## WASTE REDUCTION AND RECYCLING PLAN

## 2022-2030



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## **FOREWORD**

Managing waste in the remote landscape of the Burke Shire 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 over the next decade.

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



This Strategy focusses on addressing the increasing pressure on our landfills from the disposal of waste generated by households, businesses and the construction sector. The opportunities that flow from increased waste avoidance, reuse and recycling require greater business and community involvement in assisting Council to implement a commercially sustainable operation.

The Burke Region is a wonderful place to live in and visit. Council's goal is to maintain and enhance our environment while providing a better return to our community on investment in waste services. This is an ambitious but realistic waste management strategy with a focus on regionally based solutions. It is a privilege to lead Council and our community toward delivering the desired outcomes.

Cr Ernie Camp Mayor Burke Shire Council

## **INTRODUCTION AND PURPOSE**



### 1.1 Introduction

Burke Shire Council (Council) has the responsibility to its ratepayers, residents and wider stakeholders to manage waste effectively and efficiently. A key component of this commitment is for Council is 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.

The local government area spans more than 40,000 square kilometres, with a population of 328 living mainly in the communities of Burketown and Gregory or on vast pastoral stations. The traditional owners of the land in the Burke Shire are the Gangalidda Garawa & Waanyi peoples

Recent changes to both Federal and State
Government legislation and policies coupled with
market changes and increasing community
expectations have resulted in the need for
Council to review its current waste management
and resource recovery infrastructure and
services. Further, one of the key drivers of this
plan is to relocate the Burketown landfill due to
both space restrictions and the Indigenous Land
Use Agreement (noted later in this report)

Due to its remote and rural nature, managing waste in the Burke Shire 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. This plan provides Councils strategic objectives out to 2030 (the end date to be consistent with many state government documents

### 1.2 Purpose of this Waste Reduction and Recycling Plan (WRRP)

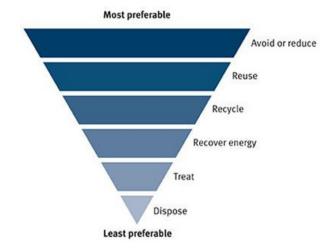
The purpose of this WRRP is to outline Council's strategic vision and objectives for recycling and waste management within the shire up until 2030

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.
- Identify the preferred site and options for the relocation of the Burketown waste facility and initiate the relocation.
- Finalisation of waste reduction and recycling targets.
- Initiate strategic actions for waste reduction, resource recovery of materials and recycling.
- Incorporate management, monitoring and improvement methods for delivering the objectives into Councils operational plan
- Identifying and pursuing funding possibilities

Council recognises information contained in the Queensland Waste Management and Resource Recovery Strategy (2019) including the waste and resource management hierarchy. This is a framework that guides the order of preference for managing waste.

Waste should be avoided as a first priority, after which options for reuse and recycling should be explored. The options of fuel production, energy production or disposal should be reserved for residual waste that is unsuitable for higher-order options.



Waste hierarchy from the Queensland Waste Management and Resource Recovery Strategy (2019)

Council also recognises the principles of the circular economy which has the following three principles:

- · Eliminate waste and pollution.
- · Circulate products and materials.
- · Regenerate nature



# STRATEGIC VISION AND OBJECTIVES

Council has adopted the following Strategic Vision:

Burke Shire Council to become the "model" shire in terms of effective waste and recycling management in a remote setting.

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

- 20% reduction in annual waste volume by 2030.
- Waste and resource recovery facilities operate in a compliant, environmentally responsible and commercially viable manner.
- Waste collection and recycling services are undertaken in a compliant, environmentally responsible and commercially viable manner.

All actions focus on achieving the vision and objectives (these are contained in Section 7 of this WRRP)



# REGULATORY FRAMEWORK AND REGIONAL CONTEXT

Both the 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.

## 3.1 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 both the reduction of waste coupled with increases in recycling.

### 3.2 National Soils Strategy

Provides a strategy to increase the long-term health of Australian soil as well as re-using processed organic material for soil enhancement.

# **3.3 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 specifically 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.

#### 3.4 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 the 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 Burketown (this is noted later).



