

NQ REGIONAL WASTE REDUCTION & RECYCLING PLAN

2014 – 2024



City of
Townsville



CHARTERS TOWERS
REGIONAL COUNCIL



HINCHINBROOK
SHIRE COUNCIL



Burdekin Shire Council

Foreword



*Jenny Hill, Mayor
Townsville
City Council*



*Ray Burton, CEO
Townsville
City Council*



*Roger Bow, Mayor
Hinchinbrook
Shire Council*



*Leanne Mash, CEO
Hinchinbrook
Shire Council*

With Townsville being the fastest growing regional city in Queensland, improving our waste management systems is becoming increasingly important as we plan for our future.

The NQ Regional Waste Reduction and Recycling Plan is the result of our strong partnership with neighbours in the Burdekin, Charters Towers, and Hinchinbrook regions; as well as feedback from our respective communities. It sets our regional agenda for a coordinated and more efficient approach to waste management for now and into the future.

Hinchinbrook Shire Council's commitment to environmentally and economically sustainable waste management is demonstrated by its investment in state of the art landfills and transfer stations. Council's recycling program is actively embraced by residents and consistently results in increasing per capita recycling rates. Hinchinbrook Shire Council has a tradition of collaborating with its neighbouring councils to share knowledge and identify opportunities for improved governance.

We look forward to participating in joint education and promotion campaigns to improve our community's capacity to maximise efficiency in waste management.



*Bill Lewis, Mayor
Burdekin
Shire Council*



*Matthew Magin, CEO
Burdekin
Shire Council*



*Frank Beveridge, Mayor,
Charters Towers
Shire Council*



*Mark Crawlwyey, CEO,
Charters Towers
Shire
Council*

Burdekin Shire takes a proactive role in the collection of waste to keep our most valuable resource – our water – clean and clear. Our key initiatives include the collection of hazardous wastes via the drumMUSTER program and trialling the recycling of plastic fluming and trickle tape used by growers in the region.

Our participation in the NQ Regional Waste Reduction and Recycling Plan will ensure that, in conjunction with our neighbouring shires, our waste management practices are efficient and protect our region's environment.

As goods reach their respective useful lives society can no longer simply return these to the local landfill. We need to be recycling more and reducing the amount of product and “waste” that is simply taken to the local tip and disposed. There is way too much going into our landfills that could be re-used, recycled and therefore reduced. Costs of managing landfills is increasing and having a bearing on the amount of land that is being used for the management of these products that could be better managed.

The North Queensland Regional Waste Reduction and Recycling Plan is an excellent initiative for the Councils within the North Queensland Region and will provide significant benefits for the ratepayers, residents and visitors to our region and reduce costs and impacts on the environment.



The NQ Regional Waste Reduction and Recycling Plan is a joint initiative of Townsville City Council, Burdekin Shire Council, Charters Towers Regional Council, Hinchinbrook Shire Council and the Queensland Government.

1	Introduction	5
1.1	Key Policy Drivers	6
1.2	Requirement for a Waste Reduction Recycling Plan	7
2	Where are we today?	7
2.1	Current Services and Infrastructure	7
2.2	Waste Generation	7
2.2.1	Waste Generated by Local Government	10
2.3	Recycling Performance	10
2.3.1	Waste Composition	10
2.4	Waste Projections	12
2.4.1	Population and Household Growth	12
2.4.2	Commercial Developments	13
2.4.3	Waste Forecasts	13
3	Where do we want to get to?	14
3.1	Vision	14
3.2	Themes and Objectives	14
4	How will we get there?	16
4.1	Options Assessment	16
4.2	Addressing the WRRP Themes	16
4.2.1	Theme 1 – Avoidance and Waste Reduction	17
4.2.2	Theme 2 – Landfill Diversion	18
4.2.3	Theme 3 – Protecting Human Health and Environment	18
4.2.4	Theme 4 – Development of Sustainability Opportunities	20
4.2.5	Theme 5 – Community Values and Collaboration	20
5	How will the success of the WRRP be measured?	21
	Appendix 1. Glossary of Terms	22
	Appendix 2. Options Assessment Results	24
	Appendix 3. Action Plans	25
	Appendix 4. Waste Reduction and Recycling Act 2011 – WRRP requirements	51

1 Introduction

The following four councils are members of the North Queensland Regional Organisation of Councils (NQROC):

- » Townsville City Council
- » Burdekin Shire Council
- » Charters Towers Regional Council
- » Hinchinbrook Shire Council

North Queensland has vast rural areas and 80% of the population is concentrated in Townsville which means effective waste management is challenging. In addition,

- » over the next 10 years, the population is predicted to grow by over 20% from around 250,000 to 300,000 people by 2024¹; and
- » the region, in general, is a long way from markets for recyclable materials and associated waste management infrastructure, in comparison to metropolitan areas in South East Queensland.

However, these challenges also present opportunities to look at innovative, tailored regional solutions for waste management, which avoid unnecessary consumption of resources and manage waste as close to the source as possible.

Waste is everyone's responsibility. Feedback from the public and businesses received via the first round of public consultation on the plan suggests environmental sustainability and public education are important to the community. These issues rank highly in terms of priorities for the future of councils waste management services².

In 2000, the Health and Environmental Services Regional Organisation of Councils – North Queensland (HESROC-NQ) produced the “North Queensland Regional Waste Management Strategy” Report. The four councils in North Queensland have agreed to work together again to develop an updated North Queensland Regional Waste Reduction and Recycling Plan (NQ Regional WRRP), covering the period 2014 – 2024. The NQ Regional WRRP addresses the requirements of the *Queensland Waste Reduction and Recycling Act 2011 (WRRRA 2011)* as well as providing a framework to realise opportunities for efficiencies and cost savings across the region.

The NQ Regional WRRP sets a vision for waste management in North Queensland over the next ten years. The vision will be achieved by local government leading by example. Residents and businesses also need to engage and share in the responsibility for achieving a change in waste management practices and performance.

‘Waste is everyone’s responsibility’



¹Queensland Government Statistician's Office - Projected population (medium), 2011 to 2036

²Phase 1 Public Consultation on the North Queensland WRRP (March 2014)

1.1 Key Policy Drivers

National and state strategies, policies and legislation have provided a clear framework for future action across all waste streams generated in Queensland and the NQ region. The ‘National Waste Policy: Less Waste, More Resources (2009)’ sets the direction for Australia’s waste management and resource recovery from 2010 to 2020. It sets six key directions under which priority strategies have been developed. The six directions are:

- 1 **Taking responsibility** for reducing the impacts of products and materials from production to the end-of-life.
- 2 **Improving the market** to deliver efficient and effective markets for waste and recovered resources, using local technology and innovation.
- 3 **Pursuing sustainability** and achieving environmental, social and economic benefits from producing less waste and using waste better
- 4 **Reducing hazard and risk** by reducing the hazardous content of wastes and using consistent and safe waste management methods
- 5 **Tailoring solutions** to increase regional capacity that allows communities to manage waste and recover and re-use resources.
- 6 **Providing the evidence** giving decision makers access to meaningful, accurate waste and resource recovery data that allows progress to be measured and informs community choices and behaviours.

The Queensland Government is working with industry and the community to develop a new, industry-led waste strategy, “Waste – Everyone’s responsibility, Draft Queensland Waste Avoidance and Resource Productivity Strategy (2014 – 2024)”. It outlines the new direction and vision for waste management in Queensland and is expected to be adopted mid-2014.

The Queensland strategy is underpinned by five guiding principles, which align with national policy:

- 1 Protecting human health and the environment to secure our future prosperity.
- 2 Shared responsibility for avoiding unnecessary consumption and improving resource management.
- 3 Recognition of the economic, environmental and social costs of waste generation and disposal.
- 4 Recognition of regional differences and opportunities.
- 5 Full lifecycle management of resources.

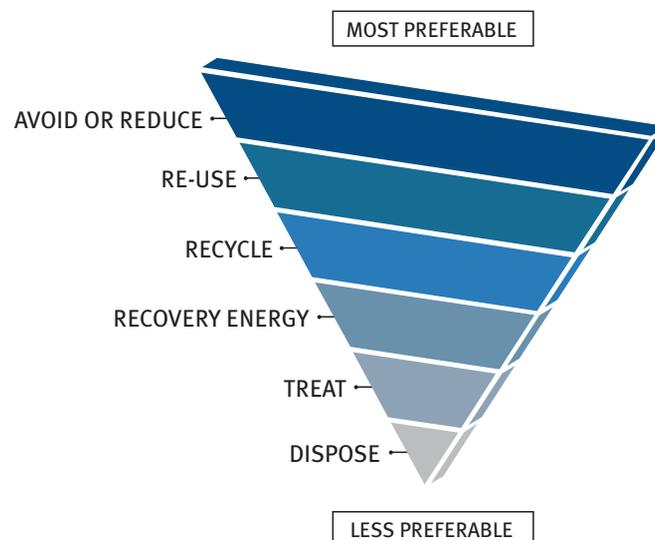
The draft state strategy proposes the following targets which take account of the different geography across Queensland with:

- » 45% recycling of municipal solid waste (domestic) by 2024 for coastal regions with significant urban centres with populations over 30,000, (includes Townsville).
- » ‘Maximise diversion to the extent practically achievable’ from remote areas with small populations and without large urban centres (includes Burdekin , Charters Towers and Hinchinbrook shires).
- » 55% recycling of commercial and industrial waste by 2024 (State-wide).

- » 80% recycling of construction and demolition waste by 2024 (State-wide).

In addition, there is a target to reduce waste generation by 5% per capita from 1.9 tonnes of general waste per person per year to 1.8 tonnes of general waste per person per year by 2024.

Figure 1 The Waste and Resource Management Hierarchy³



This NQ Regional WRRP is consistent with the national and state strategy and has been informed by the waste management hierarchy, setting out an order of preference for managing waste, with avoidance and reduction the most preferable and disposal with no energy recovery the least preferable.

The key priorities, strategies and actions in the corporate plans for each of the councils in North Queensland have also been considered in developing this WRRP.

1.2 Requirement for a Waste Reduction and Recycling Plan

A key requirement of the Queensland *Waste Reduction and Recycling Act 2011 (WRRRA 2011)* is an obligation for local governments to prepare waste management plans, known as Waste Reduction and Recycling Plans (WRRP). A WRRP needs to set out actions for managing waste in local government areas in a way that best achieves the objects of the Act. The *WRRRA 2011* allows multiple local governments to combine as a single entity to prepare a regional plan for the management of some or all aspects of waste management for the local governments. This approach has been adopted by the four councils in North Queensland in developing the NQ Regional WRRP.

The NQ Regional WRRP is a headline document supported by regional and local action plans for each of the four council areas, setting out regional and individual council actions and initiatives for driving the WRRP forward. Appendix 4 summarises where the requirements of the *WRRRA 2011* have been addressed within this WRRP. The NQ Regional WRRP will be reviewed on a minimum three yearly basis, with the regional and individual action plans reviewed and updated annually.

³Waste – Everyone’s responsibility” Draft Waste Avoidance and Resource Productivity Strategy for Queensland (2014 – 2024) – Department of Environment and Heritage Protection

2 Where are we today?

2.1 Current Services and Infrastructure

North Queensland councils provide a range of kerbside services across the region, summarised in Table 1. Recyclable materials collected at the kerbside from

Burdekin, Hinchinbrook and Townsville are sorted at the VISY Materials Recycling Facility (MRF) in Townsville. A total of fifteen self-haul/transfer stations are also provided by councils for residents and businesses to drop

Table 1 Current Domestic Kerbside Service provided across North Queensland Councils

Council	Domestic Kerbside Service	Households served (2012/13)
Townsville	2 Bin system	72,300 households are provided with collections for dry recycling and general waste
Burdekin	3 Bin system	5,100 households are provided with collections for dry recycling, green and general waste
	2 Bin system	2,800 households are provided with collections for dry recycling and general waste
Charters Towers	1 Bin system	Due to the rural nature of the area: » 4,050 household are provided with a kerbside collection of general waste only. » Approximately 20% of households have no kerbside collection and are serviced by self-haul sites.
Hinchinbrook	2 Bin system	5,500 households are provided with collections for dry recycling and general waste

Table 2 Council Operational Landfill Sites in North Queensland

Landfill Site	2012/13 Tonnes landfilled	Capacity (Tonnes/ annum)	Lifespan	Gas
Council: Townsville				
Stuart	98,000	100,000 – 200,000	2032	Flaring
Jensen	50,400	50,000 – 100,000	Stage 1 2016 Stage 2 2018	Flaring planned 2018/2019
Hervey Range	65,100	50,000 – 100,000	2022	Flaring planned 2015/2016
Picnic Bay	1,100	10,000 – 20,000	Up to 5 years	No
Council: Burdekin				
Kirknie	7,100	20,000 – 50,000	2040	No
Council: Charters Towers				
Greenvale	180	50 – 2,000	>100 years	No
Pentland	150	50 – 2,000	>100 years	No
Ravneswood	170	50 – 2,000	>100 years	No
Stubley Street	15,100	10,000 – 20,000	~2025	No
Council: Hinchinbrook				
Warrens Hill	44,700	26,500	2040	No

off waste for recycling or disposal, for example garden waste, furniture. There are six sites in Townsville, four in Charters Towers, three in Burdekin and two in Hinchinbrook. The end destination of material collected for recycling which does not go through the MRF is generally not fixed and is dependent on market conditions and quantities. Given the remote location of North Queensland one of the greatest challenges is the lack of local markets for recyclable material; this is particularly true in relation to organic material.

General waste, that is not recycled or composted, is disposed of at a total of ten landfill sites across the region, listed in Table 2.

