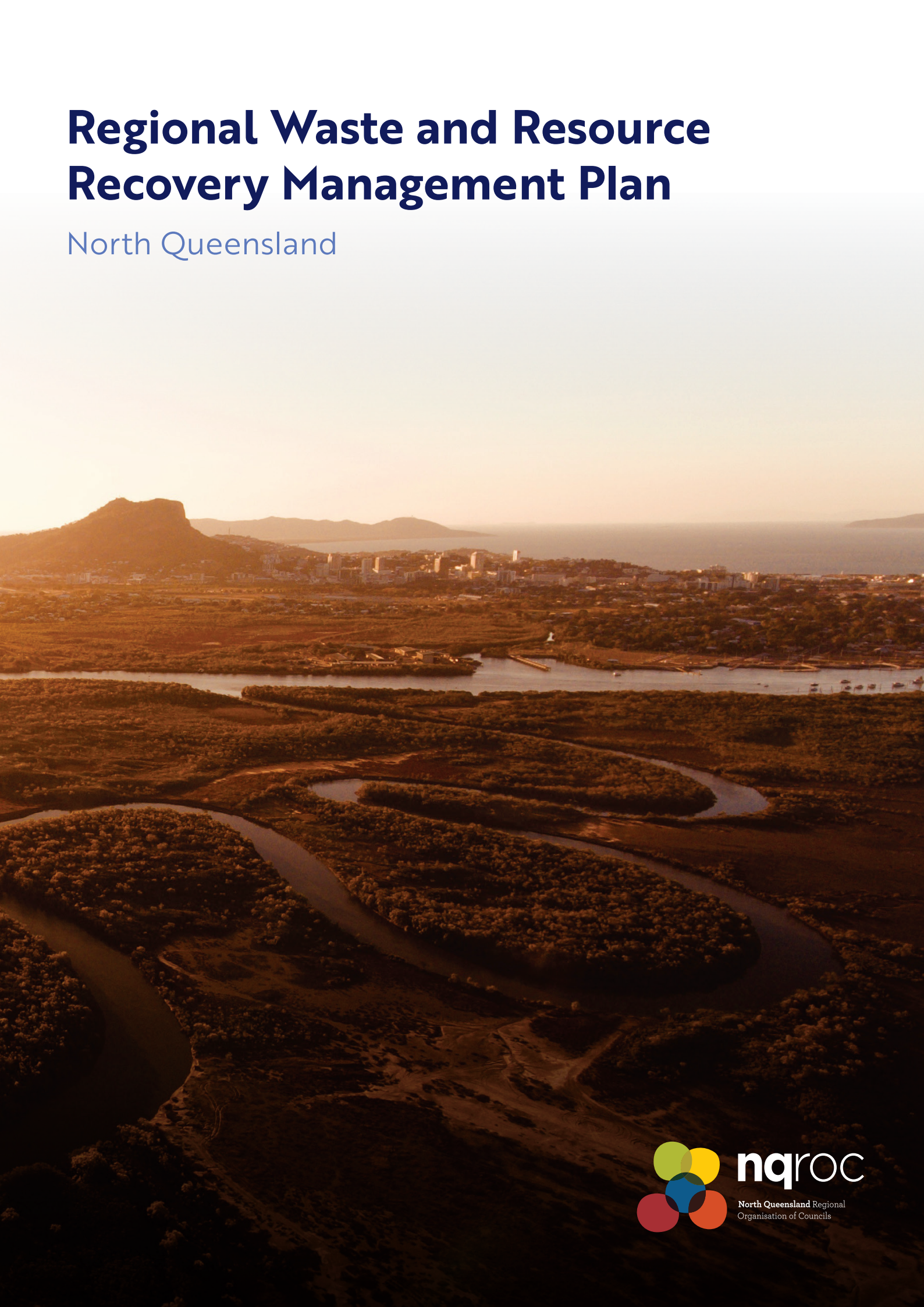
# Regional Waste and Resource Recovery Management Plan

## North Queensland



nqroc

North Queensland Regional Organisation of Councils

Burdekin Shire Council

CHARTERS TOWERS REGIONAL COUNCIL

HINCHINBROOK SHIRE COUNCIL

PALM ISLAND ABORIGINAL SHIRE COUNCIL

City of Townsville

# Contents

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North Queensland Regional Organisation of Councils

# Foreword

In 2020, the five member councils that make up the North Queensland Regional Organisation of Councils (NQROC) – Burdekin Shire Council, Charters Towers Regional Council, Hinchinbrook Shire Council, Palm Island Aboriginal Shire Council and Townsville City Council – delivered a Waste and Resource Recovery Strategy to guide the region over the next 20 years.

Local Governments are at the coal face of resource recovery, managing waste; delivering on national and state sustainability targets; and educating their communities about recycling, reusing, and disposing of waste responsibly.

Managing resource recovery is a significant challenge, one that can only be met through regional collaboration.

It is a balance between rising landfill and waste transport costs, a lack of local processing services, and rightful community expectations of protecting the environment.

NQROC's Strategy now has a Plan, a list of priorities and actions member councils of the NQROC will endeavour to deliver over the next eight years.

Infrastructure improvements, the establishment of re-processing industries, and improvements to our internal processes are included in our Plan. So is the education of our communities, such that they better understand the role they play in managing waste.

