



TAMWORTH REGIONAL COUNCIL
INTEGRATED WASTE MANAGEMENT AND RESOURCE
RECOVERY STRATEGY

April 2017



TAMWORTH
A Waste Wise Region

TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
Ch 1. Introduction	4
Ch 2. Strategy development process	5
Ch 3. Current performance in managing the region's waste	6
Ch 4. Drivers for change	10
Ch 5. Objectives: waste management and resource recovery	17
Ch 6. An Integrated waste management strategy	21

EXECUTIVE SUMMARY

This *Integrated Waste Management and Resource Recovery Strategy* has been developed during a period of substantial development of state and regional waste policy over the last four years. This consultation document sets out Tamworth Regional Council's ambitions for sustainable waste management incorporating increased resource recovery or recycling.

Council facilities received more than 98,000 tonnes of waste in 2015/16. Some 56% of waste received was recycled, in keeping with recent recycling performance. Recycling of Construction & Demolition waste was exceptional and exceeded the New South Wales Environment Protection Authority's recycling target for 2020/21. On the other hand, recycling performance for municipal (domestic) waste and business waste fell short of the future New South Wales Environment Protection Authority's recycling targets. This Plan sets out a strategy for Council, together with the business and residential community, to sustainably boost recycling.

Council's guiding *Keychange 2023* document summarises its vision for the Local Government Area as "a region of opportunity and prosperity – a place to call home". It comprises four core themes: a spirit of community; a prosperous region; an accessible region; and a region for the future.

The Integrated Waste Management and Resource Recovery Strategy comprises seven key strategic themes that are consistent with the *Waste Avoidance and Resource Recovery Strategy* and the Northern Inland Regional Waste Strategy:

Theme 1. Avoid and reduce waste generation

Council's objective is to guide the community in reducing the generation of unnecessary waste.

- Council's aim is to reduce overall waste generation.

Theme 2. Increase recycling

Council's objective is to maximise separation, processing, recycling and/or reuse of all waste materials. Council's aims include:

- Improved recycling of business waste.
- Increased recycling collected from households in kerbside recycling bins.
- Increased opportunities for recycling in public places.
- Increased business interest in, and understanding of, the value of recycling.
- Reduced disposal of organic waste to landfill.
- Reduced disposal of residual waste (general waste), from recycling activities and to landfill.

Theme 3. Increase Community Recycling, and Improve Problem Waste Capture

Council's objectives are to ensure that comprehensive and sustainable service arrangements are in place for the community to safely dispose of problem wastes, such as, asbestos and commercial organics. Council's aim is:

- Ongoing, affordable and convenient community disposal of problem wastes.
- Ongoing increase in community reuse and recycling.

Theme 4. Reduce littering

Council's ambition is to create a cleaner Tamworth Region where all citizens play an active part in protecting the environment and improving quality of life. Council's aims include:

- Support the New South Wales litter reduction target by achieving a 40% reduction in the volume of litter in the region by 2020.
- Participate and support where possible, various state and national clean up and enforcement campaigns.

Theme 5. Reduce illegal dumping of waste

Council's objective is to minimise the incidence of illegal dumping and pursue dumping incidents to the extent of available powers. Council's aim includes:

- Work in partnership with the community and Northern Inland Regional Waste to minimise illegal waste dumping.
- Continue to work with Councils Regulatory Services and the New South Wales Environment Protection Authority to achieve a reduction in illegal dumping incidents.

Theme 6. Sustainable, integrated waste management

Council's objective is to develop, manage and improve waste services and infrastructure consistent with protecting the environment and best use of resources within the region. Council's aims include:

- Protect the environment.
- Providing efficient waste management services.
- Effective and efficient Asset management.
- Best use of available waste management resources within the region.
- Improve the planning and development application process to have a stronger focus on waste management during the construction/fit out stages.
- Support ongoing business operations to develop industry based templates for waste management plans that would be reviewed periodically.
- Investigate Green Star Business recognition program using the waste management plan process.