2.2 Waste Generation

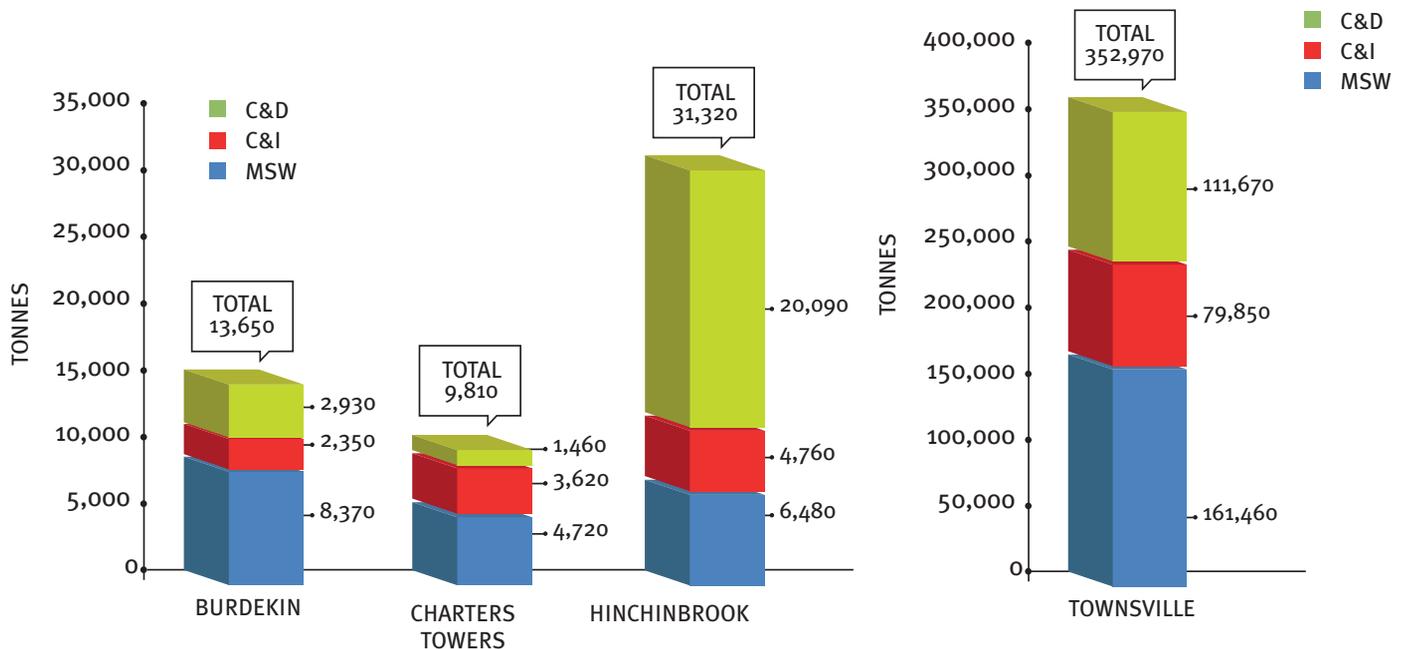
As a region North Queensland generated 408,000 tonnes of waste in the 2012/13 financial year. The waste is collected by the councils or deposited at council operated landfill sites in the region and consists of:

- » 181,020 tonnes of municipal waste (MSW)
- » 90,590 tonnes of commercial and industrial (C&I) waste; and
- » 136,140 tonnes of construction and demolition (C&D) waste

The region had a population of 240,390, in 2012/13, which means that waste generation was equivalent to 1.7 tonnes per person per year (excluding waste not handled by the councils).

A breakdown of waste generated by each council area is provided in Figure 2.

Figure 2 Waste Generated by Waste Stream and Council Area (2012/13)⁴



⁴The large quantity of C&D waste generated in Hinchinbrook in 2012/13 was due to large scale roadworks which occurred in Hinchinbrook between 2010 - 2013



2.2.1 Waste Generated by Local Government

Waste generated by local government in carrying out its activities is diverse, as shown in Table 3. Currently the councils undertake a range of measures to prevent, reuse and recycle waste where possible, for example use of better quality oils in council fleet vehicles to prolong the time between oil changes and separating out material which can be reused/recycled from highways work. As the councils want to lead by example in moving waste up the hierarchy, there is a need to establish an accurate baseline position of the quantities of waste generated by specific Local Government activities before targets can be set and to allow future performance to be measured against the baseline.

2.3 Recycling Performance

Recycling performance across the region varies by council and waste stream. For MSW (domestic) in 2012/13 the regional recycling rate was 28%, with Burdekin who operate a three bin system at the kerbside having the highest recycling performance at 49%. The Queensland strategy recycling target of 45% by 2024 for regional centres only applies to Townsville, who are currently recycling around 27% of the MSW (domestic) stream.

C&I waste recycling data show a regional performance of 5%. However, this figure is distorted by the fact that it does not take account of material diverted for recycling which is not handled by the councils but includes general waste from businesses that is deposited at council landfill sites. The Queensland strategy recycling target for C&I of 55% by 2024 is a state target and therefore will take account of material recycled through other non-council routes.

The regional recycling performance for C&D waste is currently around 83%. The Queensland recycling target of 80% by 2024 is a state target, like C&I waste, and therefore will take account of construction material recycled through other non-council routes. North Queensland is diverting high levels of C&D waste already.

2.3.1 Waste Composition

While there is no recent comprehensive waste composition data for the councils, Burdekin and Townsville have kerbside general waste composition information. The data, see Figure 3 and Figure 4, demonstrates there is still a large proportion of material in the general waste bin which could be captured for recycling e.g. paper/cardboard which would improve recycling performance.

The data also highlights the high proportion of organic material (garden and food waste) available in the general waste bin of a typical two bin system and the amount of food waste specifically in a three bin system. This suggests there may be an opportunity to increase recycling performance by introducing collection systems which divert organics from the general waste stream where practicable.

Table 3 Types of Waste Generated by Local Government Activity

Local Government Activity	Types of Waste Generated						
	C & D Waste	Liquid Waste	Organic	General Waste	Paper & Card Recycling	Other Recycling	e-waste
Community Services			✓	✓	✓	✓	
Council Offices			✓	✓	✓		✓
Construction & Maintenance	✓					✓	
Workshops/Fleet		✓			✓	✓	✓
Highways	✓						
Parks and Gardens	✓		✓	✓			
Sewerage Treatment		✓	✓				
Water Treatment		✓	✓				

‘...councils want to lead by example...’

Table 4 Recycling Rates across North Queensland Councils (2012/13)

Stream/ Council	Burdekin	Charters Towers	Hinchinbrook	Townsville	NQ
MSW (domestic)	49%	2%	35%	27%	28%
MSW (self-haul)	0%	100%	0%	75%	69%
MSW total	48%	9%	35%	27%	28%
C&I	21%	10%	0%	4%	5%
C&D	68%	0%	99%	81%	83%
Total	48%	8%	71%	39%	41%

Figure 3 Composition of Kerbside General Waste Bin based on Two Bin System in Townsville⁵

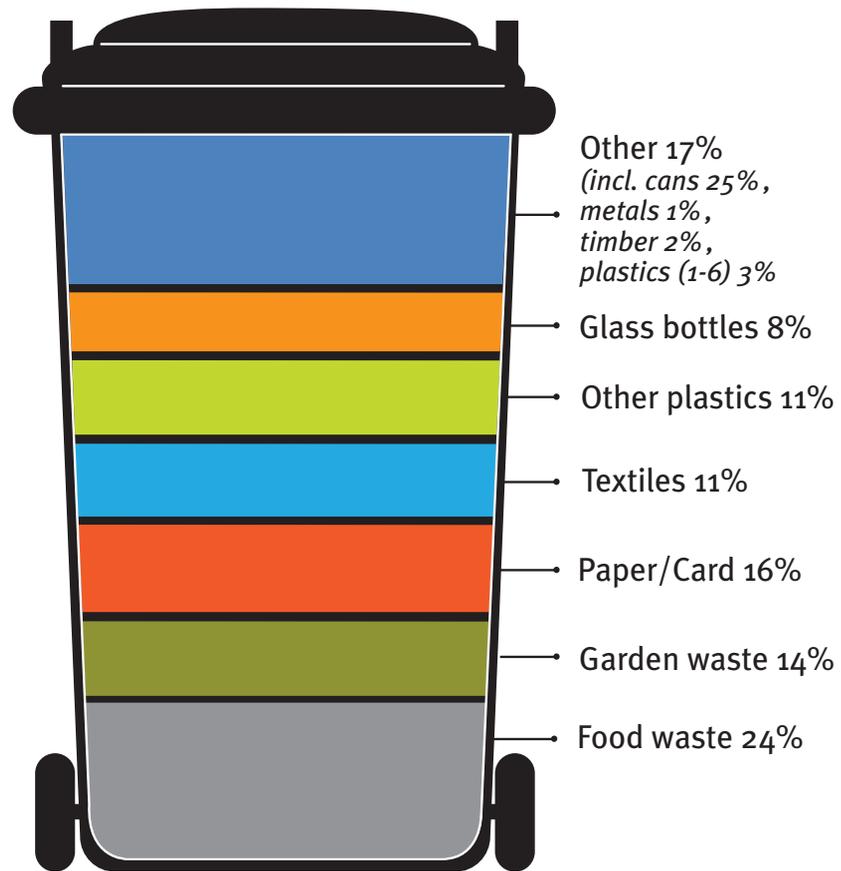
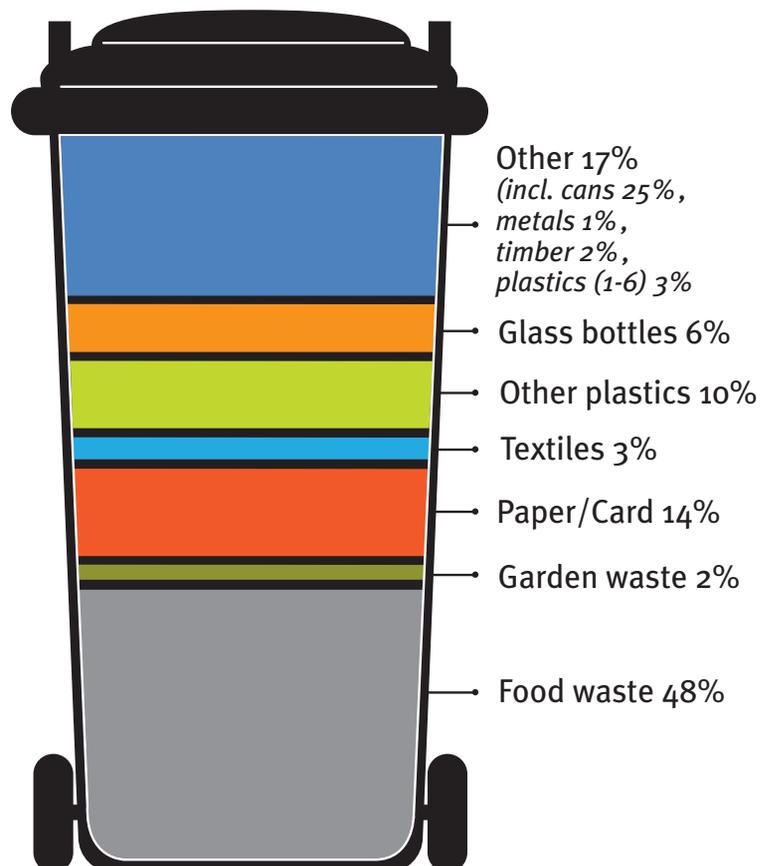


Figure 4 Composition of Kerbside General Waste Bin based on Three Bin System in Burdekin⁶



⁵Townsville City and Magnetic Island Kerbside Waste Characterisation Audit 2010 - AECOM

⁶Burdekin Shire Council Waste Stream Audit 2013 Assessment of the General and Recycling Waste Streams, Final Report June 2013 - EnviroCom

2.4 Waste Projections

2.4.1 Population and Household Growth

Over the next 10 years, the population of North Queensland is predicted to grow by over 20% from around 250,000 to 300,000 people by 2024⁷, as illustrated in Figure 5. The main population growth is predicted in Townsville, with over 2% per year on year growth projected over the next ten years, which is equivalent to 25% growth in total. Whilst in other areas the projected population growth is much lower, this is especially evident in Burdekin and Hinchinbrook, where the growth over the next ten years in total is expected to be 4% and 2% respectively.

Predicted household growth is consistent with population growth with households in North Queensland expected to grow by 26% over the next ten years, from around 96,000 households in 2014 up to 120,500 households by 2024, see Table 5. Townsville shows the highest increase in number of households, with household numbers projected to increase by 29% over the next ten years. The slightly higher projected increase in household numbers in comparison to population suggests a trend in a lower number of people per household.

Figure 5 North Queensland Population Projections up to 2023/24⁷

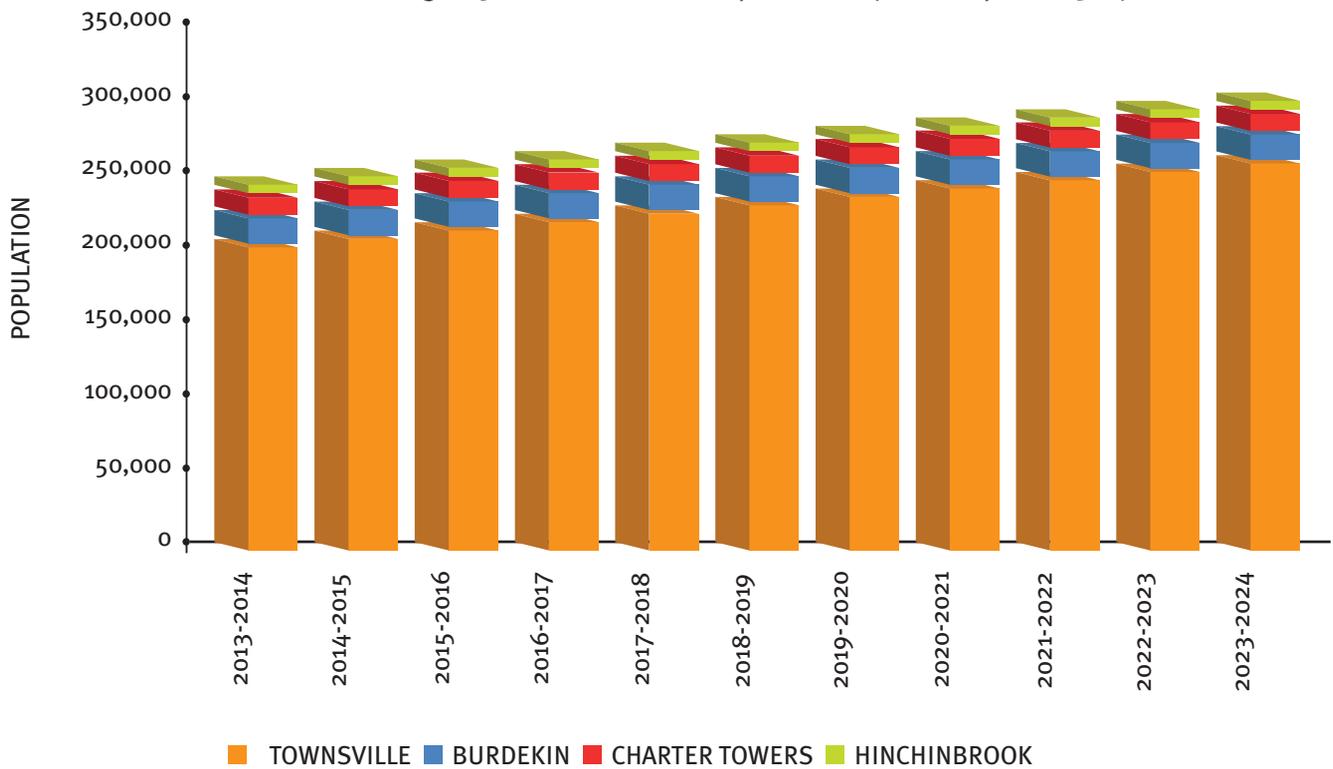


Table 5 Change in Household Numbers Projected from 2013/14 to 2023/24⁸

Households	2013/14	2023/24	Change
Townsville	77,661	100,483	29%
Burdekin	7,708	8,380	9%
Charters Towers	5,102	5,788	13%
Hinchinbrook	5,231	5,784	11%
Total	95,703	120,434	26%

⁷ Queensland Government Statistician's Office - Projected population (medium series), by local government area, Queensland, 2011 to 2036

⁸ Queensland Government Statistician's Office - Projected households (a) (medium series) by local government area, Queensland, 30 June, 2006 to 2031

2.4.2 Commercial Developments

North Queensland is one of Australia’s most significant and rapidly growing economic zones, with Townsville being the commercial and services hub for North Queensland’s minerals, agriculture, defence, tourism and tropical sciences sectors. The region is home to natural resources, for example sugar cane, mining, cattle, along with leading institutions like James Cook University and the Australian Institute of Marine Science.