### 3.5 Burke Shire Council Plans and Policies

Burke Shire Council has developed several corporate documents including but not limited to

- Corporate Plan
- Budget (FY21) and Long Term Financial Forecast
- · Business Continuity Plan
- Operational Plan
- Other Council policies including Local Law No. 6 (Waste Management) 2018

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

- Council has a low revenue base and needs to manage its operational expenses closely. It is recognised that the organisation's budget forecast has significant pressure on maintaining a minimum of a balanced annual result, with declining cash reserves.
- The high costs of removing and transporting waste to another area for resource recovery, recycling or disposal
- Limited staff capacity (numbers) and capability compared to other regional Councils, driving a need to outsource various business activities.

### 3.6 Regional Context

Earlier in 2021, the Department of Environment and Science in conjunction with the Qld Aboriginal and Torres Strait Islander Councils released a report "Respecting Country – A sustainable waste strategy for First Nation communities" to guide the 17 indigenous Regional Councils in terms of reducing waste, recycling and promoting circular economy principles. Whilst BSC is not classified as Indigenous, a high proportion (approximately 55%) of the population is Indigenous and the Burke Shire Council area is surrounded by Indigenous Councils. Any "First Nations" strategy needs to include Burke Shire with this being emphasised to the Government

The Local Government Association of Queensland (LGAQ) is further assisting several Indigenous Councils in the North West Region of Queensland in developing regional waste plans. It is understood that this report will be completed in mid-2022. Further, a recent discussion with DES has noted that the Department is considering the development of waste strategies for the Northern Region Organisation of Councils.

Whilst this WRRP is being developed for the Burke Shire, Council needs to be cognisant of regional activities including the following:

- Potential upgrading of the Doomadgee Waste facility (which may be part of another strategy for regional waste management facilities)
- Opportunities to transport recyclable waste to Mt Isa
- Opportunity to work with Century Mine
- Opportunities to contract or lease resource recovery and recycling equipment (including crushers, trommels, shredders) rather than for Burke Shire Council to purchase them outright due to the low utilisation envisaged to process Councils waste.

# EXISTING AND PREDICTED WASTE VOLUMES

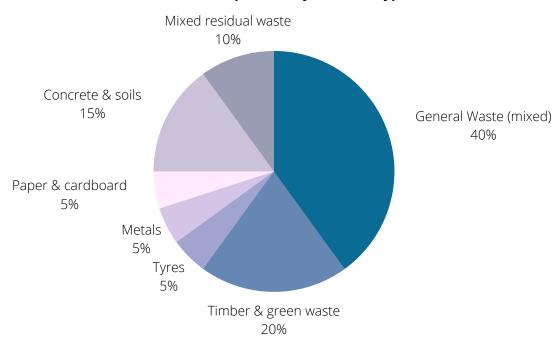
Recent data indicates the volume (tonnage) of waste that is received at the waste facilities is approximately 200 tonnes per annum at Burketown and 50 tonnes per annum at Gregory.

The waste streams accepted at both sites include:

- 1. General waste (including both domestic household and commercial waste
- 2. Timber and Green waste
- 3. Tyres
- 4. Metal (including appliances and car bodies)
- 5. Paper and Cardboard
- 6. Concrete and Soil
- 7. Mixed Residual Waste

An estimate of the breakdown is shown below.

#### **Waste Composition by Material Type**





4.

Due to the low population growth rate, it is predicted that the waste volumes generated will be of similar levels in the coming decade. Nonetheless, there will likely be periods of sudden increases of waste from large construction projects within the Council area. This has occurred recently, for example, with the replacement of power poles by Ergon Energy and the demolition of a building by Queensland Health.





# EXISTING COUNCIL WASTE INFRASTRUCTURE AND SERVICES

### 5.1 Infrastructure

Council currently operates two waste facilities at Burketown and Gregory. Some key features of both facilities are noted below:

- Both sites are located relatively close to the respective towns and can be easily accessed by residents and local businesses, and also non-resident visitors.
- The landfill cells are not lined which may cause longer-term leachate management issues.
- Whilst there is some segregation of stockpiles into various particular waste streams (which can be recovered recycled), much of the waste is mixed and needs to be landfilled.
- There is an opportunity to process and recycle some waste (such as green waste and concrete) into recoverable material that could be used in future council works programs.
- Previous operational management of the facilities included burning of general and mixed waste material disposed in pits.
   While this is not ideal current practice, the environmental impact was low because the volumes have been small and that there are no impacted residents.
   However, the Department of Environment and Science has expressed concern regarding the current practice. Council's current management techniques are noted below.



