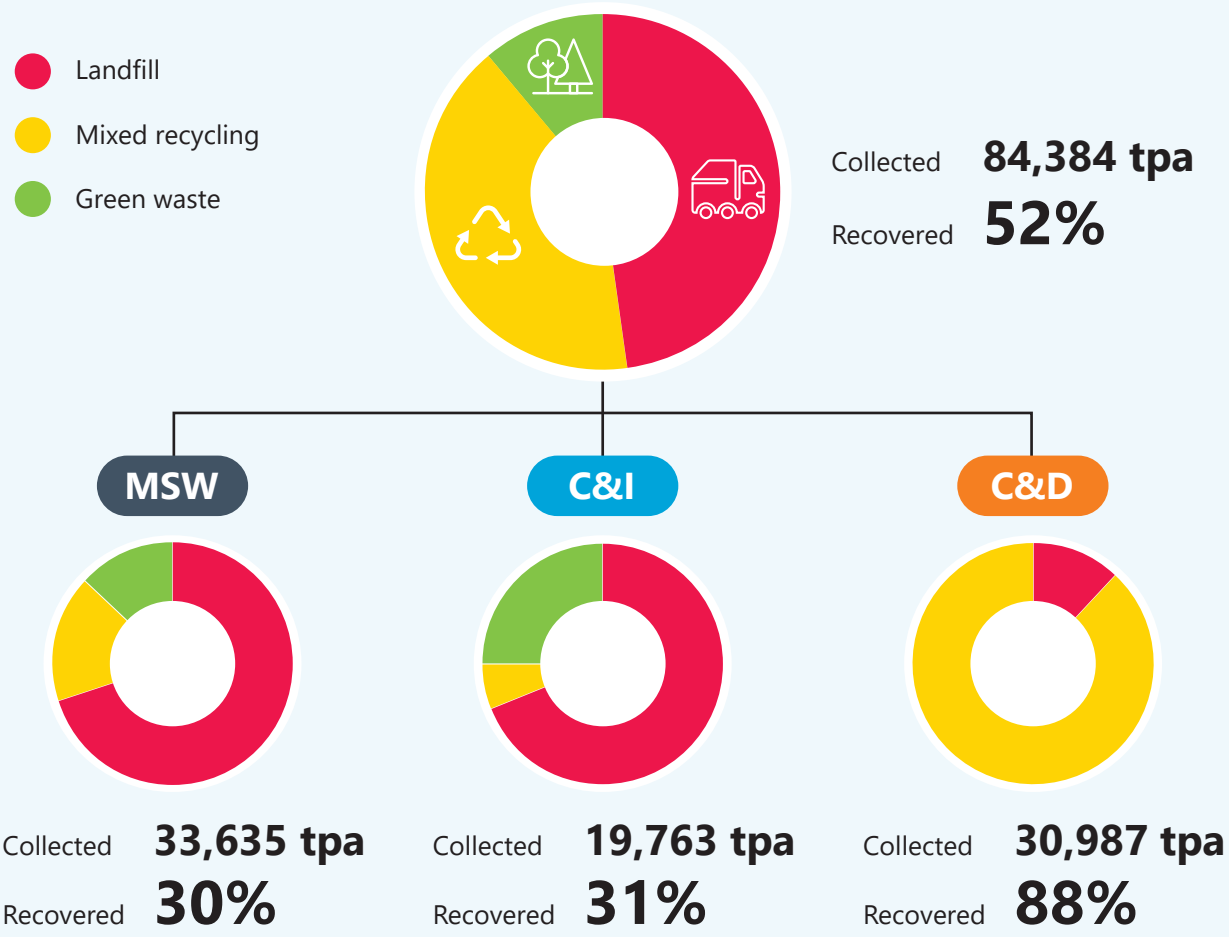
Construction and demolition

Collected **30,987 tpa**

Recovered **37%**

The graphic below illustrates the breakdown of MSW, C&I, and C&D waste that was landfilled, and collected as recycling or green waste. It should be noted that a large amount of the C&D recycling is represented by clean fill which is comprised of soil (27,166 tonnes) and concrete & asphalt (164 tonnes).

Total waste collected and managed (kerbside + self-hauled) 2022-23 (tpa,%)

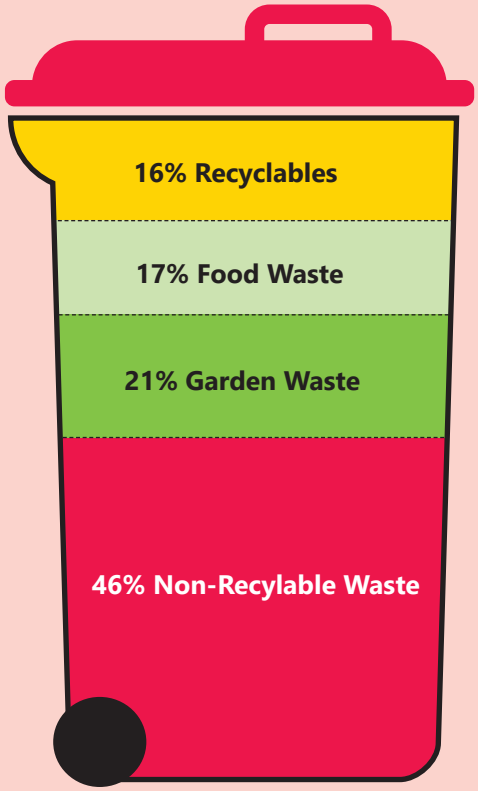


Kerbside Services

A weekly 240 litre general waste bin and fortnightly 240 litre commingled recycling bin are available to most households in the Region. General waste is transported to landfill and mixed recycling is transported to an MRF. Council also collects from commercial customers with this waste representing approximately 9% of the general waste loads and 6% of the co-mingled recycling loads.

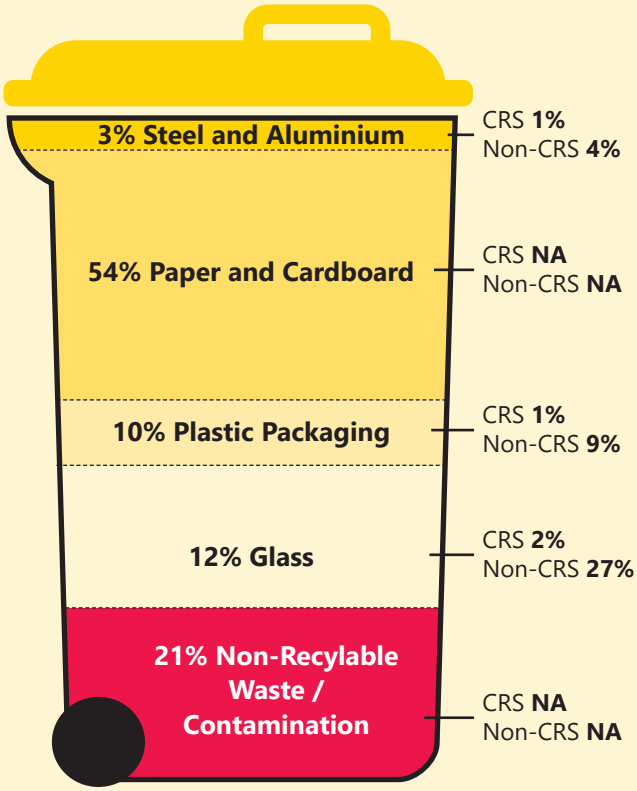
Council conducted a household waste audit in 2023. About 66% of the waste in residential, red-lidded bins, currently sent to landfill, could be diverted through composting or recycling. This would extend the lifespan of Council's landfills and create economic opportunities by repurposing these materials. The composition of red-lidded residual waste bins includes 24% food organics, 14% garden organics, 28% recyclable materials, and only 34% that needs to be landfilled.

Waste Bin Composition



Estimate **6,811,454 CRS** containers per year in general waste bin, equal to **$681,145** (if @10c per container) lost revenue each year.

Recycling Bin Composition



Estimate **8,353,670 CRS** containers per year in recycling bin, equal revenue to **$835,367** (if @10c per container) lost each year.

Waste Infrastructure

Council owns and operates eight waste facilities including one landfill and seven waste transfer facilities.

Kerbside co-mingled recycling materials are transported to a third party for sorting.

Some additional privately-owned waste infrastructure exists within the Region including a Container Deposit Scheme facility and an e-waste and scrap metal recycling.

Bonnick Road Landfill is the main waste management facility in Gympie. A new landfill cell has recently been built at this site which has an estimated lifespan of approximately 3 years. Council is investigating options for security of waste disposal, and this may include a new landfill or transport and disposal of waste to another region.

Waste Facility Network

Self-haul waste from residents is accepted at seven (7) waste management facilities from where materials are then transferred to the landfill at Bonnick Road for further processing or disposal.

The waste management facilities manage 2,200 tpa general waste per annum in comparison to 42,000 tpa at Bonnick Road. Tin Can Bay processes nearly 1,800 tpa, Imbil 300 tpa and Gunalda 60 tpa, whereas the remaining facilities only process 25 tpa combined. Not all facilities have the same recycling infrastructure, undercover areas or weighbridges. A key focus area for Council is to consider how to consolidate and make these as compliant and resource and cost-efficient as possible.

