

Waste Reduction and Recycling Plan

----- 2023 - 2030



 **Central Highlands**
Regional Council



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Acknowledgement of Traditional Owners

Central Highlands Regional Council acknowledge the First Peoples – the Traditional Owners of the lands where we live and work, and we recognise their continuing connection to land, water and community. We pay respect to Elders – past, present and emerging – and acknowledge the important role Aboriginal Peoples and Torres Strait Islanders continue to play within the Central Highlands region.



Foreword

Cr Kerry Hayes

Mayor



Managing waste in the regional setting of Central Highlands Regional Council presents significant challenges as well as many opportunities. As a community, we need to respond to change, and this document outlines how council will work with our community to better manage our waste and recycling efforts over the next decade.

Waste management and recycling has recently received unprecedented local, national and international media and public attention. This has assisted the community to understand the scale and complexity of the issues. Council must take the initiative in tackling waste issues locally.

This Waste Reduction and Recycling Plan focuses on providing a level of service to our residents that both exceeds neighbouring regions and is undertaken in a financially responsible manner. The plan looks into waste avoidance actions, expanding the kerbside collection services, developing and re-organising our resource recovery centres as well as providing improved access to recycling services. The Central Highlands Region is a great place to work, live and visit. Council's goal is to maintain and enhance our local environment while providing a better return to our community on investment in waste and recycling services.

This is an ambitious but realistic waste reduction and recycling plan with a focus on regionally-based solutions.





Driving towards net zero

WHY A PLAN?

Council has the responsibility to its ratepayers, residents and wider stakeholders to drive towards a net zero community including managing waste effectively and efficiently. A key component of this commitment is for council to adhere to environmental and safety legislation whilst operating in a fiscally responsible manner. This involves undertaking waste and recycling management programs and actions that are congruent to relevant legislation in an efficient manner.

Recent changes to both Federal and State Government legislation and policies coupled with market changes and increasing community expectations has resulted in the need for Council to review its current waste management and resource recovery infrastructure and services.

Due to its rural nature of the region, managing waste in the Central Highlands Local Government Area presents significant challenges as well as many opportunities. Council needs to respond to change, and this document outlines how council will work with the community to better manage its waste and recovered materials until 2030 (to be consistent with many state government documents).

Council's own 2022-2027 Corporate Plan identifies the following two long-term destination goals:

- Responsibly manage our natural environment
- Prepare for a low carbon future and adapt to a changing climate

These goals support the development of this Waste Reduction and Recycling Plan (WRRP).

WHAT'S THE PLAN?

Every local government in Queensland is required to have its own Waste Reduction and Recycling Plan (WRRP). Our council first adopted a WRRP in 2016 and has undertaken the required legislated reviews every three years which resulted in the current WRRP being amended in 2019. In 2022, again part of the required three-year review process, council developed a draft Resource Recovery (Waste Management) Strategy to better understand our current state and the challenges and future actions the council would take for effective waste management.

The draft strategy was placed on community consultation from the 26 May 2022 through to the 4 July 2022.

During this consultation hundreds of community members and stakeholders provided council with feedback on the draft strategy and the proposed actions. A core component of the feedback was through a survey.

The feedback received through this consultation process has determined that a new and revised WRRP is required to better reflect our region, our current state, future vision and clearly outlines actions needed over the next eight years to achieve the vision.

THE DRAFT STRATEGY 2019

The draft strategy released for community consultation included a detailed assessment of some of key issues including but not limited to:

- An overview of the waste collection service including the areas covered.
- An overview of waste infrastructure network (type and waste received).
- An examination of landfills activities including the current techniques and proposed actions.
- An estimation of current potential capital requirements and operating costs.
- Potential options associated improved resource recovery.



- Detailing management, monitoring and improvement methods.
- Identifying funding possibilities.

Council recognises the information contained in the Queensland Waste Management and Resource Recovery Strategy (2019) including the waste and resource management hierarchy.

Figure 1. Waste and resource management hierarchy

The primary objective is to prioritise waste avoidance, followed by the exploration of reuse and recycling options. Fuel production, energy generation, or disposal should be reserved for residual waste that is considered unsuitable or cannot be effectively managed through higher-order options. This hierarchy plays a crucial role in defining the priorities of the strategy and services as the foundation for the development of appropriate actions.