### **5.2 Services**

Council currently provides a domestic waste collection service for Burketown only. The waste is mixed containing putrescible, recyclables and green waste. Bins are collected once a week from residential properties, commercial premises, the caravan park and hotels as well as from Council parks.

The volume of waste has slightly declined in recent months due to residents diverting some recyclable waste into the local container deposit scheme as well as the use of Council provided home compost bins.

There is no recycling or green waste service (this is mixed into the red general bin service). Once collected the waste is transported to the Burketown landfill.



Waste Stream	Current Management
Domestic Waste	This waste is collected by a Council collection truck from individual residents in Burketown and Gregory and placed into the disposal at the Burketown facility (this is also noted later in Services).
Domestic Waste	Council has partially implemented an option for residents and businesses to use Council provided compost bins but otherwise, food and garden waste is landfilled at Burketown and Gregory facilities.
Green and Timber Waste	Currently transported to and stored in stockpiles at Burketown and Gregory waste management facilities. This is mulched on an ad hoc basis.
Plastic Waste	Currently stored at both sites (in mixed stockpiles).
Paper and Cardboard	Currently stored at both sites (in mixed stockpiles).
Metal Waste	Currently stored at both sites and removed on an opportunistic basis.
Concrete and Soil	Mixed with construction and demolition waste and used for fill material in an ad hoc manner.

It is noted that both waste management sites contain mixed stockpiles in which it would both be commercially unviable and operationally unsafe to re-sort the waste. These stockpiles will need to be landfilled.

The Burketown site is subject to an intended condition of an Indigenous Land Use Agreement (ILUA), and Council will need to vacate the current site within the next three years (under a renegotiated ILUA which is currently being finalised). An alternative site has been identified within the current ILUA. Selecting a new site that is nearby that is not covered by an ILUA may be difficult (this is noted later in the report)

The Gregory site is on State Land and operated by Council in trust has sufficient area for the site to be expanded and act as a Council and potentially a regional landfill, as well as developing and operating storage areas for recovered and recyclable material. However, the land tenure and geotechnical nature need to be confirmed.



**6**.

# STRATEGIC OBJECTIVES AND RECOMMENDED ACTIONS

Below are a series of recommended actions to achieve each Strategic Objective and the Overall Vision as noted in Section 2.

#### **Timelines**

Short term	Less than six months
Medium term	6 to 12 months
Longer term	Over 12 months

### **Strategic Objectives**

20% Waste reduction

This objective is based on the objectives noted in the Queensland State-Wide Strategic Plan (2019) noted above.

**1.1** The Burke Shire Community to reduce the volume of organic (food and green waste) waste from being landfilled.

Action	Timeline	Indicative Cost
Re-invigorate and complete the program that provided compost bins to residents and businesses.	Short-term	\$10K
Provide education material to residents on how to use the compost bins.	Short-term	\$5K
Liaise with businesses (including Savannah Lodge, Burketown Hotel, Morning Glory Café, Gregory Downs Hotel) to ascertain the preferred option of segregating food waste. This may include the provision of a food waste only bin. The food only waste bin could be then taken to a waste facility for composting.	Short-term	\$5K
Actively promote the compost program at Burketown State School providing education material which is available from the State Government and Container Exchange (COEX).	Medium-term	Low

**1.2** The Burke Shire Community to reduce the volume of recyclable material (cardboard, paper, plastic) both utilised in the Shire and disposed to landfill.

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	\$5K
Provide details on Council's website on how to reduce waste generated from households and businesses.	Medium-term	

**1.3** Provide opportunities for the Burke Shire Community to more actively participate in the COEX operated Queensland Container Refund Scheme.