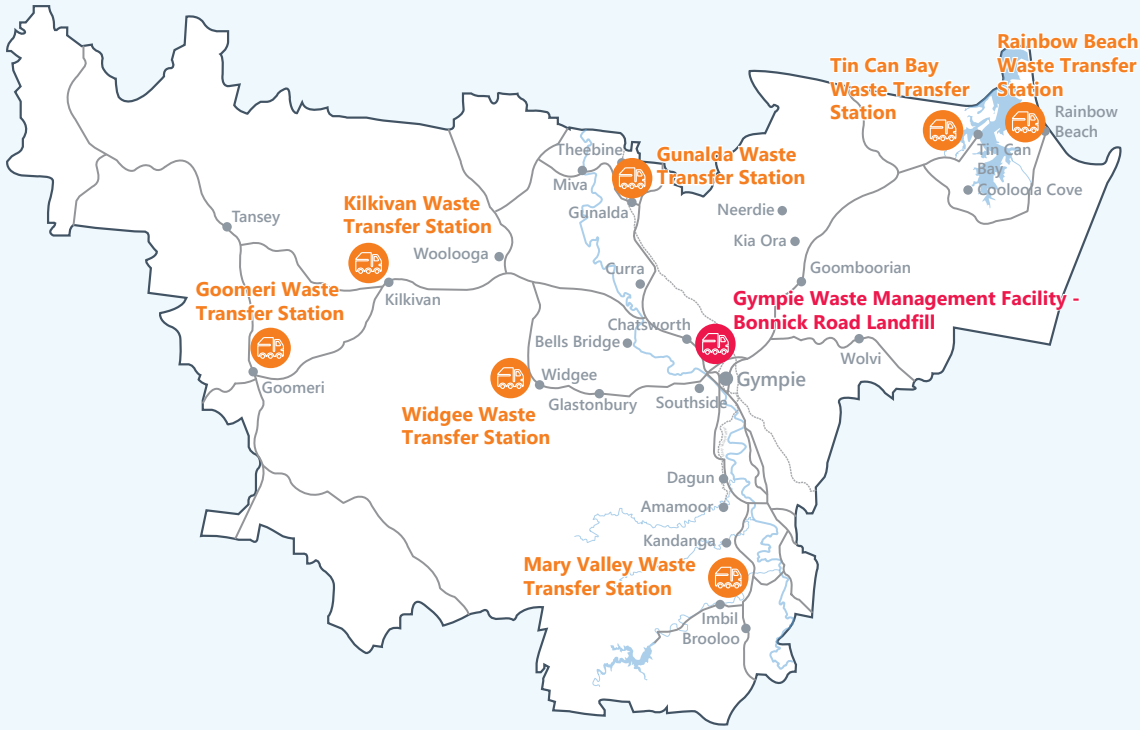


Figure 1: Map of waste infrastructure within Gympie Regional Council Area (base map: Gympie Region Council public mapping system)

Litter and Illegal Dumping

Between April 2023 and February 2024, Council reported 201 cases of illegal dumping. The total volume of waste reported was approximately 654,400 litres (L), with around 186,461 L successfully managed and collected promptly. Reducing illegal dumping of hazardous material is an important aspect for Council and its environment. Below is a breakdown of the most common materials being illegally dumped.

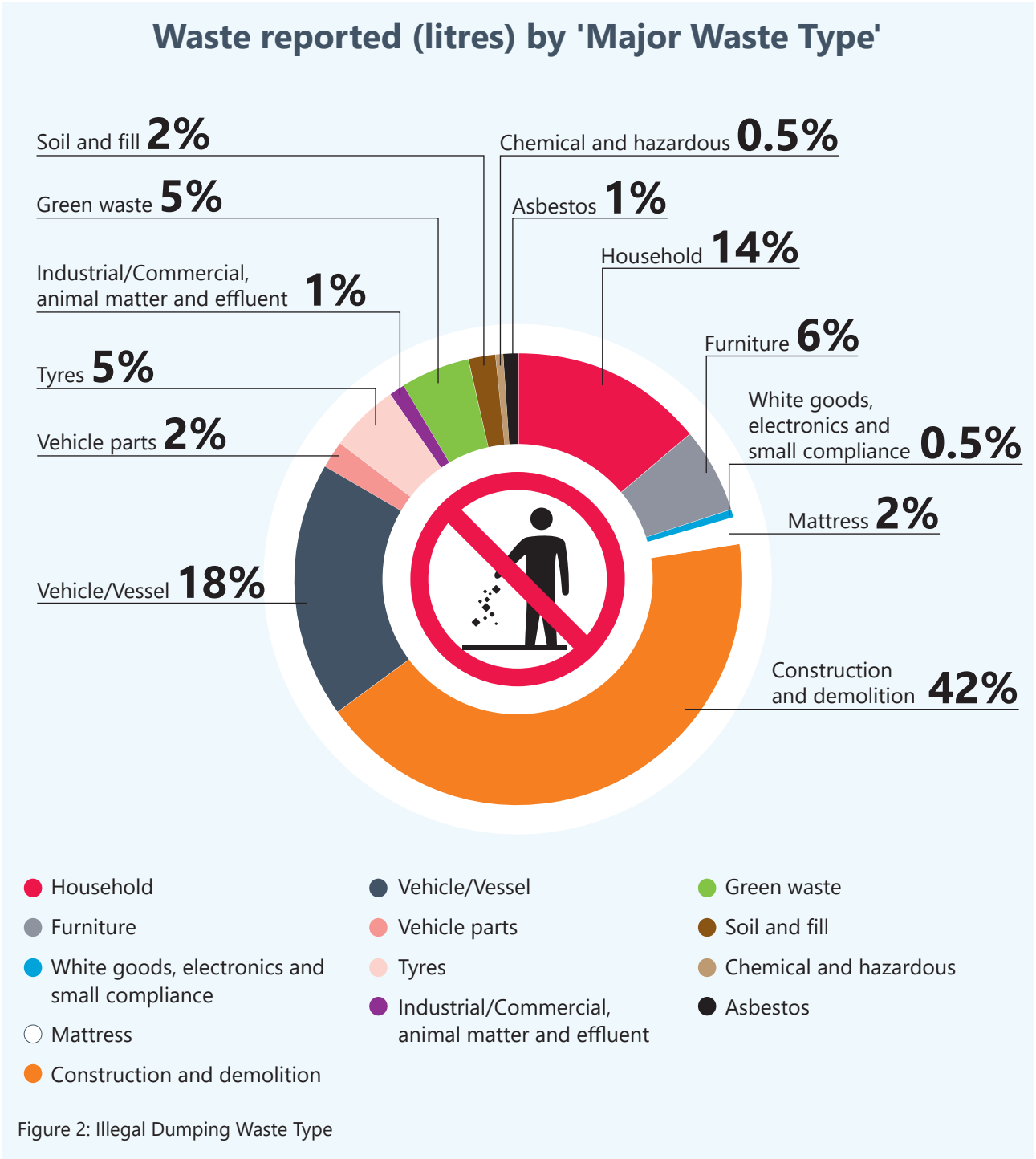


Figure 2: Illegal Dumping Waste Type

Where do we want to be?

Moving on to the future, Council aims to first and foremost align its waste and resource management with the regional WBB's targets, with the State targets being seen as aspirational and next level. For Council, it is important to provide a resilient waste infrastructure that is compliant with the current and future legislative and regulatory context, and at the same time fosters and advocates for a resource-efficient, resilient and circular future for the Region.

Baseline – how Council aligns with regional targets today

The Council will aim to achieve the regional targets and only refer to national targets as aspirations. Refer to the key targets in the table below.

Table 1: Regional targets and Council's current performance

Regional targets Wide Bay Burnett	Council (2022-2023)	Today (WBB Region)	2030	2040
Resource recovery target	52%	52%	59%	65%
Kerbside organic diversion[2]	0%	0%	24%	30%
Organic contamination rate	N/A	N/A	< 5%	< 5%
Kerbside recycling diversion	16%	19%	25%	27%
Regional kerbside total tonnage per annum	3,086	19,478	28,500	33,000
Regional kerbside recycling contamination rate	13.50%	16-18%	< 5%	< 2%

2 This diversion rate is based on kerbside diversion compared to the overall organic diversion rate, including self-haul above (47%).

How recovering the priority streams can increase landfill diversion

To achieve the targets, Council must divert another 27,920 tonnes per annum in total, across all categories, to achieve State Government targets by 2030 (80% diversion rate from landfill). The C&D targets are already currently being achieved, this is because a lot of C&D is represented by clean fill material (e.g. uncontaminated soil, sand gravel) that can be reused on-site or at construction sites i.e. 87.7% (27,166 out of 30,987 tonnes) and a total of 33% out of the total tonnage.

The graphs in **Figure 3** below indicate the opportunity for additional recovery of priority streams and the quantity of waste (non-recoverable) that will still require landfilling.