Theme 7. Internal Council Waste Management Initiatives

Council's objective is to demonstrate, manage and improve waste services and infrastructure within its own buildings and facilities where possible. Council's aims include:

- A whole-of-Council approach to modern waste management and resource recovery practices and policies.
- Develop waste management plans for Council facilities.
- Improve internal education opportunities for staff about council waste management and resource recovery activities.

- Investigate new diversion opportunities regularly.

This set of Themes, Objectives and Aims forms the basis of Council's strategic intent.

1. INTRODUCTION

This *Integrated Waste Management and Resource Recovery Strategy* sets out Tamworth Regional Council's ambitions for sustainable waste management and increased recycling. The strategy has been prepared by Council's Water and Waste Directorate in consultation with the region's community before being formally adopted by council.

The document commences with a brief description of the development process by which this Strategy was formulated, followed by a review of the region's waste management and resource recovery performance. A review of the legislative and policy framework in which modern waste management operates in New South Wales (Chapter 4) heads Council's objectives for improved waste management and resource recovery (Chapter 5). Finally, the Strategy is completed with development of seven strategic themes and a number of specific initiatives for sustainable waste management and resource recovery (Chapter 6).



Tamworth Regional Council's Community Recycling Centre located at Forest Road Waste Management Centre, Tamworth, New South Wales.

2. STRATEGY DEVELOPMENT PROCESS

The *Integrated Waste Management and Resource Recovery Strategy* has been developed during a period of substantial change in the state and regional waste policy over the last four years. Two documents in particular have influenced the final design and presentation of the Tamworth Regional Council *Integrated Waste Management and Resource Recovery Strategy*:

- The Environment Protection Authority has published a revised *Waste Avoidance and Resource Recovery Strategy* in December 2014.
- The Northern Inland Regional Waste group has completed and published in October 2014 a substantive *Regional Waste Strategy* with an updated strategy due in 2017.

The **first stage** was development of the preliminary strategy, prior to the above publications including:

- A review of the current situation in managing solid waste in the Tamworth Local Government Area, including local issues and drivers that may influence the way waste and recycling need to be managed in the Tamworth region. This analysis was used to establish the local context in which waste management and resource recovery activities need to be conducted.
- Discussions with Council's Waste Management Working Group about issues, priorities and objectives for waste management and resource recovery.
- Consultation meetings with local waste management industry representatives to gain perspectives on possible objectives and priorities.
- Compilation of an initial draft Waste Management and Resource Recovery Strategy.

The **second stage** involved refining the draft strategy to harmonise with the Environment Protection Authority and Northern Inland Regional Waste strategies so that all three flow from state through regional to local government level.

- Review of the policy and legislative context for current and future waste management and resource recovery. This analysis provided information about policy and regulatory settings and market trends, all of which set the standard for contemporary waste management.
- Review of the content and intent of the Environmental Protection Authority's *Waste Avoidance and Resource Recovery Strategy* and the Northern Inland Regional Waste groups *Regional Waste Strategy*.
- Compilation of a draft *Integrated Waste Management and Resource Recovery Strategy*.
- Placement of draft Strategy on public exhibition, seeking feedback from the local community and industry.
- Adoption of the final document.

3. CURRENT PERFORMANCE IN MANAGING THE REGION'S WASTE

Tamworth Regional Council manages waste and recycling on behalf of residents and business in the Tamworth Regional Council Local Government Area. Service functions include collection, treatment, and recycling or disposal of waste materials. Council strives to provide high quality services to the community, protect the environment from potential harmful impacts of its waste and recycling operations, recover materials which are able to be recycled, and manage costs by efficiently operating services and assets. It strives to do all this within the broader context of co-operation with joint members of the New England and North-West Councils' Northern Inland Regional Waste group as *Integrated and Sustainable Waste Management*. The cost to the Council of providing waste management services and assets is recouped through a combination of waste management charges and gate or disposal fees.

Sustainable waste management is targeted within three principal areas:

Environment: minimising the environmental impact of waste treatment and disposal facilities, particularly through active control of dust, windblown litter, noise, odour, water, leachate and landfill gas emissions and diversion of waste suitable for recycling or reprocessing.

Community: asset management is a core responsibility of Council, ensuring assets are developed and maintained in line with statutory requirements and able to meet community service expectations.