It is important that regional efforts are prioritised, coordinated, planned, and funded.

NQROC member councils are acknowledged for their valuable time and contributions to the NQ Regional Waste and Resource Recovery Management Plan.

NQROC thanks the Queensland Government, in particular the Department of Environment and Science, for its partnership to make this Plan possible.

Lyn McLaughlin

**Councillor Lyn McLaughlin**
Chair, North Queensland Regional Organisation of Councils (NQROC)
Mayor, Burdekin Shire Council

**Councillor Frank Beveridge**
Deputy Chair, North Queensland Regional Organisation of Councils (NQROC)
Mayor, Charters Towers Regional Council

**Councillor Ramon Jayo**
Mayor,
Hinchinbrook Shire Council
NQROC member Council

**Councillor Mislam Sam**
Mayor,
Palm Island
Aboriginal Shire Council
NQROC Member Council

**Councillor Jenny Hill**
Mayor,
Townsville City Council
NQROC Member Council

August 2023

# Executive Summary

## Regional Waste and Resource Recovery Management Plan North Queensland

This Plan identifies a pathway for the North Queensland Regional Organisation of Councils (NQROC) via regional and individual council actions to improve waste and resource recovery outcomes to align with the objectives and targets of Queensland's Waste Management and Resource Recovery Strategy. Participating councils are Burdekin Shire Council, Charters Towers Regional Council, Hinchinbrook Shire Council, Palm Island Aboriginal Shire Council and Townsville City Council.

The North Queensland Region contributes over $17.1 billion annually to the Queensland Economy and is described as one of the most diverse economic bases in Australia. The region is expected to see significant population growth from around 234,000 people now to 324,000 residents in 2041, driven by significant growth in Townsville. The region has an extensive logistics network which includes the largest general cargo and container port in northern Australia, facilitating export of a range of products including zinc, lead, sugar, fertiliser, and molasses.

Palm Island Aboriginal Shire Council is a member of the North Queensland region for the purpose of developing and implementing this Plan. The Council has been consulted during the development of this Plan and agreement reached for the first stage to refine its own local waste reduction and resource recovery plan which would then be acknowledged in the implementation of the North Queensland Regional Waste and Resource Recovery Management Plan. This Plan should be read and interpreted with this inclusion in mind.

## Current state

### Waste arisings and services

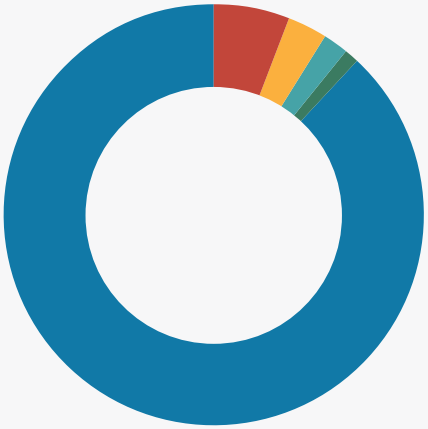
In the North Queensland Region, a total of 382,544 tonnes of waste was managed by Councils in the 2020-21 financial year. This included:

**132,135 tonnes** of household waste (MSW)

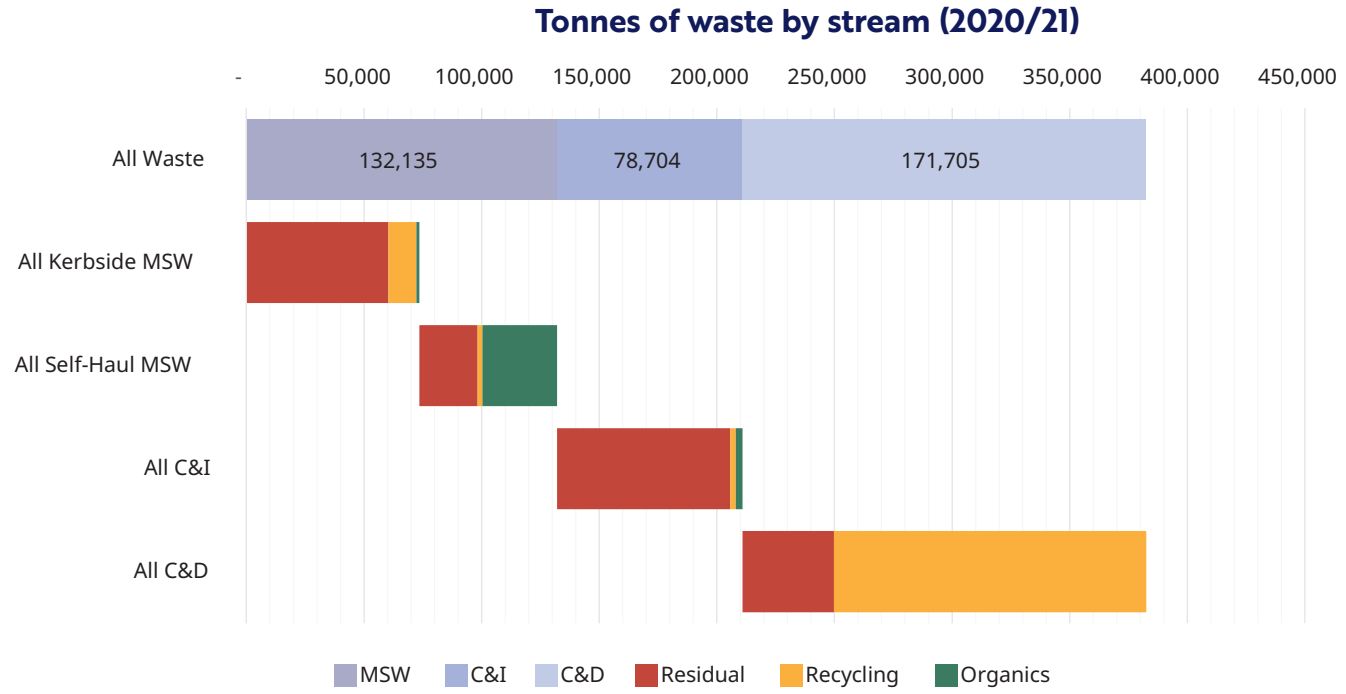
**78,704 tonnes** of commercial and industrial waste (C&I)