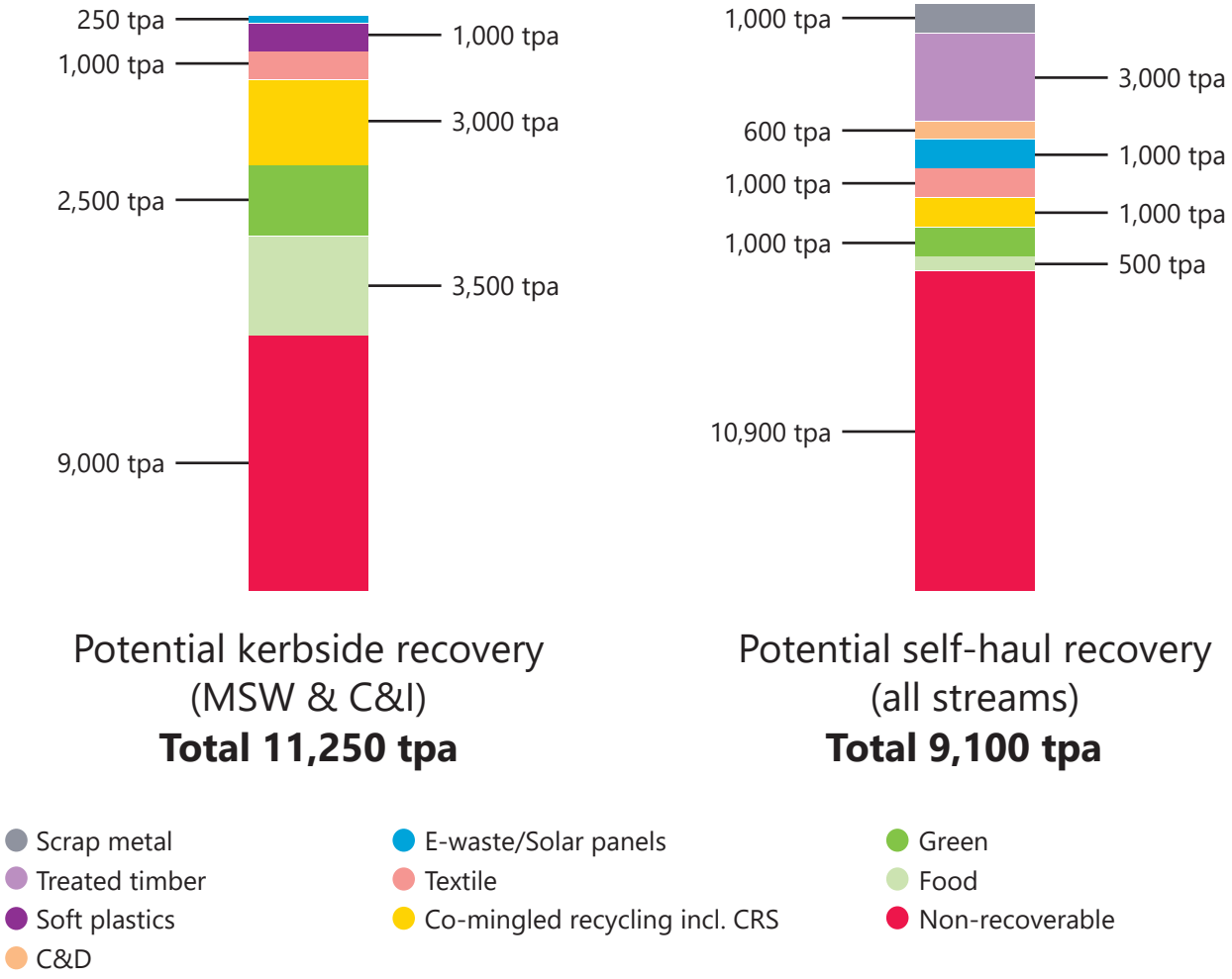


Figure 3: Opportunity for additional recovery of priority streams for kerbside (MSW and C&I) and self-haul waste

Figure 4 below illustrates the total opportunity for additional recovery of priority streams and the quantity of waste (non-recoverable) that will still require landfilling.

Figure 4: Opportunity for additional recovery of priority streams for kerbside (MSW and C&I) and self haul waste combined

Future Strategic Targets for Council

For each of the Focus Areas, several key actions and sub-actions have been developed to assist Council achieve its targets.

Each of these sub-actions has been measured on their relative contribution towards potential diversion of waste from landfill, cost impact and reduction of carbon emissions to achieve net zero emissions. Refer to **Appendix A** for a full list of details on the sub-actions where individual targets have been allocated per Focus Area to measure success. Each of the actions have been prioritised into Short (1-3 years), Medium (4-7 years), Long (8-10 years), and Ongoing (yearly required activity) term actions.

Focus Area 1:
Optimise Waste and Resource Recovery Infrastructure

Deliver compliant, accessible, scalable, and cost-effective waste and resource recovery infrastructure to meet evolving future regional demands.

Maximise Resource Recovery and ensure long term landfill disposal security

This Strategy aims to optimise Council's existing waste and resource recovery infrastructure. Council currently owns and operates seven waste management facilities (Goomeri, Kilkivan, Widgee, Mary Valley, Gunalda, Rainbow Beach and Tin Can Bay). As the population grows, we need to review the location of each of these sites to ensure they are the right size and in the right place and provide the necessary waste and resource recovery infrastructure.

Council owns and operates one landfill at Bonnick Road, Gympie. This landfill is expected to reach capacity by the year 2028. There is a need to develop and implement actions to reduce reliance on landfill and ensure landfill disposal security over the next ten years.

To maximise future landfill capacity, Council must also maximise the recovery of materials and to do this Council needs to establish a waste and resource recovery system that contains the appropriate infrastructure to effectively manage the waste materials generated within the Region. Establishing the appropriate resource recovery infrastructure is important for several reasons:

- It ensures that waste is appropriately contained, reducing the risk of adverse impacts on the environment through pollution to air, water, and land
- It helps to establish a circular economy that increases the beneficial use of resources and results in a reduction of overall greenhouse gas emissions as the energy and resources. It also reduces our reliance on landfill by reducing the quantity of waste being landfill
- It will provide waste infrastructure that is resilient and can withstand future flooding and other natural disasters.

1

Building Resilient Resource Recovery Options

There is currently a lack of secondary markets in the Wide Bay-Burnett (WBB) Region. The WBB Region consists of local government areas that are diverse in their communities, natural environment, geographical area, primary industries and drivers when it comes to waste and resource management.

To address this, Council can work proactively to establish Resource Recovery Precincts or Circular Economy Hubs to drive local recovery options and provide economic, social and environmental benefits. Gympie has land available that can be used for this particular purpose. A local precinct can especially help to reduce the impact of:

- Transport distance e.g. long distance to secondary markets (lack of local secondary markets) and economies of scale for waste materials
- Infrastructure upgrades: reduce the need for upgrade or development of infrastructure, equipment to maximise separation and transport of materials
- Provide collection/storage/transport reprocessing for problematic waste streams (including tyres, plastics, mattresses, hazardous waste/chemicals, concrete, scrap metal incl car bodies, solar panels, textiles, illegal dumping, biosolids, organics and concrete).

What are our key actions?

1.1 Ensuring compliant and resilient waste infrastructure that has the capacity to effectively manage waste generated by an increasing population

1.2 Improve Resource Recovery opportunities

1.3 Embrace Resource Recovery and Circular Economy principles in future waste infrastructure

Measuring Success

Table 2: Measuring success for Focus Area 1

Target	2024 (baseline)	2027	2031	2034
Waste infrastructure capacity secure to all the waste streams (in years)	3 years	> 5 years	> 5 years	> 5 years

2

Focus Area 2:

Promoting an Organics Circular Economy

By providing a service to the community to recover food organics and garden organics (FOGO) and turning this resource into valuable end products which can be beneficially used to enhance our soils.

Legislative Drivers to Support Organic Recycling

The Federal government has through the *National Waste Policy and Action Plan* set a target for all Councils in Australia to deliver an organic waste collection service to metropolitan households and businesses by 2030[3]. The Queensland Government has set targets through its *Queensland Organics Strategy and Action Plan 2022-2032* to halve food waste generation by 2030, divert 80% of organic material from landfill and achieve a 70% recycling rate for organics by 2030[4].

Organic waste from the municipal residential sector includes food waste or food organics 'FO' (leftovers, meat, dairy, pasta, fruit and vegetables), green waste or garden organics 'GO' (grass clippings, leaves, branches, prunings), and wood/timber.

The benefits of increasing resource recovery of organics are:

- Reduce waste to landfill
- Reduce greenhouse gas emissions – keeping food waste out of landfills helps tackle climate change
- Improve soil health – composting organic waste and bringing it back to farmland helps to restore soil health and retain water and ultimately increase crop yields for farmers
- Beneficial use of material destined to landfill – it is estimated that households spend between $2,000 to $2,500 each year on food organics that are wasted[5].

It is estimated organic waste contributes over one-third (38%) of the contents of the average household garbage bin in the Region. The disposal of organic waste materials such as food waste and green waste (food organics and garden organics 'FOGO') into landfills generates significant greenhouse gas emissions as organic materials decompose and emit methane, a potent greenhouse gas with 28 times the global warming potential of carbon dioxide (CO_2).