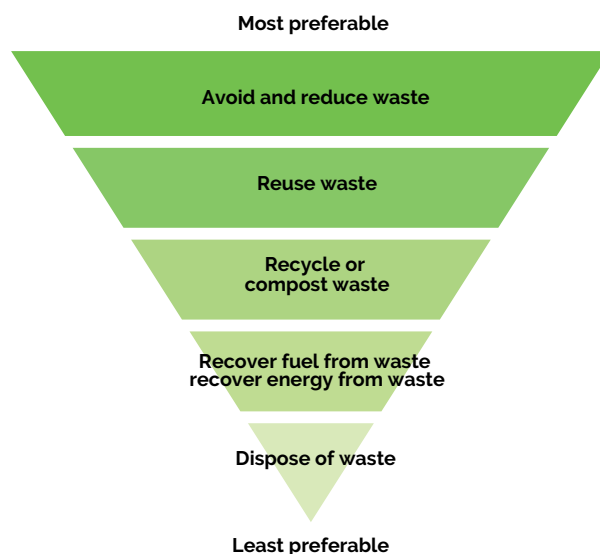
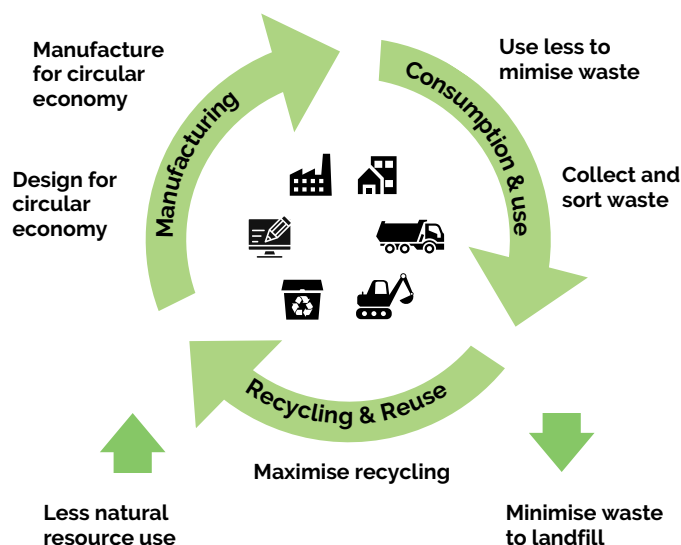


Figure 2: Circular economy

Council also recognises the circular economy that identifies elimination of waste and pollution, circulation of products and materials, and regeneration of nature.



The draft strategy provided excellent technology analysis for our region, however was determined to not be fit-for-purpose and not user-friendly to clearly articulate exactly what the focus of the council will be over the next eight years. So whilst the draft strategy will not form a final document, it remains an important background and technical document that has been used to shape this new WRRP.

The purpose of this WRRP is to outline council's overall strategic vision and objectives for recycling and waste management within the region. The plan is a community facing document that provides direction and future intent for council, businesses and local residents.

The vision and objectives are supported by the following actions that are included in the plan:

- Detailing the current and projected population, business activity and waste flows.
- Identification of waste reduction and recycling targets.
- The level of service for residents and businesses in the region.
- Identifying strategic actions for waste reduction, resource recovery of materials and recycling (that are generally consistent with this plan).



Vision and objectives

ADOPTED STRATEGIC VISION

Central Highlands Regional Council is a model regional organisation in effective waste and recycling management. Council works in collaboration with our partners and our community to deliver the expected level of service for a region of our size and scale.

To achieve the Vision, council has adopted the following Strategic Objectives:

- Reduce the volume of waste being generated (that needs to be managed) within the region by 25% over the next eight years until 2030.
- Operate compliant, environmentally responsible and commercially sustainable waste and resource recovery facilities.
- Provide a level of service that is of equal or exceeds the requirements of the state government and other adjacent local governments.
- Deliver residents and local businesses with an efficient and responsible waste collection and recycling services.
- For council to conduct its own procurement activities taking into account circular economy principles.

Actions noted in this plan are focused on achieving the vision and objectives (this is contained in Section 7 of this document).

- Wheelie bins (yellow ones at transfer station).
- Illegal dumping area – plastic waste from agricultural activities.
- Grazing area / mining.
- Shopping precinct with waste bins.