Financial: affordable service delivery is based on annual review, a rolling four year planning and budgeting cycle, and grant funding where available.

Sustainable Waste Operations

Council provided approximately 26,000 kerbside services as of 21 January 2017 to domestic and commercial customers. Waste is also delivered (dropped-off) by domestic and commercial customers to Council's various Waste Management Centres operating throughout the Tamworth Regional Council Area (11 in total).

Domestic waste collection services

All domestic kerbside collection services (including bulky waste and waste transfer) are currently collected by a contractor.

- *Council kerbside general waste collections:* weekly collection of household general waste in a 240 L bin with red lid, in common with the majority of Councils in New South Wales.
- *Council kerbside recycling collections:* fortnightly co-mingled recycling service in a 240L bin with yellow lid, in line with broad local government practice.
- *Council kerbside organics collections:* fortnightly collection of household garden organics in a 240L bin with green lid, in common with the majority of Councils in New South Wales.

- *Council Kerbside bulky waste collections:* biannual collection of specified bulky waste.



Tamworth Regional Council's kerbside general waste, recycling collection and garden organic collection bins.

Commercial waste collection services

Council currently offers fee-based general waste and recycling services along with optional garden organics collection services to commercial customers. These services are provided by a contractor on behalf of Council, as part of the kerbside collection contract.

Commercial Problem Wastes

Council manages a number of commercial problem wastes, such as asbestos and commercial organics (particularly from animal processing industries), which present particular challenges in handling and disposal. Council is working with local industry, the New South Wales Environment Protection Authority and the Northern Inland Regional Waste group to quantify these waste streams and provide alternative management plans where required.

Waste Disposal and Recycling Facilities

Tamworth Regional Council operates a network of landfills, transfer stations and resource recovery facilities throughout the Local Government Area. The Forest Road Waste Management Centre is the largest facility, providing principal regional landfilling and resource recovery options for Council. This facility incorporates a Community Recycling Centre funded by the Environment Protection Authority to enable Council to better manage problem household wastes.

Council manages 10 other waste management and resource recovery sites in the region; five operate with active landfills and recycling household facilities, whilst the other five are transfer stations to provide convenient access for waste and recycling drop-off.

Regional Collaboration

Although Tamworth Regional Council operates independently in waste management activities, it collaborates in the activities of Northern Inland Regional Waste group; a voluntary regional waste group comprising 12 Councils located in North-West New South Wales. Tamworth Regional Council may also participate in regional contracts developed by the group's Executive, such as garden organics processing, scrap metal and lead acid battery collection, and concrete crushing. The benefits to Tamworth Regional Council can include reduced expenses and time associated with tendering services, as well as more competitive works quotations and higher commodity prices.

Tamworth Regional Council collaborates with neighbouring Councils and provides assistance when required, currently accepting waste from Walcha Shire Council at its Forest Road Waste Management Centre. Past collaborations included a Memorandum of Understanding (the Memorandum) with Armidale Regional Council to accept its general waste if required during the time of the Memorandum, whilst Armidale Regional Council's new landfill site continued construction developments. The future development of more regional waste management and recycling capabilities is a theme central to Northern Inland Regional Waste group's mandate and supported by Tamworth Regional Council.

Waste and Recycling Performance

Council's waste management and resource recovery facilities received more than 98,000 tonnes of waste and recyclable materials during 2015/16. This is broadly consistent with the amount of waste recyclable materials managed during the preceding three years. Council recovered and recycled 56% of all waste delivered across the Tamworth region in 2015/16. While this is approaching the previous State recycling target, the current New South Wales *Waste Avoidance and Resource Recovery Strategy* has an overall diversion target of 75%. Although recycling of Construction and Demolition (C&D) waste exceeds the *Waste Avoidance and Resource Recovery Strategy* targets, recycling performance for MSW (41%) and business waste (Commercial & Industrial – C&I waste) (21%) falls well short of the targets. Table 3-1 below shows the latest recycling rates for each of the principal classes of wastes received.

Table 3-1. Waste received and recycled by waste type across Tamworth Regional Council facilities: 2015/16. Source: Tamworth Regional Council State of the Environment Waste Data Report for 2015/16.