Transitioning towards a 3-bin kerbside collection system or other alternatives

There is currently no kerbside collection of organic waste in the Region, which presents an opportunity to increase recovery of this material stream. Gympie is a large region, and implementing a cost-efficient, new kerbside collection is logistically challenging.

Many local governments around Australia have been promoting a three-bin system (residual waste, mixed recycling, organics) for several years. Several FOGO collection trials have been undertaken across Queensland (Rockhampton, Ipswich, Townsville, Lockyer Valley) to better understand the most effective approach of rolling out FOGO kerbside services.

3 https://www.dcceew.gov.au/environment/protection/waste/publications/national-waste-policy-action-plan

4 https://www.qld.gov.au/environment/circular-economy-waste-reduction/strategy-plans/organics-strategy

5 Queensland Organic Strategy, 2022-2023. https://www.qld.gov.au/__data/assets/pdf_file/0024/240747/organics-strategy-2022-2032.pdf

2

There are several options for introducing kerbside organic collection services, including:

- Third bin alternatives to FOGO such as GO and VOGO
- Provision of commercial food waste collection services
- Home composting or community composting of food waste
- A Mobile Recycling Centre collection service or similar (which could include FO).

Recovery of organic waste presents both a challenge and opportunity to achieve legislative targets while also implementing innovative new processes. Once recovered via kerbside collection, organic waste can be transformed into beneficial reuse products including compost which can be applied to soil. It can also be used for the recovery of renewable energy such as biogas via more innovative processes such as anaerobic digestion.

The recycled organic process is especially sensitive to contamination. As such, achieving low contamination is necessary to produce high-quality recycled organic products. Apart from physical contaminants like plastic and glass, there are also chemical contaminants like PFAS and other chemicals.

To ultimately succeed with establishing a Circular Economy for organics, it is imperative for Council to develop local end markets for any manufactured recycled organic products. One way to encourage this is for Council to promote the reuse of organic recycled compost in its own operations (including contracts) and local food production.

What are our key actions?

2.1 Minimising food waste at the source

2.2 Investigate and implement Organic Kerbside diversion (FOGO) in the community

2.3 Explore and promote Commercial FO services

2.4 Develop local end markets for recycled organics

Measuring Success

Table 3: Measuring success for Focus Area 2

Target	2024 (baseline)	2027	2031	2034
Kerbside organic diversion	0%	5%	10%	25%
Organic waste recycling (across all streams)	47%	60%	70%	75%
Organic collection contamination	N/A	< 4%	< 3%	< 2%
Food waste reduction	0%	10%	25%	50%

Focus Area 3:

Championing behaviour to reduce waste and increase resource recovery

Educating the community with the knowledge and tools to minimise their waste generation and to correctly recycle.

Waste education and behaviour change

Waste education and behaviour change campaigns are a critical factor in:

- Bringing the community on board with any changes made to waste and recycling services
- Promoting a sense of responsibility for residents and the community
- Promoting awareness and encouraging active participation in sustainable waste practices
- Supporting a shift in behaviour towards waste minimisation and increased recycling
- Helping to reduce the amount of waste sent to landfills
- Increasing the value of resources being recovered and recycled to create a circular economy.

Waste Reduction (e.g. avoidance and minimisation)

Examples to encourage waste reduction include:

- Participating, advertising, and supporting community share and recovery economies e.g., repair cafes, tool libraries
- Organising community clean-up events, recycling drives, and composting workshops to further encourage active involvement and behaviour change
- Operating or supporting tip shops and resource recovery stores co-located at waste management facilities
- Promote state-wide campaigns like "Love Food Hate Waste"
- Reduce wastage through educating the community on the 10Rs Principles for Circular Economy.

Tackling Contamination

Contamination comes in two different shapes and forms:

1. physical (e.g. misplaced items)
2. chemical (e.g. PFAS, Asbestos).

Reducing contamination can be achieved through measures such as improved community education or via use of innovative de-contamination technologies. The value of any end product will depend on the technology chosen, the feedstock, its composition, and the level of contamination present.

"The best waste is the waste that never occurs."

3

Overcoming barriers and supporting community needs

Council will be guided by the top 5 barriers preventing Queenslanders from recycling more, outlined in a Behaviour Change Study conducted by the Queensland Government in 2023 and the needs expressed by the Gympie's community.

- **Time and effort constraints** either due to a shortage of time or effort, or simply because it is more convenient to use the general waste (red) bin
- **Confusion or lack of information** particularly regarding what items can/can't be recycled
- **Challenges in waste management** including the need for more frequent collections or a more efficient household waste management system
- **Limited or no access to nearby facilities** (especially in remote areas), difficulties in transporting items, or not having suitable transport. In Council each resident lived within 20-30 min of the nearest transfer station
- **Household dynamics** where issues with other household members may impact recycling practices, often beyond an individual's control.

To recycle and recover more of their waste, the residents in Gympie, have expressed a need for Council to:

- Deliver information to improve residents' understanding of its recycling processes
- Introduce bin stickers to assist residents in undertaking their home recycling correctly
- Deliver enhanced recycling and cost-efficient services, mainly a source-separated service for organics
- Promote responsible disposal practices in general and educate the community on environmental concerns.

Over the next ten years through the delivery of this Strategy, Council will create education and behaviour change programs that have a strong focus on community engagement, waste reduction and recycling service information to give residents and the community the knowledge and tools to increase resource recovery and reduce contamination.

What are our key actions?

3.1 Identify and understand the needs of the community

3.2 Promote education that encourages resource-efficient and circular behaviour

3.3 Introduce interventions to encourage resource efficiency, reduce contamination and minimise illegal dumping

Measuring Success

Table 4: Measuring success for Focus Area 3

Target	2024 (baseline)	2027	2031	2034
Reduced Illegally dumped waste collected	34 tpa	10%	20%	30%
Kerbside dry recycling contamination rate	13.50%	< 10%	< 10%	< 10%
Domestic waste per household (kg)	525	490	450	394

Focus Area 4:
Creating a resource efficient community

Provide user friendly services to our community that increase resource recovery and reduce waste disposed to landfill.

Provision of user-friendly services

Council will strive to provide a future waste and recycling collection and processing system that is user-friendly and complies with current legislation and regulations.

The Waste Hierarchy is a waste management framework that prioritises higher order resource recovery options for materials as opposed to disposal of materials to landfill. The concept of this framework is to prioritise moving waste "up the hierarchy" to options with waste avoidance and reduction being the most preferable management options. This includes encouraging the minimisation of waste through conscious choices such as reducing unnecessary consumption, selecting products with less packaging, using products for longer and opting for reusable items or materials which contain recycled content.

Public waste bin infrastructure to service the Region is a challenge. It comes with a significant cost to manage and service, particularly in tourist areas in peak times. Ensuring this infrastructure meets the needs of the community and provides appropriate environmental protection and public health services is essential.

Ongoing feedstock to support a resource-efficient circular economy

As discussed in **Focus Area 1**, introducing innovative reprocessing to reduce waste sent to landfills is a key initial step in establishing an efficient and circular economy. Councils can establish Resource Recovery Precincts to drive local recovery options and provide economic, social, and environmental benefits. However, to develop a local Circular Economy, there must be both an ongoing supply of feedstock and a demand for reprocessed/ refurbished and remanufactured products. To create local secondary markets, the provision of source-separated collection services needs to increase as well as the local and regional waste infrastructure.

Cost-efficiency is key

Expanding its source-separated kerbside services (e.g. Organics) and making current services more resource-efficient is key providing a sustainable long-term waste and resource recovery solution. When introducing new source-separated kerbside services, Council will need to consider the cost-effectiveness of any new recycling initiative.

4

What are our key actions?

4.1 Enhance kerbside services to ensure efficient resource use and accessibility for all demographics.

4.2 Integrate and leverage new technologies and innovations in kerbside contracts whenever possible.

4.3 Establish systems to enable and promote reuse and waste avoidance.

4.4 Improve resource recovery opportunities and service efficiency for managing public place waste.

Measuring Success

Table 5: Measuring success for Focus Area 4

Target	2024 (baseline)	2027	2031	2034
Landfill diversion MSW	30%	40%	45%	50%
Landfill diversion C&I	31%	40%	45%	50%
Landfill diversion C&D	88%	90%	95%	95%
Overall landfill diversion	**50%**	**57%**	**62%**	**65%**
Recycling targets/rate	52%	55%	59%	63%

5

Focus Area 5:
Governance and Regional Collaboration

A strong waste management governance system to promote and encourage resource recovery and partnerships with surrounding regional communities to enhance our collective waste services to meet State and National targets.

A strong governance system

In this Focus Area, Council will develop a strong governance system and regional collaboration to help it achieve its desired strategic outcomes.

A Strategy needs a strong Governance system to achieve successful outcomes. This requires Council to have a strong foundation of baseline data to measure performance, and to develop necessary documentation and templates to provide ongoing progress updates on how the strategy is performing.

