

5.9. WASTE REDUCTION AND RECYCLING PLAN

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RECOMMENDATION

That Council adopts the Douglas Shire's Waste Reduction and Recycling Plan 2022-2025 in accordance with the *Waste Reduction and Recycling Act 2011*.

EXECUTIVE SUMMARY

The *Waste Reduction and Recycling Act 2011* ("the Act") requires local governments in Queensland to prepare, adopt and implement a Waste Reduction and Recycling Plan which addresses all aspects of waste management in its local government area. The attached Waste Reduction and Recycling Plan for Douglas Shire ("the Plan") was open for public comment from 10 February 2022 until 10 March 2022 in accordance with the Act.

The Plan is required to align with the State's Waste Strategy and to consider a range of factors as detailed in the Act, including waste reduction and recycling targets and strategies for achieving these targets. Priorities in the Council's Plan align with the State's waste strategy; reducing the impact of waste on the environment, transitioning to a circular economy for waste and building economic opportunity.

The plan details several actions which will be implemented to achieve the priorities in the Plan. These actions includes:

1. continuation of waste education
2. increasing resource recovery at Killaloe Transfer Station
3. growth in the number of sustainable events
4. litter and illegal dumping intervention, closed landfill management
5. continued support for sustainable procurement
6. regional collaboration with local and state governments

BACKGROUND

The Act requires the Plan to include waste reduction and recycling targets, strategies for achieving these targets, details of current and proposed infrastructure, management and monitoring of the local government's performance under the Plan and information about achieving continuous improvement in waste management.

The Act also requires the Plan to have regard to current and predicted information about population profiles, residential, industrial and commercial development, amounts and types of waste generated and services, markets and facilities relevant to dealing with different types of waste. The Plan must have regard to the waste and resource management hierarchy and principles, and how the goals and targets of the State's waste management strategy will be achieved.

Queensland’s Waste Management and Resource Recovery Strategy (“the State’s strategy”) provides actions to achieve targets for waste reduction and recycling in Queensland up until 2050. The vision of the State’s strategy is to become a zero-waste society, where waste is avoided, reused and recycled to the greatest extent possible. The State’s strategy is underpinned by the Waste and Resource Management Hierarchy which guides the order of preference for managing waste.

Under this framework, waste should be avoided as a first priority, after which options for reuse, recycling, recovering and treating should be explored, before the least preferable option of disposal (Figure 1).

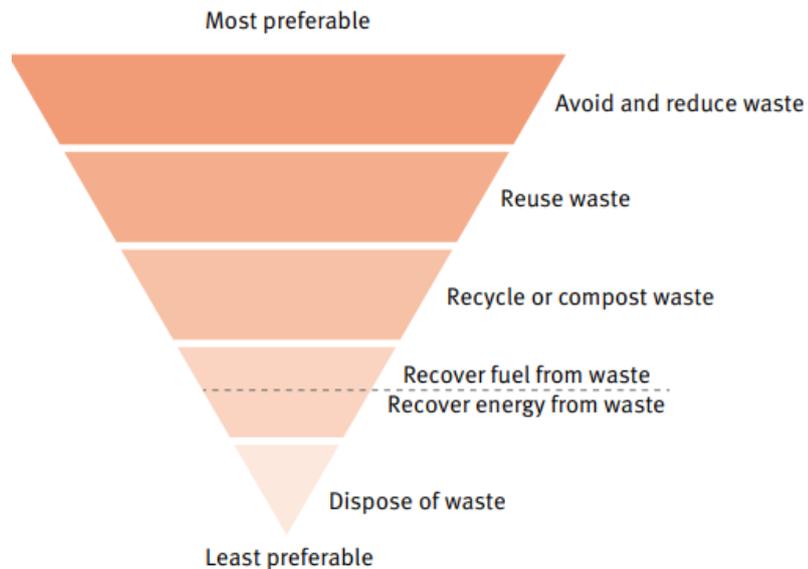


Figure 1: The Waste and Resource Management Hierarchy (Queensland’s Waste Management and Resource Recovery Strategy)

The State’s strategy includes landfill diversion targets as shown in Table 1.

Table 1 – Waste diversion from landfill targets (recovery rates as a percentage of total waste generated)

Stream	Baseline (2018)	2025	2030	2040	2050
MSW	32.4%	55%	70%	90%	95%
C&I	47.3%	65%	80%	90%	95%
C&D	50.9%	75%	85%	85%	85%
Overall	45.4%	65%	80%	80%	90%

- MSW – Municipal solid waste
- C&I – Commercial and industrial waste
- C&D – Construction and demolition

COMMENT

Council has implemented numerous strategies, programs and initiatives in line with Council’s preceding Waste Reduction and Recycling Plan and the evolving waste industry to reduce waste generation and increase resource recovery.

Programs include;

- undertaking waste characterisation audits
- implementation of waste monitoring systems
- waste education
- increased capacity for resource recovery
- investigation of market opportunities for problem wastes.

These initiatives have resulted in an overall increase in landfill diversion rates since baseline recovery rates were set in 2014-2015 as shown below in Table 2.

Changes in reporting requirements since 2014-2015 have resulted in the re-categorisation of some waste types into different waste streams, giving the appearance of a reduction in diversion rates for Municipal Solid Waste (MSW) and Commercial and Industrial Waste (C&I), since they have moved to a different waste stream category.

There has been a significant increase in landfill diversion of C&D waste, particularly concrete which has contributed to the considerable increase in the resource recovery rate for C&D waste.

Table 2 – Landfill Diversion Rates for Douglas Shire

Waste Stream	2014/15	2020/21
MSW	90%	70%
C&I	80%	75%
C&D	1.2%	83%
Overall	57%	75%

MSW and C&I recovery baselines include volumes of waste and recyclables collected in Council's kerbside collection service, which is calculated as 100% recovery in accordance with reporting requirements.

There is a percentage of this material which is not recovered, due to contamination in recyclable loads and un-processible items in the general waste loads.

The recovery baseline does not account for presentation or participation rates in recycling. Indications are that participation rates in some parts of the residential and commercial collections are low due to the lack of community awareness about recycling practices and education on what can be recycled.

This has been considered in setting the priorities and actions in the Plan.

Council's current landfill diversion rates for 2020-2021 exceed the diversion targets set in the State's strategy for achievement in 2025.

PROPOSAL

Priorities and actions for achieving priorities are outlined below in Table 3.