Waste type	Tonnes Received	Tonnes Recycled	Recycling Rate	Waste Avoidance and Resource Recovery Strategy Recycling Targets
Municipal solid waste	32,124	13,290	41%	70%
Commercial and Industrial waste	29,030	6,015	21%	70%
Construction and Demolition waste	11,970	10,705	89%	80%
Total ¹	98,495	55,994	56%	75%

Data for total waste received and diverted from Council's waste management and resource recovery facilities across the region for the four financial years, July 2012 – June 2016 is shown below (Figures 3-1).

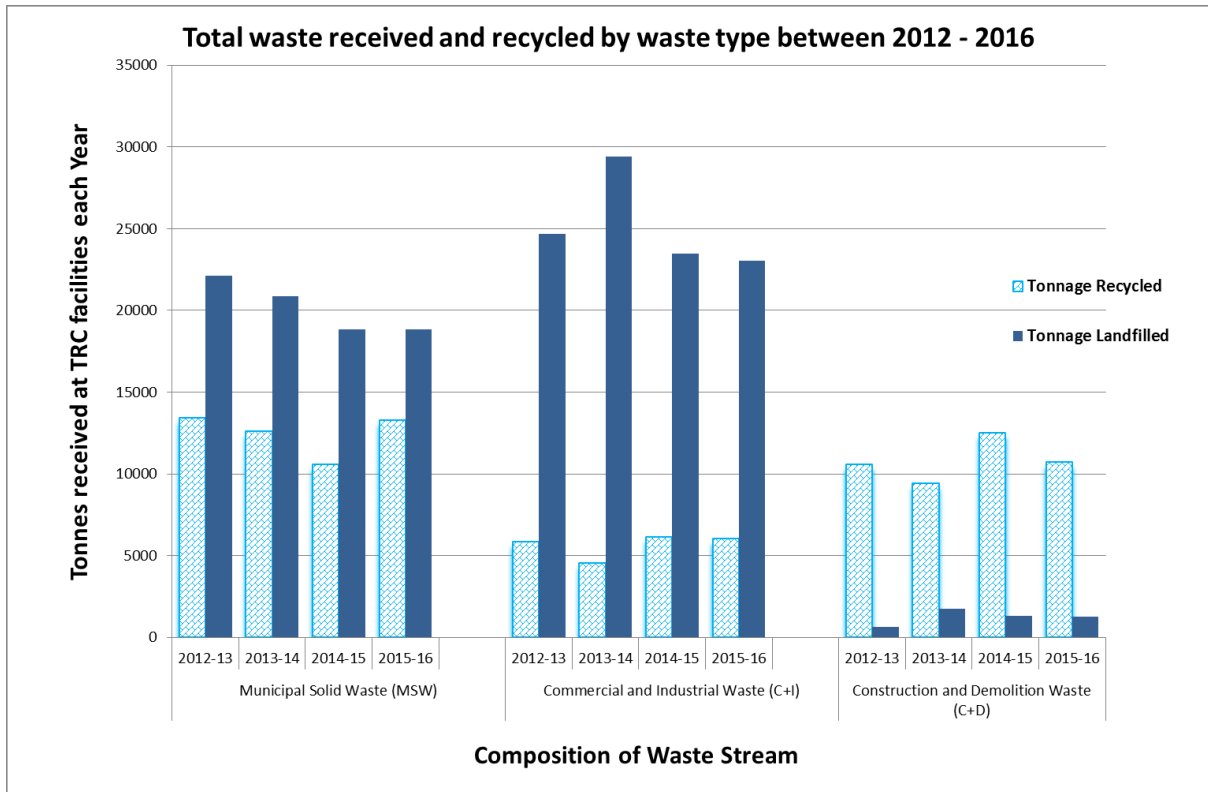


Figure 3-1. Total waste received and recycled at Tamworth Regional Council Facilities by waste type: 2012-2016. Source: Tamworth Regional Council State of the Environment Waste Data Reports for the four year period.

4. DRIVERS FOR CHANGE

This chapter considers the influence of sustainability policies, and the national and state legislative, policy and market context driving improved environmental performance within the New South Wales waste industry.