Action	Timeline	Indicative Cost
Negotiate with Carpentaria Land Council to partner with Council to provide a Container Refund Point area in a new waste facility at Burke (noted in 7.2) with all proceeds going to the Land Council.	Medium-term	\$5K
Undertake Consultation with COEX to determine the best method of marketing the revised service to residents, businesses and visitors.	Medium-term	\$10K
Investigate options (with assistance from the Carpentaria Land Council) to assess containers that are collected in Doomadgee and Mornington Shires to be consolidated as part of this program.	Medium-term	\$5K



# Waste and Recycling Facilities operate in a compliant, environmentally responsible and commercially viable manner

**2.1** Council to finalise ILUA arrangements at Burketown (current site), select a new site and construct a new facility.

Action	Timeline	Indicative Cost
Council to negotiate with the Carpentaria Land Council Aboriginal Corporation to finalise arrangements at the current Burketown site. This includes using the recently excavated area for a new cell giving Council a landfill life of three years at this facility.	Short -term	\$50K
In consultation with stakeholders (local indigenous groups, DES, community members) undertake a process to select a site for a new waste management facility.	Medium-term	\$50K
Undertake rehabilitation of the existing site (this is noted in Section 6 - 2.2)	Medium-term	TBA (after initial assessments)



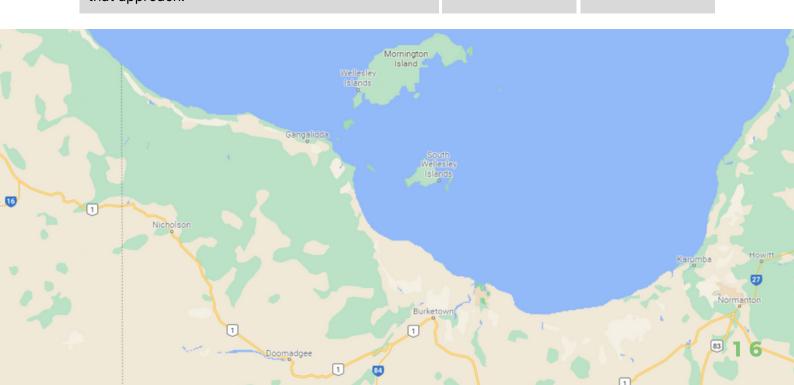
**2.2** Council to reorganise the existing Burketown waste management facility site layout and operations and undertake processing of recyclable material.

Action	Timeline	Indicative Cost
Council to complete partially constructed new landfill cell to have a capacity of three years.	Short-term	\$150K
Reorganise the current Burketown facility to have clearly segregated and signed recycling areas. This will include understanding what materials can be recovered and then creating hardstand areas for these recoverable waste streams.	Short-term	\$10K
Provide communication materials on Council's website and in rates notices showing the new layout of the Burketown landfill as well as directions to residents to place materials into the correct containers and stockpiles.	Short-term	\$5K
Landfill all mixed waste piles (that cannot be recycled) as well as previously burned material.  This area will need to be covered with clean earth material.	Medium-term	\$50K
Undertake processing of green waste (mulch) to use on Council work sites or store for rehabilitation of current landfill. Surplus mulch can be stockpiled and made available to residents free of charge.	Medium-term	\$10K
Keep excavated material (from the newly constructed cell) as well as clean fill and soil deposited at the site for future rehabilitation.	Short-term	\$5K
Ensure that any closure/rehabilitation programs that are undertaken at the Burketown landfill are approved by DES.	Long-term	\$10K



**2.3** Council to undertake a brief infrastructure review to evaluate and consider long term waste management and resource recovery options at Burketown and Gregory.

Action	Timeline	Indicative Cost
Council to review needs of the shire in terms of the type of regional waste facilities required. Options include:  1. Upgrading the Gregory landfill so it becomes the main landfill for the Shire  2. A small transfer station to be established at Burketown (rather than a new landfill) that caters for all waste streams as well as the inclusion of a Container Refund Point  3. Approach neighbouring Councils such as Doomadgee and Mornington Island to accept their waste at a Burke Shire Council regional facility as week as exploring an alliance between "user" Councils	Medium-term	\$50K
Council to undertake a commercial review of the cost of transporting waste from Burketown to Gregory (if the option of a Gregory Landfill is chosen).	Medium-term	\$20K
Undertake an assessment whether it would be more commercially viable for the potential Burketown Transfer Station to be managed by private contractors rather than Council staff.	Long-term	\$20K
Council to consider liaising with Century Mine with the view of potentially utilising their facilities. It is noted that a business case would need to be prepared to determine the commercial viability of that approach.	Medium-term	TBA



**2.4** Council to reorganise the existing Gregory waste management facility site layout and operations and undertake processing of recyclable material.