Table 3 – Priorities and Actions

Strategic Priorities – State’s Waste Strategy	Actions to Achieve Priorities	Key Performance Indicators to Monitor Performance	Timeframe for Implementation
Strategic Priority 1 – Reducing the impact of waste on the environment	Action 1 – Continuation of the Waste Education Officers role to support the implementation of actions in the WRR Plan	Continuation of the Waste Education Officers role	Ongoing
	Action 2 - Development and implementation of Council’s Waste Education Plan which targets waste reduction, recycling and composting at schools, businesses and events	Waste Education Plan developed and adopted by Council	June 2022
	Action 3 - Implementation of tailored recycling programs for commercial premises and Multi-Unit Dwellings	Increase in recycling programs implemented in commercial premises and Multi-Unit Dwellings.	Ongoing
	Action 4 – Increased resource recovery at Killaloe Transfer Station with commissioning of new sorting shed	Increased resource recovery rates to meet Queensland’s Waste Strategy 2025 targets as identified in Table 1	March 2025
	Action 5 – Implementation of an in-house council staff waste education program, targeting composting and recycling	Implementation of a composting program at Council’s administration building for use in the garden	April 2022
	Action 6 – Encourage sustainable events, including supporting the culture of BYO and reusables and providing recycling bins/opportunities where they are unavailable commercially	Increased number of sustainable events in Douglas Shire	Ongoing
	Action 7 – Deliver illegal dumping and littering interventions in the	Continuation of intervention in accordance with	Ongoing

Strategic Priorities – State’s Waste Strategy	Actions to Achieve Priorities	Key Performance Indicators to Monitor Performance	Timeframe for Implementation
	community and at hotspots	Council’s Illegal Dumping Strategy	
	Action 8 – Capping and/or rehabilitation of landfills	Final capping of Killaloe Landfill, and rehabilitation works at Newell and Sanitary Depot Landfills	Ongoing
	Action 9 – Undertaking waste characterisation audits with a focus on organics and food packaging in the commercial waste stream	Completion of waste characterisation audits	June 2022
Strategic Priority 2 – transitioning to a circular economy for waste	Action 10 – Continue environmentally responsible procurement in accordance with Council’s Procurement Policy	Purchasing of material with recycled content where possible	Ongoing
	Action 11 – Recovery of waste from Council’s operations for reuse	Recovery of concrete, pavement and other suitable material for reuse in the future	Ongoing
	Action 12 – Provision of advocacy and support to individuals and groups working to divert waste from landfill and create a circular economy	Support offered to individuals and groups working to divert waste from landfill	Ongoing
Strategic Priority 3 - Building economic opportunity	Action 13 - Regional collaboration across councils to create economies of scale and meet infrastructure needs	Engagement in regional collaboration through FNQ, specifically the development of a Regional Waste Strategy	Ongoing

Strategic Priorities – State’s Waste Strategy	Actions to Achieve Priorities	Key Performance Indicators to Monitor Performance	Timeframe for Implementation
	Action 14 - Maintaining relationships with state departments, including the Department of Environment and Science and Queensland Treasury to identify economic and development opportunities	Maintenance of partnership	Ongoing
	Action 15 – Investigation of market opportunities for waste with an existing resource value	Finding alternative end of life solutions for material destined for landfill	Ongoing

FINANCIAL/RESOURCE IMPLICATIONS

Council’s Waste Education Officer three (3) days per week is partly funded by contributions from the waste collection contractor and Council’s fixed-term Illegal Dumping Officer is fully funded through the landfill levy. The development of the Regional Waste Strategy is being funded by the State. All actions outlined in Table 3 for achieving the priorities listed have been budgeted for or will be absorbed by these existing roles.

Current direct operational costs to Council over the life of the strategy (3 financial years) is expected to be \$195,000.00 (\$65 000.00 per year) all being related to waste education activities. Council’s existing obligation to cap former landfill areas has an expected capital cost of approximately \$2.2 Million over the next 3 financial years.

RISK MANAGEMENT IMPLICATIONS

The Act requires Council to prepare and adopt a Waste Reduction and Recycling Plan which complies with the requirements detailed in this report. If Council does not have a Waste Reduction and Recycling Plan in place, the State will prepare one to be implemented and Council will be responsible for all costs, charges and expenses reasonably incurred.

SUSTAINABILITY IMPLICATIONS

Economic: Numerous economic benefits are expected from reducing waste and increasing recycling volumes in Douglas Shire, including lower processing costs and increased income from recyclables (eligible beverage containers, scrap metal and batteries). Increased resource recovery will also result in higher landfill diversion rates and less waste which is transported to an offsite landfill and attracting the landfill levy.

Environmental: Waste reduction and increased resource recovery rates will result in improved environmental outcomes. The waste hierarchy, in particular reducing and reusing items, reduces adverse environmental impacts associated with the consumption of

natural resources, the manufacture and use of products and the disposal of waste.

Social: Waste reduction and resource recovery is important to residents and tourists in Douglas Shire. Education and providing choices for communities on waste, particularly in relation to the waste hierarchy, allows communities to change behaviors and contribute to a sustainable environment. Well informed communities with choices have the ability to purchase wisely, reduce packaging, reuse items and influence suppliers. Waste minimisation provides leadership to the community and demonstrates commitment to social and environmental responsibility.

CORPORATE/OPERATIONAL PLAN, POLICY REFERENCE

This report has been prepared in accordance with the following:

Corporate Plan 2019-2024 Initiatives:

Theme 3 - Leading Environmental Stewardship

Our visitors and residents deeply value the unparalleled environment in which we live. We recognise our responsibility in protecting and preserving our natural world for generations to come. We understand the strong link between the environment and the economy: they are interdependent. Douglas Shire will be at the forefront of environmental protection by developing strategies, setting policies, and working with all stakeholders to become the envy of and to inspire locations across Australia and the World.

Goal 1 - We will protect our sensitive environment and plan for the impact of climate change

Goal 2 - We will implement programs that reduce and offset our environmental footprint.

Goal 4 - We will partner with the community to educate and monitor.

Operational Plan 2020-2021 Actions:

3.2.3 - Carry out and audit of kerbside waste and recycling bins to identify opportunities for education and improved recycling.

3.4.1 - Conduct a targeted waste education program aligning with the new collection contract and the capabilities of the new Material Recycling Facility in Cairns.

3.4.2 - Grow the water education program through primarily schools and community groups to engender a greater knowledge of the water cycle and water security within Douglas.

COUNCIL'S ROLE

Council can play a number of different roles in certain circumstances and it is important to be clear about which role is appropriate for a specific purpose or circumstance. The implementation of actions will be a collective effort and Council's involvement will vary from information only through to full responsibility for delivery.