The delivery of the strategic outcomes must also be supported by Council, developing guidelines and policies required to expand the current service offering and introduce recycling opportunities in the Region.

Strong budget to support change

The delivery of the Strategy needs to be funded through a strong budget. The foundation for a strong budget is that it is supported by rates, fees and charges that is set so that services are charged at a level where they are representative of the true cost of service provision, but low enough to not encourage undesirable behaviours such as illegal dumping.

To further drive behaviour change and assist Council in achieving strategic outcomes is to introduce financial incentives to increase desired behaviour. This can be achieved by developing a pricing structure that will encourage residents/ customers to minimise their waste and increase resource efficiency. Rebates and pay-as-you-throw systems may also form an important part of driving sustainable and circular behaviour.

Leverage regional collaboration

It is the Council's responsibility to provide services for the community to manage its waste, however, this task can be more complicated and expensive for regional local governments compared to large metropolitan local governments. As the volumes of waste being generated are smaller in regional areas, it is a significant financial investment to establish a new waste facility to manage small volumes of material.

Working on achieving economies of scale, collaboration and strong partnerships becomes imperative. This can help to ease the associated financial pressures of regional waste processing. Council already has strong relationships with surrounding Councils and is committed to continue working collaboratively to achieve the targets outlined in the Regional Waste and Resource Recovery Plan.

Council will continue with its current regional collaboration and strive to work together with the surrounding local governments and industry to resourcefully coordinate waste management for the Region through cost-effective and feasible options for both kerbside collection services and reprocessing of material. Successful local and regional collaboration supported by strong governance will be key to drive future waste management initiatives in the Region.

5

What are our key actions?

5.1 Advocate for Strong Regional Collaboration and internal Governance to deliver on the Strategy.

5.2 Develop a compliant, reliable system that records data from all waste streams to measure performance and progress.

5.3 Develop waste management policies and best practices to accommodate the diverse needs and preferences of the community and challenging demographics.

5.4 Integrating finance and budget to provide a waste management system that ensures long-term sustainable success.

Appendix A

Identified Actions to Implement this Strategy

Identified key and sub-actions for each of the five focus areas Council has committed to aim towards delivering during the 10 years are listed below. This list is not necessarily inclusive of all actions required but will form a base for Council to develop a more detailed implementation plan. The actions will help Council guide and monitor progress and impact. Each of these sub-actions has been measured on how they contribute towards potential landfill tonnage diversion, cost impact and reduction of carbon to achieve zero emission.

Table 6: Colour code*

Costing impact	**High cost:** over $1M per annum in operational cost and/or high investment cost over $5M in initial investment	**Moderate cost:** between $200K to $1M in operational cost and/or around $1M to $5M in initial investment	**Low cost:** around $100K in operational cost and/ or under $1M in initial investment
Landfill diversion	**Low diversion:** less than 200 tonnes per annum (tpa), less than 1% of total tonnage diverted from landfill	**Medium diversion:** 200-1,000tpa, 1-5% of total tonnage diverted from landfill	**High diversion:** over 1,000tpa, over 5% of total tonnage diverted from landfill
Reduced Carbon Emission[1]	**Small effect** on emissions 500-2,000 tonnes carbon dioxide equivalents (tCO2-e) annually	**Medium carbon** emissions reduction 3,000 – 10,000 tCO2-e annually	Will likely **greatly contribute** to emission reduction greater than 10,000 tCO2-e

*It should be noted that the assessment has been made on assumptions made at the time of making the strategy and may differ once the action is implemented (e.g. depending on final scope per action). The assessment should be seen as a comparative summary on the possible impact each action will have.

Individual targets have been allocated per Focus area to measure success in each area. Each of the actions was also prioritised into:

S = Short (1-3 years)

M = Medium (4-7 years)

L = Long (8-10 years)

O = Ongoing (yearly required activity) term actions.

1 FOCUS AREA 1: Optimise Waste and Resource Recovery Infrastructure

	Time	Strategy Actions	Consideration		
			$	♻	
1.1		**Ensuring compliant and resilient waste infrastructure that has the capacity to manage future waste flow**			
1.1.1	S	Determine the most suitable option for Council to ensure future waste and recycling capacity is secured. Complete ongoing Bonnick Road upgrade work. Then undertake landfill and future master planning to identify the most suitable option to secure future landfill capacity. This will consider: 1) New landfill within the Region that has at least 100 years disposal capacity 2) Waste management facility to bulk up waste for transport to an out of region landfill or EfW facility 3) EfW facility in a local precinct Collaboration with surrounding Councils may be required for these options.	◆	◆	◆
1.1.2	L	Explore landfill gas capture for producing electricity to offset operational costs. Although the amount of LFG produced today is not enough now to capture in a cost-efficient way, this may change in the future.	◆	◆	◆
1.1.3	M	Investigate opportunities to utilise old landfill sites for renewable energy/waste precinct/solar farms.	◆	◆	◆
1.2		**Improve resource recovery opportunities**			
1.2.1	S	Review current infrastructure at waste management facilities for options to expand source separation to: 1) Increase resource recovery 2) Improve the payment and data collection system at all waste management facilities 3 Improve site layouts. Compare different layout concepts for example Recycling Street; L-bin system 4) Work with contractors to set up resource recovery targets KPIs per site	◆	◆	◆
1.2.2	M	Embrace the CRS system and implement CRS collection points at all waste management facilities to ensure CRS revenue is captured at all sites. Include CRS collection points in future contracts.	◆	◆	◆
1.2.3	M	Promote and support current and future Product Stewardship Schemes at the waste management facilities (e.g., textiles, car seats, polystyrene, mattresses, etc).	◆	◆	◆

$ Costing Impact — ◆ High ◆ Moderate ◆ Low

♻ Landfill Diversion — ◆ Low ◆ Medium ◆ High

Reduced Carbon Emission (tCO_{2-e}) — ◆ 500-2,000 ◆ 3,000-2,000 ◆ 10,000>

1 FOCUS AREA 1: Optimise Waste and Resource Recovery Infrastructure

	Time	Strategy Actions	Consideration		
1.3		**Foster and embrace resource recovery and circular economy principles in waste infrastructure**			
1.3.1	-	Increase C&I and C&D diversion opportunities. Consider offering cost-efficient services for source separation options at waste management facilities (plasterboard, mattresses, repair services, etc.).	◆	◆	◆
1.3.2	-	Develop infrastructure to introduce the 10Rs of the circular economy: Refuse, Reduce, Resell/Reuse, Repair, Refurbish, Re-manufacture, Repurpose, Recycle, and Recover by expanding the possibilities for residents to engage in the 10Rs activities as per the waste hierarchy, in the community and at the waste management facilities. This may include investigating the possibility of improving and updating current Tip Shops to offer a more appealing shop front including providing undercover areas, expanding service options such as introducing repair cafes, expanding re-use areas, offering tool/textile libraries, and expanding recycling options at waste management facilities to encourage more sustainable consumption habits. Seek to establish a network with charities, recycling organisations, and community groups to support the introduction of these actions.	◆	◆	◆
1.3.3	L	Investigate the feasibility of introducing a potential circular economy and resource recovery precinct (RRP). Collaboration with government and industry to create industrial symbiosis suitable for the Region.	◆	◆	◆

Time S = Short (1-3 years) M = Medium (4-7 years) L = Long (8-10 years)
O = Ongoing (yearly required activity) term actions

2 FOCUS AREA 2: Promoting an Organics Circular Economy

	Time	Strategy Actions	Consideration		
			$	♻	
2.1		**Minimising food waste at the source**			
2.1.1	M	Promote and educate residents and commercial customers on the importance of reduction of food waste. Leverage the Love Food Hate Waste Campaign, which is promoted by the Queensland Government.	◆	◆	◆
2.1.2	M	Work with commercial customers and local industry (e.g. agriculture and livestock industry) to identify where organic facilities and processing could be of value for the Region. Investigate if there are synergies to combine feedstock collected by the Council to create future renewable energy/fuel/recycled compost for the Region.	◆	◆	◆
2.2		**Investigate and implement organic kerbside diversion (FOGO) in the community**			
2.2.1	S	Investigate the feasibility of rolling out a 3-bin kerbside system trial to include an organic service (GO/FO/FOGO). **Key Decision Points for third bin roll out:** • Number of households (eligible area) • Type of collection, GO vs VOGO vs FOGO, etc. • How to roll it out (step by step), implementation plan, mandatory vs opt-in vs voluntary • Frequency of servicing of each stream • Financial implications, increased rates • Contamination monitoring system (manual vs AI) • Processing options • Diversion target (min to max) considers best practice vs worse/average case for tonnage calculation.	◆	◆	◆
2.2.2	M	Implement a 3-bin kerbside system with organic service (GO/FO/FOGO) to increase waste diversion from landfill and close the loop on organic material based on the findings from action 2.2.1.	◆	◆	◆