**171,705 tonnes** of construction and demolition waste (C&D), of which **115,000 tonne** was reported as clean earth

Regionally, the amount of waste managed by individual council is:



- Burdekin Shire Council: **6%**
- Charters Towers Regional Council: **3%**
- Hinchinbrook Shire Council: **2%**
- Palm Island Aboriginal Shire Council: **<1%**
- Townsville City Council: **88%**




Without action, waste arisings in the region is forecast to grow to 464,000 tonnes in 2030 and 601,000 tonnes by 2050-51.

All Councils offer a kerbside residual waste collection service, covering 98% of households across the North Queensland Region. Hinchinbrook Shire Council, and Townsville City Council offer a 2-bin collection system with a kerbside recycling bin. Burdekin Shire Council offers a 3-bin collection system including residual, kerbside recycling and garden organics collected at the kerbside. Charters Towers Regional Council currently offers a residual waste kerbside service only. Palm Island Aboriginal Shire Council also currently offers a weekly residual waste bin collection service with the aim of removing all waste from the island promptly to reduce risk of impact to the waterways of the island and the Great Barrier Reef.

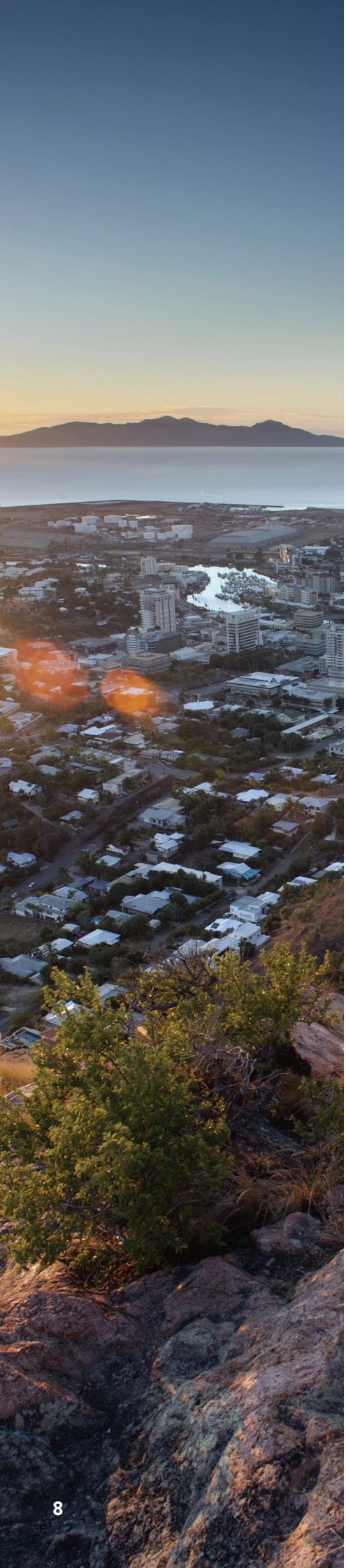
All Councils offer a form of self-haul facility which receive MSW, C&I, and C&D wastes, with Palm Island Aboriginal Shire Council improving existing transfer facilities. Councils typically manage most residual wastes from the C&I stream, however data is incomplete for C&I recycling within the region, hence the low volume of C&I waste reported as recovered in the region. There also remains a need to improve the quality and quantity of data available, particularly for private sector waste and recycling operations in the region. Problematic wastes specifically identified in the region include contaminated soils, e-waste, plastics, mattresses, food, and garden organics (sent to landfill), timber, textiles, and tyres.

The Plan identifies several regional or cross-regional solutions for these but acknowledges that Queensland or Commonwealth Government leadership and interventions will be needed for some of the more problematic waste streams.