The following areas outline where Council has a clear responsibility to act:

Service Provider Council provides many services to the community from roads and waste services to libraries and recreational facilities. Services evolve over time and it is the Council's mission to ensure that these services are appropriate, delivered efficiently, and designed with the customer at the centre.

CONSULTATION

Internal: Internal consultation was undertaken with the Resource Management Department.
The draft plan was also discussed with Councillors on 26 April 2022.

External: Community consultation was undertaken in accordance with the Act and feedback was received from several individuals and community groups.

COMMUNITY ENGAGEMENT

The plan was open for public consultation from 10 February 2022 until 10 March 2022 in accordance with the Act.

ATTACHMENTS

1. Waste Reduction and Recycling Plan 2022-2025 [5.9.1 - 21 pages]

WASTE REDUCTION & RECYCLING PLAN

2022-2025

10 February 2022



*Improving Environmental Performance
Ngaral Kulji Bubungu - Eastern Kuku Yalanji
Pulmpa dakit jarral-a-kaling - Yirrganydji*

Image: Daintree Rainforest

Version	Prepared By	Issue for Review to & Date	Authorised by	Signature & Date
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1. Purpose

The *Waste Reduction and Recycling Act 2011 (WRR Act)* requires Local Governments in Queensland to prepare, adopt and implement a Waste Reduction and Recycling Plan (WRR Plan) which addresses all aspects of waste management in its local government area. The WRR Plan must go out for public consultation for a period of 28 days and all submissions must be considered prior to updating and adopting the final plan.

This WRR Plan has been prepared by Douglas Shire Council (Council) in accordance with the WRR Act and was open for public consultation from 10/02/2022-10/03/2022.

2. Reference

Acts:

- *Environmental Protection Act 1994 (Qld)*
- *Waste Reduction and Recycling Act 2011 (Qld)*

Regulations:

- *Waste Reduction and Recycling Regulation 2011*
- *Environmental Protection Regulation 2019*

Strategies:

- United Nations' Agenda 2030 Sustainable Development Goals
- Australia's National Waste Policy – Less Waste, More Resources (2018)
- Queensland Waste Management and Resource Recovery Strategy (2019)

3. Regulatory Framework

The legislative framework for waste management in Queensland consists of national and state legislation, strategies and policies, as well as international commitments.

3.1. Environmental Protection Act 1994 (Qld)

The objective of the *Environmental Protection Act 1994 (EPA Act)* is to protect Queensland's environment while allowing for development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends. The EPA Act defines waste as anything, other than an end of waste resource that is left over, or an unwanted by-product from an industrial, commercial, domestic or other activity; or surplus to the industrial, commercial, domestic or other activity generating the waste.

3.2. Waste Reduction and Recycling Act 2011 (Qld)

The *Waste Reduction and Recycling Act 2011 (WRR Act)* establishes a framework to promote waste avoidance and reduction and encourage resource recovery and efficiency. The objectives of the WRR Act are:

- (a) To promote waste avoidance and reduction, and resource recovery and efficiency actions;
- (b) To reduce the consumption of natural resources and minimise the disposal of waste by encouraging waste avoidance and the recovery, re-use and recycling of waste;
- (c) To minimise the overall impact of waste generation and disposal;
- (d) To ensure a shared responsibility between government, business and industry and the community in waste management and resource recovery;
- (e) To support and implement national frameworks, objectives and priorities for waste management and resource recovery.

Subsequent amendments to WRR Act have been made to include provisions for the plastic bag ban, container refund scheme, waste levy and single-use plastic items ban.

3.2.1. Plastic Bag Ban

The Queensland Plastic Bag Ban commenced on 1 July 2018 under the *Waste Reduction and Recycling Amendment Act 2017* (Qld) provisions. The objectives of the scheme are to:

- (a) Reduce plastic pollution by reducing the number of plastic bags that become waste and enter the environment as litter;
- (b) Encourage retailers and consumers to:
 - i. Reduce the overall use of carry bags by considering whether it is necessary on every occasion to use a bag to carry goods; and
 - ii. Use alternative shopping bags.

3.2.2. Beverage Container Refund Scheme

The Queensland Beverage Container Refund Scheme (Containers for Change) commenced on 1 November 2018 under the *Waste Reduction and Recycling Amendment Act 2017* (Qld) provisions. The main objectives of the scheme are to:

- (a) Increase the recovery and recycling of empty beverage containers;
- (b) Reduce the number of empty beverage containers that are littered or disposed of to landfill;
- (c) Ensure the manufactures of beverage products meet their product stewardship responsibility in relation to their beverage products;
- (d) Provide opportunities for social enterprise, and benefits for community organisations by:
 - i. Making funds available through the payment of refund amounts for empty beverage containers;
 - ii. Creating opportunities for employment in activities related to collecting, sorting and processing containers for recycling;
 - iii. Complement existing collection and recycling activities for recyclable waste.

3.2.3. Waste Levy

The *Waste Reduction and Recycling (Waste Levy) Amendment Act* provisions were added to the existing *Waste Reduction and Recycling Act 2011* and came into force on 1 July 2019. The main purpose of the Waste Levy is to impose a levy on waste delivered to a levyable waste disposal site and to allow for an exemption from the levy, or a discounted levy rate, for particular waste. A levyable waste

disposal site is defined as a waste disposal site, whether under the ownership or control of the State, a local government or otherwise; but does not include a part of the waste disposal site that is a resource recovery area.

3.2.4. Single-use Plastics Items Ban

The *Waste Reduction and Recycling (Plastic Items) Amendment Act 2021* came into force on 1 September 2021. This amendment banned the supply of supply of single-use plastic straws, stirrers, plates, bowls, cutlery and expanded polystyrene takeaway food containers and cups in Queensland.

3.3. United Nations' Agenda 2030 Sustainable Development Goals

On 25 September 2015, the United Nations and signatory countries, including Australia adopted the Agenda 2030 Sustainable Development Goals. The goals aim to end poverty, protect the planet and ensure prosperity for all. Sustainable Development Goal 12 focuses on responsible consumption and production patterns. The goal has a series of targets which includes by 2030, substantially reducing waste generation through prevention, reduction, recycling and reuse.

3.4. Australia's National Waste Policy (2018)

Australia's National Waste Policy 2018 (National Waste Policy) provides a framework for collective action by businesses, governments, communities and individuals until 2030. The National Waste Policy focuses on waste avoidance, improved material recovery and use of recovered materials, as well as presents a common vision on priorities for responding to changing international waste markets. It aligns with the United Nations Sustainable Development Goals and is underpinned by the Circular Economy Model.