$ Costing Impact — ◆ High ◆ Moderate ◆ Low

♻ Landfill Diversion — ◆ Low ◆ Medium ◆ High

Reduced Carbon Emission (tCO_{2-e}) — ◆ 500-2,000 ◆ 3,000-2,000 ◆ 10,000>

2 FOCUS AREA 2: Promoting an Organics Circular Economy

	Time	Strategy Actions	Consideration		
			$	♻	
2.3		**Promote and explore alternative FO Services**			
2.3.1	M	Investigate commercial FO service provision in high-density hospitality areas and touristic areas. Consider community composting options as well as alternative options (e.g. insect farming, dehydrators, composers, anaerobic digestion, co-digestion) suitable for small-scale regional collaborations. Target areas are Rainbow Beach and general commercial hospitality sector in urban areas.	◆	◆	◆
2.3.2	M	Consider options to support and advocate home and community composting initiatives (explore the cost, savings, rewards, and potential composting rebate).	◆	◆	◆
2.4		**Close the loop and develop local end markets for recycled organics**			
2.4.1	S	Investigate and implement processing capacity for organics (GO, FO, or FOGO) to support organic kerbside collection kerbside collection introduced in action 2.2.1 and 2.2.2. Collaborate through existing partnerships with surrounding Councils and investigate new private options.	◆	◆	◆
2.4.2	M	Council to promote the use of recycled organics in internal contracts and educate the local agriculture industry on the benefits of using recycled organics. Promote the reuse of organic recycled compost in Council operations and local food production.	◆	◆	◆

Time S = Short (1-3 years) M = Medium (4-7 years) L = Long (8-10 years)
O = Ongoing (yearly required activity) term actions

3 FOCUS AREA 3: Championing Behaviour to Reduce Waste and Increase Resource Recovery

	Time	Strategy Actions	Consideration		
3.1		**Identify and understand the needs of the community**			
3.1.1	S	Develop a standard customer satisfaction survey to measure satisfaction and the needs of the community. Undertake the satisfaction surveys biannually to receive feedback on how well received the service provision is by residents, tourists/visitors, and other commercial clients.	◆	◆	◆
3.2		**Promote education that encourages resource-efficient and circular behaviour**			
3.2.1	S	Establish a 10-year education and behavioural plan to undertake ongoing marketing of key messaging in this strategy. This will include activities such as social media campaigns and continue working and improving the kNOw Waste Education Program. Examples of activities that the plan should include: • Participate in community events and presentations to share the key messaging in this strategy. • Yearly social and face-to-face campaigns to educate residents on waste reduction, recycling, and responsible waste management practices, effectively promoting sustainable habits within the community. • Ongoing updates on resource recovery options at the waste management facilities. • Promote the habits of the waste hierarchy incorporating the 10Rs • Develop and implement the "use of the right bin program and policy".	◆	◆	◆
3.2.2	M	Develop a strategy for targeting waste behaviour in tourist areas.	◆	◆	◆
3.2.3	S	Implement an education campaign specifically targeting the modification of household waste reduction/minimisation habits and behaviours. Combine with action 2.1.1. and leverage of existing campaigns, for example, Love Food Hate Waste.	◆	◆	◆
3.2.4	S	Promote behaviour that aims to reduce toxicity in waste streams. This can be done by promoting safe handling, collection and disposal of hazardous items such as batteries, chemicals, gas bottles, asbestos etc. via methods other than disposal in waste bins.	◆	◆	◆
3.2.5	L	Develop a campaign to educate and empower the community to shift towards circular behaviour.	◆	◆	◆

Costing Impact: ◆ High ◆ Moderate ◆ Low

Landfill Diversion: ◆ Low ◆ Medium ◆ High

Reduced Carbon Emission (tCO_{2-e}): ◆ 500-2,000 ◆ 3,000-2,000 ◆ 10,000>

3 FOCUS AREA 3: Championing Behaviour to Reduce Waste and Increase Resource Recovery

	Time	Strategy Actions	Consideration		
3.3		**Introduce interventions and incentives to encourage resource efficiency, reduce contamination and/or illegal dumping**			
3.3.1	S	Establish an education and coaching program to monitor yellow-lid recycling bins to reduce contamination and maximise waste diversion from landfills by providing direct feedback and information to residents when action is needed. The system could consist of: • Recycling bin inspections and using bin stickers to communicate • Issuing warnings to residents for incorrect bin use (e.g., warning stickers) • Face-to-face consultation with residents (where contamination issues are identified) to offer support and guidance on correct bin use • Consultation with drivers to identify offending/problem collection areas • Leveraging the latest technologies as Artificial Intelligence (AI) for contamination and illegal dumping monitoring further streamlines waste management processes.	◆	◆	◆
3.3.2	M	Reduce Illegal dumping by considering a human-centred approach to investigate the cause of illegal dumping and how to target information to trigger changed behaviour. This action is linked to the availability of funding.	◆	◆	◆

Time S = Short (1-3 years) M = Medium (4-7 years) L = Long (8-10 years)
O = Ongoing (yearly required activity) term actions

4 FOCUS AREA 4: Creating a Resource Efficient Community

	Time	Strategy Actions	Consideration		
4.1		**Enhance kerbside services to ensure efficient resource use and accessibility for all demographics.**			
4.1.1	M	Explore opportunities to introduce innovative solutions and address current operational challenges.			
4.2		**Implement and leverage new technology and innovations in kerbside contracts.**			
4.2.1	L	Explore opportunities in new contracts for collection, processing, and other services to introduce innovative solutions and address current operational challenges.			
4.2.2	S	Investigate options to measure waste at regional waste management facilities.			
4.3		**Improve resource recovery opportunities and service efficiency for public place waste infrastructure**			
4.3.1	M	Explore solutions for tourist areas where a lot of waste and illegal littering occurs. Investigate systems that minimise waste collected in public place bins (e.g. reusable cup and container schemes, which avoid the use of single-use items and improve the overall recovery rate).			
4.3.2	M	Introduce CRS options for public place bins, and/or add more CRS points to the current infrastructure.			
4.3.3	M	Investigate applying future smart bin technology (e.g., with sensors) to public place bins to reduce the collection costs or monitoring cameras on challenging sites. This technology could increase efficiency in more remote areas.			
4.3.4	M	Review locations of all current public place bins to ensure community needs are met, bins are in correct locations and being used.			

Costing Impact: High, Moderate, Low

Landfill Diversion: Low, Medium, High

Reduced Carbon Emission (tCO_{2-e}): 500-2,000, 3,000-2,000, 10,000>

5 FOCUS AREA 5: Governance and Regional Collaboration

	Time	Strategy Actions	Consideration		
5.1		**Advocate for strong regional collaboration and internal governance to deliver on the strategy**			
5.1.1	–	Develop an internal implementation (project) plan for this Strategy, with yearly milestones, allocated budget and key stakeholders and their responsibilities.	◆	◆	◆
5.1.2	–	Network and actively seek commercial, policy, and government partnerships, participate in regional meetings and industry working groups to: 1) Develop key actions in the WBB strategy 2) Assist in developing solutions to achieve this strategy.	◆	◆	◆
5.1.3	–	Establish a local working group to network with local industry (e.g. forestry/ agriculture/ manufacturing industry) and internal stakeholders to assess the feasibility of establishing a local Resource Recovery Precinct that promotes circular economy initiatives, bioeconomy, and industrial symbiosis for local industry.	◆	◆	◆
5.1.4	L	Establish a working group to introduce a sustainable and circular procurement framework. Create a reporting structure to follow up on how often the framework is used.	◆	◆	◆
5.2		**Develop a compliant, reliable system that records data from all waste streams to measure performance & progress**			
5.2.1	S	Undertake annual waste audits for MSW including self-haul, C&I & C&D waste streams (mainly general waste) to inform and understand the composition and progress made.	◆	◆	◆
5.2.2	S	Develop a template and a system to calculate a yearly baseline to measure annual waste performance. Develop KPIs aligned with this strategy to enable yearly follow-up of the targets in the new strategy.	◆	◆	◆
5.2.3	M	Consider undertaking waste audits of Illegal dumping and public place waste/recycling streams (bins). The data will identify the composition and contamination of illegal dumping and public place streams to identify future opportunities for resource recovery including CRS recycling.	◆	◆	◆
5.2.4	O	Maintain a waste management system that is safe and complies with current regulations by undertaking regular compliance reviews to ensure services do not cause harm to human health and local environment.	◆	◆	◆

Time S = Short (1-3 years) M = Medium (4-7 years) L = Long (8-10 years)
O = Ongoing (yearly required activity) term actions

5 FOCUS AREA 5: Governance and Regional Collaboration

	Time	Strategy Actions	Consideration		
			$	♻	
5.3		**Develop waste management policies and best practices to accommodate the diverse needs and preferences of the community and challenging demographics**			
5.3.1	M	Develop guidelines for Multi-Unit Dwellings (e.g. high-rises, townhouses, duplexes) that consider how waste is managed in these developments.	◆	◆	◆
5.3.2	M	Develop and introduce sustainability guidelines/policy for local events.	◆	◆	◆
5.4		**Integrating finance and budget to provide a waste management system that ensures long-term sustainable success**			
5.4.1	O	Embed financial planning and budgeting into every step for long-term sustainability. Conduct a 10-year budget plan that aligns with the identified strategy actions and initial assessments made with developing this strategy. Undertake annual reviews to follow up and revise.	◆	◆	◆
5.4.2	M	Provide financial incentives for customers who choose to separate their self-haul loads at the waste management facilities.	◆	◆	◆
5.4.3	O	Actively seek funding to support future development of the strategy actions.	◆	◆	◆

Time S = Short (1-3 years) M = Medium (4-7 years) L = Long (8-10 years)
O = Ongoing (yearly required activity) term actions

Costing Impact
◆ High ◆ Moderate ◆ Low

Landfill Diversion
◆ Low ◆ Medium ◆ High

Reduced Carbon Emission (tCO_{2-e})
◆ 500-2,000 ◆ 3,000-2,000 ◆ 10,000>

Appendix B

Strategic Context and Alignment for Gympie

This Waste Strategy and Action Plan has been guided by the following global, national, regional and local policy settings.