Townsville has the most broad-based regional economy outside of Brisbane and has been identified by the Queensland Government as the state’s logical second capital city with a significant economy with long term growth potential.

The Townsville Economic Development Plan⁹ identifies that in line with expected population growth, the Townsville economy must grow by 109% and generate over 56,000 jobs by 2031. The services and industry sectors identified as priority areas for growth include:

- » Education and tropical science expertise – building on the education, training and research facilities e.g. James Cook University, Townsville Hospital
- » Port Operations, intermodal freight and storage – Port of Townsville and potential to expand trade along with expansion of the Stuart Industrial area with an important transport corridor

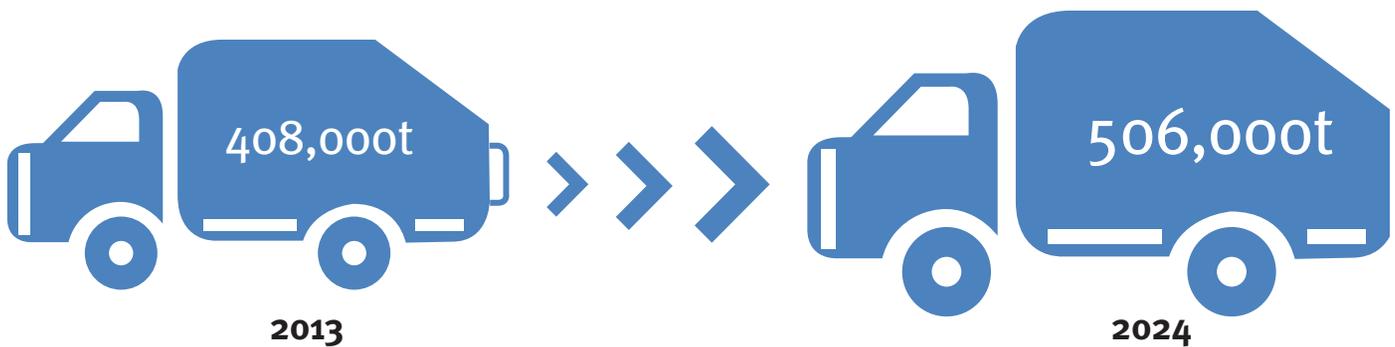
- » Defence – potential opportunities with links to defence operations and Townsville’s engineering, logistics and vehicle maintenance sectors.

Along with anticipated growth potential in government and professional services, mineral processing and agricultural supply services, aviation industries, retail, tourism and sustainable technologies sectors. There are also opportunities for businesses to develop waste and recycling infrastructure to meet the needs of this WRRP, including reprocessing capability and markets for material collected for recycling.

2.4.3 Waste Forecasts

Based on the levels of household growth and commercial development expected in the services and industry sectors in North Queensland, waste is expected to grow from 408,000 tonnes (2013/13) to 506,000 tonnes by 2024, as highlighted in Figure 6. This projected 24% increase in levels of waste generated highlights the need to move waste up the waste hierarchy and for waste avoidance initiatives that reduce and help control the levels of waste generated in the future to be prioritised.

Figure 6 Change in waste growth Projected from 2013/14 to 2023/24



Waste Stream	2012/13 (Tonnes)
MSW	181,000
C&I	90,600
C&D	136,300
Total	407,900

Waste Stream	2023/24 (Tonnes)
MSW	212,700
C&I	117,1600
C&D	176,500
Total	506,300

⁹ Townsville City Economic Development Plan 2013 – 2017 – Townsville City Council

3 Where do we want to get to?

The North Queensland councils have developed a strategic vision for the future management of waste and resources in the region. Sitting below this vision is a number of themes and objectives that provide a focus for delivery of the NQ Regional WRRP. By 2024, councils will have implemented the required actions to ensure the vision and objectives of the NQ Regional WRRP have been achieved.

3.1 Vision

The overall vision for waste and resource management in North Queensland:

North Queensland – moving towards sustainable waste management by 2024.

The vision is intended to support programs of work at the state level, set out in the draft Queensland Waste Strategy, at the same time as recognising that waste management initiatives and solutions need to be tailored to the regional geography of North Queensland.

3.2 Themes and Objectives

In order to deliver the vision, five key themes have been identified. These themes provide a focus for future planning and delivery of the strategy. The themes are based on key policy drivers at the national, state, regional and local level along with feedback from public consultation and are:

- 1 Avoidance and Waste Reduction
- 2 Landfill Diversion
- 3 Protecting Human Health and Environment
- 4 Development of Sustainability Opportunities
- 5 Community Values and Collaboration

Under each theme a series of objectives and targets have been developed, presented in Figure 7, setting out what the NQ Regional WRRP is aiming to achieve in each area and to allow progress against the WRRP to be measured.

Table 6 Objectives for the NQ Regional WRRP

Theme 1: Avoidance and Waste Reduction
<p><i>Objectives</i></p> <p>1.1 Reduce waste generation per capita.</p>
<p><i>Targets:</i></p> <ul style="list-style-type: none"> • Reduce waste generation per capita by 2.5% from 2014 levels by 2024. • Stretch target: Reduce waste generation per capita by 5% by 2024.
Theme 2: Landfill Diversion
<p><i>Objectives</i></p> <p>2.1 Establish an accurate baseline position of types, quantities and management methods for all waste streams.</p> <p>2.2 Increase the MSW (domestic) recycling rate.</p> <p>2.3 Increase the recovery rate of C&I presented at landfills</p> <p>2.4 Increase the recovery rate of C&D presented at landfill.</p>
<p><i>Targets:</i></p> <ul style="list-style-type: none"> • Establish a baseline position by 2015/16. • By 2024 achieve 40% recycling rate for MSW (domestic), 50% recovery rate for C&I, 80% recovery rate for C&D. • Stretch target by 2024: 45% recycling rate for MSW (domestic), 55% recovery rate for C&I, 85% recovery rate for C&D.
Theme 3: Protecting Human Health and Environment
<p><i>Objectives</i></p> <p>3.1 Ensure our facilities comply with environmental requirements.</p> <p>3.2 Develop and implement regional solutions for illegal dumping.</p> <p>3.3 Manage landfill airspace on a regional basis to minimise the total environmental footprint.</p> <p>3.4 Investigate, develop, and implement regional solutions for the management of problem wastes.</p> <p>3.5 Develop and implement regional solutions for litter management.</p>
<p><i>Targets:</i></p> <ul style="list-style-type: none"> • Maintain environmental compliance in accordance with regulatory requirements and work towards achieving best practice. • Reduce illegal dumping incidents by 30% of 2012/13 levels by 2018/19 • Develop a regional landfill solution by 2017. • Provide regional facilities for the management of three key problem waste streams by 2020/21 • Reduce tonnage of litter and illegal dumping by 30% of 2012/13 levels by 2018/19.



Theme 4: Development of Sustainability Opportunities

Objectives

- 4.1 Engage with the waste industry to identify new business opportunities linked to waste management and resource recovery in North Queensland.
- 4.2 Provide opportunities for regional contracts and resource sharing to minimise individual member council costs for waste management services.
- 4.3 Promote the opportunities for regional innovation in developing tailored, regional solutions for waste management including fostering the development of local recycling industries.

Targets:

- Support the expansion and or establishment of new businesses linked to waste management and resource recovery in North Queensland by 2017/18.
- Investigate three opportunities for regional contracts/resource sharing between councils by 2017/18.
- Support the expansion and or establishment of new local recycling enterprises across the North Queensland region by 2019/20.

Theme 5: Community Values and Collaboration

Objectives

- 5.1 Remain responsive to community expectations in respect to waste management services.
- 5.2 Continue to manage waste and infrastructure to enhance regional environmental outcomes.
- 5.3 Increase public education in order to reduce waste generation and increase reuse and recycling performance.
- 5.4 Provide economic development and job opportunities through enhancing waste management and resource recovery activity in the region.

Targets:

- Councils to carry out a biennial user survey of waste service provided to understand community satisfaction.
- Achieve a year on year reduction in levels of total waste generated (kg per capita).
- Achieve a year on year increase in the recycling rate, to achieve 40% recycling rate for MSW (domestic), 50% recovery rate for C&I, 80% recovery rate for C&D by 2024.

4 How will we get there?

It is important that we work with residents, businesses and the wider community to achieve the vision for waste management in North Queensland over the next ten years and beyond. In order to meet the objectives and targets which sit below the WRRP vision and themes, there are a number of options, initiatives and actions for consideration. Community and stakeholder engagement was undertaken as a component of this WRRP development, to understand the regional community's expectations and aspirations for waste management now and into the future, the feedback from which has been incorporated in to the proposed initiatives and actions under each theme.

Underpinning this WRRP is also the need for:

- » education and awareness raising to change behaviour and support moving waste up the hierarchy
- » good quality data to establish a robust baseline and measure the change in performance as a result of implementing options and initiatives under this WRRP
- » local government to lead by example in the way waste from local government activities is managed.

As part of identifying the different ways to meet the vision and themes set out within this strategy a quantitative options appraisal process was undertaken. This focussed on the waste avoidance and landfill diversion themes, and considered how different options could contribute to the delivery of the WRRP objectives. Options were identified and assessed against their contribution to waste avoidance, landfill diversion performance, along with the additional

criteria of deliverability, social, environmental impact and cost.

For the remaining three themes, protecting human health and environment, development of sustainability opportunities and community values and collaboration, a formal options assessment has not been carried out. However, key initiatives and actions, aligned with national and state policy, to achieve the WRRP objectives under these themes have been identified.

Councils are also looking at the regional governance arrangements in order to assess how waste management services across the North Queensland region can be delivered efficiently and effectively in the future, whilst achieving the vision and themes of this strategy. This includes comparing how council's currently operate and how various structures for working at the regional level may help to realise costs savings, for example through joint procuring of goods, delivery of waste services and development of regional waste infrastructure.

4.1 Options Assessment

To understand the contribution to the WRRP objectives of potential changes to the way in which waste is collected and managed across North Queensland, ten options were developed, which take into account both the waste hierarchy and the rural geography of North Queensland. Whilst these options primarily focussed on the municipal waste stream, as councils have most control on this waste stream, the development of treatment/disposal

Table 7 Options tested through the options appraisal process

Waste Avoidance	Preventing waste from being generated through waste avoidance initiatives such as Love Food Hate Waste, mail campaigns.
Collection Systems	Maximising performance of existing collections, through increased capture of recyclables through kerbside collections and self-haul sites.
	Reduced general waste container size (to 140 litre from 240 litre) and greater dry recycling container size (360 litre from 240 litre) to encourage diversion of material to recycling stream.
	Separate weekly food waste kerbside collection (Townsville City Council area only), material processed through anaerobic digestion (AD) facility.
	Fortnightly garden waste kerbside collection, material processed through windrow (excluding Charters Towers).
	Fortnightly mixed food and garden waste kerbside collection, material processed through In-vessel composting (IVC) (excluding Charters Towers).
Treatment/ Disposal	One bin system, removing kerbside recycling services and processing material through a dirty MRF, recyclables extracted and refuse derived fuel (RDF) type output .
	Regional Mechanical Biological Treatment (MBT) plant with AD.
	Regional Landfill - fully engineered landfilled with complete gas extraction.
	Biodrying with treated material sent to regional gasification facility.

infrastructure provides potential opportunities for increased diversion from landfill of C&I and C&D wastes.

The options modelled and tested through the options appraisal process are summarised in Table 7. Where a regional facility is assumed, one central facility located close to the major area of waste generation was assumed, with rural councils bulking and hauling general waste to that facility. Some options do not apply to all councils, due to the constraints associated with rural areas in terms of delivery of the option and/or the small amount of material generated for processing. This does however provide opportunities to work with the community and industry to consider innovative, tailored solutions on a small scale at a more local level.

The options were assessed against the waste avoidance, landfill diversion performance, deliverability, social, environmental impact and cost criteria.

The outcomes of the assessment process, summarised in Appendix 2, highlighted that the waste avoidance option scored highest, this is mainly because this initiative can be introduced at relatively low cost and has the potential to reduce levels of waste generated per person by over 4%. Maximising the performance of existing collections, through increased capture of recyclables at kerbside and self-haul also scored highly. This was closely followed by opportunities to reduce the general waste container size from 240 litre to 140 litre at the same time as increasing the size of kerbside recycling containers from 240 litre to 360 litre.

For organic wastes, a fortnightly garden waste kerbside collection with material processed through a windrow was the top scoring option. Whilst the Alternative Waste Treatment technologies (AWT) such as Mechanical Biological Treatment (MBT) and gasification scored high from a landfill diversion perspective, scores for cost and deliverability meant moving to a regional landfill with complete gas extraction was the highest scoring of the treatment/disposal options.

More detailed feasibility studies are required for some of the options, before considering whether it is possible to implement them in the different council areas. Where a more detailed feasibility study is required, this has been picked up as part of the action plan process.

4.2 Addressing the WRRP Themes

A summary of the options and initiatives identified for delivery of the WRRP objectives is set out under each theme below. In addition, detailed action plans have been developed at the regional and council level setting out key actions required to deliver each objective, responsibility for delivery along with timescales for implementation of the action, see Appendix 3.

4.2.1 Theme 1 – Avoidance and Waste Reduction

One of the biggest challenges is to reduce the amount of waste we generate at home, at work and through all activities we undertake. We have become accustomed to a 'buy and throw' approach, buying less durable products, for example household items and electrical goods at relatively low cost and replacing them frequently along with buying more food than we consume. However,

as the demand for raw materials become greater and more expensive, it may not be as easy to buy products at such low cost.

Ways to prevent waste can include:

- » buying items that last longer and can be repaired
- » deciding not to upgrade products when existing ones still work
- » not buying items that are heavily packaged
- » not buying items that have a short lifespan or are low quality
- » planning meals and food purchases before going shopping and using up leftovers to reduce food waste
- » buying items in refillable containers e.g. washing liquid
- » composting at home organic food and garden waste.

The options appraisal process highlighted that preventing waste from being generated through waste avoidance initiatives such as Rub out Rubbish (Townsville and Hinchinbrook), or Love Food Hate Waste (UK), campaigns had the potential alone to reduce MSW (domestic) waste generation per person by 5% from 2013 levels by 2024.

To support delivery of this theme, initiatives to help deliver the objectives include:

At the householder level:

- » raising awareness of the issues of managing increased waste through delivery of a regional communication campaigns targeting specific material e.g. junk mail, food waste.
- » advising on practical ways to avoid and reduce waste and where waste cannot be avoided looking at opportunities and outlets across the region for reusing items including partnering with the community.
- » reviewing the size of general waste containers provided at the kerbside to constrain capacity.

Commercial and industrial waste:

- » working with economic development bodies (e.g. the Chamber of Commerce, Townsville Enterprise) and Industry in the region, to support Queensland's ecoBiz eco-efficiency program, designed to help business and small to medium enterprise to cut waste and inefficiency.

Local government activity:

- » embedding sustainable resource management principles into council purchasing and decision making processes so that environmental impacts and the waste hierarchy are always considered.

Key Community feedback and associated initiatives:

- » **All councils** – desire for increased public education of waste issues and services offered. **Regional action:** develop and deliver a regional 'Rub Out Rubbish' awareness raising campaign to increase public understanding and engagement of waste avoidance and reduction.