3.5. Queensland Waste Management and Resource Recovery Strategy (2019)

The Queensland Waste Management and Resource Recovery Strategy (Queensland's Waste Strategy) provides direction for waste management and resource recovery in Queensland. It supersedes the Queensland Waste Avoidance and Resource Productivity Strategy 2014-2023 and reflects the introduction of the waste disposal levy. The vision of the Queensland's Waste Strategy is to become a zero-waste society, where waste is avoided, reused and recycled to the greatest extent possible.

3.5.1. Waste and Resource Management Hierarchy

The National Waste Policy and Queensland's Waste Strategy are underpinned by the Waste and Resource Management Hierarchy. This is a framework that guides the order of preference for managing waste. Waste should be avoided as a first priority, after which options for reuse, recycle, recover and treat should be explored, before the least preferable option of disposal.



Figure 1: The Waste and Resource Management Hierarchy

The WRR Act refers to the Waste and Resource Management Hierarchy and provides further guidance on the seven stages:

- (a) Avoid unnecessary resource consumption;
- (b) Reduce waste generation and disposal;
- (c) Reuse waste resources without further manufacturing;
- (d) Recycling waste resources to make the same or different products;
- (e) Recovery waste resources, including the recovery of energy;
- (f) Treat waste before disposal, including reducing the hazardous nature of waste;
- (g) Dispose of waste only if there is no viable alternative.

4. Douglas Shire – Community Profile

The Douglas Shire region is located in Far North Queensland, Australia. The region encompasses an area of 2,435 square kilometres extending from Degarra in the north to south of Wangetti. Famous for its Rainforest to Reef setting, the Shire is at the interface of two World Heritage Listed areas: The Great Barrier Reef and the Wet Tropics, including the ancient rainforest of the Daintree. The Shire is home to 12,367 residents, with approximately 70% residing in the two main population centres of Port Douglas and Mossman. Other urban areas include the beachside communities of Wonga Beach, Newell and Cooya Beach.

Domestic and international tourism is the predominant driver of the local economy, with 1.2 million tourists visiting the Shire each year. Sugar cane production and processing is the second major industry, with other key industries including transport, health care, education, construction, commercial fishing, tropical horticulture, cattle farming, the creative arts and professional services.

The Captain Cook Highway is the principle access route into Douglas Shire, linking the area to Cairns. It is a winding two lane carriageway that caters for the majority of the Shire's freight needs. The Mossman Mount Molloy Road is also an important link connecting the Shire to the Tablelands. Douglas Shire is not expected to have any significant population growth during the term of this WRR Plan.

5. Current Services and Infrastructure

Douglas Shire Council provides services and facilities for waste disposal and recycling throughout the Shire. This includes a general waste and recycling kerbside collection services for properties within the collection service area and four transfer stations. Killaloe landfill was active from 1989 until the end of 2021 when it reached capacity resulting in offsite transport of all residual waste. Properties outside of the kerbside collection service area are levied a Special Refuse Charge to utilise transfer stations, including one transfer station in the adjacent local government area of Cook Shire.

5.1. Kerbside Collection Service

Council's kerbside collection service is available to 7543 residential and 554 commercial properties within the Shire (January 2022). This consists of a weekly service of 240L wheelie bins and a fortnightly service of 240L co-mingled recycling bins for paper, cardboard, glass bottles and jars, hard plastic bottles and containers and steel and aluminium cans.

Waste from the kerbside collections Service is delivered to Killaloe Transfer Station for transport to SUEZ's Advanced Resource Recovery Technology (ARRT) Facility in Cairns for processing. Recyclables collected in the kerbside collection are transported directly to the Material Recovery Facility (MRF) in Cairns. Recyclables are sorted and separated into plastics, paper, steel and aluminium, baled and transported to Brisbane for recycling. Glass is separated and crushed for use in Cairns Regional Council's operations, including concrete cycle and pedestrian path construction.

Council commenced a kerbside collection trial in 2020 for commercial properties between Forest Creek and Cape Tribulation which were outside of Council's kerbside collection service area. The trial was introduced to determine participation rates for properties in this area who currently self-haul waste and recycling to the closest transfer station at Cow Bay. The trial commenced as a result of Council securing funding for the collection of the recycling component of the trial under the Recycling Transport Assistance Package offered by the State Government in 2019. The service consisted of a weekly collection of 240L waste bins and a fortnightly collection of 240L recycling bins. Results of the trial showed considerable uptake of the waste collection service however resulted in the recovery of very low volumes of recycling. This is likely due to high participation in the Container Refund Scheme operating in the area, leaving only small volumes of recyclables for collection. As a result of the trial, a permanent waste-only kerbside collection service was introduced for 34 commercial properties in this area in 2021, reducing significant travel time for many of the commercial operators. Properties are still encouraged to self-haul co-mingled recyclables to the transfer station which are accepted free of charged.