Globally

UN Sustainable Development Goals

In 2015, United Nations (UN) members adopted the 2030 Agenda for Sustainable Development and created 17 Sustainable Development Goals (SDG) which is a global call to action providing a shared blueprint to bring peace and prosperity to the people and planet. This Waste Strategy aims to deliver on SDGs 9, 11, 12 and 13.

Federal Government

National Waste Policy (2018) and National Waste Action Plan (2019)

In 2018 the Federal Government released its National Waste Policy, followed by the *National Waste Policy Action Plan* in 2019, as issued by the Department of Climate Change, Energy, the Environment and Water (DoCCEEW) to provide a framework of targets and to drive actions on waste management and resource recovery across Australia. It also aims to foster a local circular economy in Australia. This has encouraged the development of further strategic plans across Australia. Key targets from the Plan include:

- Banning the export of waste plastic, paper, glass and tyres, commencing in the second half of 2020
- Reducing the total waste generated in Australia by 10% per person by 2030
- Achieving an 80% average recovery rate from all waste streams by 2030
- Significantly increasing the use of recycled content by governments and industry
- Phasing out problematic and unnecessary plastics by 2025
- Halving the amount of organic waste sent to landfill by 2030.

State Government – Department of Environment, Science and Innovation

Queensland Waste Management and Resource Recovery Strategy and Organic Strategy and Action Plan 2022-2023 and other guiding documents

Following the Federal government's National Waste Policy, the Department of Environment, Science, Tourism and Innovation (DETSI) issued the *Queensland Waste Management and Resource Recovery Strategy* in 2019 and the supporting Queensland Organics Strategy and Action Plan 2022-2032 with targets set for 2030. These

two key documents together with a number of guiding documents (refer to list below) will drive a fundamental shift in the way waste is managed in Queensland and support the transition to a circular economy. A key driver which underpins each of these strategies is the implementation of a waste disposal levy to drive landfill diversion solutions 'higher' up the waste hierarchy. To support Queensland's transition to a circular economy, the Queensland Government is also progressing a number of key actions as follows:

- Respecting Country – A sustainable waste strategy for First Nation communities
- Keeping Queensland Clean: the Litter and Illegal Dumping Plan
- Queensland's Plastic Pollution Reduction Plan
- Queensland Organics Strategy and Action Plan
- Queensland Resource Recovery Industries 10 Year Roadmap and Action Plan
- Energy from Waste Policy and Guideline
- End-of-life electrical and electronic products are also a priority under the Strategy.

The most relevant key targets from the Queensland Waste Management and Resource Recovery Strategy and the Queensland Organics Strategy 2022-32 are listed in Table 7 below.

Table 7: Queensland Government Waste Strategy targets

Year	QLD State Waste Strategy Targets (all waste streams)		
	2030	2040	2050
Waste reduction (per capita)	15%	20%	25%
Waste diversion from landfill	80%	85%	90%
Recycling rate (all streams)	65%	70%	75%
Organic Waste Action Plan	Halving the amount of food waste generated 80% diverted from landfill 70% recycling rate	N/A	N/A

Waste Reduction and Recycling and Other Legislation Amendment Act 2023

The *Waste Reduction and Recycling and Other Legislation Amendment Act 2023* includes provisions which seek to address the following:

- Introduces the circular economy principle as a key policy principle, moves the definition of waste from the *Environmental Protection Act 1994* to the *Waste Reduction and Recycling Act 2011* to provide greater clarity and certainty around waste and the circular economy
- Focuses on improving plastic recycling and littering by introducing a ban on single use plastic items and a ban on the outdoor release of lighter-than-air balloons from 1 September 2023
- Removes the general exemption to the waste levy for clean earth that is disposed of in a waste disposal site.

Queensland's Clean Economy Jobs Act and 2035 Clean Economy Pathway (2024)

In April 2024, the Queensland Government passed the *Clean Economy Jobs Act 2024* which enshrines in legislation Queensland's aims to drive clean economy investment and jobs as well as an emissions reduction target of 75% below 2005 levels by 2035 and a commitment of net zero emissions by 2050. The 2035 Clean Economy Pathway outlines some of the key existing work currently underway by the Queensland Government to meet the 2035 targets and further actions to meet net zero by 2050[6].

6 https://www.energyandclimate.qld.gov.au/about/strategy/clean-economy-pathway

2035 Clean Economy Pathway (2024)

In April 2024, the Queensland Government passed the *Clean Economy Jobs Act 2024* which enshrines in legislation Queensland's aims to drive clean economy investment and jobs as well as an emissions reduction target of 75% below 2005 levels by 2035 and a commitment of net zero emissions by 2050. The 2035 Clean Economy Pathway outlines some of the key existing work currently underway by the Queensland Government to meet the 2035 targets and further actions to meet net zero by 2050[6].

Regional – Wide Bay Burnett Regional Plan (2023)

The Regional Waste & Resource Recovery Plan for Wide Bay Burnett (WBB) Region was recently developed in 2023 and covers the LGAs of Bundaberg Regional Council, Cherbourg Aboriginal Shire Council, Fraser Coast Regional Council, Gympie Regional Council, North Burnett Regional Council and South Burnett Regional Council.

This Waste Strategy has been developed with consideration of the regional targets outlined in the WBB Regional Plan. Key focus areas for the WBB Regional Plan are:

- Landfill capacity
- Regional processing or remanufacturing of recyclable materials
- Finding local markets for recycled materials
- Foster a community behaviour towards recyclable outputs
- Policies to support greater recovery and recycling.

Targets contained in the WBB Regional Plan are presented in Table 8 below.

Table 8: WBB Regional Plan targets

Regional Targets	Council Current Performance	Current (WBB Region)	2030	2040
Resource recovery target (all streams)	52%	52%	59%	65%
Kerbside organic diversion	0%	0%	24%	30%
Organic contamination rate	N/A	N/A	< 5%	< 5%
Kerbside diversion rate (excl organics)	16%	19%	25%	27%
Kerbside recycled (tpa)	3,086	3,086	4,514	5227
Kerbside dry recycling contamination rate	13.50%	16-18%	< 5%	< 2%

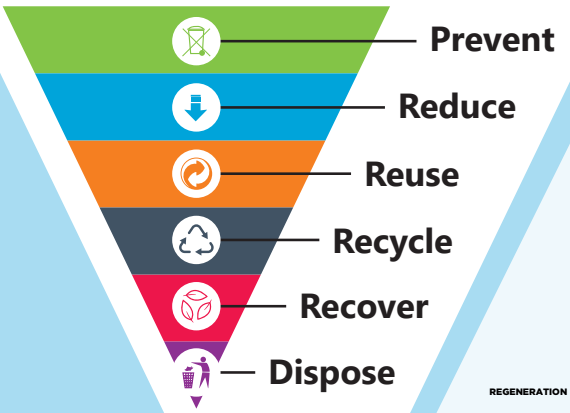
Principles of Waste Management

Principle 1: Transition from Linear to Circular Economy

The Linear (take-make-waste) Economy is our current system where raw materials are extracted and used to make a product, which are then used and/or consumed, and then discarded. In a linear economy, products are not used to their full potential and are ultimately discarded without a second life.

To limit the amount of waste being disposed to landfill due to our linear economy approach to resources, many jurisdictions around the world have adopted 'The Waste Hierarchy" (see **Figure 5**: Waste Hierarchy, QLD Waste Management and Resource Recovery Strategy). The Waste Hierarchy prioritises more sustainable resource management options over less sustainable resource management options. E.g. 'Recover' is prioritised over 'Dispose' and 'Prevent' is prioritised over all other management options in the hierarchy.

More recently, many jurisdictions, including the Queensland and Australian Governments, have adopted the Circular Economy model as a preferred approach for managing waste. Circular Economy refers to an economic model that treats all waste materials as a resource with value, and where sharing, leasing, repairing, re-using, refurbishing, and recycling existing materials and products are a priority over their disposal. The Circular Economy model seeks to keep resources in circulation at their highest value for as long as possible, thus limiting the need for production and disposal. It is important to note that the Circular Economy model prioritises resource management options in the same order as the Waste Hierarchy.