Sustainability

Tamworth Regional Council's sustainability values are instilled within its Community Strategic Plan and other Integrated Planning and Reporting documents (described in Chapter 5). In practice, these are expected to at least include benefits associated with:

- Ownership of assets.
- Minimal environmental impact arising from waste and recycling facility's operations.
- Engagement of the business and residential community to improve reuse and recycling.
- Notion to re-manufacture products from used resources (compared with recycling from waste) and operate within a circular economy.
- Regional collaboration in line with Northern Inland Regional Waste group's Regional Waste Strategy.
- The potential financial, environmental and community benefits available by processing waste food and garden organics to produce valuable compost and mulch products.

Waste Management and Resource Recovery Policy

Tamworth Regional Council operates and controls waste management activities within a framework of Commonwealth, State and Local Government policy and legislation. A number of the policy and regulatory measures from State and Commonwealth Governments act to influence the delivery of services by Tamworth Regional Council and other Local Councils. They specifically seek to minimise the amount of waste disposal via landfill, in favour of resource recovery and recycling, and to reduce the impacts from the disposal of wastes.

For instance, the New South Wales Government sets State policies and targets for improved recycling and litter reduction. The Commonwealth Government is successful in some national policy issues including product stewardship schemes, such as the drumMUSTER.



Source: <http://www.drummuster.org.au/container-recycling/eligible-containers/>

The policy, legislation and regulation that shape the Tamworth region's Strategy are discussed below.

New South Wales Policy Settings

Within New South Wales, the Environment Protection Authority is the key state agency empowered to protect the environment. The Environment Protection Authority seeks to improve recycling rates and environmental performance of waste management entities and facilities in New South Wales. This is achieved through a number of acts, regulations, strategies, guidelines, guides, reports, order and exemptions, and funding grants, in what is viewed as both a "push" and "pull" approach.

Regulation

The Environment Protection Authority uses risk assessment and performance-based approaches to drive regulatory performance and best management practice. In particular, minimisation of environmental impacts of the State's landfills through diversion of organics, improved environmental controls and reduced number of operating sites is at the heart of the Environment Protection Authority's desired reform.

The Environment Protection Authority's stated broad policy objectives are delivered within two key pieces of legislation:

- The *Protection of the Environment Operations Act 1997*, which regulates for protection of the environment and human health from inappropriate use of waste.
- The *Waste Avoidance and Resource Recovery Act 2001*, which provides the framework for promotion of waste avoidance and improved resource recovery.

The Environment Protection Authority's primary legislation is the *Protection of the Environment Operations Act*, which came into operation on 1 July 1999, repealing a number of acts associated with minimising environmental impact. It details both policies for protecting the environment (Protection of the Environment Policies) and approaches to reducing pollution.

The *Waste Avoidance and Resource Recovery Act 2001* contains guiding principles to minimise consumption of natural resources. Its themes may be summarised as encouraging the most efficient use of resources within ecologically sustainable

development, ensuring resource consumption is considered against a waste hierarchy, and reducing waste and encouraging beneficial reuse, recycling and waste avoidance.

New South Wales Waste Strategy

The Environment Protection Authority's *Waste Avoidance and Resource Recovery Strategy 2014-2021* provides clear direction and targets for reducing waste and increasing recycling by 2021/22. Local Government is expected to contribute to the attainment of these targets so Waste Management Strategies need to be broadly consistent with the New South Wales Government targets, including actions to meet the targets and to contribute to the success of the State strategy as a whole. Tamworth Regional Council's current waste avoidance and resource recovery performance is significantly lower than state targets for municipal (MSW) and commercial waste (C+I) waste.

The *Waste Avoidance and Resource Recovery Strategy* encompass a number of objectives and targets:

- Avoid and reduce waste generation: by 2021-22, reduce the rate of waste generation per capita.
- Increase recycling: by 2021-22, increase recycling rates for:
 - Municipal solid waste (MSW) to 70%.
 - Commercial and industrial waste (C&I) to 70%.
 - Construction and demolition waste (C&D) to 80%.
- Divert more waste from landfill: by 2021-22, increase waste diverted from landfill to 75%.
- Manage problem wastes better: by 2021-22, establish or upgrade 86 drop-off centres for managing problem household wastes.
- Reducing litter: 40% fewer items (compared to 2012) by 2017.
- Reducing illegal dumping: 30% fewer incidents (compared to 2011) by 2017.