REGULATIONS

Federal and State governments have released a number of policies, plans and funding programs over the past few years. A summary of the pieces of legislation and relevant policies that relate to the strategy and operations of council are noted below.

National Waste Policy (2019) and Action Plan (2020):

Outlines the key federal government strategies including restrictions and bans on the export of waste (glass, tyres, plastic and cardboard) as well as other initiatives that actively promote reduction of waste coupled with increases in recycling.

Queensland Waste Management and Resource Recovery Strategy (2019):

Provides an outline of the key strategies to both reduce waste, increase recycling as well as adopting circular economy principles. This outlines the requirement for council to develop their waste management plans and strategies.

Following this strategy, the State Government has recently released the Queensland Organics Strategy which notes actions to reduce food and garden waste as well as processing actions and goals.

It is noted that the State Government has released several targeted funding programs for increasing recycling and resource recovery from landfill that council may be able to evaluate for suitable waste management and resource recovery projects and lodge an application for funding.

Container Refund Scheme: In 2019 the Queensland Government implemented a Container Refund Scheme in which residents and businesses can receive ten cents for each eligible container that is returned to container refund point.

This has resulted in less containers being landfilled as well as funds used to support community organisations. The scheme currently operates in Emerald.



Central Highlands Regional Council Plans and Policies:

Central Highlands Regional Council has developed several corporate documents including but not limited to:

- Corporate Plan 2022-27
- Budget (FY23) and Long-Term Financial Forecast
- Operational Plan 2022- 2023

The WRRP recognises and is consistent with Council's corporate goals and objectives including items that impact the WRRP such as:

- Council has a solid revenue base but needs to manage operational expenses closely. The organisational budget forecasts significant pressures on maintaining a balanced annual result.
- Ongoing changes relating to implementation of the Queensland Waste levy and potential rebates that council may receive in the future.
- The high costs of removing and transporting waste to another area for resource recovery, recycling or disposal.
- The quantity of waste received from the mining sector as well as agricultural activities in the region can fluctuate potentially causing operational issues.





Regional context

CHRC REGION

As highlighted by the draft Resource Recovery Strategy, the Central Highlands Region has following features:

- Population of just under 28,000 with the main centre being Emerald.
- The dominant industry and main employment in the region is mining with agriculture, retail and services also having a significant presence.
- The land use is mainly rural in nature with accompanying grazing and other agricultural uses.
- The area is approximately 60,000km.

Whilst this WRRP is being developed for the Central Highlands, council needs to be cognisant of regional activities including the following:

- Opportunities to link with other councils in terms of developing resource recovery centres.
- Opportunities to hire resource recovery and recycling equipment rather than outright purchase.
- Volume of mining and agriculture activity in the region can result in the increased use of council's facilities that is beyond the normal level of activity for a region of this size.

REGIONAL LEVEL OF SERVICES

Local governments have a legal responsibility under various pieces of legislation to provide waste management services to its residents. Nevertheless, often providing household waste collection services is not logistically nor commercially viable. This is particularly relevant in non-metropolitan areas (such as Central Highlands) whereby distances between properties are significant and some roads cannot be traversed by heavy waste collection vehicles.