4.2.2 Theme 2 – Landfill Diversion

Landfill sits at the bottom of the waste hierarchy hence there is a need to look at ways in which material can be diverted from landfill and moved up the waste hierarchy. Landfill diversion can be achieved in a variety of ways including:

- » reducing the overall amount of waste generated (see Theme 1)
- » increased reuse of material
- » increased recycling and recovery of material
- » use of alternative waste treatment (AWT) technologies for treating waste as opposed to landfill.

In addition to considering the waste hierarchy and environmental impact of disposing of waste, it is also important to consider ‘future proofing’ of options by anticipating potential future needs and changes to policy/fiscal measures. This includes consideration of economic factors which may include future carbon taxes/ waste levies on the landfilling of waste, which are currently not in place or suspended, but may impact on the cost of landfilling in the future. It is also important to consider the costs associated with remediating landfills to meet required environmental standards once they have reached the end of their operational life.

Given the geography of North Queensland, when looking at options to divert waste from landfill there is a need to consider the limited access to current markets for recyclables and organic waste, as well as the costs and distances involved in transporting waste to regional treatment facilities. At the same time this provides opportunities for tailored, regional solutions discussed in Theme 4.

The options appraisal process highlighted improving the recycling performance of existing collection services, for example through developing a regional communication campaign and targeting areas with low performing kerbside collections. Along with improved segregation at self-haul sites has the potential to improve the current NQ MSW (domestic) recycling rate by 6% by 2020. There is also an opportunity to improve diversion of C&I and C&D waste at landfill through greater interception and improved segregation and sorting of material.

Diverting waste from landfill can also be achieved through increasing the provision of organics collections at the kerbside. This is supported by the general waste composition, which suggests there is a large amount of organic material in the general waste bin. Mixed food and garden waste collection has the potential to increase the recycling rate by 4% across NQ. The options appraisal indicated that fortnightly garden waste kerbside collection with material processed through a window was the top scoring organics option, with the potential to increase the recycling rate by 2% across NQ¹⁰.

In the options appraisal, AWT for treating and disposing of general waste such as MBT and gasification scored highly in terms of landfill diversion, but lower from a cost and deliverability perspective, which meant that a regional landfill with complete gas extraction scored highest overall on the treatment and disposal options. Given potential future changes to policy/fiscal measures which may make

landfill more expensive, the case for AWT technologies needs to be kept under review.

To support delivery of this theme, actions identified to help deliver the objectives include:

At the householder level:

- » developing a regional communications campaign focused on improving the recycling performance of existing collection services
- » reviewing the performance of kerbside recycling collection services and identify potentially low performing areas for support
- » undertaking a detailed feasibility study in accordance with individual council action plans for introducing additional (dry recycling, food and/or garden wastes) collections at the kerbside and the supporting regional processing infrastructure
- » carrying out a detailed regional feasibility study for the alternative treatment of waste that minimises landfill disposal
- » identifying and implementing opportunities for a regional strategy to aid in the management of wastes generated by man-made and natural disasters.

Commercial and industrial and construction and demolition waste:

- » providing advice to businesses and industry on recycling and resources recovery and support initiatives that assist businesses improve their recycling performance
- » investigating regional opportunities for greater segregation/interceptions of C&I and C&D waste at transfer/landfill sites.

Local government activity:

- » establishing an accurate baseline position of current amounts of waste generated and end destination of material in order to set targets to demonstrate continuous improvement
- » reviewing contract specifications to have greater control on end use and destination of material generated by local government in carrying out its activities but managed by contractors
- » assessing feasibility of developing an inter-council waste exchange for material generated from local government activity.

Key Community feedback and associated initiatives:

- » **Charters Towers** – desire for provision of kerbside recycling. **Council action:** to carry out a detailed feasibility study for introducing kerbside recycling
- » **Townsville** – desire for provision of green waste collection at the kerbside. **Council action:** undertake a detailed feasibility study for introducing organics (food and/or garden wastes) collections at the kerbside
- » **All councils** – review of services provided during cyclone season. **Regional action:** identify and implement opportunities for a regional strategy to aid in the management of wastes generated by man-made and natural disasters.

¹⁰ Burdekin already operate a 3 bin system and Charter Towers were assumed not to have a kerbside garden waste service.

4.2.3 Theme 3 – Protecting Human Health and Environment

Protecting human health and the environment is an important consideration with all waste management activity. NQ councils always seek to maintain full compliance with regulatory requirements for council operated activities/facilities, for example landfill sites. In addition, there are a number of areas which we can contribute to protecting the human health and environment of North Queensland and its residents through measures such as:

- » regionally managing landfill air space to control the overall environmental footprint of landfill sites, for example consolidating the number of landfill sites in the region
- » improving regional management of problems waste for example agricultural chemicals, and hard to handle waste e.g. mattresses
- » reducing levels of illegal dumping and littering through regional programs.

Strategies will be put in place to address these areas and support delivery of this theme. The strategies will identify education and awareness initiatives along with associated enforcement programs to reduce the number of illegal dumping and littering incidents. We will also continue to support clean-up initiatives such as Clean Up Australia Day.

The strategy for problem waste will align to the wastes identified in the draft Queensland Waste Avoidance and Resource Productivity Strategy, identifying areas for regional collaboration (where appropriate) and opportunities for improved management of problems waste, including supporting existing initiatives such as the drumMUSTER program for return of non-returnable farm chemical containers.

Key Community feedback and associated initiatives:

- » **Burdekin** – raised the importance of drumMUSTER and collections for other hazardous wastes **Council action:** identify and implement local initiatives for managing these wastes
- » **Hinchinbrook** – better education systems and more policing of throwing rubbish out of the car. **Council action:** to support state and regional initiatives and programs on litter reduction and illegal dumping and actively spread the message to local communities
- » **Townsville** – desire for provision of facilities for recycling e-waste. **Council action:** identify and implement local initiatives for managing problem waste and promote facilities for the recycling of e-Waste.



¹¹ as defined in the draft Queensland Waste Avoidance and Resource Productivity Strategy (2014 – 2024)

4.2.4 Theme 4 – Development of Sustainability Opportunities

There are a number of waste management challenges as a result of the geography and rural nature of North Queensland, in particular in relation to access to infrastructure including:

- » limited access to markets for recycled material, in particular glass and organics
- » currently a limited ability to manage the variable quality of material collected for recycling e.g. organic waste and the ability to use material on council parks
- » there are minimum tonnage requirements to make AWT viable and costs involved in the transport and bulking of relatively small quantities of waste from rural locations to a central facility for treatment
- » maintaining a value for money waste management service for residents and businesses of North Queensland whilst striving for continuous improvement in performance.

With these challenges come opportunities, including:

- » potential for increased regional working between councils to achieve economies of scale and consistency of services/messages across the region
- » the potential to work more closely with businesses and industry across the region to develop tailored solutions for local waste management needs.

Specific initiatives to support delivery of objectives under this theme include:

- » establishing a regional working group to explore opportunities for providing support to local business/industry to promote new businesses opportunities and develop new markets for recycled products. This may also include working with wider councils who participate in the Local Authority Waste Management Advisory Committee (LAWMAC)¹¹
- » fostering regional market development opportunities for recycled material particularly in relation to green waste and glass
- » identifying opportunities and solutions for addressing quality issues with green waste collected from the kerbside and self-haul to use as mulch on parks
- » monitoring current costs of waste management against any future proposed options to ensure a cost effective management service is being provided across the region to residents and businesses.

Key Community feedback and associated initiatives:

- » **All councils** – ability to recycle greater range of material **Regional action:** establish a regional working group to explore opportunities for providing support to local business/industry to promote new businesses opportunities and develop new markets for recycled products. Foster regional market development opportunities for recycled material particularly in relation to green waste and glass.

4.2.5 Theme 5 – Community Values and Collaboration

Waste is everyone's responsibility and it is important we work with and listen to the community in order to achieve the vision and objectives of this WRRP.

As part of this WRRP development, consultation was undertaken to test the regional community's expectations and aspirations for waste management now and into the future.

It is also important as a group of councils that we work together to achieve efficiencies and improved performance, where possible.

To support the delivery of objectives under this theme, initiatives include:

- » reviewing opportunities to work with community organisations in the local areas to support the activities in the WRRP
- » providing support to community waste prevention and reuse programs
- » continuing to carry out regular consultation with residents and businesses to understand community priorities, assess level of satisfaction with waste service and opportunities for improvement/services changes
- » implementing regional arrangements between the four councils to ensure the WRRP is delivered, progress on actions is effectively monitored, and opportunities and efficiencies for increased partnership working are exploited
- » implementing governance arrangements across the North Queensland region to ensure opportunities for regional efficiencies are exploited where appropriate
- » committing to the development of appropriate regional infrastructure, for example a regional landfill site, regional MRF, regional organics processing facility.

Key Community feedback and associated initiatives:

- » **Charters Towers** – desire for community gardens. **Council action:** to identify opportunities to work with community organisations in the local areas to support the activities in the WRRP
- » **Hinchinbrook** – concentrate on providing local services of a high standard **Council action:** carry out periodic consultation with householders and business to assess level of satisfaction with waste service and opportunities for improvement/service changes
- » **Townsville** -community compost program to reduce green and food waste and allow people to buy cheaply **Council action:** provide support to community waste prevention and reuse programs.

¹¹ LAWMAC is an organisation of nineteen North Queensland Local Government Councils dedicated to best practice waste management aiming to provide sustainable solutions through its regional forum and interactive participation across the LAWMAC region on current and future waste management practices and technologies.

5 How will the success of the WRRP be measured?

Over the life time of this WRRP, NQ councils will work with other councils in the region, community, businesses and industry to help achieve the vision and objectives within this WRRP. This will include initiatives for:

- » moving waste up the waste hierarchy
- » NQ councils to lead by example, looking at waste management practices and sustainability within local government activity
- » increased collaboration with the community
- » providing opportunities for innovation and promoting new business opportunities linked to waste management and resource recovery across the region.

Action plans have been developed at the regional level and for each council setting out the actions or required changes to services and infrastructure. Timescales and delivery

deadlines, along with who has ownership of each action are also identified.

Monitoring of how we are performing against the WRRP vision and objectives will be tracked on an annual basis against key indicators set out in Table 8.

The development of the NQ Regional WRRP has been a collaborative effort between the participating local councils and their consultant. Going forward, the councils will have a team to ensure implementation of the action plans maintains traction and the region achieves its vision of sustainable waste management by 2024.

In line with the *WRRRA 2011*, this WRRP will be reviewed every three years and action plans updated on an annual basis.

Table 8 Indicators for Monitoring progress of the WRRP

Theme	Indicator	Unit/metric
Avoidance and Waste Reduction	Waste generated per person	Kilograms per capita per annum
Landfill Diversion	Tonnes of waste to landfill	Tonnes per annum
	Recycling rate by waste stream MSW (domestic);local government activities;	Percent of waste recycled per annum
Protecting Human Health and Environment	Number of illegal dumping incidents	Number of illegal dumping incidents per annum
	Tonnes of illegal dumping collected	Tonnes collected per annum
	Number of active operational landfills across the region	Number of operational landfill sites
	Number of facilities in each council area for management key problem waste streams	Number of problem waste facilities
	Tonnes of litter collected	Tonnes per annum
Development of Sustainability Opportunities	Number of regional contracts/resource sharing opportunities investigated between councils	Number of contracts/opportunities investigated
	Number of new businesses supported linked to waste management and resource recovery established in North Queensland	Number of new businesses
	Number of new local recycling enterprises across North Queensland	Number of new enterprises
Community Values and Collaboration	Number of waste service user surveys carried out	Number of biennial surveys
	Number of people employed in waste and resource management industry in the region	Number of employees

Appendix 1. Glossary of Terms

Anaerobic Digestion (AD)	A process where biodegradable material is placed in an enclosed vessel and broken down in controlled conditions in the absence of oxygen. Outputs are typically a digestate and biogas
Alternative Waste Treatment technologies (AWT)	Waste processing infrastructure using mechanical, biological and/or thermal processes as an alternative to, or pre-treatment prior to, landfill
Avoidance and reduction	Preventing waste from being generated in the first instance e.g. purchasing items with less packaging
Bio-drying	The process by which waste is rapidly heated through to remove moisture from the waste and reduce the overall weight of the waste
Construction and Demolition (C&D)	Waste arising from construction and demolition activity e.g. bricks, concrete, metals
Commercial and Industrial (C&I)	Waste arisings from businesses including waste from school, restaurants, retail, offices and manufacturing industries
e-waste	End-of-life electronic equipment, such as televisions, computers, mobile phones, stereos and small electrical appliances (excluding white goods)
Gasification	A thermal treatment process for treating pre-treated waste (typically) in the presence of some air and oxygen, producing a gas which can be combusted to generate electricity and a char which usually requires disposal if no markets are available
In-Vessel Composting (IVC)	A process by which organic material (food and garden waste) is processed in enclosed units in the presence of air to produce a compost type material
Landfill diversion	Actively diverting waste away from landfill so that it is instead reused, recycled or treated
Material Recovery Facility (MRF)	A facility for the sorting of mixed recyclable materials into separate material streams
Mechanical Biological Treatment (MBT)	Mechanical sorting / separation technologies used in conjunction with biological treatment processes, such as composting to treat general waste
Municipal Solid Waste (MSW)	Waste arising from households and from activities carried out by local government e.g. parks and gardens
MSW (domestic)	Municipal Solid Waste from households, usually either collected at the kerbside or delivered by residents to transfer stations/landfill sites
NQ	North Queensland
NQROC	North Queensland Regional Organisation of Councils
Problem/Priority wastes	Covers a range of wastes which may: <ul style="list-style-type: none"> » pose a hazard to human health or the environment e.g. chemicals » be hard to handle e.g. mattresses, or » be currently uneconomic/ lack of available outlets to recover or recycle material e.g. organic waste.
Recovery	Material which has been diverted from landfill and either reused, recycled or stockpiled for future use
Recycling	The collection, sorting and processing of materials for use as a raw material in the production of the same or similar products
Refused Derived Fuel (RDF)	A fuel produced from combustible waste that can be used to produce heat and/or power
Reuse	Material that does not require processing and is in a suitable condition and quality to be reused in its original form, for example furniture