New South Wales Waste and Environment Levy

The *Waste Avoidance and Resource Recovery Strategy* also sets the basis for the Section 88 Waste Levy, which seeks to promote resource recovery over landfill disposal, and education to encourage change in consumer behaviours by imposing a state charge on waste landfilled. A levy on solid waste deposited in landfill is applied to certain areas in New South Wales. By making landfill more expensive, the levy aims to encourage recovery of and conservation of resources that would otherwise be deposited in landfill.

While the Tamworth region is not currently regulated under the Waste Levy, the implementation of the Levy state-wide has not been ruled out. Waste levy rates for 2016/17 are \$135.70/T for the Sydney Metropolitan Area, and \$78.20/T for designated regional areas.

Waste Less, Recycle More Initiative

This five year waste management and resource recovery initiative comprises five programs and much of the \$465.7 million is available to local councils and groups of councils by way of competitive grants for projects funded within each of the funding programs:

- Waste and Recycling Infrastructure: \$250 million.
- Local government waste and resource recovery: \$137.7 million.
- Illegal dumping prevention and waste enforcement: \$58 million.
- Litter prevention and enforcement: \$20 million.
- Energy recovery policy.

Themes around resource recovery and recycling, and managing waste as a resource in line with the Waste Hierarchy, feature significantly. For example, diverting and separately processing kerbside organics is an initiative for which the Strategy provides a number of tools. The initiative also provides funding for education programs to change community behaviour.

Round 1 of the *Waste Less, Recycle More* initiative is due to be completed in 2017, and a second round is expected to follow.



Source: <http://www.epa.newsouthwales.gov.au/wastestrategy/waste-less-recycle-more.htm>

A New South Wales Container Deposit Scheme

The New South Wales Government is developing a container deposit scheme which is due to be implemented by December 2017. The main aim is to reduce drink container litter, thus helping the Government to hit its target of a 40% reduction in the volume of litter by 2020. The Government intends that the incentive available through a deposit scheme will shift behaviour so that containers which would previously have been littered are instead recycled.

Tamworth Regional Council will back the container deposit scheme by supporting network operators managing collection sites and through community education and promotion of the facilities available.

Bin Systems and Collection Guides

Council's current waste kerbside collection contract was implemented in 2009 and is in effect until 2019. There are a number of guides and reports available from the New South Wales Environment Protection Authority to provide practical information to local Councils in delivering sustainable kerbside collection services. The 2012 *Preferred Resource Recovery Practices by Local Councils – Best Bin Systems Guide* describes best practice for greater recovery of organics and dry recyclables. It sets out preferred service levels, covering aspects such as standardised and uniform colour-coding of all bins, recycling targets and the need for separation of waste streams.

Resource Recovery Orders and Exemptions

Wastes with genuine reuse potential, considered fit for purpose and of no threat to the environment or human health, may be beneficially reused for specific, approved purposes. Orders and Exemptions contain conditions which waste processors and users must comply with in processing and re-using these materials. Tamworth Regional Council provides recycled materials for the community under a number of these Orders and Exemptions.

National Waste Policy Settings

National Waste Policy is embodied within the Commonwealth's *Less Waste, More Resources* strategy. Within the 2010 Implementation Plan, all levels of government are implicated with various levels of responsibility for actioning the Plan. Specifically within Strategy 7 of the Plan, local government is responsible for supporting phasing down the amount of biodegradable material sent to landfill.

Product Stewardship Legislation

Product stewardship is an approach to managing the impacts of different products and materials. The *Product Stewardship Act 2011* provides the framework to manage the environment, health and safety impacts of products, in particular those impacts associated with the disposal of products. The Commonwealth Government's *National Waste Policy 2009* includes the development and implementation of product stewardship arrangements for wastes such as computers and televisions (e-waste), batteries, paint and tyres.

Local Governments are facing increased pressure to provide locations for residents to drop-off these items and to facilitate the collection logistics. However, the product stewardship provisions make industry the liable parties for collection arrangements.