## Key issues

To inform the development of this Plan, several key issues were identified and considered which limit waste outcomes in the region including:

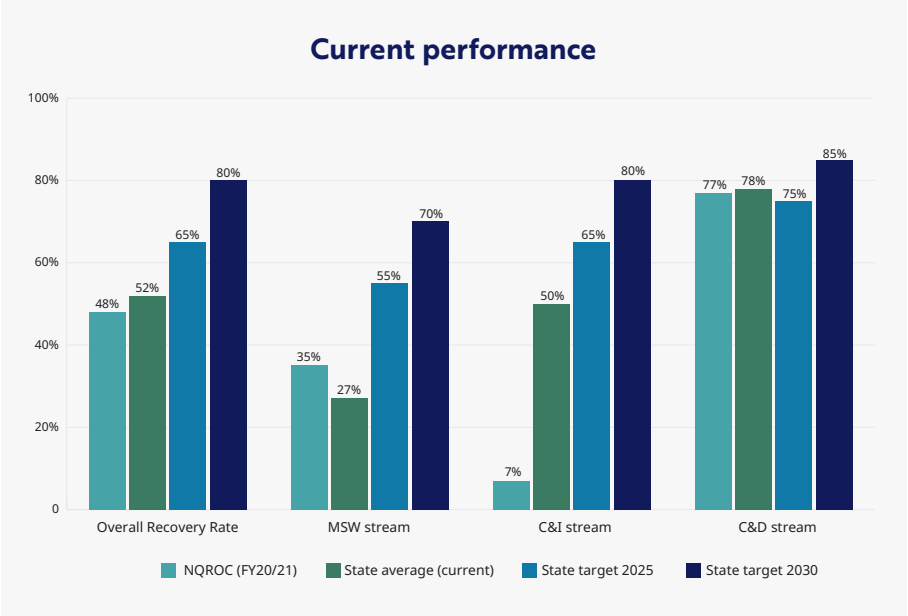
- Lack of long-term approved and constructed landfill capacity.
- Geographical diversity in the region with a range of large geographical areas with dispersed populations, more densely populated urban areas, and island communities limits a standardised approach.
- Lack of scale for recycling or secondary processing.
- Lack of end-markets locally driving demand for recycled materials.
- Community behaviour lacks understanding to support production of high-quality recyclable output.
- Current policy settings do not support greater recovery and recycling.





## Current performance against Strategy targets

The North Queensland region has a current resource recovery rate of 48% across all streams, compared to a state average of 52% and 2025 state target of 65%. The C&D waste stream is performing well against the 2025 target whilst the C&I and household (MSW) streams are reported as performing well below the 2025 targets. In the case of the C&I stream, this may be due to incomplete data for private sector waste managed outside of council facilities in the region.




# Plan Outcomes

## Education as a primary focus

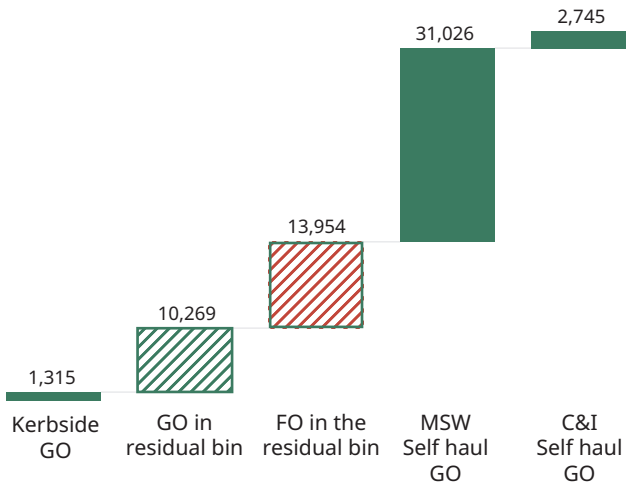
A Regional Waste and Recycling Education Strategy has been identified as required by councils to focus investment on education and behaviour change activities that promote better outcomes for the region. Education will focus on problem areas including reducing the kerbside recycling bin contamination rates, which diminishes the value of sorted material and can increase operational costs, as well as capturing more recyclable material currently sent to landfill. Other areas of focus will include food waste avoidance programs, and other behaviour change activities which educate residents on the benefits of getting recycling right.

The regional education strategy will be developed through collaboration by Councils in the region, however will require investment and input from the Queensland Government to prepare and implement. Through further investment, this Strategy, and the resources deployed could also target education of waste producers in the C&I stream to drive better resource recovery outcomes. Palm Island Aboriginal Shire Council will develop their own community specific education Plan to align with other education services in the area.

## Improved organic waste management

Across the North Queensland Region, 35,086 tonnes of organic waste was reported as recovered in the region (in FY20-21). A further 24,000 tonnes of food and garden organic (FOGO) waste is estimated to currently go to landfill via the residual waste bin. This represents an opportunity to target further diversion of household organic waste in the region. In the region, current policy and economic settings suggest that Townsville City Council has sufficient scale to consider implementation of a kerbside organic waste diversion service, pending business case development and Council approval. For other councils in the region, lack of suitable processing and current policy settings may limit the potential establishment of kerbside organic waste services.

### Organic waste in region




For those parts of the region that cannot access a kerbside organic waste collection service, the Queensland Government will establish mechanisms for residents to participate in composting through community gardens or composting hubs, or by encouraging access to at-home composting infrastructure such as compost bins or worm farms. These interventions will be implemented as soon as practically possible and dependent on availability of funding. Food waste avoidance education should also be rolled out across the region.

Economic analysis to support this Plan has identified that the introduction of a new kerbside organic waste collection service is expected to result in extra cost for councils. At a time when cost of living pressures are evident, Council will need to be mindful of their residents' ability to pay for additional services, and seek external funding to help minimise the impact on rate payers.