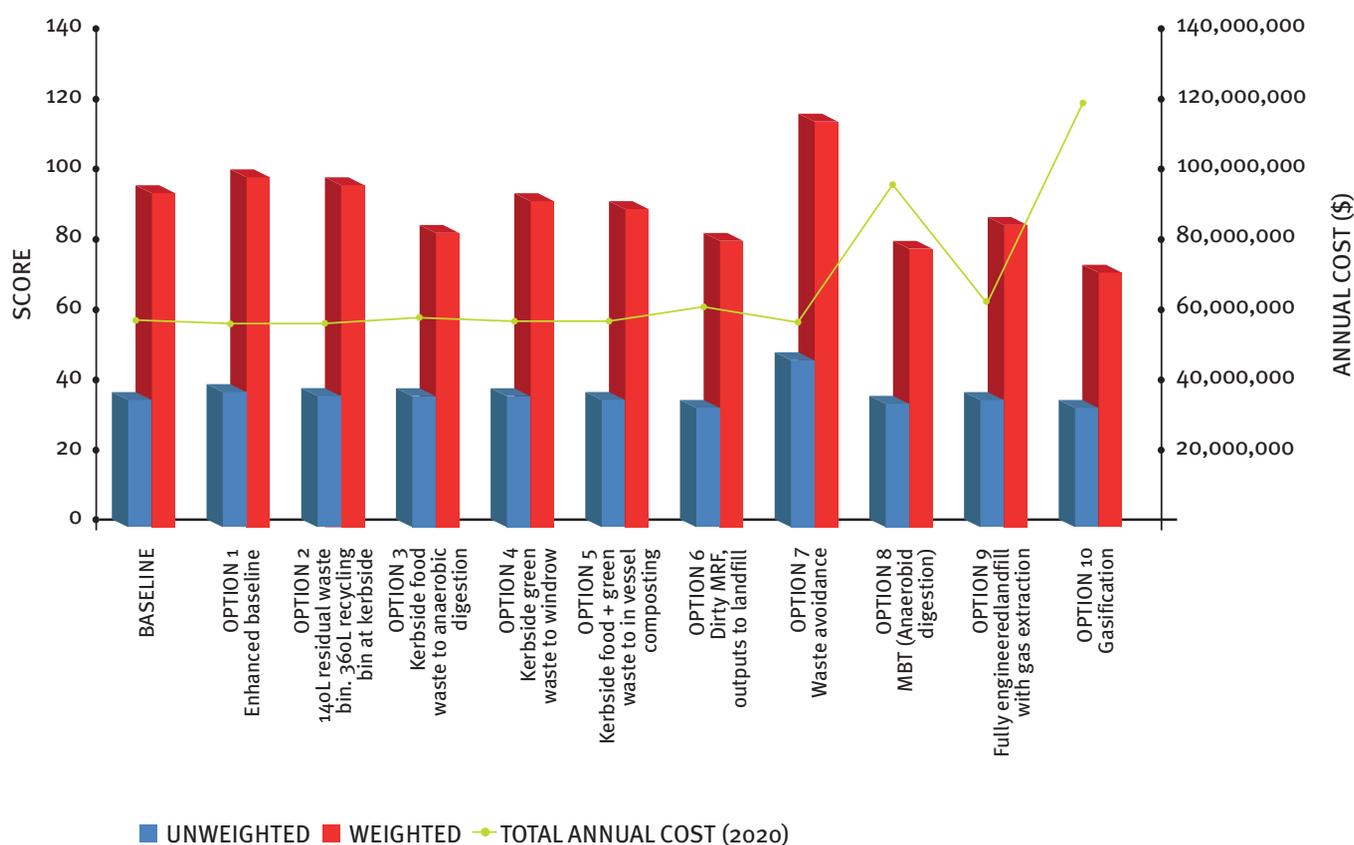
Waste	<p>The <i>Environmental Protection Act 1994</i> and <i>Queensland Waste Reduction Act</i> defines waste as:</p> <p>(1) Waste includes anything, other than a resource approved under the <i>Waste Reduction Act 2011</i>, chapter 8, that is:</p> <p>(a) left over, or an unwanted by-product, from an industrial, commercial, domestic or other activity; or</p> <p>(b) surplus to the industrial, commercial, domestic or other activity generating the waste.</p> <p>(2) Waste can be a gas, liquid, solid or energy, or a combination of any of them.</p> <p>(3) A thing can be waste whether or not it is of value.</p> <p>(4) For subsection (1), if the approval of a resource under the <i>Waste Reduction Act</i>, chapter 8, is a specific approval, the resource stops being waste only in relation to the holder of the approval.</p> <p>(5) Despite subsection (1), a resource approved under the <i>Waste Reduction Act</i>, chapter 8, becomes waste—</p> <p>(a) when it is disposed of at a waste disposal site; or</p> <p>(b) if it is deposited at a place in a way that would, apart from its approval under that chapter, constitute a contravention of the general littering provision or the illegal dumping of waste provision under that Act— when the depositing starts.</p>
Waste Hierarchy	<p>The waste hierarchy is the preferred order in which waste and resource management options should be considered with avoidance and reduction the most preferable, followed by reuse and recycling and disposal with no energy recovery the least preferable option for managing waste</p>
WRRRA 2011	<p><i>Queensland Waste Reduction and Recycling Act 2011</i></p>
WRRP	<p>Waste Reduction and Recycling Plan</p>

Appendix 2. Options Assessment Results

Table A2: Options Appraisal Weighted Evaluation Scores (Ranked)

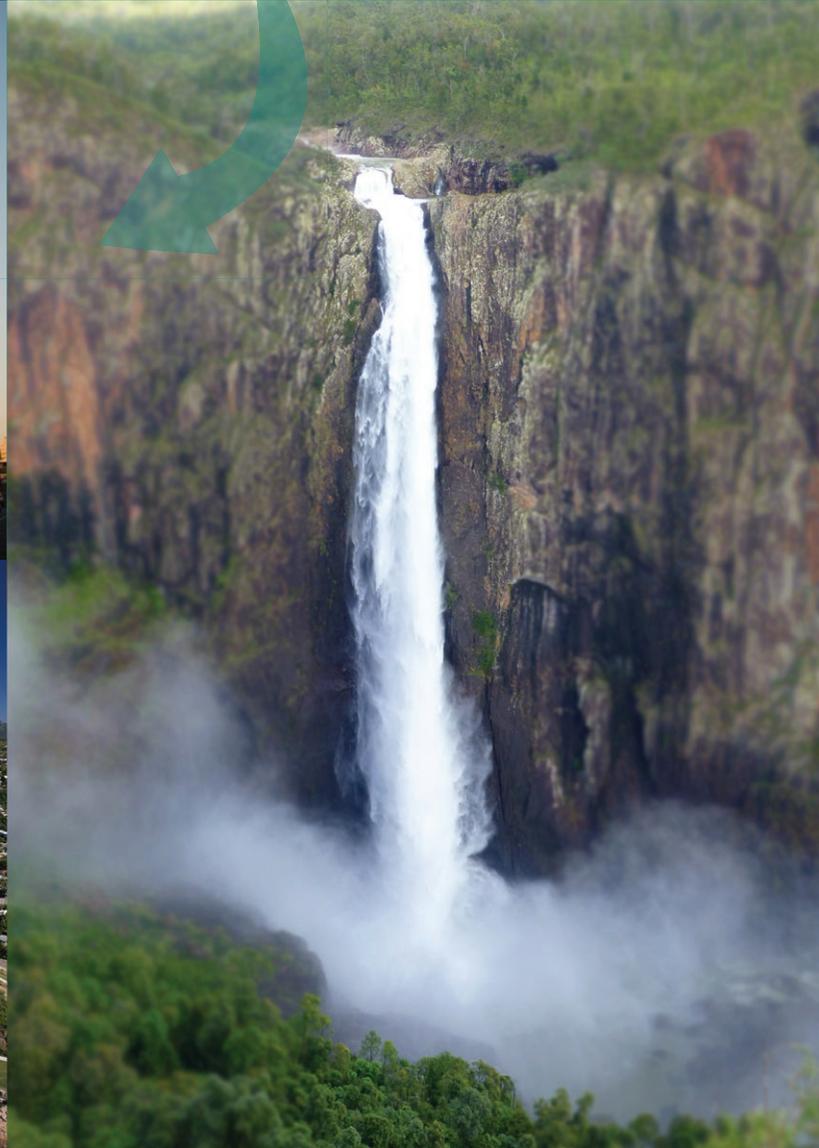
Option	Weighted Score	Rank
Option 7 - Waste avoidance	116	1
Option 1 - Enhanced baseline	100	2
Option 2 - 140 litre residual waste bin, 360 litre recycling bin at kerbside	98	3
Baseline	95	4
Option 4 - Kerbside green waste to windrow	92	5
Option 5 - Kerbside food + green waste to in vessel composting	89	6
Option 9 - Fully engineered landfill with gas extraction	88	7
Option 3 - Kerbside food waste to Anaerobic Digestion	86	8
Option 6 - Dirty MRF, outputs to landfill	84	9
Option 8 - MBT (Anaerobic Digestion)	80	10
Option 10 - Gasification	73	11

Figure A2: Options Appraisal Evaluation Scores against Total Annual Cost (2020)



Appendix 3. Action Plans

- » North Queensland Regional Action Plan
- » Burdekin Shire Council Local Action Plan
- » Charters Towers Regional Council Local Action Plan
- » Hinchinbrook Shire Council Local Action Plan
- » Townsville City Council Local Action Plan



NQ Regional Waste Reduction & Recycling Plan: Regional Action Plan (2014-2024)

This action plan details the actions proposed at a regional level to meet the vision and objectives in the WRRP. Each action may address multiple objectives and themes. Set out below is detail of the action, the key and contributing objectives the action addresses, along with who is responsible and expected timescales for delivery of the action. This action plan will be updated on an annual basis.

NQ Regional WRRP Action Plan (2014 – 2024)		Version / date: Final v1 (15/07/2014)		
Vision: North Queensland - moving towards sustainable waste management by 2024				
Theme 1: Avoidance and Waste Reduction				
Detail of Action	Key objective addressed	Contributes to objectives	Who is responsible?*	Timescale for delivery (from July 2014)
1.1	Develop and deliver a regional awareness raising campaign to increase public understanding and engagement of waste avoidance and reduction	2.2, 5.3	*Responsibilities to be assigned following establishment of Regional Working Group	3 yearly program to be developed within 12 months and reviewed annually thereafter.
1.2	Work with the economic development bodies and industry in the region to help deliver Queensland's ecoBiz eco-efficiency program, designed to help business and small to medium enterprise to cut waste and inefficiency.	2.3, 2.4, 4.3, 5.4		Development: March 2015 Delivery: March 2015 – on-going
1.3	Waste generated by the local government in carrying out its activities			Within 2 years
	Develop initiatives for reducing levels of generation of different waste streams generated by local government	4.2, 5.1, 5.3		Within 12 months
	Develop a regional approach to embedding consistent sustainable resources management principles into Council purchasing and decision making processes so that environmental impacts are always considered.			

Theme 2: Landfill Diversion						
Detail of Action	Key objective addressed	Contributes to objectives	Who is responsible?	Timescale for delivery		
2.1	Develop and deliver a regional awareness raising campaign to increase reuse and recycling	1.1, 5.3		See 1.1		
2.2	Undertake a detailed feasibility study in accordance with individual Council action plans for introducing additional (dry recycling, food and/or garden wastes) kerbside collections and associated regional processing infrastructure requirements	2.3, 4.1, 4.2, 4.3, 5.1		Within 2 years		
2.3	Provide advice to businesses and industry on recycling and resources recovery and support initiatives that assist businesses improve their recycling performance	1.1, 2.4, 4.1, 4.3, 5.1, 5.4		See 1.2		
2.4	Consider options for the alternative treatment of waste that minimises landfill disposal and carry out detailed feasibility study	2.3, 2.4, 3.3, 3.4, 4.1, 4.2, 4.3,		Within 12 months		
2.5	Identify and implement opportunities for a regional strategy to aid in the management of wastes generated by man-made and natural disasters	2.3, 2.4, 3.4, 4.2		Within 12 months		
2.6	Establish regional baseline position of waste generated from local government activity			Within 12 months		
	Waste generated by the local government in carrying out its activities	2.1				
	Develop regional environmental training and awareness program for local government employees to generate greater awareness of moving waste up the hierarchy with carrying out local government activities	2.2	1.1, 4.3, 5.3		Within 2 years	
	Assess feasibility of developing an inter Council waste exchange for material generated from local government activity	2.2		Within 2 years		

Theme 3: Protecting Human Health and Environment

Detail of Action	Key objective addressed	Contributes to objectives	Who is responsible?	Timescale for delivery
3.1 Identify regional collaboration opportunities for dealing with problem waste (linking to Queensland state strategy) and implement	3.4	3.2, 3.5, 4.1, 4.3, 5.1, 5.2, 5.4		Within 12 months
3.2 Develop and deliver a regional litter management strategy that identifies initiatives related to education and awareness and enforcement programs	3.5	3.1, 3.4, 3.5, 5.1, 5.3		Within 2 years
3.3 Develop and deliver a regional strategy for illegal dumping that identifies initiatives related to education and awareness and enforcement programs	3.2	3.1, 3.4, 5.1, 5.3		Within 2 years

Theme 4: Development of Sustainability Opportunities

Detail of Action	Key objective addressed	Contributes to objectives	Who is responsible?	Timescale for delivery
4.1 Establish a regional working group to explore opportunities for providing support to local businesses/industry to promote new business opportunities and develop new markets for recycled products	4.1	3.4, 4.3, 5.4		Establish group within 12 month
4.2 Foster regional market development opportunities for recycled material particularly in relation to green waste and glass	4.3	1.1, 2.2, 2.3, 2.4, 3.4, 4.2		On going
4.3 Identify opportunities and solutions for addressing quality issues with green waste collected from kerbside and self-haul and use as mulch on parks	4.3	2.2, 2.3, 2.4, 4.2, 5.1, 5.2		Within 2 years
4.4 Monitor costs of waste management and future proposed solutions to ensure a cost effective management service is being provided across the region to residents and businesses	4.2	4.3		On going

Theme 5: Community Values and Collaboration					
Detail of Action	Key objective addressed	Objectives addressed	Who is responsible?	Timescale for delivery	
5.1	4-3	1.1, 2.2, 2.3, 2.4, 3.4, 4.1, 5.4		Ongoing with annual review date to be aligned with yearly review of WRRP	
5.2	5.4	4.1, 4.3		See 1.2	
5.3	All	All		On going Annual review of WRRP and update of action plans in July each year	
5.4	5.2	4.2, 4.3, 5.4		Within 12 months	
5.5	5.2	3.3, 4.2, 4.3,		Within 3 years	

Objectives:

1	Avoidance and Waste Reduction				
1.1	Reduce waste generation per capita	3-4	Investigate, develop, and implement regional solutions for the management of problem wastes	5	Community Values and Collaboration Remain responsive to community expectations in respect to waste management services
2	Landfill Diversion	3-5	Develop and implement regional solutions for litter management.	5-1	Continue to manage waste and infrastructure to enhance regional environmental outcomes
2.1	Establish an accurate baseline position of types, quantities and management methods for all waste streams	4	Development of Sustainability Opportunities	5-2	Increase public education in order to reduce waste generation and increase reuse and recycling performance
2.2	Increase the MSW (domestic) recycling rate	4.1	Engage with the waste industry to identify new business opportunities linked to waste management and resource recovery in North Queensland	5-3	Provide economic development and job opportunities through enhancing waste management and resource recovery activity in the region.
2.3	Increase the recovery rate of C&I presented at landfills	4.2	Provide opportunities for regional contracts and resource sharing to minimise individual member council costs for waste management services	5-4	
2.4	Increase the recovery rate of C&D presented at landfills	4.3	Promote the opportunities for regional innovation in developing tailored, regional solutions for waste management including fostering the development of local recycling industries.		
3	Protecting Human Health and Environment				
3.1	Ensure our facilities comply with environmental requirements				
3.2	Develop and implement regional solutions for illegal dumping				
3.3	Manage landfill airspace on a regional basis to minimise the total environmental footprint				



Burdekin Shire Council Action Plan (2014 – 2024)



NQ Regional Waste Reduction & Recycling Plan: Burdekin Shire Council Action Plan (2014-2024)

This action plan details the actions proposed by Burdekin Shire Council to meet the vision and objectives in the WRRP. Each action may address multiple objectives and themes. Set out below is detail of the action, the key and contributing objectives the action addresses, along with who is responsible and expected timescales for delivery of the action. This action plan will be updated on an annual basis.