Carbon Abatement

The Emissions Reduction Fund is the Commonwealth's mechanism for purchasing carbon abatement from eligible projects. Carbon abatement can be achieved through activities that reduce greenhouse gas emissions by either storing carbon or reducing emissions of carbon and other harmful Greenhouse Gases. These activities can include: reducing livestock emissions, increasing efficiency of fertiliser use, enhancing carbon in agricultural soils and storing carbon through revegetation and reforestation. Abatement is purchased in the form of Australian Carbon Credit Units through reverse auctions funded by the government's \$2.55 Billion dollar commitment.

In February 2016, the Commonwealth Government announced a finalised method for quantifying the carbon off-set value of newly captured kerbside organics. Local Councils may now undertake projects using this method and gain credits for diverting food and garden organics and processing them within eligible treatment technologies, such as composting.

A separate Landfill Gas Methodology was made in January 2015. It provides incentives to install or upgrade Landfill Gas collection systems for carbon abatement.



International Trends

A number of influences within the waste management industry are driving greater landfill diversion and resource recovery trends in New South Wales. These influences and trends can be related to just a few ideas that have been instrumental in driving improved waste management in Europe, Scandinavia and Australia over the last decade: increased conservation of resources; and improved protection of the environment. The strategy is based on two main themes:

- Maximising source separation of dry recyclable materials so that these never enter the general waste stream; and
- Reducing the direct landfill disposal of biodegradable waste without some form of treatment.

These drivers and strategic themes, together with the associated policy responses and local actions are set out diagrammatically at Table 4-2 below. It is considered they will be decisive in shaping the way waste is managed in Australia over the next 10 to 20 years.

Table 4-2. Broad Policies and Trends in International and Australian Waste Management.

Broad national and international objectives	Broad national and international strategy	Public policy responses	Local strategy responses
Increased conservation of resources and improved environment protection			
	Maximum source separation of dry recyclable materials	Improve kerbside recycling volumes Improve public place recycling volumes Improve business recycling volumes Product stewardship legislation	Education and improved collection methods Mandatory public place recycling opportunities Review increased landfill charges to drive waste source separation and increased recycling Ongoing monitoring of producer responsibility requirements
	Reduce direct disposal to landfill of biodegradable waste	Bans on direct disposal without prior treatment Waste disposal levies Carbon financial liabilities	Alternative waste treatment facilities Garden and food waste collection and processing Increased landfill management requirements Investigate and implement carbon abatement initiatives

5. OBJECTIVES: WASTE MANAGEMENT AND RESOURCE RECOVERY

The development of strategic objectives establishes the vision for future waste management and resource recovery. Objectives can provide a guiding framework for strategy development and evaluation of alternatives.

With changes to Council's new planning and reporting commitments under its Integrated Planning and Reporting Framework the following objectives have been adopted by Council for the 2016 Strategy as outlined below.

Council's Plans for the Region

Council's guiding *Keychange 2023* document summarises its vision for the Local Government Area as "a region of opportunity and prosperity – a place to call home". It comprises four core themes: a spirit of community, a prosperous region, an accessible region, and a region for the future.

The *Keychange 2023* initiative comprises five separate documents to guide development of the region. A separate Community Engagement Strategy completes the requirements for the framework.

The five documents summarised below reveal Council's objectives, strategies and measures of success in delivering the strategies. Clearly embedded within *Keychange 2023* is the concept of regional Sustainability.

Community Strategic Plan: The Community Strategic Plan is a 10 year strategic direction for Council. The Community Strategic Plan relates to New England North-West Regional Action Plan, which in turn relates to the New South Wales State Plan (New South Wales 2021 A Plan to make New South Wales Number One). The Plan describes "Challenges for the Future", some of which relate generally to waste management and resource recovery. Quoting from the Community Strategic Plan this includes:

- Managing the region's development in a way that respects the social and economic needs and environmental functions for the benefit of the community and future generations.
- Ensuring development is ecologically sustainable and protects ecosystem functioning to provide clean air, water and healthy soils.
- Continuing to ensure the different needs of city, town, village and rural lifestyles are met within the Council region.
- Making the best decisions that meet short-term needs, as well as positioning the region well for future opportunities.
- Ensuring the community is actively engaged and participating in planning decisions.
- 'Whole-of-Government' integration of activities and resources of different government agencies.