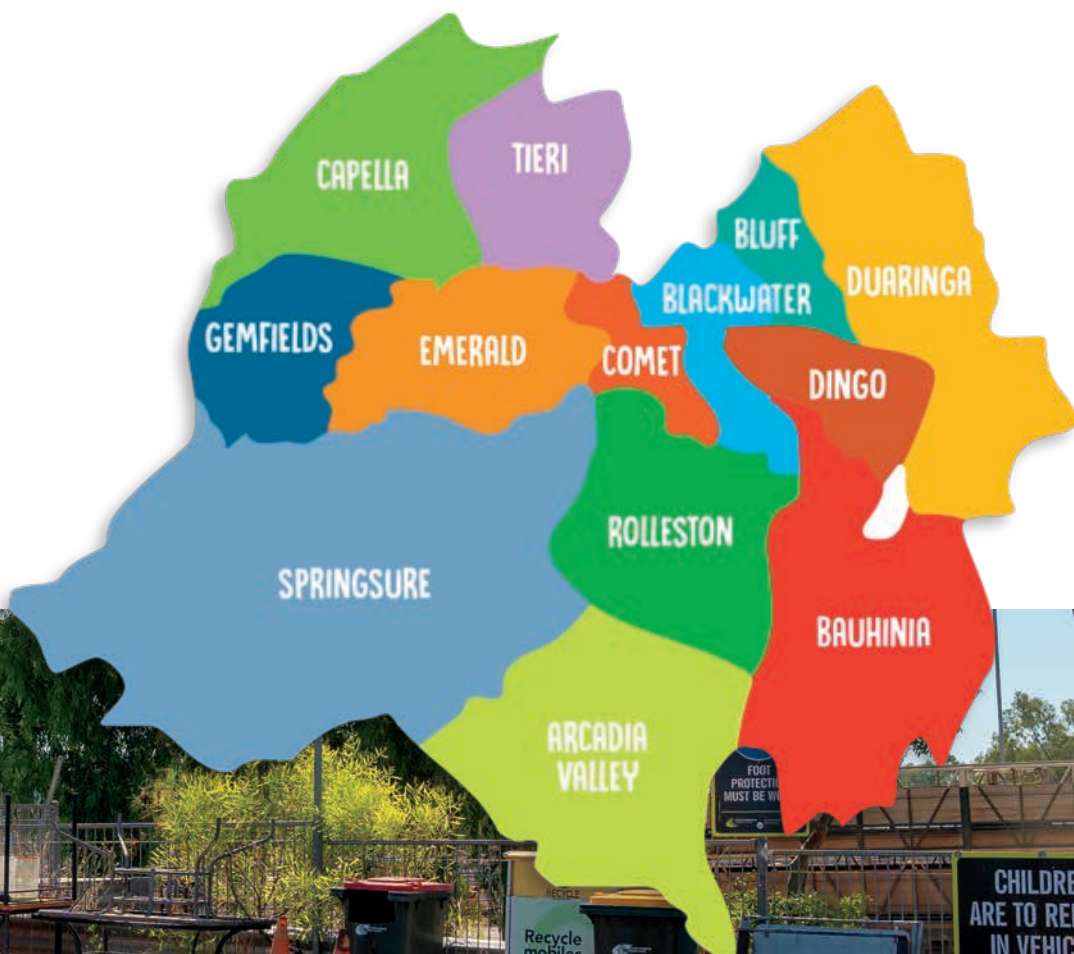
Nevertheless, local governments need to provide facilities for residents and businesses that ensures environmental health matters are addressed.

Often this means the need to compromise or search for alternative waste collection and storage methods. Nevertheless, ad-hoc planning can over service some areas whilst under servicing others.

Based on recent studies and review of other local authorities it is recommended that the level of services to be provided to Central Highland residents is as follows:

- Where practicably possible, make kerbside collection services available for residents.
- Where it is not practicable for a collection service for households, that 75% of those residents have a resource recovery facility/or bin stations that it is within 20 minutes drive of their home.







Existing infrastructure

COUNCIL ASSETS

Council currently operates three landfills (Lochlees, Blackwater and Tieri) as well as series of resource recovery centres and bin stations. Some of the key features of the sites are below.

- Lochlees is the region's main landfill and has a potential lifespan of between eight and 20 years with the possibility of expansion.
- Blackwater is a secondary landfill and may be subject of an expansion of a nearby coal mine in the coming years.
- Tieri is located in the northern section of the region and partly funded by Glencore and is often used by that organisation.

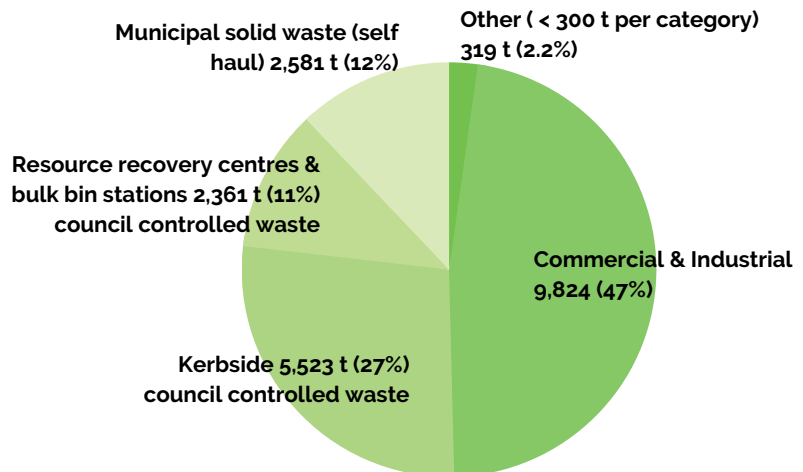
The total tonnage of material brought to landfill in financial year 2020-2021 was 65,950t. Of this, 45,139t was reused, recycled or collected by third parties, leaving 20,811t of waste which required disposal (Lochlees landfill: 14,454t; Blackwater landfill: 6,357t)