Introduction of a kerbside organics service is estimated to cost approximately $80 million dollars (present value) based upon the whole-of-life system costs for a 30 year period. This includes:

- Capital and operational costs associated with collection of organic waste and the establishment and operation of a new processing facility.
- One-off transition costs to purchase consumables and distribute to households including new kerbside organic solution bins, kitchen caddies and compostable liners.
- Additional potential one-off-costs associated with standardising bin lid colours prior to service commencement.
- Additional establishment education and ongoing organics diversion education costs specifically for the new organics service in Townsville.

Whilst nothing in this Plan precludes other Councils from introducing a kerbside organics collection and processing solution, under current policy settings, the comparable cost per household would be higher due to 100% of landfill levy paid being returned to council in annual advance payments, in addition to the lack of scale and large distances required to transport waste for processing. Similar proportional costs may be incurred by other Councils progressing organic waste diversion. For Burdekin Shire Council, increased costs may be incurred in converting the existing garden organics (GO) service to include food, including the potential need for a new processing solution.

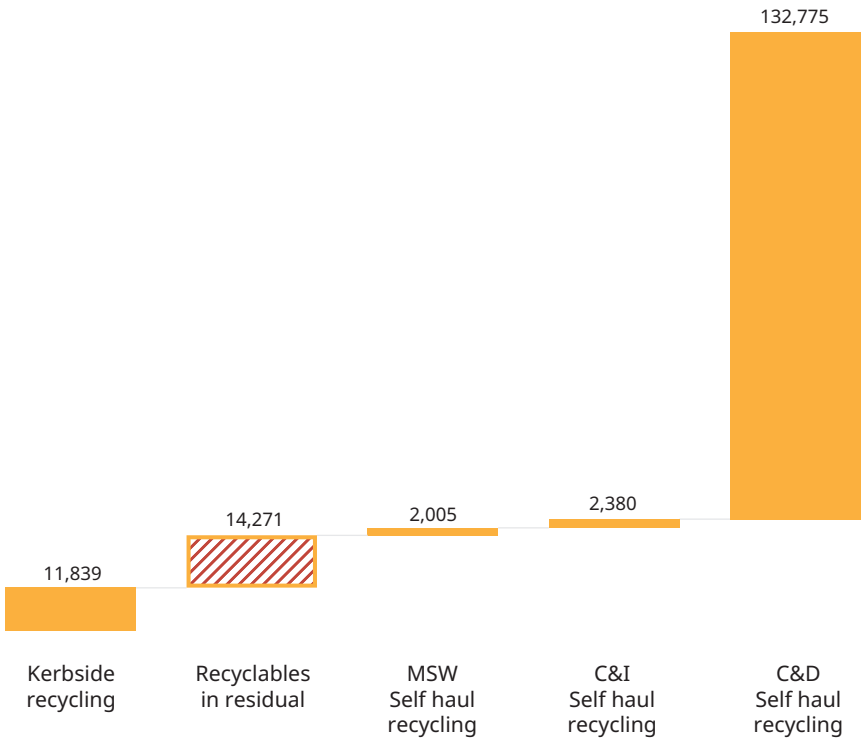
Activities and actions are identified for Councils not introducing new kerbside services to support food waste avoidance, at-home, or community composting. These interventions are expected to be led by the Queensland Government.

It is estimated that the introduction of an organics collection service in Townsville could capture an initial 20,945 tonnes of organic waste to be processed. This would improve the regional recovery rate for the region to an estimated 55%. By FY30-31 this intervention is estimated to divert an estimated additional 65,000 tonnes of organic waste from landfill.

## Improved material recovery and recycling

In FY20-21, 148,999 tonnes of material managed in the region was reported as recovered, of which the household kerbside collection of dry recyclables contributed 11,839 tonnes. A further 137,160 tonnes was self-hauled to council facilities in the region. Contamination of the kerbside commingled bin in the region ranges from 19% to 41% across the North Queensland Region. It is estimated that there is also approximately 14,300 tonnes of dry recyclable material in the kerbside residual waste bin that could potentially be captured for recycling.

### Recycling in region




Through focussed education campaigns as part of the regional education strategy it is expected that contamination will be reduced, and that there will be greater capture of recyclable material currently lost to landfill.

There may be opportunities for the establishment of new recycling or reprocessing facilities in the region aligned with the Queensland Governments precinct approach, however this requires further refinement. Townsville is identified as a major hub for reprocessing across Northern Queensland. Target reprocessers may include organic waste, glass, paper and cardboard, masonry, aggregates, and concrete (collectively C&D waste), tyres, mattresses, e-waste, and solar panel recycling to complement existing arrangements.

To facilitate future precinct development and better diversion through resource recovery facilities, an allowance has also been made in the economic analysis for improvements to transfer facilities, additional operating costs, and transport to move recyclables from satellite sites to processing hubs. This may also include community recycling hubs or hazardous waste transfer facilities, and circular economy solutions such as repair facilities, which it is expected will be supported through programs led by the Queensland Government.