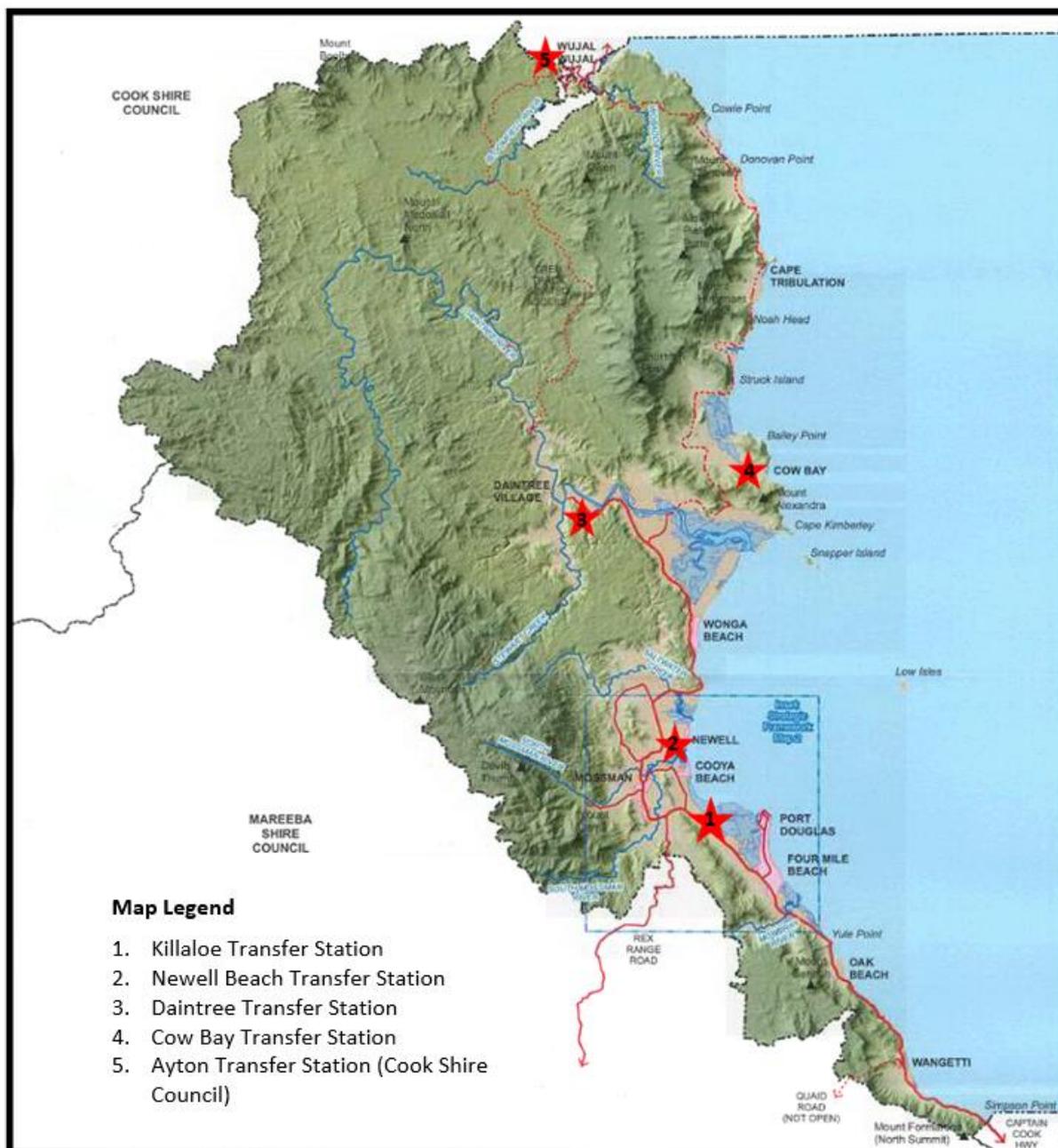
5.2. Transfer Stations

Council operates four transfer stations, with Killaloe Transfer Station being the primary facility in the Douglas Shire. The remaining three transfer stations: Newell Beach, Daintree and Cow Bay transfer stations service the remote areas of the shire. All facilities are supervised during opening hours and are secured when closed.

Eligible properties outside of the kerbside collection service area are issued a Special Refuse Card for use at transfer stations for the disposal of waste and recyclables. A total of 350 properties were levied a Special Refuse Charge in Douglas Shire in January 2022.

Council has an arrangement with the adjacent local government area of Cook Shire to allow residents in the Degarra area to utilise Ayton Transfer Station. Figure 2 illustrates the locations of the transfer stations.

Figure 2: Location of Transfer Stations



5.2.1. Killaloe Transfer Station

Killaloe Transfer Station (Killaloe) is located on Dump Road, Killaloe. It is open 8am-6pm Monday to Saturday and 9am-6pm Sunday and closed on Christmas Day. The waste acceptance criteria for Killaloe includes:

- Domestic and commercial treatable waste

- Co-mingled recyclables – plastic, glass bottles and cans
- Cardboard
- Dry inert landfill items
- Wet cell batteries
- Solvents (<25L)
- Motor oil (<25L)
- Tyres
- White goods
- Regulated waste containers
- Asbestos for off-site disposal
- Chemical drums (DrumMuster)
- Fertiliser bags
- Mattresses
- Car bodies and scrap metal
- Gas cylinders and fire extinguishers
- Green waste for storage and process on site
- Recycle shop items

Treatable waste collected in the kerbside collection service is taken to Killaloe and deposited into the Treatable Waste Bay (Bay 5). This waste is loaded into a 30m Roll and Roll off bin (RoRo) for transport to the ARRT in Cairns for processing into compost. Co-mingled recyclables received at Killaloe are loaded into a bulk bin and transported directly to the Cairns MRF in Cairns. Other materials such as tyres and chemical drums are uplifted by specialist contractors, with fridges and air conditioning units being degassed on site prior to uplift. There is an onsite recycle shop (Scrap Shack), with a dedicated drop off area to promote the diversion of materials to landfill.

Construction of a large waste sorting shed was completed at the end of 2021, with commissioning expected in early 2022. Mixed inert waste will be sorted in this shed to increase resource recovery and reduce the amount of residual waste going direct to landfill.

5.2.2. Newell Beach Transfer Station

Newell Beach Transfer Station is located on Rankine Street, Newell Beach. It is open 1pm-5pm on Wednesday and 8am-12 noon on Saturday; and closed on Christmas Day. Waste acceptance for temporary storage includes:

- Co-mingled recyclables, including cardboard
- Dry inert landfill items
- Scrap metal
- White goods
- Wet cell batteries
- Gas bottles
- Solvents (<25L)
- Green waste from domestic users for storage and processing onsite.

5.2.3. Daintree Transfer Station

Daintree Transfer Station is located on Mossman-Daintree Road, Daintree. It is open 1pm-5pm on Saturday and closed on Christmas Day. Waste acceptance for temporary storage includes:

- Domestic and commercial treatable waste
- Dry inert landfill items
- Co-mingled recyclables including cardboard
- Green waste from domestic users
- Chemical drums (DrumMuster)
- Solvents (<25L)
- Gas bottles

5.2.4. Cow Bay Transfer Station

Cow Bay Transfer Station is located on Quandong Road, Cow Bay. It is open 10am-5pm on Wednesday, 8am-12noon on Friday and 9am-12noon on Saturday; and closed on Christmas Day. Cow Bay Transfer Station services the community north of Forest Creek. Waste acceptance for temporary storage includes:

- Domestic and commercial treatable waste, including cardboard
- Co-mingled recyclables – plastic, glass bottles and cans
- Dry inert landfill items
- Car bodies and scrap metal
- Wet cell batteries
- Gas bottles
- Motor oil (<25L)
- Solvents (<25L)
- Tyres
- White goods

6. Waste Profile for Douglas Shire

The waste profile for Douglas Shire is presented in **Table 1**, which includes approximate annual tonnages for Municipal Solid Waste (MSW), Commercial and Industrial (C&I) and Construction and Demolition (C&D).