Burdekin Shire Council Action Plan (2014 – 2024)		Version/date: Final v1 (15/07/2014)		
Theme 1: Avoidance and Waste Reduction				
Detail of Action	Key objective addressed	Contributes to objectives	Who is responsible?	Timescale for delivery (from July 2014)
1.1	Develop communications campaign focused on waste avoidance and reduction initiatives	2.2, 5.1, 5.3	Media Officer/ Env & Health	12 months
1.2	Deliver communication campaign and monitor impact on waste generation levels	2.2, 5.1, 5.3	Media Officer/ Env & Health	2 years
1.3	Waste generated by the local government in carrying out its activities	2.2, 2.3, 3.3, 5.1	Operations/ Env & Health	Within 2 years
	Develop strategy and action plan aimed at reducing local government waste. Apply sustainable resource management principles into Council purchasing and decision making processes so that environmental impacts are always considered. Implement sustainable resources management practices.	4.2	Finance/admin	Within 2 years
		1.1	All	Within 2 years

Theme 2: Landfill Diversion					
Detail of Action	Key objective addressed	Contributes to objectives	Who is responsible?	Timescale for delivery (from July 2014)	
2.1	Conduct recycling project aimed at businesses to improve resource recovery and support initiatives that assist them to improve their recycling performance.	1.1, 2.4, 4.3, 5.1, 5.3	Env & Health	July 2014 commencement completion within 2 years	
2.2	Implement a system to enable the benchmarking and measurement of landfill diversion.	1.1, 2.1, 2.3, 2.4	Env & Health	Within 12 months	
2.3	Develop communications campaign focused on improving the recycling performance of existing collection services	1.1, 2.3, 5.3	Media Officer/ Env & Health	within 12 months	
2.4	Review performance of the <i>free sorted waste</i> disposal service on diverting waste from landfill and identify areas for improvement.	1.1, 3.2	Env & Health	Within 12 months	
2.5	Develop a strategy for management of wastes generated by man-made and natural disasters to maximize resource recovery	2.3, 2.4, 3.4, 4.2	Env & Health	Within 12 months	
2.6	Investigate opportunities for greater segregation/interceptions of C&I and C&D waste at transfer/landfill sites.	5.2, 5.3	Env & Health	Within 12 months	
2.7	Determine what improvements are required at landfill and transfer stations facilities to encourage increased diversion of self haul waste	2.3	Env & Health	Within 12 months	
2.8	Establish accurate baseline position of waste generated by the local government in carrying out its activities	1.1, 2.3	Env & Health	Within 12 months	
	Identify initiatives for moving different waste streams (generated by local government in carrying out its activities) up the waste hierarchy	1.1, 4.2, 4.3	Manager Operations/ Env & Health	Within 12 months	
	Implement the initiatives identified above	1.1, 4.2, 4.3	Operations/ Env & Health	Within 18 months	
	Review progress of strategy	1.1, 4.2, 4.3	Env & Health	12 months after implementation then annually	
	Incorporate greater awareness of moving waste up the waste hierarchy within environmental training/awareness program given to local government employees.	1.1, 4.3, 5.3	Operations/Env & Health	Within 12 months	
Review contract specifications to have greater control on end use and destination of material generated by local government in carrying out its activities but managed by contractors	2.4	1.1, 4.2	Operations/Env & Health	Within 2 years	

Theme 3: Protecting Human Health and Environment

Detail of Action	Key objective addressed	Contributes to objectives	Who is responsible?	Timescale for delivery (from July 2014)
3.1 Define problem wastes for the Council area and make sure sufficient data is available for these waste streams to investigate opportunities for managing these wastes.	3.4	3.2, 3.5, 4.1, 4.3, 5.1, 5.2, 5.4	Env & Health	Within 12 months
3.2 Identify and implement local initiatives for managing problem waste	3.4	3.2, 3.5, 4.1, 4.3, 5.1, 5.2, 5.4	Env & Health	Within 2 years
3.3 Develop and implement an Illegal dumping and litter strategy for the local government area	3.5	3.1, 3.4, 3.5, 5.1, 5.3	Env & Health	Within 6 months
3.4 Support state and regional initiatives and programs on litter reduction and illegal dumping and actively spread the message to local communities	3.5	3.1, 3.4, 3.5, 5.1, 5.3	Consider for inclusion in campaign from action 1.1	Within 12 months
3.5 Undertake a detailed feasibility study for management and disposal of green waste collected.	3.4	4.1, 4.2, 4.3, 5.1	Env & Health	Within 2 years
3.6 Undertake a study to determine the cost effectiveness of shredding waste prior to disposal.	3.3	4.1,4.2,4.3	Env & Health	Within 2 years

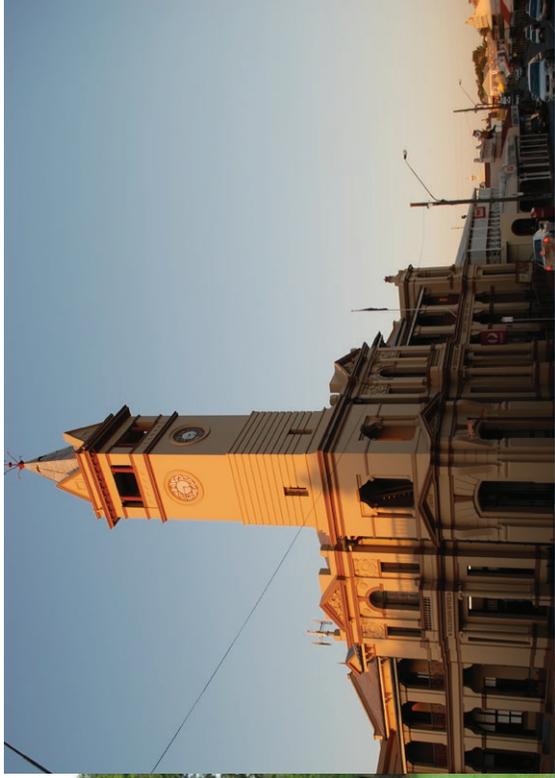
Theme 4: Development of Sustainability Opportunities

Detail of Action	Key objective addressed	Contributes to objectives	Who is responsible?	Timescale for delivery (from July 2014)
4.1 Continue to monitor and benchmark costs of waste management on a regular basis to ensure a cost effective waste management service is being provided to residents and businesses	4.2	4.3, 5.2	Finance/ Env & Health	Ongoing
4.2 Support regional market development initiatives for recycled material where viable	4.1	4.2, 4.3, 5.4	Economic & Comm. Dev	2 years
4.3 Support local businesses with innovation and developing opportunities for waste management solutions	4.3	4.1, 4.2, 5.4	Economic & Comm. Dev	2 years

Theme 5: Community Values and Collaboration					
Detail of Action	Key objective addressed	Contributes to objectives	Who is responsible?	Timescale for delivery (from July 2014)	
5.1 Identify opportunities to work with community organisations in the local areas to support the activities in the WRRP	5.4	1.1, 2.2, 2.3, 2.4, 3.4, 4.1, 4.3,	Env & Health/ Economic & Comm. Dev	2 years	
5.2 Provide support to community waste prevention and reuse programs	5.3	1.1, 4.1, 5.4	Env & Health/ Operations	2 years	
5.3 Regularly consult with householders and businesses to assess level of satisfaction with waste service and opportunities for improvement/services changes	5.1	5.3	Customer service/ Env & Health	12 months	

Objectives:

- 1 Avoidance and Waste Reduction**
 - 1.2 Reduce waste generation per capita
- 2 Landfill Diversion**
 - 2.1 Establish an accurate baseline position of types, quantities and management methods for all waste streams
 - 2.2 Increase the MSW (domestic) recycling rate
 - 2.3 Increase the recovery rate of C&I presented at landfills
 - 2.4 Increase the recovery rate of C&D presented at landfills
- 3 Protecting Human Health and Environment**
 - 3.1 Ensure our facilities comply with environmental requirements
 - 3.2 Develop and implement regional solutions for illegal dumping
- 3.3** Manage landfill airspace on a regional basis to minimise the total environmental footprint
- 3.4** Investigate, develop, and implement regional solutions for the management of problem wastes
- 3.5** Develop and implement regional solutions for litter management.
- 4 Development of Sustainability Opportunities**
 - 4.1 Engage with the waste industry to identify new business opportunities linked to waste management and resource recovery in North Queensland
 - 4.2 Provide opportunities for regional contracts and resource sharing to minimise individual member council costs for waste management services
 - 4.3 Promote the opportunities for regional innovation in developing tailored, regional solutions for waste management including fostering the development of local recycling industries.
- 5 Community Values and Collaboration**
 - 5.1 Remain responsive to community expectations in respect to waste management services
 - 5.2 Continue to manage waste and infrastructure to enhance regional environmental outcomes
 - 5.3 Increase public education in order to reduce waste generation and increase reuse and recycling performance
 - 5.4 Provide economic development and job opportunities through enhancing waste management and resource recovery activity in the region



Charters Towers
Regional Council
Action Plan (2014 – 2024)



NQ Regional Waste Reduction & Recycling Plan: Charters Towers Regional Council Action Plan (2014-2024)

This action plan details the actions proposed by Charters Towers Regional Council to meet the vision and objectives in the WRRP. Each action may address multiple objectives and themes. Set out below is detail of the action, the key and contributing objectives the action addresses, along with who is responsible and expected timescales for delivery of the action. This action plan will be updated on an annual basis.

Charters Towers Regional Council Action Plan (2014 – 2024)		Version/date: Final v1 (15/07/2014)			
Theme 1: Avoidance and Waste Reduction					
Detail of Action		Key objective addressed	Contributes to objectives	Who is responsible?	Timescale for delivery (from July 2014)
1.1	Develop communications campaign focused on waste avoidance and reduction initiatives	1.1	2.2, 5.1, 5.3	MO, DPSD, ESM	Within 12 months
1.2	Deliver communication campaign and monitor impact on waste generation levels	1.1	2.2, 5.1, 5.3	MO, DPSD	By end of 2014/15 financial year
1.3	Waste generated by the local government in carrying out its activities	1.1	2.3, 5.3	ESM	Within 12 months
	Investigate opportunities to minimise waste by placing a cost on all Council waste delivered to Council landfills				
1.3	Expand on Council's purchasing policies to ensure that sustainable resource management principles, including waste impacts in addition to environmental impacts are always considered	1.1	4.2, 5.2	DCS, ESM	Within 12 months
		1.1	4.2, 5.2	Procurement	Ongoing

Theme 2: Landfill Diversion					
Detail of Action	Key objective addressed	Contributes to objectives	Who is responsible?	Timescale for delivery (from July 2014)	
2.1	Provide advice to businesses and industry on opportunities for landfill diversion and support initiatives that assist businesses improve their recycling performance	2.3	1.1, 2.4, 4.3, 5.1, 5.4	EDO, ESM	Within 2 years and Ongoing
2.2	Investigate opportunities for greater segregation/interceptions of C&I waste at landfill sites	2.3	5.2, 5.3	EDO, ESM	Within 2 years
2.3	Implement a data strategy to enable the improved benchmarking of recycling performance and landfill diversion	2.2	1.1, 2.1, 2.3, 2.4	ESM	Within 12 months
2.4	Consider a detailed feasibility study for introducing kerb-side Recycling (refer item 1.3)	2.2	4.1, 4.2, 4.3, 5.1	DPSD	Within 3 years
2.5	Develop a strategy for management of wastes generated by man-made and natural disasters to maximize resource recovery	2.2	2.3, 2.4, 3.4, 4.2	ESM	Within 2 years
2.6	Design targeted communication campaigns that can contribute to improvements in reuse and recycling	2.2	1.1, 2.3, 5.3	MO, ESM	Within 2 years
2.7	Modify Council's Website to include a section on landfill Diversion	2.2	2.3, 2.4	DPSD	Within 12 months
2.8	Establish accurate baseline position of waste generated by the local government in carrying out its activities	2.1	1.1, 2.3	ESM	Within 2 years
	Record the various waste streams generated by local government in carrying out its activities.	2.2	1.1, 4.2, 4.3	ESM	Within 12 months
	Identify and implement strategies to maximise landfill diversion opportunities and improve mechanisms for reporting internal waste movements.	2.2	1.1, 4.2, 4.3	ESM	Within 18 months
	Review contract specifications to have greater control on end use and destination of material generated by local government in carrying out its activities but managed by contractors	2.4	1.1, 4.2	Procurement, ESM	Within 2 years

Theme 3: Protecting Human Health and Environment

Detail of Action	Key objective addressed	Contributes to objectives	Who is responsible?	Timescale for delivery (from July 2014)
3.1 Define problem wastes for the council area and make sure sufficient data is available to assess the magnitude these waste streams . This will assist Council in decision making and if required, identifying business and/or regional collaboration opportunities to improve environmental outcomes.	3-4	3-2, 3-5, 4-1, 4-3, 5-1, 5-2, 5-4	ESM	Within 12 months
3.2 Identify and implement local initiatives for managing problem waste and where possible link into regional opportunities to address same.	3-4	3-2, 3-5, 4-1, 4-3, 5-1, 5-2, 5-4	ESM	Within 2 years
3.3 Undertake a baseline data gathering exercise to identify the extent of littering across the Council area, particularly littering 'hot-spots' and the potential causes of litter	3-5		LLO	Within 12 months
3.4 Support state and regional initiatives and programs on litter reduction and illegal dumping and actively spread the message to local communities	3-5	3-1, 3-4, 3-5, 5-1, 5-3	MO, ESM	Ongoing

Theme 4: Development of Sustainability Opportunities

Detail of Action	Key objective addressed	Contributes to objectives	Who is responsible?	Timescale for delivery (from July 2014)
4.1 Monitor and benchmark costs of waste management on a regular basis to ensure a cost effective waste management service is being provided to residents and businesses	4-2	4-3, 5-2	Procurement, ESM	Ongoing each financial year
4.2 Support regional market development initiatives for recycled material where viable	4-1	4-2, 4-3, 5-4	EDO, ESM	Within 3 years
4.3 Support and Assist local businesses with innovation and developing opportunities for waste management solutions	4-3	4-1, 4-2, 5-4	EDO, ESM	Within 3 years and ongoing

Theme 5: Community Values and Collaboration

Detail of Action	Key objective addressed	Contributes to objectives	Who is responsible?	Timescale for delivery (from July 2014)
5.1 Identify opportunities to work with community organisations in the local areas to support the activities in the WRRP	5.4	1.1, 2.2, 2.3, 2.4, 3.4, 4.1, 4.3,	All CTRC Staff	Ongoing
5.2 Provide support to community waste prevention and reuse programs	5.3	1.1, 4.1, 5.4	EDO, ESM	Ongoing
5.3 Improve communication networks with the wider Community to promote the values of the WRRP	5.1	5.3	Councillors, MO, CDM, EDO, ESM	Ongoing monthly

Key:

CTRCharters Towers Regional Council
ESM Environmental Services Manager
MO Media Officer

EDO Economic Development Officer
DPSD Director Planning & Sustainable Development
DCS Director Corporate Services

LLO Local Laws Officer
CDO Community Development Officer

Objectives:

- 1**
 - 1.1 **Avoidance and Waste Reduction**
Reduce waste generation per capita
 - 2 **Landfill Diversion**
2.1 Establish an accurate baseline position of types, quantities and management methods for all waste streams
2.2 Increase the MSW (domestic) recycling rate
2.3 Increase the recovery rate of C&I presented at landfills
2.4 Increase the recovery rate of C&D presented at landfills
- 3** **Protecting Human Health and Environment**
 - 3.1 Ensure our facilities comply with environmental requirements
 - 3.2 Develop and implement regional solutions for illegal dumping
- 3-3 Manage landfill airspace on a regional basis to minimise the total environmental footprint
- 3-4 Investigate, develop, and implement regional solutions for the management of problem wastes
- 3-5 Develop and implement regional solutions for litter management.
- 4** **Development of Sustainability Opportunities**
 - 4.1 Engage with the waste industry to identify new business opportunities linked to waste management and resource recovery in North Queensland
 - 4.2 Provide opportunities for regional contracts and resource sharing to minimise individual member council costs for waste management services
- 4-3 Promote the opportunities for regional innovation in developing tailored, regional solutions for waste management including fostering the development of local recycling industries.
- 5** **Community Values and Collaboration**
 - 5.1 Remain responsive to community expectations in respect to waste management services
 - 5.2 Continue to manage waste and infrastructure to enhance regional environmental outcomes
 - 5.3 Increase public education in order to reduce waste generation and increase reuse and recycling performance
 - 5.4 Provide economic development and job opportunities through enhancing waste management and resource recovery activity in the region.