The estimated cost to implement interventions to the material recycling and recovery stream for the region is $31 million (present value). This includes:

- Small-scale infrastructure improvement to allow for upgrades to existing facilities, or conversion of existing landfills to transfer facilities. This estimate may be higher or lower pending individual council needs.
- The inclusion of increased operational costs associated with growth in kerbside recyclables driven by population growth and impact of education.
- The development and delivery of a regional education strategy that applies across all Councils to provide education priorities in collaboration with the Queensland Government, commencing immediately.
- The exclusion of recycling beneficiation technology within the cost breakdown as it is assumed that Councils are unlikely to financially contribute to these costs, which will be borne by the private sector.
- The cost estimates presented in this Plan exclude precinct establishment and enabling works costs, estimated to be in the range $62 million to $76 million.

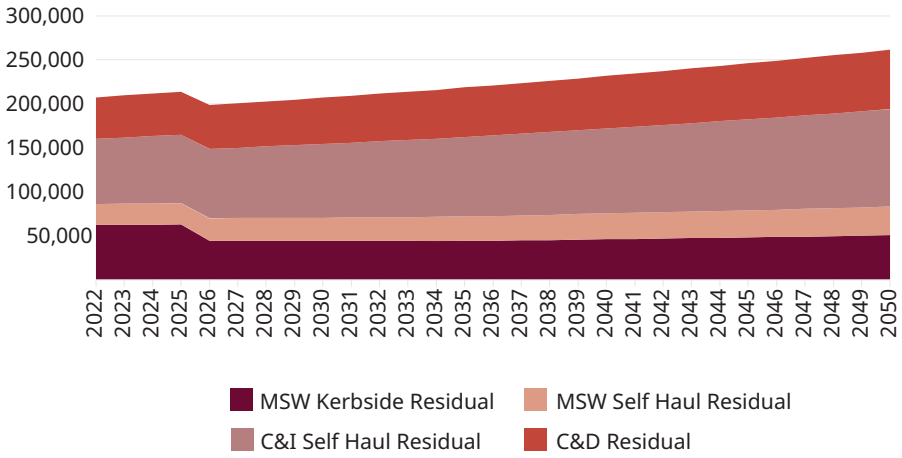
It is assumed that additional education costs are funded by the Queensland Government. These changes are focussed on improving the quality and quantity of material captured for recycling through enhanced education across the region. A separate education Plan has also been identified for Palm Island Aboriginal Shire Council specific to community needs.

At present Burdekin Shire Council, Hinchinbrook Shire Council and Townsville City Council provide services to collect kerbside recyclables individually and deliver to a privately owned MRF in Townsville for processing. Councils have identified the opportunity to collaborate on a potential new recycling processing solution to be in place between 2025 and 2027 and to determine the best ownership and contracting approach for securing this service. It is not expected that Charters Towers Regional Council or Palm Island Aboriginal Shire Council will provide a kerbside recycling service.

## Residual waste management in the long-term

In FY20-21, 197,653 tonnes of residual waste was managed in the region, of which 85,143 tonnes was generated directly by households. With the interventions identified in this Plan, there will be a per-capita reduction in the amount of waste that goes to landfill, however the resulting residual waste generated by the region is expected to grow to 212,000 tonnes by FY30-31, 238,000 tonnes by FY40-41 and 279,000 tonnes by FY50-51 (**see Figure EX5**).

**Forecast residual waste to be managed in the region**




Some Councils in the region are running out of constructed landfill capacity in the near term, necessitating potential expansion considerations. The cost of residual waste management is expected to increase as new landfill capacity is required, or alternative solutions procured.

The largest landfill in the region, the Stuart Landfill at Townsville does not have capacity for further expansion. Additionally, the cost of landfilling is increasing rapidly for Townsville City Council due to changes in annual advanced payments. In the long-term the region will need to identify and plan a residual waste solution that considers continuation of landfill through development of new capacity, or via sending some residual waste to energy or to fuel from waste facilities that could be developed in the region. All solutions however will still require ongoing landfill capacity.

Aligned with Queensland's Waste Management and Resource Recovery Strategy, utilisation of energy from waste is the likely path to achieve the states' target of 90% resource recovery by 2050. There is however some uncertainty over the costs as an energy from waste (EfW) solution is not currently available in the North Queensland region, or Queensland at present. If a solution was available, the estimated cost per household of diverting residual waste to EfW is likely to be significantly greater than continued landfilling. An action in the Plan is to monitor the opportunity to develop an EfW facility of suitable scale for the region. If energy from waste is chosen as the preferred option, the region is forecast to achieve a recovery rate of an estimated 77%, however this could be higher depending on technology choice and incorporation of the C&I stream.

Other problematic streams identified in the residual waste stream include disaster wastes, biosolids and timber. Long term solutions for these streams that avoid the need for landfill will require further cross-regional collaboration and strategic transformation of regional waste management.

## Expected recycling and resource recovery outcome of the Plan

To achieve an estimated regional resource recovery rate for the MSW stream of approximately 55% resource recovery, which amounts to an overall improvement of 7% for the entire region, the Councils, principally Townsville City Council, would need to introduce an organics diversion service. On just the kerbside MSW stream, this represents a 27% increase in resource recovery rate. This should be coupled with improvements to the existing yellow lid bin recycling services for all Councils through a combination of improved transfer facilities and education. Beyond this, significant improvements to the C&I stream are required, but only after data for non-council managed wastes is collected and assessed. If energy from waste is introduced in the region, then the expected recovery rate would be approximately 77%.