Council also operates a series of resource recovery centres and unsupervised bulk bin compounds. The location of these facilities is noted below:

- Emerald
- Lilyvale
- Comet
- Blackwater
- Stewarton
- Bluff
- Dingo
- Wallaroo
- Duaringa
- Willows
- Bogantungan
- Rolleston
- Rolleston
- Orion
- Springsure
- Gindie
- Anakie
- Sapphire
- Rubyvale
- Chirnside
- Hibernia
- Capella
- Tieri

The listed sites are all located relatively close to the respective towns. Both local residents as well as visitors and employees of large mining ventures can access and utilise these facilities. The breakdown of waste streams can be received at each site and is regularly updated on council's website.

For kerbside bin service, the resource recovery centres offer disposal of bulky waste that is unsuitable for collection in a 240L kerbside bin. For residents without a kerbside bin service, municipal waste as well as recyclable material can be disposed at resource recovery centres, bulk bin stations or landfills.





WASTE STREAM MANAGEMENT

Domestic waste: This kerbside waste is collected by a waste collection contractor and transported to respective landfills

Domestic waste: Where residents cannot access a kerbside service, the waste is taken to a resource recovery centre. In a contracted arrangement council then transports the bulked-up waste to Lochlees landfill.

Commercial and industrial waste: This waste is collected by either council or by self-haul to a landfill.

Construction and demolition waste: Self-haul to Lochlees or Blackwater landfills where most of material is recycled.

Green and timber waste: Self-haul to Lochlees or Blackwater landfills where most of material is mulched and reused on-site or for council construction or rehabilitation activities

Recyclable waste (paper, cardboard, plastic): Currently either collected via the yellow bin waste collection service or self-hauled to transfer stations. In both instances this waste is taken to the Emerald Resource Recovery Facility.

Metal waste: Self-haul to council transfer stations or landfills whereby Council engages a contractor to remove this waste

E-waste: Self-haul to council transfer stations or landfills whereby Council engages a contractor to remove this waste

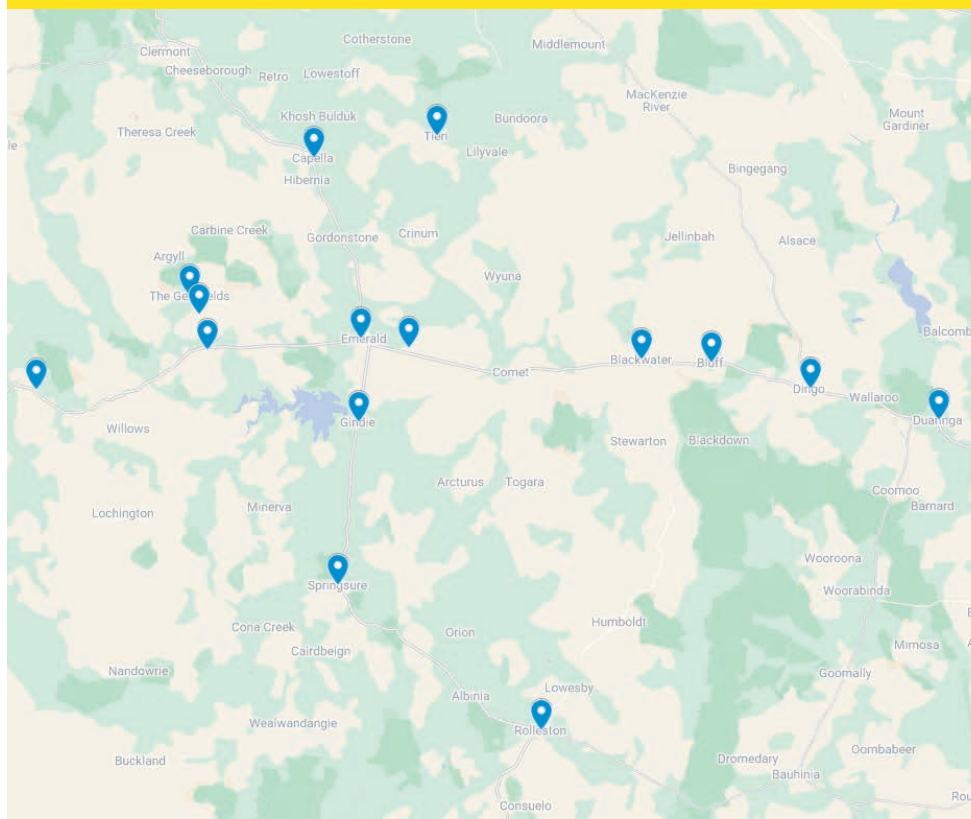
The draft strategy clearly noted that there is a need to establish a new full-service resource recovery centre to serve Emerald and the region. The facility could be co-located on a new residuals disposal site or be a stand-alone operation. This proposal as well as other infrastructure and service delivery options are noted in Section 7.