**Hinchinbrook Shire Council
Action Plan (2014 – 2024)**



NQ Regional Waste Reduction & Recycling Plan: Hinchinbrook Shire Council Action Plan (2014-2024)

This action plan details the actions proposed by Hinchinbrook Shire Council to meet the vision and objectives in the WRRP. Each action may address multiple objectives and themes. Set out below is detail of the action, the key and contributing objectives the action addresses, along with who is responsible and expected timescales for delivery of the action. This action plan will be updated on an annual basis.

Hinchinbrook Shire Council Action Plan (2014-2024)		Version/date: Final v1 (15/07/2014)			
Theme 1. Avoidance and Waste Reduction					
Detail of Action	Key objective addressed	Contributes to objectives	Who is responsible?	Timescale for delivery (from July 2014)	
1.1	Develop a communications campaign focussed on waste avoidance and reduction and initiatives such as National Recycling Week	5-3	Executive Manager of Environment & Community Services	End 2014	
1.2	Consider opportunities to constrain available residual waste capacity at kerbside	3-4	Executive Manager of Environment & Community Services	End 2014	
Waste generated by the local government in carrying out its activities					
1.3	Identify individuals in various departments to develop and implement a strategy and challenge current practices for waste generated by the local government in carrying out its activities including generating greater awareness of moving waste up the waste hierarchy	2.3, 5.3	Executive Manager of Environment & Community Services	End 2014	
1.4	Identify individuals in various departments to embed sustainable resource management principles into Council purchasing and decision making processes so that environmental impacts are always considered	2.3, 5.3	Departmental Executive Managers	End 2014	
1.5	Define the sustainable resources management criteria that will be embedded in the Council practices	4-2, 5.2	Departmental Executive Managers	Mid 2015	
1.6	Implement sustainable resources management practices	4-2, 5.2	Departmental Executive Managers	2016	

Theme 2. Landfill Diversion						
Detail of Action	Key objective addressed	Contributes to objectives	Who is responsible?	Timescale for delivery (from July 2014)		
2.1 Provide advice to businesses and industry on recycling and resources recovery and support initiatives that assist businesses to improve their recycling performance.	2.3	1.1, 2.4, 4.3, 5.1, 5.3	Executive Manager of Environment & Community Services	Ongoing		
2.2 Implement a data strategy to enable the improved benchmarking of recycling performance	2.2	1.1, 2.1, 2.3, 2.4	Executive Manager of Environment & Community Services	Mid 2015		
2.3 Review performance of kerbside recycling collection service and communicate performance to community to encourage improvement	2.2	5.1, 5.3	Executive Manager of Environment & Community Services	Annually		
2.4 Develop and maintain a strategy for management of wastes generated by man-made and natural disasters	2.2	2.3, 2.4, 3.4, 4.2	Executive Manager of Environment & Community Services	2015		
2.5 Carry out a site user survey to gauge householder/business satisfaction with self-haul and identify possible areas for improvement including increased re-use and recycling.	2.2	2.3, 2.4, 3.4, 4.2	Executive Manager of Environment & Community Services	Mid 2015		
2.6 Establish accurate baseline position of waste generated by the local government in carrying out its activities	2.1	1.1, 2.3	Executive Manager of Environment & Community Services	End 2014		
2.7 Review contract specifications to have greater control on end use and destination of material generated by local government in carrying out its activities but managed by contractors	2.4	1.1, 4.2	Executive Manager of Environment & Community Services	End 2016		

Theme 3: Protecting Human Health and Environment

Detail of Action	Key objective addressed	Contributes to objectives	Who is responsible?	Timescale for delivery (from July 2014)
3-1 Define problem waste areas for the Council area and make sure sufficient data is available for these waste streams in order to guide improved management of these streams	3-4	3-2, 3-5, 4-1, 4-3, 5-1, 5-2, 5-4	Executive Manager of Environment & Community Services	End 2015
3-2 Identify and implement local initiatives for managing problem waste e.g. DrumMuster, and seek participation in regional waste management opportunities.	3-4	3-2, 3-5, 4-1, 4-3, 5-1, 5-2, 5-4	Executive Manager of Environment & Community Services	Ongoing
3-3 Undertake a baseline data gathering exercise to identify the extent of littering , littering “hot spots” and the potential causes of litter	3-5		Executive Manager of Environment & Community Services	End 2015
3-4 Support State and regional initiatives and programmes on litter reduction and illegal dumping and actively spread the message to local communities	3-5	3-1, 3-4, 3-5, 5-1, 5-3	Executive Manager of Environment & Community Services	Ongoing

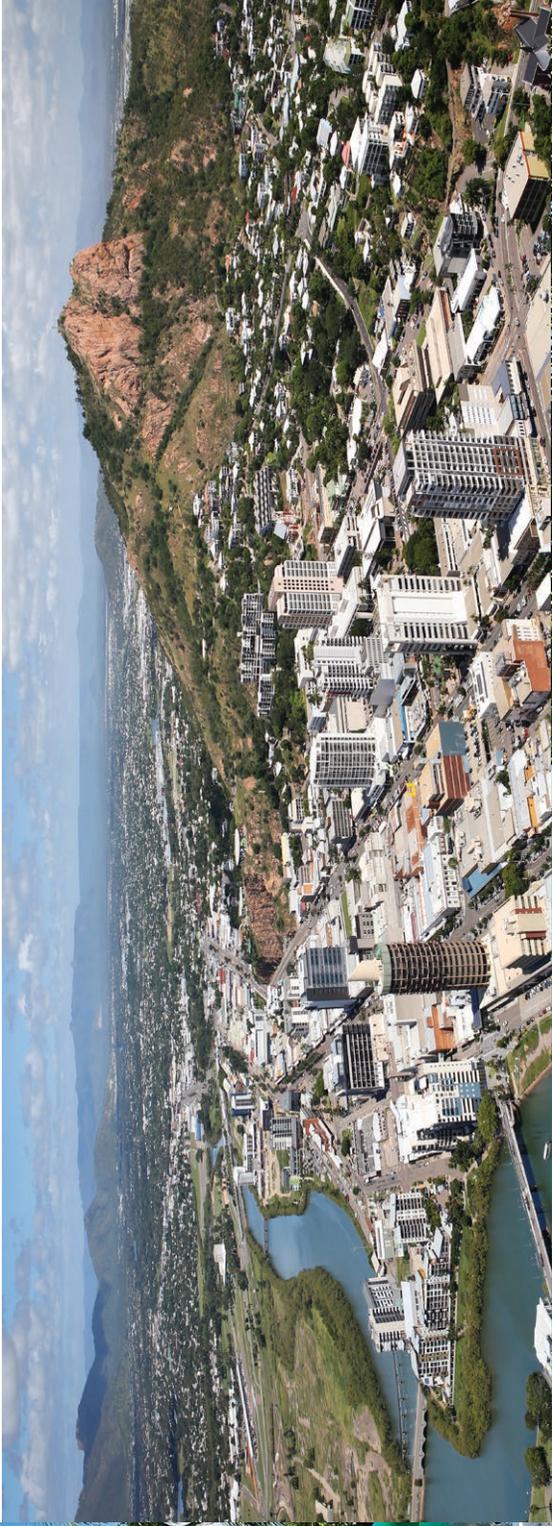
Theme 4. Development of Sustainability Opportunities

Detail of Action	Key objective addressed	Contributes to objectives	Who is responsible?	Timescale for delivery (from July 2014)
4-1 Monitor and benchmark costs of waste management on a regular basis to ensure a value for money waste management service is being provided to residents	4-2	4-3, 5-2	Executive Manager of Environment & Community Services	Annually
4-2 Support regional market development initiatives to find new markets for recycled material and increased ‘closed loop’ recycling	4-3	4-2, 5-2, 5-4	Executive Manager of Environment & Community Services	Ongoing

Theme 5. Community Values and Collaboration					
Detail of Action	Key objective addressed	Contributes to objectives	Who is responsible?	Timescale for delivery (from July 2014)	
5.1 Carry out periodic consultation with householders and business to assess level of satisfaction with waste service and opportunities for improvement/service changes	5.1	5.3	Executive Manager of Environment & Community Services	Biennially	

Objectives:

- 1 Avoidance and Waste Reduction**
 - 1.1 Reduce waste generation per capita
- 2 Landfill Diversion**
 - 2.1 Establish an accurate baseline position of types, quantities and management methods for all waste streams
 - 2.2 Increase the MSW (domestic) recycling rate
 - 2.3 Increase the recovery rate of C&I presented at landfills
 - 2.4 Increase the recovery rate of C&D presented at landfills
- 3 Protecting Human Health and Environment**
 - 3.1 Ensure our facilities comply with environmental requirements
 - 3.2 Develop and implement regional solutions for illegal dumping
- 3.3 Manage landfill airspace on a regional basis to minimise the total environmental footprint
- 3.4 Investigate, develop, and implement regional solutions for the management of problem wastes
- 3.5 Develop and implement regional solutions for litter management.
- 4 Development of Sustainability Opportunities**
 - 4.1 Engage with the waste industry to identify new business opportunities linked to waste management and resource recovery in North Queensland
 - 4.2 Provide opportunities for regional contracts and resource sharing to minimise individual member council costs for waste management services
 - 4.3 Promote the opportunities for regional
- 5 innovation in developing tailored, regional solutions for waste management including fostering the development of local recycling industries.
 - 5 Community Values and Collaboration**
 - 5.1 Remain responsive to community expectations in respect to waste management services
 - 5.2 Continue to manage waste and infrastructure to enhance regional environmental outcomes
 - 5.3 Increase public education in order to reduce waste generation and increase reuse and recycling performance
 - 5.4 Provide economic development and job opportunities through enhancing waste management and resource recovery activity in the region.



Townsville City Council Action Plan (2014 – 2024)



NQ Regional Waste Reduction & Recycling Plan: Townsville City Council Action Plan (2014-2024)

This action plan details the actions proposed by Townsville City Council to meet the vision and objectives in the WRRP. Each action may address multiple objectives and themes. Set out below is detail of the action, the key and contributing objectives the action addresses, along with who is responsible and expected timescales for delivery of the action. This action plan will be updated on an annual basis.

Townsville City Council Action Plan (2014 – 2024)		Version / date: Final v1 (15/07/2014)			
Theme 1: Avoidance and Waste Reduction					
Detail of Action		Key objective addressed	Contributes to objectives	Who is responsible?	Timescale for delivery (from July 2014)
1.1	Develop communications campaign focused on waste avoidance and reduction initiatives	1.1	2.2, 5.1, 5.3	MARCOMS, ISS, TWS	Continue existing campaigns. Develop new programs targeted to achieve objectives. 3 yearly program to be developed over the next 12 months and reviewed annual there-after.
1.2	Deliver communication campaign and monitor impact on waste generation levels	1.1	2.2, 5.1, 5.3	MARCOMS, ISS, TWS	As per 1.1
1.3	Define kerbside collection service offered as 140L waste and 240L recycle and provide opportunities for residents to upgrade bin sizes at additional cost	1.1	2.2, 2.3, 5.1	TCC and TWS	Within 2 years
1.4	Appoint full time Waste Reduction and Recycling Officer	1.1	2.2, 2.3, 5.1	TWS	Within 12 months
1.5	Waste generated by the local government in carrying out its activities	Identify individuals within departments to champion the Waste Reduction and Recycling Strategy and challenge current practices by their department in carrying out its activities	2.3, 5.3	TTS	Within 12 months
		Assess feasibility of developing waste exchange for waste generated by different departments		Waste Reduction and Recycling Officer	Within 12 months
		Continue to consider sustainable resource management principles into Council purchasing and decision making processes so that environmental impacts are always considered	4.2	Manager Procurement	On-going – included in Council's Procurement Policy and Local Government Act.
	Define the waste reduction and recycling management criteria that will be embedded in the council practices	1.1	4.2, 5.2	All TCC Departments	Within 12 months
	Implement sustainable resources management practices	1.1	4.2, 5.2	Management Procurement	Ongoing

Theme 2: Landfill Diversion					
Detail of Action	Key objective addressed	Contributes to objectives	Who is responsible?	Timescale for delivery (from July 2014)	
2.1 Provide advice to businesses and industry on recycling and resources recovery and support initiatives that assist businesses improve their recycling performance	2.3	1.1, 2.4, 4.3, 5.1, 5.3	Waste Reduction and Recycling Officer	Within 2 years	
2.2 Investigate opportunities for greater segregation/interceptions of C&I waste at transfer/landfill sites	2.3	2.4, 5.2, 5.3	TWS	Within 2 years	
2.3 Implement a data strategy to enable the improved benchmarking of recycling performance and landfill diversion	2.2	1.1, 2.1, 2.3, 2.4	TWS	Within 12 months	
2.4 Develop communications campaign focused on improving the recycling performance of existing collection services	2.2	1.1, 2.3, 5.3	As per 1.1	As per 1.1	
2.5 Review performance of kerbside recycling collection service and potential low performing areas for intervention	2.2		Waste Reduction and Recycling Officer	Within 12 months	
2.6 Review contamination rates in the kerbside recycling service and approach/policy for dealing with contamination	2.2		As per 2.5	As per 2.5	
2.7 Undertake a detailed feasibility study for introducing organics (food and/or garden wastes) collections at kerbside in response to external drivers	2.2	3.4, 4.1, 4.2, 4.3, 5.1	TWS	Within 12 months	
2.8 Develop a strategy for management of wastes generated by man-made and natural disasters to maximize resource recovery	2.2	2.3, 2.4, 3.4, 4.2	TWS	Within 12 months	
2.9 Design targeted communication campaigns that can contribute to the improvement of reuse and recycling rates at self haul sites	2.2	1.1, 2.3, 5.3	As per 1.1	As per 1.1	
2.10 Enhance site user survey to gauge householder/business satisfaction with facilities and services and identify possible areas for improvement including increased reuse and recycling	2.2	2.3, 2.4, 3.4, 4.2	TWS	Within 12 months	
2.11 Enhance facilities at landfills to encourage increased diversion of self haul waste	2.2	2.3, 2.4	TWS	2016/2017	