Table 1: Waste Profile for Douglas Shire

Municipal Solid Waste (MSW)	Commercial & Industrial (C&I)	Construction & Demolition (C&D)
7891 tonnes	5395 tonnes	773 tonnes

Figure 3: MSW Approx. Annual Tonnages 2020/21

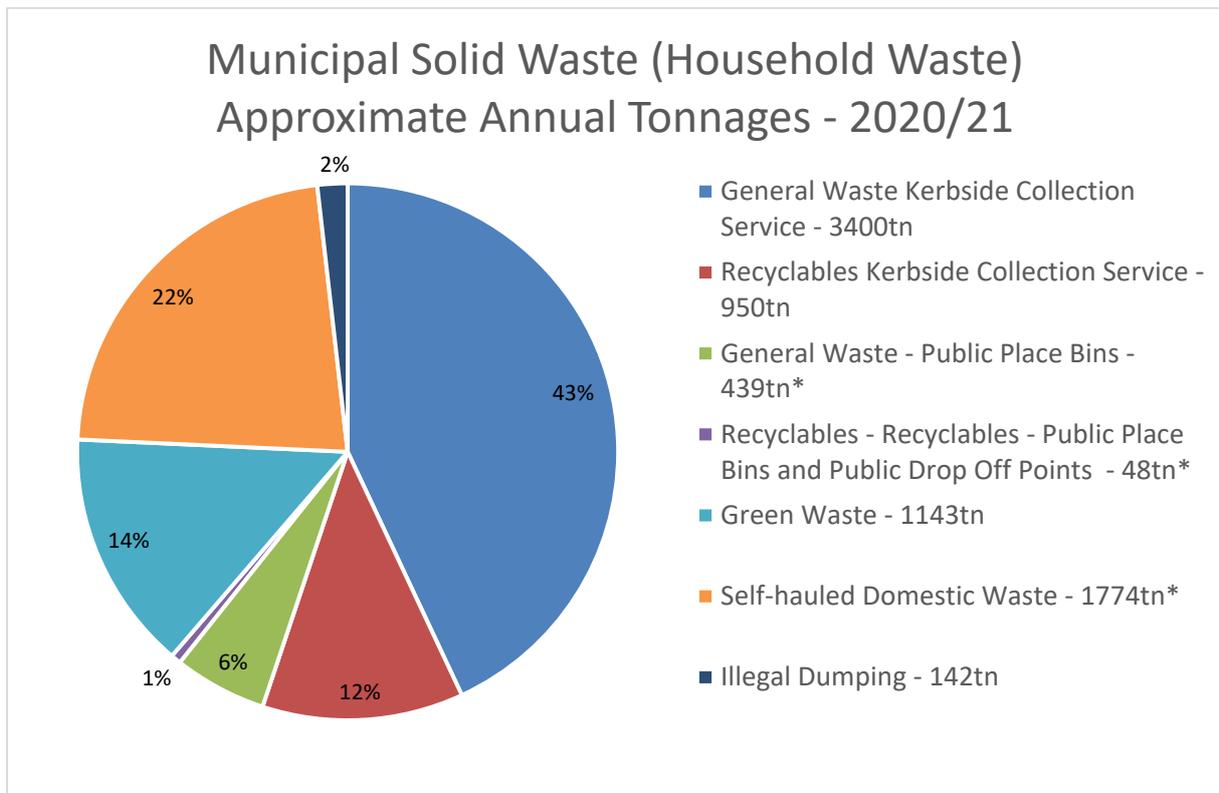
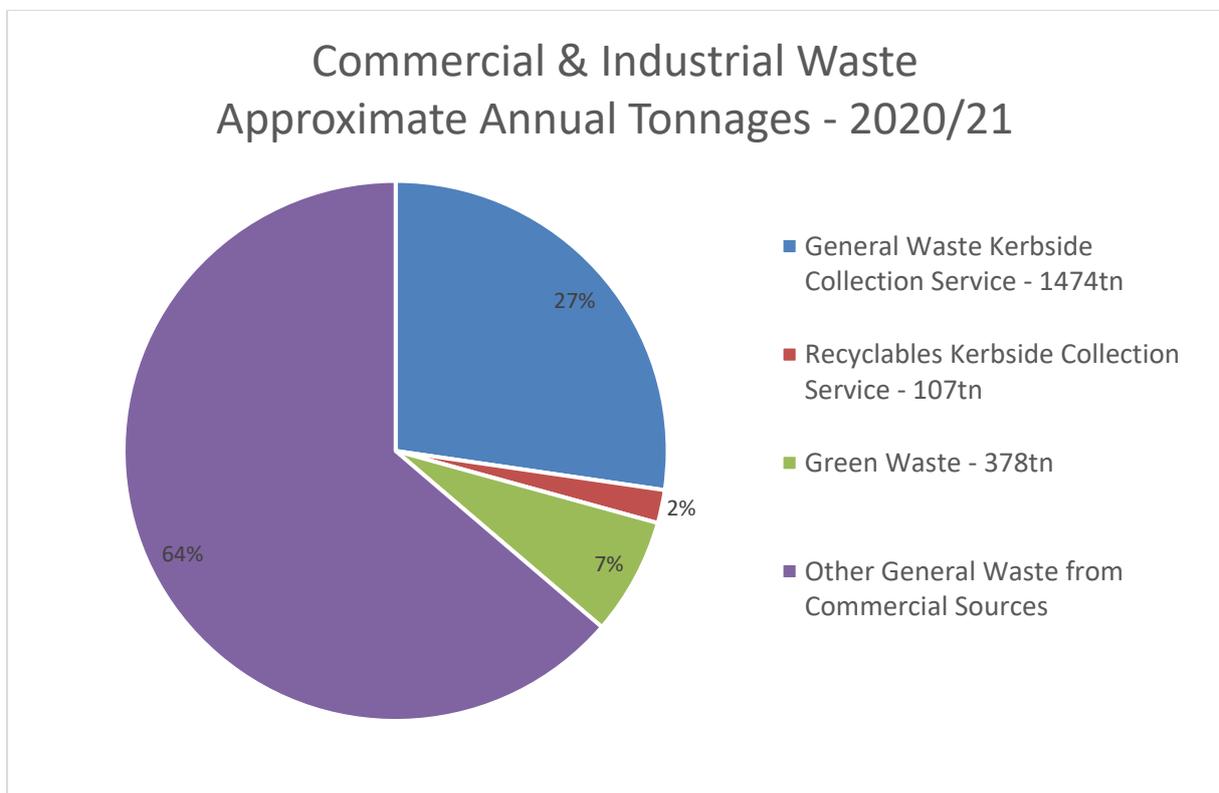