WASTE COLLECTION

Council currently through a contracting arrangement provides a waste collection service for urban and some rural areas of the region. The collection service includes the following:

- Domestic waste kerbside bins.
- Domestic recycling kerbside bins.
- Public place bin collection (waste and recyclables).
- Commercial waste kerbside bins.
- Commercial recycling kerbside bins.
- Construction and demolition waste.
- Bulk bin stations.

The waste collection service offers both municipal waste (red bin) and recyclable (yellow bin) services. Like most other local governments in Queensland, council does not currently offer a green bin (garden waste) nor a FOGO (food organics and garden organic) kerbside service.







Objectives and Actions

OBJECTIVES AND ACTIONS

Noting the vision and strategic objectives in Section 2 as well as the draft strategy, below are a series of recommended actions to achieve each strategic objective and the overall vision.

Nominated timeframes against each identified action include:

- Short-term – up to 2 years
- Medium-term – 2-5 years
- Long-term – 6-8 years
- Ongoing

OBJECTIVE 1

Reduce the volume of waste within the region by 25% over the next eight years until 2030

Theme 1.1 The Central Highlands Community to reduce the volume of waste from being landfilled

Action	Timeline	Indicative cost
Continue with community education programs regarding the reduction of waste and improved recycling	Short-term	Currently budgeted
Consult with businesses (to ascertain the preferred option of segregating recyclable waste). This may include the provision of additional recycling bins	Short-term	Low
Launch Expression of Interest (EOI) process for resource recovery seeking proposals from interested parties on materials received at our facilities and their potential for reuse/recycling	Short-term	Likely to be a revenue source
Investigate options for providing compost bins to residents that do not have a collection service thus reducing the amount of organic waste to be landfilled	Medium-term	Low
Increase the volume of recycling through the redevelopment of existing resource recovery centres	Medium-term	To be confirmed
Liaise with key mining companies to ascertain future waste volumes and potential internal recycling activities	Short-term	Can be recovered through charges
Investigate expansion of the number of waste streams that can be recycled (such as tyres, solar panels, mattresses etc.)	Short-term	To be confirmed

Theme 1.2 The Central Highland Community to reduce the volume of packaging waste being brought into the region (that cannot be recycled)

Action	Timeline	Indicative cost
Provide businesses within the region educational information about reducing packaging material for products (this information is available from both federal and state government sources)	Medium-term	Low
Provide details on the council website on how to reduce waste generated from households and businesses	Medium-term	Low

OBJECTIVE 2

Operate compliant, environmental responsible and commercially sustainable waste and resource recovery facilities

Theme 2.1 Council to review operational requirements at the Lochlees landfill and Emerald Resource Recovery Centre

Action	Timeline	Indicative cost
Council to examine operational needs of the existing Lochlees landfill including the continued use of the Resource Recovery Area (RRA)	Short-term	\$100K
Should the RRA be relocated, council to investigate financial implications (waste levy) of this action	Short-term	\$50K