Action	Timeline	Indicative Cost
Council to extend the existing landfill cell to allow mixed waste and previously burned waste to be landfilled.	Medium-term	\$150K
Reorganise the current Gregory site to have clearly segregated and signed recycling areas. This will include understanding what materials can be recovered and then creating hardstand areas for these recoverable waste streams (signage to be consistent Burketown).	Short-term	\$5K
Provide relevant communication materials on Council's website and rates notices about the layout and resource recovery activities at the Gregory site.	Medium -term	\$5K
Undertake processing of green waste (mulch) to use on Council work sites or store for rehabilitation of current landfill cell. Surplus mulch can be made available to residents free of charge.	Medium-term	\$5K
Keep excavated material as well as clean fill and soil deposited at the site for future rehabilitation.	Medium-term	Part of site operations

**2.5** Council to investigate the implemention of a fee for landfilling commercial waste.

Action	Timeline	Indicative Cost
Council to investigate the establishment of commercial waste charges on a per tonne or cubic metre basis to manage waste and recycling activities for commercial waste generators operating in the Shire. For ease of management, Council may consider implementing an annual fee to such operators. Existing commercial businesses (such as both Hotels and Savannah Lodge) will be exempt from the fee as such businesses already pay a waste management levy as part of their normal rates.	Meduim-term	\$10K
Council to advise utility services (eg: Ergon) and construction companies of the proposed fee.	Medium-term	NII
Allocate any monies that are collected by the waste fees for the treatment (processing, recycling or landfilling) of the waste	Medium-term	Nil

### 2.6 Reduce illegal dumping and littering.

Action	Timeline	Indicative Cost
Following stakeholder consultation, Council to provide additional general waste bins at key locations (shops, parks and camping areas) to reduce bin overflow and littering.	Short-term	\$5K
Council to provide additional bins at truck and car rest stops along major roads (if required) in conjunction with TMR.	Medium-term	\$2K
Council to provide additional fencing at Burketown and Gregory waste facilities to ensure that windblown litter does not travel into neighbouring properties.	Short-term	\$40K

Waste Collection and Resource Recovery Activities are undertaken in a compliant, environmentally responsible and commercially viable manner

## **3.1** Council to provide compliant (environmental and safety) waste collection and bulk haulage services.

Action	Timeline	Indicative Cost
Council to continue its town collection services in Burketown and Gregory under the existing arrangements.	Ongoing	Already budgeted
Council to review options and costs of transporting waste in bulk containers from a potential Burketown Transfer Station to an upgraded Gregory landfill.	Medium-term	\$10K
Council to understand the potential transport costs for relocation of recycled waste from the Shire to external landfill facilities such as Mt Isa or Century Mine.	Medium-term	Part of contract negotiations with the site owner
Council to ensure the waste collection (and transport) fleet is well serviced to maintain safe and environmentally compliant services.	Ongoing	Already budgeted

## 3.2 Council to ascertain the most effective way to undertake resource recovery activities

Action	Timeline	Indicative Cost
Council to investigate recycling providers for recovered metal, plastic, cardboard and tyre waste.	Short-term	\$5K
Undertake green and timber waste mulching on an as needs basis. Council would need to hire a suitable mobile shredder from another organisation.	Short-term	\$5K
When feasible, concrete and soil should either be reused onsite or as part of Council works. This may require the hire/ lease of specialised recycling equipment.	Long-term	\$10K
Any mixed waste (that is stockpiled) that cannot be sorted and recycled is to be landfilled (noted above).	Short-term	\$5K
Council to re-establish and complete the compost bin program (noted above).	Short-term	\$5K



# THE THREE BIG THINGS OVER THE NEXT SIX MONTHS

To gain traction and momentum with the goals of the WRRP, Council will focus on 'Three Big Things Over the Next Six Months' to ensure that the strategic vision is being achieved.