Figure 4: C&I Approx. Annual Tonnages 2020/21

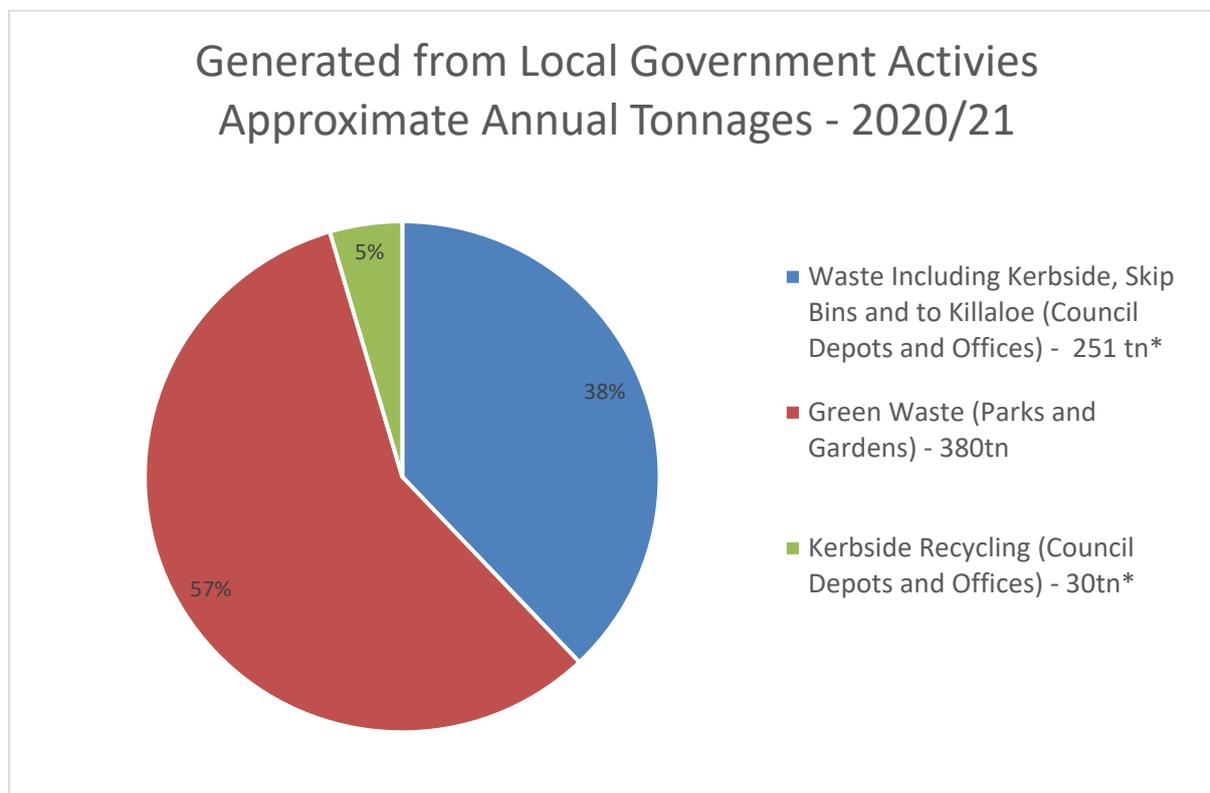


*Some volumes are based on deemed weights and percentages

6.1. Waste Generated by Douglas Shire Council

Volumes of waste generated by Douglas Shire Council in carrying out its activities are shown below.

Figure 5: Waste Generated by Local Government 2020/21



*Some volumes are based on deemed weights and percentages

7. Resource Recovery

Council has implemented numerous strategies, programs and initiatives in line with Council's preceding WRR Plan and the ever-changing waste industry to reduce waste generation and increase resource recovery. These are detailed below.

7.1. Waste Characterisation Audits

Waste characterisation audits are essential for identifying baseline characteristics and setting targets for improvement. Waste characterisation audits were undertaken on a sample of households, commercial, public place and a transfer station waste in 2016. The results have been used to inform education requirements, review of services and budgets since 2016. Further waste characterisation audits are scheduled for 2022 to focus on organics and food packaging in the commercial waste stream, particularly at restaurants and other food venues, to determine volumes of each and level of compliance with the single use plastics items bans.

7.2. Waste Monitoring Systems

Improvements to waste monitoring were required with the implementation of the landfill levy in 2019. This has resulted in an accurate record of waste to landfill being recorded and a review of landfill diversion rates as detailed below in section 8.

7.3. Waste Education

Council's previous WRR Plan included targets for education campaigns. This has been met with the appointment of a Waste Education Officer in March 2021 as a resource for schools, businesses and community groups to reduce their waste generation and increase reuse and recycling. This has included the introduction of more sustainable practices at events, with free recycling bins and advice offered to events in Douglas Shire.

7.4. Plastic Free Cairns and Douglas

Federal funding allowed Douglas Shire to join the Plastic Free Cairns program (becoming the Plastic Free Cairns and Douglas program) to provide free advice to businesses on how to comply with the single use plastic items ban which came into effect on 1 September 2021. Businesses are also awarded with champion status if they can eliminate single-use plastics from their supply chain. An announcement in relation to a second round of single use plastic bans is expected in 2022. Council requested support from the State Government to continue providing assistance to businesses with this second round of bans and is awaiting a response at the time of writing.

7.5. Increased Resource Recovery

Council's capacity for resource recovery has been increased significantly with the construction of a large resource recovery shed at Killaloe allowing for improved sorting at the front end. Council expects this to result in increased recovery of C&D waste, particularly timber and other construction wastes which can be recovered rather than going to landfill. The Scrap Shack, Council's Tip Shop, has also been opened since the previous WRR Plan, diverting numerous reusable items from landfill since 2016.

The diversion of mattresses from landfill also began since the previous WRR Plan was drafted, they had been mechanically shredded however are now going to a workshop operated by the Endeavour Foundation. This diverts approx. 693 cubic metres from landfill each year and contributes to better social outcomes for our communities.

7.6. Closure of Killaloe Landfill

Killaloe Landfill reached capacity at the end of 2021. This has resulted in all residual waste being transported off-site for disposal, making waste diversion a priority to reduce transport costs. The waste is currently going to a private landfill near Mareeba, having a much less sensitive receiving environment than where Killaloe is located.