Theme 2.2 Council to review long term operational needs at Blackwater

Action	Timeline	Indicative cost
Assess the future of Blackwater landfill in the Resource Recovery (waste management) Strategy if the underlying mining lease is developed	Medium-term	To be confirmed
Undertake investigation to determine the commercial and operational viability of a large Resource Recovery Facility in the Blackwater area (determining location, type of waste and area serviced) and how such a facility compliments the waste infrastructure network	Medium-term	\$100K
Prepare the design and undertake the construction of the facility if the above is determined to be a positive approach	Medium-term	High
Should the Blackwater landfill be closed, undertake negotiations with the relevant mining company to seek compensation for loss of the waste (landfill) asset	Medium-term	No cost (compensation received)

Theme 2.3 Council to investigate then develop a new Regional Resource Recovery Centre that may include a landfill (Emerald)

Action	Timeline	Indicative cost
Undertake preliminary commercial assessment, including securing an allotment for a centre with a sufficiently large footprint to accommodate sorting, resource recovery, recycling, construction and demolition waste, tyres, buy-back centre, regulated waste collection and removal.	Short-term	\$50K
Develop a preliminary design and operational management plan for the centre which will be co-located on the new residual's disposal facility site	Short-term	TBA
Lodge the Development application, construction then operation	Short-term	TBA

Theme 2.4 Council to review the network of resource recovery centres and bulk bin stations in conjunction with a potential expanded a kerbside collection service

Action	Timeline	Indicative cost
Council to review the needs of parts of the region that are currently serviced by bulk bins station with the view of providing an alternative service (such as kerbside waste collection as per Strategic Objective 4)	Short-term	\$50K
Establish the need for and location of a nominated bin collection point for use by residents outside the declared waste collection area.	Medium-term	\$20K
Prepare and implement a plan to provide a secured kerbside bin compound in certain areas if required	Long-term	\$50K

OBJECTIVE 3

Provide a level of service that is of equal or exceeds the requirements of the state government and other adjacent local governments.

Theme 3.1 Council to provide either a kerbside collection service to each property (where feasible) or access to transfer station or bulk bin area

Action	Timeline	Indicative cost
Council to investigate options to expand the waste collection service (as per strategic objective 4) where feasible	Ongoing	Already budgeted
Council to ensure that 75% of residents that do not have a kerbside collection can access a resource recovery facility or bulk bin station	Ongoing	Already budgeted
Council to procure a new collection contract in FY27. This may include a further expansion of the designated urban area and/or additional service (such as green or food waste)	FY27	To be confirmed in FY27

Theme 3.2 Council to review level of service composition to reduce duplication and over servicing in some areas

Action	Timeline	Indicative cost
Council to review the current servicing arrangement including bin sizes and layout at transfer stations and bulk bin sites to reduce the need for different trucks to service same location	Ongoing	Already budgeted
Reconfigure the layout of certain resource recovery centres (if required to reduce the need for service duplication)	Medium-term	\$50K

OBJECTIVE 4

Deliver residents and local businesses with an efficient and responsible waste collection and recycling services

Theme 4.1 Council to provide efficient and responsible (environmental and safety) and waste collection services

Action	Timeline	Indicative cost
Council to continue its current arrangements with existing contractor until the new contract is due in FY27	Ongoing	Already budgeted
Council to expand its current collection area to accommodate new properties. This will require a marketing and education campaign for any new additional properties	Medium-term	\$10K
Council to procure a new collection contract in FY27. This may include a further expansion of the designated urban area and/or additional service (such as green or food waste)	FY27	\$100K

Theme 4.2 Council to provide compliant (environmental and safety) bulk haulage services

Action	Timeline	Indicative cost
Council to undertake an audit of both bulk bins at transfer and park bins to determine the most appropriate and costs effect bin size and layout	Ongoing	Already budgeted
Council to ascertain whether bin stations need to close or relocated if the waste collection service is expanded thus reducing the need for some bin stations	Medium-term	\$10K

Theme 4.3 Council to provide cost effective recycling services at key facilities

Action	Timeline	Indicative cost
Council to review the current recycling arrangements for each recycled waste stream to determine the most efficient way to process such material	Ongoing	Already budgeted
Council to review or enter new contracts with recyclers (when required) with the view of processing onsite or remove recyclables for offsite processing	Medium-term	\$10K



GENERAL WASTE
←
PLEASE PLACE ALL
HOUSEHOLD WASTE IN PIT



Theme 4.4 Reduce illegal dumping and littering

Action	Timeline	Indicative cost
Following stakeholder consultation council to provide additional general and recycling waste bins at key locations (shops, parks and camping areas) to reduce bin overflow and littering.	Short-term	Low
Council to provide additional bins at truck and car rest stops along major roads (if required)	Medium-term	Low
Council to provide additional fencing at facilities where required to ensure that windblown litter does not travel into neighbouring properties	Short-term	To be confirmed