#### **Compost Bins**

- 1. Re-establish the Compost Bin Rollout services to all of Burketown and Gregory residents currently, approximately 30% of residential households have opted to have the compost bins with even less fully using the bins.
- 2. It will be the goal of Council to promote and enable access to compost bins to 100% of residential households in Burketown and Gregory. To enhance the success of the program a "how to use" guide and relevant information should be provided on Council's website (This is noted in Section 7).

### **Burketown Landfill - Confirm the preferred option**

- 1. Council has commenced negotiations with the local indigenous group regarding the ILUA matters at Burketown. It is important to the success of this Plan that Council confirms such arrangements that will allow Council to:
  - Continue to landfill at the Burketown site for the next three years
  - Clarify the arrangements (and site selection criteria) for the new Burketown waste management and resource recovery facility whether it is a new landfill or transfer station
  - Begin planning for the rehabilitation of the existing facility.

#### The existing Burketown and Gregory facilities - reorganise the layout

1. This involves improved segregation, sorting and signage at both sites to allow Council to potentially undertake more resource recovery. Secondly, mixed waste that cannot be resorted and recovered will be landfilled.



# FINANCIAL CONSIDERATIONS

### 8.1 Infrastructure Upgrades

In accordance with the intent of the yet to be registered ILUA arrangements for Burketown Council will undertake landfilling then rehabilitation of the existing Burketown waste facility. Prior to this Council will investigate options for a new facility. Since the size, location and likely volumes for the new facility are yet to be determined it is difficult to undertake capital works budget estimate at this time. Nevertheless, Council will consider allocating funds into financial provision so that there is sufficient Capex available in approximately FY23/24. It is likely that the cost will be in the millions.

### **8.2 Operational Costs**

Council needs to ascertain and understand the costs of the options to transport waste from a Burketown Transfer Station to an upgraded Landfill at Gregory. As part of the normal operational planning Council will estimate such costs.

As noted in Section 7 there is an option for Council to subcontract the management of transfer stations and landfills. Before considering this process Council will undertake market sounding to determine the private sector appetite for the tasks and likely costs.

#### 8.3 Potential Revenue

As noted in Section 6, Council will investigate options to receive waste and recyclable products from both Doomadgee and Mornington Island Councils. This additional revenue may make the business case of a new regional waste management and resource recovery facility more viable. Further, it is likely that the aggregation of small waste volumes from several other Shires would achieve the desired goals for the Department of Environment and Science. There is also an opportunity to explore an alliance based model with participating Councils.

## 8.4 Funding Options

Many of the suggested actions noted in this strategy will require capital that will exceed Council's financial capacity. In order to maintain its financial sustainability goals, Council will examine other funding sources to avoid a long term debt problem.

Recent state and federal government waste and recycling initiatives present Council with opportunities to secure funding.

# KEY RISKS AND MITIGATION ACTIONS

To ensure that the plan relevance is current it will be reviewed annually in conjunction with the Council budget processes.

Below are some of the risks that Council will need to manage over the period of the plan and to ensure mitigation:

- ILUA not able to be negotiated to continue landfilling at Burketown facility for 3 years. Council will require detailed and thorough negotiation in this area and early warning to relocate to the site.
- Time, budget, approval and construction constraints to develop the possible new landfill
  cells at Gregory facility by FY25. This can be managed by Council adopting a rigorous
  project management program that includes consultation with key stakeholders. It is noted
  that Council will require a business case for this project should be supported in principle
  by the state government.
- DES requires curtailment of any burning of waste and Gregory and Burketown facilities. Landfill cells will need to be designed to accommodate this.
- Resource Recovery options and operating costs including transport of recovery materials
  off sites is cost-prohibitive to Council. Any new landfill cells will need to be designed to
  accommodate this.
- A new waste facility (either at Doomadgee or Gregory) that is supported by the state government as the regional solution but cannot be delivered in three years. BSC would then need to investigate other interim options.