7.7. Investigation of Market Opportunities

Investigations into end-of-life solutions for other material destined for landfill, such as untreated timber, wet cardboard, textiles, solar panels and household batteries are also continuing in an effort to increase landfill diversion rates. Council is awaiting the launch of the Battery Stewardship Scheme for the responsible management of batteries at the time of writing. The Battery Stewardship Council has provided the following timeline to show the history of the scheme and planned commencement timeframe:

Figure 6: History and Timeline for the Battery Stewardship Scheme in Australia. Source: Battery Stewardship Council



8. Recovery

Strategies and actions implemented by Council as detailed above have resulted in the landfill diversion rates shown below in Table 2.

The percentage of material diverted from landfill for the Douglas Shire are shown in Table 2.

Table 2: Landfill diversion rates for Douglas Shire

Waste Stream	2014/15	2020/21
MSW	90%	70%
C&I	80%	75%
C&D	1.2%	83%

Significant changes to recovery rates have mostly been attributed to improvements in reporting with the introduction of the waste levy. Operational changes relating to the sorting of residual waste have resulted in increased recovery of C&D waste, particularly concrete.

9. Queensland Strategy Targets

Queensland's waste strategy sets short to medium term targets for waste avoidance, landfill diversion and recycling rates.

9.1. Waste Avoidance Targets

Waste avoidance is the highest priority on the Waste and Resource Management Hierarchy. The waste avoidance target seeks to reduce the amount of waste that each household in Queensland generates.

Table 3: Waste reduction targets for households (per capita)

Stream	Baseline (2018)	2025	2030	2040	2050
MSW	0.54 tonnes	10%	15%	20%	25%

9.2. Landfill Diversion Targets

In July 2019 the Queensland Government introduced a waste disposal levy to provide a clear price signal to divert valuable material away from landfill. There are several wastes, such as asbestos, for which landfill is unavoidable and these have been accounted for in the targets.

Table 4: Waste diversion from landfill targets – recovery rate as a percentage of total waste generated

Stream	Baseline (2018)	2025	2030	2040	2050
MSW	32.4%	55%	70%	90%	95%
C&I	47.3%	65%	80%	90%	95%
C&D	50.9%	75%	85%	85%	85%
Overall	45.4%	65%	80%	80%	90%

9.3. Recycling Rate Targets

Increased recycling rates will be supported by the development of markets and the delivery of infrastructure to meet market demand for recycled material. The percentages in Table 5 relate to waste that is reported as recycled or reused, specifically excluding material from which energy is recovered.

Table 5: Recycling rates - as a percentage of total waste generated

Stream	Baseline (2018)	2025	2030	2040	2050
MSW	31.1%	50%	60%	65%	70%
C&I	46.5%	55%	60%	65%	%65%
C&D	50.9%	75%	80%	>80%	>80%
Overall	44.9%	60%	65%	70%	75%

10.Future Projections for Douglas Shire

Douglas Shire is not expected to have any significant population growth during the term of this WRR Plan. Additional waste infrastructure and services are therefore not expected to be required during this term, however, regional collaboration continues with local governments in the FNQ region and state departments for future planning to increase resource recovery and economic opportunities for the north.

11.Waste Reduction and Recycling Targets

Council has set waste reduction and recycling targets which aim to reduce overall volumes of waste generated within the Shire, increase participation rates in kerbside recycling and result in improved resource recovery rates at transfer stations. Targets have been set with regard to the Waste and Resource Management Hierarchy, with the aim of moving waste up the hierarchy in an effort to achieve the goals and targets outlined in the Queensland's Waste Strategy. Council's targets and strategies are presented in Table 6.

Table 6: Waste Reduction and Recycling Targets

Strategic Priorities – State’s Waste Strategy	Actions to Achieve Priorities	Key Performance Indicators to Monitor Performance	Timeframe for Implementation
Strategic Priority 1 – Reducing the impact of waste of the environment	Action 1 – Continuation of the Waste Education Officers role to support the implementation of actions in the WRR Plan	Continuation of the Waste Education Officers role	Ongoing
	Action 2 - Development and implementation of Council’s Waste Education Plan which targets waste reduction, recycling and composting at schools, businesses and events	Waste Education Plan developed and adopted by Council	June 2022
	Action 3 - Implementation of tailored recycling programs for commercial premises and Multi-Unit Dwellings	Increase in recycling programs implemented in commercial premises and Multi-Unit Dwellings.	Ongoing
	Action 4 – Increased resource recovery at Killaloe Transfer Station with commissioning of new sorting shed	Increased resource recovery rates	Ongoing
	Action 5 – Implementation of an in-house council staff waste education program, targeting composting and recycling	Implementation of a composting program at Council’s administration building for use in the garden	April 2022
	Action 6 – Encourage sustainable events, including supporting the culture of BYO and reusables and providing recycling bins where they are unavailable commercially	Increased number of sustainable events in Douglas Shire	Ongoing
	Action 7 – Deliver illegal dumping and littering interventions in the community and at hotspots	Continuation of intervention in accordance with Council’s Illegal Dumping Strategy	Ongoing

	Action 8 – Capping and/or rehabilitation of landfills where redundant	Final capping of Killaloe Landfill, and rehabilitation works at Newell and Sanitary Depot Landfills	Ongoing
	Action 9 – Undertaking waste characterisation audits with a focus on organics and food packaging in the commercial waste stream	Completion of waste characterization audits	June 2022
Strategic Priority 2 – transitioning to a circular economy for waste	Action 10 – Continue environmentally responsible procurement in accordance with Council’s Procurement Policy	Purchasing of material with recycled content where possible	Ongoing
	Action 11 – recovery of waste from Council’s operations for reuse	Recovery of concrete, pavement and other suitable material for reuse in the future	Ongoing
	Action 12 – provision of advocacy and support to individuals and groups working to divert waste from landfill and create a circular economy	Support offered to individuals and groups working to divert waste from landfill	Ongoing
Strategic Priority 3 - Building economic opportunity	Action 13 - Regional collaboration across councils to create economies of scale and meet infrastructure needs	Engagement in regional collaboration through FNQ, specifically the development of a Regional Waste Strategy	Ongoing
	Action 14 - Maintaining relationships with state departments, including Department of Environment and Science and Queensland Treasury to identify economic and development opportunities	Maintenance of partnership	Ongoing
	Action 15 – investigation of market opportunities for waste with an existing resource value	Finding alternative end of life solutions for material destined for landfill	Ongoing

12. Community Consultation and Adoption

Council's draft Waste Reduction and Recycling Plan (2022-2025) was open for public consultation from 10/02/2022-10/03/2022. Advertising was undertaken on Council's website and through social media.

13. Review

This Plan will be reviewed every three years in accordance with the WRR Act. Any amendments which substantially affect the operations of the plan will be adopted by Council.