OBJECTIVE 5

For Council to conduct its own procurement activities taking into account circular economy principles

Theme 5.1 Council to utilise recycled or processed products obtained from waste collection services (concrete, soil, mulch)

Action	Timeline	Indicative cost
Ensure waste material is recycled (crushed or mulch) to a level / standard so that it can be used in council infrastructure projects	Short-term	Low
Ensure that the use of recycled material is noted in council specifications for works	Medium-term	Low
Continue to use recycled material for landfill cover and other needs at waste facilities	Already underway	Currently budgeted



Looking ahead

KERBSIDE SERVICE EXPANSION

The draft strategy outlined that the gate fee for waste that ends up in landfill is \$181 per tonne. In contrast, the costs associated with the full management of our waste production is considerably higher, amounting to \$1,267 per tonne. Thus, in simple terms the expansion of the collection service will have a net positive financial impact for council.

Further, the use of compost bins by those residents that currently do not have collection service (and may not receive in the future) would reduce the need to provide additional services in some areas.

OPERATIONAL COSTS

Council needs to ascertain and understand the costs of the undertaking its own recycling activities in comparison with outsourcing the processing and potential sale of the offtake. This understanding will need to include an assessment of whether it is financially responsible to lease / hire recycling equipment or purchase.

POTENTIAL REVENUE

It is recommended that council investigate options to receive waste and recyclable products from both mining activities as well as other commercial operators. This additional revenue may make the business case of some new Resource Recovery Centres more viable. Further, it is likely that the aggregation of small waste volumes from several other local authorities would achieve the desired goals for the Queensland Department of Environment and Science.

FUNDING OPTIONS

Many of the suggested actions noted within this strategy will require capital due to the significant increase in council's annual infrastructure spend. As a result, it is prudent for council to examine other funding sources without creating a long-term debt problem.

Several funding options may be available for council to pursue with recent state and federal government waste and recycling initiatives as well as potentially partner with other councils or the private sector operators to source capital funding.

THE NEXT 12-18 MONTHS

To gain traction and momentum with the goals of the WRRP, council will focus on 'Four Big Things' Over the Next 12-18 months to ensure that the Strategic Vision is being achieved:

- Potential Expansion of kerbside collection Service
 - Undertake an investigation into the commercially and operational effectiveness of expanding the current kerbside collection service.
 - Achieving this outcome will be the catalyst for other actions in this WRRP.
- Confirmation of the arrangements regarding the Resource Recovery Area at Lochlees facility coupled with examination of the need for a new resource recovery centre in Emerald area (that may include a landfill)
 - This activity involves an operational and commercial review of the existing Lochlees site to ascertain the future location of the RRA.
 - Following this council will examine the location and requirement of a new Resource Recovery Centre (and potentially a landfill) in the Emerald area.



- Council reviews the current network arrangement of resource recovery centres to ensure both a level of service is maintained and the recycling of material is undertaken appropriately.
 - This involves reorganising some resource recovery centres as well as upgrading others. The expansion of the kerbside collection may change the layout of some sites.
 - Each facility needs to be adequately serviced to allow the maximum level of recycling.
- Ensure council utilises recycled material in its own infrastructure works and rehabilitation programs
 - This involves ensuring that any recycling of waste (especially construction and demolition) is undertaken to allow the reuse of material in future construction or used in rehabilitation works

WHAT YOU CAN DO

Effective waste management is everyone's responsibility. There are several actions that both individual residents and businesses can undertake as part of their daily activities to ensure that waste in our region is managed effectively such as:

- Place items in the correct bin and/or compost your food scraps where you can. Make sure that the material that is placed in recycled wheelie bin (yellow lid) only contains matter can be recycled.
- Avoid single-use food and drink containers and utensils.
- Take unwanted waste to resource recovery centres.
- Deposit empty 10c containers in your yellow bin or directly at the Container Exchange facility.

Ensure any litter that is found in public areas is placed into the red lid wheelie bins.

- Report any illegal dumping to council.
- When using a resource recovery centre make sure you place your waste in the correct area.



Central Highlands
Regional Council

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