# Implementation

## Cost to deliver the Plan

The estimated cost for implementation of this Plan is $73 million (real costs ) over the period to FY30-31 with the assumption that changes to residual waste management come into effect beyond this period. The costs for beneficiation facilities are not included as they are expected to largely be incurred by private sector operators.

## Summary

Financial modelling was undertaken as part of development of the Plan. A summary of the costs associated with implementing actions across five key focus areas is provided below. Costs are in millions, and the period includes FY24 to FY31 inclusive:

Regional Implementation Costs
**$3.37M**

Regional Education Strategy
**$0.1M**

Regional Organics Solution
**$52.07M**

Material Recycling & Recovery Solution
**$15.64M**

Residual Waste (excluding EfW)
**$1.8M**

## Access to supporting resources and funding

There is a need for support around the development of business cases and forecasting suitable for approval by the Queensland Government, particularly for infrastructure such as new or improved transfer facilities, new collections, or processing infrastructure. Access to regional facilitation / coordination support resources is essential for Councils' implementation of the Plan, as would funding support to develop supporting documentation for funding applications. Implementation at the regional scale will also require funding to coordinate, liaise with the Queensland Government, and advocate for better waste outcomes in the region.

Funding for capital expenditure such as an organic waste processing facility (or enhancements to existing privately owned facilities), small scale infrastructure improvements, or potentially an energy from waste facility may also be facilitated by the Queensland Government, pending specific business case development.



## Regional collaboration and responsibilities

Under the existing Resource Recovery Working Group (RRWG) the region has established a functioning collaborative approach to strategy development and implementation. In the immediate term the region will continue to collaborate on Plan implementation, and seek to undertake regional procurement where beneficial, as well as collaborate on the implementation of education and awareness campaigns.

Depending on procurement and ownership decisions around certain infrastructure, there may be a need to establish additional governance structures. Responsibility for decision making for the implementation of interventions under this Plan will sit with individual councils facilitated by the RRWG. The RWWG will coordinate funding requests required to the Queensland Government for approval under the following proposed structure:

## Regional governance structure

**Investment Review Committee (IRC)**

**IRC Participants:**
DES Director General, DSD Director General
Local Government Association of Queensland (observer)
Queensland Treasury Corporation (advisory body)

**Function:** Review and approve/reject funding requests

**NQROC Resource Recovery Steering Group (RRSG)**

**Resource Recovery Steering Group (RRSG)**
**Governance:** Formed under regional structure (ROC)

**Participants:** Elected Representative from each LGA
Executive Director (or delegate) DES, DSD
Local Government Association of Queensland (observer)

**Function:** Regional priority setting, project prioritisation and gateway approvals, collaboration across Queensland, funding decisions and approval for budget allocations

**NQROC Resource Recovery Working Group (RRWG)**

Regional Support Service

Member Councils: BSC, CTRC, HSC, PIASC, TCC

**Resource Recovery Working Group (RRWG)**
**Governance:** Formed under regional structure (ROC)

**Participants:**
Regional Support Resource (dedicated program manager)
Officer from each LGA (minimum of one)
Elected Representative from each LGA
Queensland Government Representatives (DES, DSD Local Officers)
Local Government Association of Queensland (observer)

**Function:** Regional priority setting, project prioritisation and gateway approvals, collaboration across Queensland, funding decisions and approval for budget allocations

## Review and monitoring

Implementation of the Plan will be the responsibility of the RRWG and ultimately the Regional Organisation of Councils (ROC). Initial first actions will be measured against progress, but longer-term review should be against metrics including delivery of specific services identified in the Plan and achieving levels of education, capture of types of waste (e.g. organics collection) and resultant change to recovery rates compared to forecast. The Plan should be reviewed and updated every 5 years.

## Implementation roadmap

An implementation roadmap has been developed identifying timing and activities to deliver this Plan, as shown below.

While the Regional Waste and Resource Recovery Management Plan provides the primary vehicle for accessing available funding from the Recycling and Jobs Fund, there may also be opportunities for initiatives to be funded that are outside the Plan. For example, a pilot at a local level to 'test' the suitability of a model or infrastructure for the region (or sub-region). It is recognised that the Plan needs to be a living document and that not all potential initiatives will have been identified in the Plan.

However, it is expected that the bulk of the funding will come through the projects identified in the Plan with a more streamlined pathway for funding approvals as it has already been identified in the Plan. In the first instance any projects identified that are outside the Plan would likely be discussed with the regional working and steering groups and the proposed regional support resource position that will be funded to support implementation of the Plan, to assess suitability for funding under the Plan or whether this would be considered under a separate funding process.

Councils, in participating in the development of this Plan and subsequent endorsement of or support for its finalisation and publication, can do so in the knowledge that this consideration does not obligate individual Councils to any funding commitment. Subsequent business cases developed as part of implementing the Plan and implementation decisions made by the region for implementing the Plan would normally include that detail.