Detail of Action		Key objective addressed	Contributes to objectives	Who is responsible?	Timescale for delivery (from July 2014)
2.12	Waste	2.1	1.1, 2.3	TWS in consultation with internal TCC Departments	Within 12 months
		2.2	1.1, 4.2, 4.3	Waste Reduction and Recycling Officer	Within 12 months
	2.2	1.1, 4.2, 4.3	TWS, Waste Reduction and Recycling Officer	Within 18 months	
	2.2	1.1, 4.2, 4.3	TWS, Waste Reduction and Recycling Officer	6 and 12 months after implementation then on-going annually	
	2.2	1.1, 4.3, 5.3	Waste Reduction and Recycling Officer	Within 12 months	
	2.4	1.1, 4.2	Manager Procurement	Within 6 months	

Theme 3: Protecting Human Health and Environment					
Detail of Action		Key objective addressed	Contributes to objectives	Who is responsible?	Timescale for delivery (from July 2014)
3.1	Define problem wastes for the Council area and make sure sufficient data is available for these waste streams to inform options for management	3-4	3.2, 3.5, 4.1, 4.3, 5.1, 5.2, 5.4	Waste Reduction and Recycling Officer	Within 12 months
3.2	Identify and implement local initiatives for managing problem waste	3-4	3.2, 3.5, 4.1, 4.3, 5.1, 5.2, 5.4	Waste Reduction and Recycling Officer	Within 2 years
3.3	Seek funding to undertake a baseline data gathering exercise to identify the extent of littering across the Council area, particularly littering 'hot-spots' and the potential causes of litter	3-5		Manager Environmental Health	Within 12 months

Detail of Action	Key objective addressed	Contributes to objectives	Who is responsible?	Timescale for delivery (from July 2014)
3-4 Support state and regional initiatives and programs on litter reduction and illegal dumping and actively spread the message to local communities	3-5	3-1, 3-4, 3-5, 5-1, 5-3	Consider for inclusion in campaign from action 1.1	
3-5 Promote facilities for the recycling of E-Waste	3-4	2-2, 2-3, 4-3	Waste Reduction and Recycling Officer	Within 12 months

Theme 4: Development of Sustainability Opportunities

Detail of Action	Key objective addressed	Contributes to objectives	Who is responsible?	Timescale for delivery (from July 2014)
4-1 Monitor and benchmark costs of waste management on a regular basis to ensure a cost effective waste management service is being provided to residents and businesses	4-2	4-3, 5-2	TWS Business Development Coordinator	Ongoing each financial year
4-2 Support regional market development initiatives for recycled material where viable	4-1	4-2, 4-3, 5-4	TWS Business Development Coordinator	Within 3 years
4-3 Support local businesses with innovation and developing opportunities for waste management solutions	4-3	4-1, 4-2, 5-4	TWS Business Development Coordinator	Within 3 years

Theme 5: Community Values and Collaboration					
Detail of Action	Key objective addressed	Contributes to objectives	Who is responsible?	Timescale for delivery (from July 2014)	
5.1 Identify opportunities to work with community organisations in the local areas to support the activities in the WRRP	5-4	1.1, 2.2, 2.3, 2.4, 3.4, 4.1, 4.3,	All TWS Staff	Ongoing with annual review date to be aligned with yearly review of WRRP	
5.2 Provide support to community waste prevention and reuse programs	5-3	1.1, 4.1, 5.4	HP to check with ISS who coordinates	Ongoing	
5.3 Continue to carry out regular consultation with householders and businesses to assess level of satisfaction with waste service and opportunities for improvement/ services changes	5-1	5-3	TWS Smart Service Team	Ongoing monthly	

Key:

TCC: Townsville City Council

MARCOMMS: Marketing and Communication

ISS: Integrated Sustainability Services

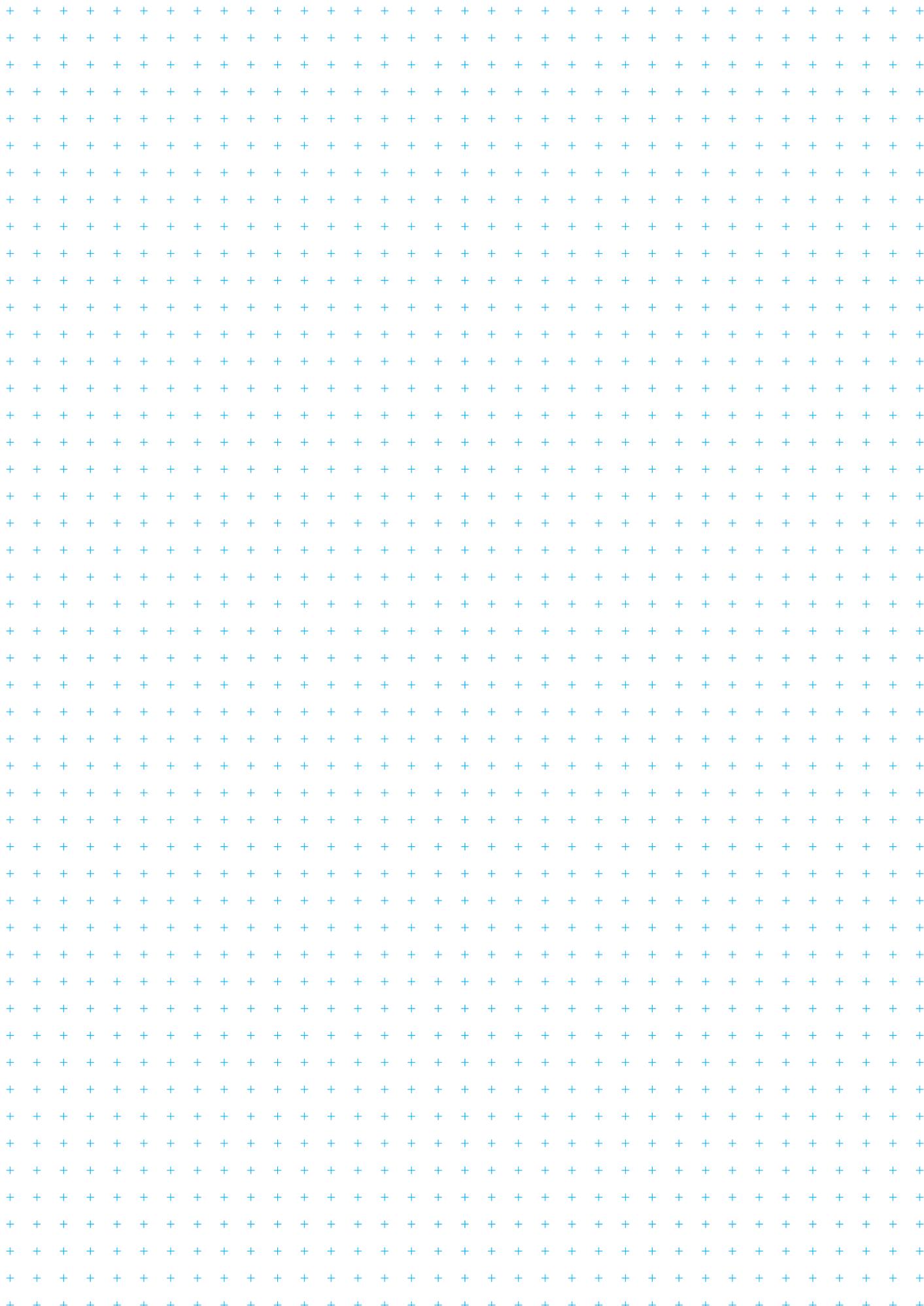
TWS: Townsville Waste Services

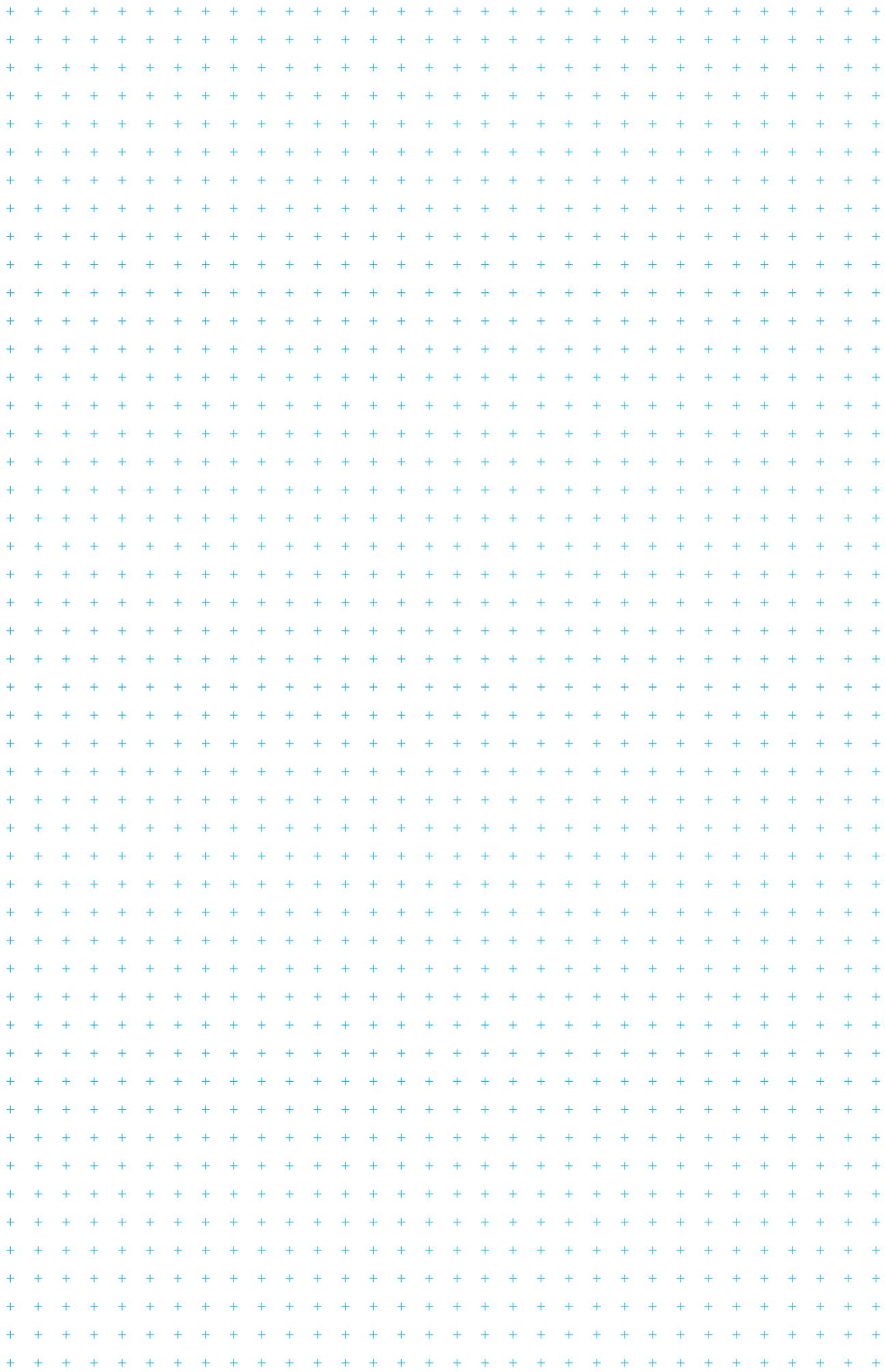
Objectives:

- 1**
 - 1.1 **Avoidance and Waste Reduction**
Reduce waste generation per capita
 - 2 **Landfill Diversion**
2.1 Establish an accurate baseline position of types, quantities and management methods for all waste streams
 - 2.2 Increase the MSW (domestic) recycling rate
 - 2.3 Increase the recovery rate of C&I presented at landfills
 - 2.4 Increase the recovery rate of C&D presented at landfills
- 3** **Protecting Human Health and Environment**
 - 3-1 Ensure our facilities comply with environmental requirements
 - 3-2 Develop and implement regional solutions for illegal dumping
 - 3-3 Manage landfill airspace on a regional basis to minimise the total environmental footprint
- 3-4 Investigate, develop, and implement regional solutions for the management of problem wastes
- 3-5 Develop and implement regional solutions for litter management.
- 4** **Development of Sustainability Opportunities**
 - 4-1 Engage with the waste industry to identify new business opportunities linked to waste management and resource recovery in North Queensland
 - 4-2 Provide opportunities for regional contracts and resource sharing to minimise individual member council costs for waste management services
 - 4-3 Promote the opportunities for regional innovation in developing tailored, regional solutions for waste management including fostering the development of local recycling industries.
- 5** **Community Values and Collaboration**
 - 5-1 Remain responsive to community expectations in respect to waste management services
 - 5-2 Continue to manage waste and infrastructure to enhance regional environmental outcomes
 - 5-3 Increase public education in order to reduce waste generation and increase reuse and recycling performance
 - 5-4 Provide economic development and job opportunities through enhancing waste management and resource recovery activity in the region.

Appendix 4. Waste Reduction and Recycling Act 2011 – WRRP requirements

Section	Requirement	Location in NQ Regional WRRP
123(2)(a)	Waste reduction and recycling targets for: (i) waste generated by the local government in carrying out its activities; and (ii) waste generated by households in the local government's local government area; and (iii) other waste generated in the local government's local government area other than by the local government;	Section 3 (ii) to be confirmed once an accurate baseline position has been established (see Action Plans)
123(2)(b)	Actions to be taken to improve waste reduction and recycling of: (i) waste generated by the local government in carrying out its activities; and (ii) waste generated by households in the local government's local government area; and (iii) other waste generated in the local government's local government area other than by the local government;	Section 4 and Action Plans
123(2)(c)	Details of current and proposed waste infrastructure	Section 2, Section 4 and Action Plans
123(2)(d)	The management and monitoring of the local government's performance under the plans;	Section 5 and Action Plans
123(2)(e)	Information about achieving continuous improvement in waste management;	Section 3, 4, 5 and Action Plans
123(2)(f)	Other matters prescribed under a regulation about the requirements for a local government's waste reduction and recycling plans.	
124(1)	A local government, in preparing or adopting a waste reduction and recycling plan for its local government area, must have regard to –	
124(1)(a)	Current and predicted information about the following matters relating to its area – (i) population profiles; (ii) residential, industrial and commercial development; (iii) amounts and types of waste generated;	Section 2
124(1)(b)	The services, markets and facilities relevant to dealing with different types and amounts of waste	All sections
124(1)(c)	The waste and resource management hierarchy	All sections
124(1)(d)	The waste and resource management principles	All sections
124(1)(e)	How the goals and targets of the State's waste management strategy will be achieved	Section 3, 4 and Action Plans





NQ REGIONAL WASTE REDUCTION & RECYCLING PLAN

2014 – 2024



Burdekin Shire Council

Burdekin Shire Council
Environment and Health
P: (07) 4783 9800
E: burdekinsc@burdekin.qld.gov.au



**CHARTERS TOWERS
REGIONAL COUNCIL**

Charters Towers
Regional Council
Environmental Services
P: (07) 4761 5300
E: mail@charterstowers.qld.gov.au



**HINCHINBROOK
SHIRE COUNCIL**

Hinchinbrook Shire Council
Environment and
Community Services
P: (07) 4776 4600
E council@hinchinbrook.qld.gov.au



**City of
Townsville**

Townsville City Council
Townsville Waste
P: 1300 878 001
E: enquiries@townsville.qld.gov.au