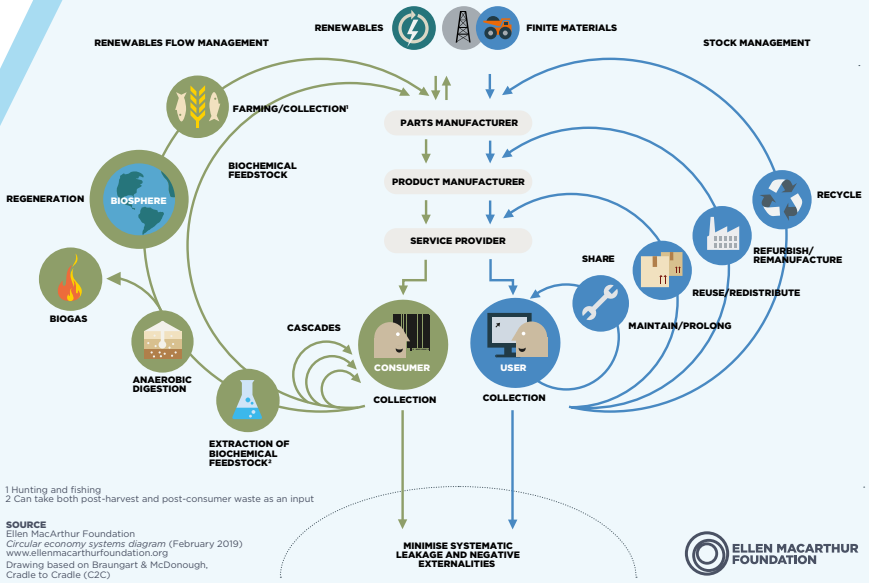


Figure 5: Waste Hierarchy, QLD Waste Management and Resource Recovery Strategy

There are three key principles, defined by Ellen McArtur to help a community move toward a Circular Economy. Ellen MacArthur is a charity that was founded in 2010 and is committed to creating a circular economy. Since their creation, they have emerged as a global thought leader in Circular economy, according to Ellen MacArthur foundation (2013) the principles of Circular economy are:

- Designing out waste and negative externalities; in a CE waste is a flaw of design and we need to shift out mindset from recovering waste to avoid generating waste in the first place
- Keeping products and materials in use at the highest possible value at all times; Introduce strategies to ensure that products and materials stay within the economy for as long as possible introducing: rental concepts, reuse, redistribute, repair, etc.
- Regenerating our natural eco-systems: In nature there is no waste, everything is food and a resource for something "a leaf falls from a tree and feeds the forest". Attempt to return valuable nutrients to the biosphere (soils, waters, and atmosphere).

The Ellen McArthur Foundation also created the Butterfly diagram (refer to **Figure 5**) to show how society, in a Circular economy, can best keep the materials circulating for as long as possible. The fewer process steps a material loop must go through for the loops to be reused, the better.

Implementing these mechanisms improves an economy which only uses the 3Rs (reduce, reuse, recycle) to a more circular economy that uses 10Rs (refuse, redesign, reduce, reuse, repair, repurpose, refurbishment, remanufacturing, recycle, recover). Refer to **Figure 6**.

The Council aims to transition from our current linear economy towards a circular economy. A circular economy will help us meet our landfill diversion targets and contribute to the creation of jobs and economic growth for the Gympie Region. It will also foster regional collaboration with surrounding LGAs and will help retain resources within our community.

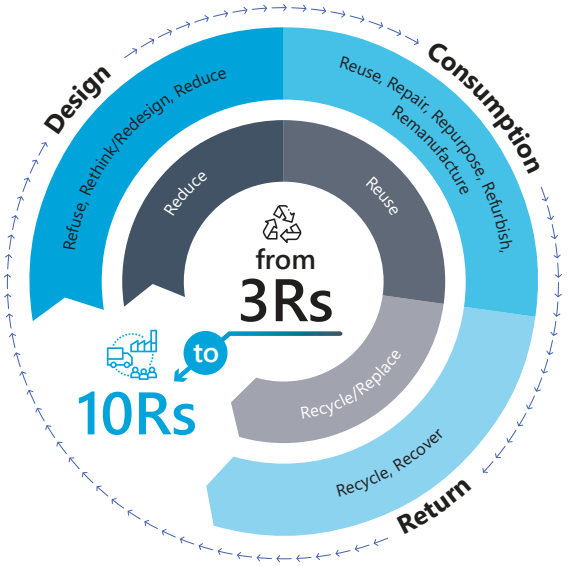


Figure 6: Moving from 3Rs to 10Rs

Principle 2: Regional collaboration and economies of scale

Waste management is an essential service for communities, however implementing improved practices can be very challenging for more regional Councils due to smaller quantities of materials and greater distances to processing markets which results in increased overall costs to regional communities when compared to large urban cities. These challenges can be overcome by pooling resources and combining feedstocks (materials) with neighbouring LGs and forming partnerships with local industry. The combined capacities obtained through such collaboration can provide more cost-effective outcomes.

Council intend to partner with surrounding LGs through the framework provided by the Regional Waste Plans by seeking opportunities to pool resources, share knowledge, and efficiently coordinate the management of waste through cost-effective and feasible service options.

Principle 3: Embracing Product Stewardship Schemes

Product stewardship schemes encourage the reuse and recycling of problematic waste streams. Waste streams currently on the product stewardship scheme list are solar photovoltaic (PV) systems, electrical and electronic products (e-waste), oil containers, child car seats, clothing textiles, problematic and unnecessary single-use plastics, matrasses, plastic in health-care products, end-of-life tyres. These schemes and their evolvement during the next 10 years, will serve as an ongoing indicator for Council as to what streams could be further source-separated at Waste management facilities to increase resource efficiency.

Principle 4: Apply the Proximity Principle to achieve the highest environmental and local value

The proximity principle states that wastes should be managed as close to their source of generation as possible, minimising transport. Adhering to this principle involves choosing technologies and options that locally process or separate wastes, such as promoting home composting instead of transporting FO to a landfill. It is preferable to transport waste where the destination will be of a higher tier in the waste hierarchy (e.g. transporting for recycling instead of landfilling locally) however where transport is necessary, it is typically most cost-effectively achieved by sorting, storing, compacting, and baling wastes. With appropriate storage arrangements, which include ensuring that wastes are kept dry and separate, materials can be stored until enough is available for transport in bulk with a truck or barge. If a local viable solution exists, this will be the preferred option for Council.

Principle 5: Leverage Container Deposit Scheme

The Container Deposit Scheme (CRS) in Queensland operates on the principle of incentivising recycling by placing a monetary value on eligible beverage containers. The scheme aims to reduce litter, increase recycling rates, and promote a circular economy. Under the CRS, consumers pay a small deposit, usually 10 cents, when they purchase beverages in eligible containers. They can then return these containers to designated collection points to reclaim the deposit. This not only encourages individuals to recycle but also reduces the environmental impact of litter. By attaching a financial incentive to the act of returning containers, the CRS fosters a culture of environmental responsibility and resource conservation, ultimately contributing to the sustainability goals of Queensland. Gympie shall use the scheme to its advantage whenever possible to ensure they leverage collection services provided by the scheme as well as revenues.

Principle 6: Provide services that contribute towards a Climate-Neutral Environment

The Queensland climate is changing which is triggering the requirement for all Councils to provide services to assist their communities to become more resilient and sustainable. Queensland is committed to achieving net zero emissions by 2050 and as such legislated a 75% reduction target by 2035 to protect its world-class environment. Waste Management, particularly landfill operation is strongly linked to the production of greenhouse gas emissions. This Strategy has included high-level assessments of the impact that each action may have on the reduction of greenhouse gases.

Principle 7: Budget and value for money – Integrating Finance and Budget for Sustainable Success:

Council is servicing a small population located in a wide-spread region, to a limited budget. As such, when evaluating different options and solutions, both the cost impact needs to be considered to determine the value for money that each strategy option to ensure each option has the most value for money for Council. This strategy is embedding financial planning and budgeting into every step for long-term sustainability.

Principle 8: Community Acceptance

Council is dedicated to implementing best practices that make sense for the Region and are accepted and embraced by its community. A key element will be to encourage current behaviour and foster behavioural change that develops a resource-efficient and resilient community.

Appendix C
Abbreviations

Table 9: Abbreviations

Abbreviations	
C&I	Commercial and Industrial
C&D	Construction and Demolition
CRS	Container Deposit Scheme
CO2	Carbon Dioxide
DETSI	Department Of Environment, Touriam, Science and Innovation
DoCCEEW	Department Of Climate Change, Energy, The Environment and Water
EfW	Energy From Waste
FOGO	Food Organics and Garden Organics
Council	Gympie Regional Council
LG	Local Government
LGA	Local Government Area
MRF	Materials Recovery Facility
MSW	Municipal Solid Waste
PFAS	per- and polyfluoroalkyl substances
QLD	Queensland
RRP	Resource Recovery Precincts
TPA	Tonnes per annum
VOGO	Vegetarian Organic and Garden Organics
WBB	Wide-Bay Burnett

Gympie Regional Council
1300 307 800
2 Caledonian Hill (PO Box 155)
Gympie QLD 4570
gympie.qld.gov.au