## Table Implementation Roadmap

| Action | Responsibility | Immediate | 2024<br>Next 2 years | 2025 |
|---|---|---|---|---|
| **General** | | | | |
| Program management | SG, RRWG | ✓ | ✓ | ✓ |
| Regional collaboration (e.g., RRWG meetings, action management, etc.) | SG, RRWG, All | ✓ | ✓ | ✓ |
| **Organic Waste Management** | | | | |
| Participate in Food Waste Avoidance initiative | RRWG, All | ✓ | ✓ | ✓ |
| Continuation of self-haul green waste receipt and processing | All | ✓ | ✓ | ✓ |
| Develop business case for organics collection service for council approval | TCC + others as necessary | ✓ | ✓ | |
| Commence new organic waste collection service education | TCC | | | ✓ |
| Procurement of organic waste collection solution | TCC | ✓ | ✓ | ✓ |
| Procurement of organic waste processing solution | TCC | ✓ | ✓ | ✓ |
| Commence kerbside organic waste collection service | TCC | | | |
| Organic waste service education (continuation) | TCC | | | |
| Roll out of at-home composting solutions | QGOV | | ✓ | ✓ |
| Roll out of community composting solutions including guidance | QGOV | | ✓ | ✓ |
| Collaborate on regional solution for finding highest value market for green waste across region | RRWG | | ✓ | ✓ |
| Develop regional business case for procurement of regionally owned and shared GO shredding technology | RRWG | | ✓ | ✓ |
| Develop regional solution for biosolids and timber | RRWG | | ✓ | ✓ |
| Develop pathway to improve non-Council held data collection | QGOV, All | | ✓ | ✓ |
| Support development and establishment of anaerobic digestion within the region | RRWG, All | | | |
| Develop feasibility study and business case for small-scale organics processing on Magnetic Island | TCC | | ✓ | ✓ |

| 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2040 | 2050 |
|---|---|---|---|---|---|---|---|---|---|
| Within next 5 years | | | Within next 10 years | | | | | To 2040 | To 2050 |
| | | | | | | | | | |
| ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
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| ✓ | ✓ | ✓ | | | | | | | |

| Action | Responsibility | Immediate | 2024 Next 2 years | 2025 |
|---|---|---|---|---|
| **Material Recycling & Recovery** | | | | |
| Develop regional education strategy | SG, RRWG | ✓ | ✓ | ✓ |
| Develop specific indigenous community waste education Plan for Palm Island | GGOV, PIASC | ✓ | ✓ | ✓ |
| Participate in Education and Behaviour Change Initiative (assumed continuation) as part of regional education strategy | RRWG, All | ✓ | ✓ | ✓ |
| Review & agree on pathway for improved enforcement activity for poor household behaviours in kerbside bin service provision, and implement | SG, RRWG All | | ✓ | ✓ |
| Collaborate and share information on use of local planning policy to drive better reuse and recycling outcomes from construction activities. | SG, RRWG | | ✓ | ✓ |
| Develop new resource recovery and transfer facility on Palm Island | PIASC | ✓ | ✓ | ✓ |
| Develop business case / Plans for enhancements to transfer facilities to better segregate self-haul recyclables and household hazardous materials | SG, RRWG, All | ✓ | ✓ | ✓ |
| Construct and commission new transfer facilities | SG, RRWG, All | | ✓ | ✓ |
| Collaborate on establishment of regional scale precinct and ancillary satellite sites in accordance with precinct guidelines | SG, RRWG, All | | ✓ | ✓ |
| Construct enabling infrastructure for precinct | SG, RRWG, All | | | |
| Procure, construct and commission new regional recycling processing solutions | TCC, BSC, HSC | | ✓ | ✓ |
| Establish new resource recovery processing facilities within precinct | GGOV, All support | | ✓ | ✓ |
| Work with Queensland Government agencies to improve uptake of recycled materials in procurement | QGOC, All RWWG | ✓ | ✓ | ✓ |
| Work with Commonwealth Government to refine insurance company approach to disaster waste management to minimise landfill disposal | Cwth Gov, QGOC, All | | ✓ | ✓ |
| Develop pathway to improve material flow data and knowledge across region for recyclable material | QGOV, All | | ✓ | ✓ |
| Residual Waste Management | | | | |
| Develop short-term landfill life expansion activities | All | ✓ | ✓ | ✓ |
| Construct and commission short-term options as necessary | All | | | |
| Develop long-term solution for regional infrastructure considering existing capacity needs including business case for regional residual waste management | SG, RRWG, All | ✓ | ✓ | ✓ |
| Design, construct & commission long term residual waste solution | SG, RRWG, All | | | |
| Develop long-term approach to managing problem and emerging wastes | RRWG, All | | ✓ | ✓ |
| Develop long-term collaborative approach to managing disaster wastes in region | RRWG, All | | ✓ | ✓ |

Notes: BSC-Burdekin Shire Council, CTRC-Charters Towers Regional Council, HSC-Hinchinbrook Shire Council, PIASC-Palm Island Aboriginal Shire Council, TCC-Townsville City Council, QGOV-Queensland Government, All-All Councils, RRWG-Resource Recovery Working Group, SG-ROC as Steering Group

| 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2040 | 2050 |
|---|---|---|---|---|---|---|---|---|---|
| Within next 5 years | | | Within next 10 years | | | | | To 2040 | To 2050 |
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| ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
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