Delivery Program: This contains objectives, strategies and Measures of Success for delivery of each of the Community Strategic Plan's themes. Within the last theme, "a region for the future", Council has five objectives, two of which relate specifically to waste management and resource recovery. These two, and the strategies and Measures of

Success which support each are as follows below. The updated Strategy develops these concepts further within initiatives for evaluation and potential delivery:

- *Living sustainably* – provide environmentally sustainable waste management services (measures of success include recycling rate, rate of landfill void consumption and trend in Carbon Dioxide emissions).
- *Planning for the future* – sound asset management (Measures of Success condition of assets and levels of services), sound land use and infrastructure planning (Measures of Success community satisfaction rates), and minimise the potential impacts of climate change (Measures of Success reduction in greenhouse gases and number of education initiatives).

Annual Operating Plan: The Annual Operating Plan is an annual sub-set of the Delivery Program detailing strategic projects to be undertaken that year to achieve the objectives of the Community Strategic Plan. Each year capital required to service Asset Renewal and construction of new or upgraded Asset projects in accordance with Asset Management Plans and Long-Term Financial Plans is nominated within the Annual Operating Plan. This is carried out as part of Council's Water and Waste Operations' annual budget preparation for the following financial year. Adopted initiatives from the Strategy will be incorporated into each Annual Operating Plan.

Resourcing Strategy: The Resourcing Strategy details Council's resources required to deliver the Community Strategic Plan. Components of the Resourcing Strategy include Asset Management Plans, Long-Term Financial Plans and workforce plans. Council's Asset Management Plans are based on asset longevity, and maintaining asset condition and services at least in line with community expectations.

Community Engagement Strategy: The Community Engagement Strategy essentially describes the principles used by Council to engage the community in the preparation of the Community Strategic Plan, Delivery Program, Annual Operating Plan and Resourcing Strategy.

Infrastructure Planning

Council's strategic planning documents guide development of the region in association with the *Keychange 2023* Community Strategic Plan. One of these in particular, the 2014 Tamworth Regional Infrastructure Strategy, describes significant infrastructure projects required "...for the next 20 years and beyond" to deliver the objectives of the Community Strategic Plan.

Within this strategy there are two short-medium term goals especially relevant to waste management. The updated Strategy with its initiatives clearly addresses these, below:

- Enhance the longevity and sustainability of the Forest Road Waste Management Centre.
- Implementation of alternative waste management and minimisation technologies.

Longer term, the goal is stated as being:

- Investigate alternative waste treatment options that are appropriate for the needs of the community and Tamworth Regional Council.

From Regional Planning to Waste Management Objectives

The planning framework described above demonstrates the critical place of planning in building sound foundations to ensure the region's long term development and sustainability. Council's asset infrastructure and services are planned and designed to deliver the best possible outcomes for the communities of today and into the future.

Waste asset longevity, service delivery, waste recycling and minimising the environmental impact of waste operations in the region are core objectives of Council.

A Set of Strategic and Operational Objectives

The Council's strategic and operational objectives for waste management have been nominated below to set direction for development of initiatives in Chapter 6. To permit integration of Council's new *Integrated Waste Management and Resource Recovery Strategy* with that of the Northern Inland Regional Waste group's Regional Waste Strategy and Environment Protection Authority's reporting requirements. Initiatives developed within Chapter 6 are aligned with themes of both the *Waste Avoidance and Resource Recovery Strategy* and the Regional Waste Strategy as outlined in the objectives described below.

Table 5-1. Strategic and Operational Objectives.

Objective Category	Strategic Objectives	Operational Objectives
Asset Management and Service Delivery	<p>Availability of a network of facilities for integrated waste management</p> <p>Continuous improvement of services within resources available to Council</p>	<p>Maintenance and renewal of waste management assets to ensure service level quality and efficiency</p> <p>Maximum internal and contractor efficiencies in delivering designated service levels</p> <p>Ensure longevity of waste assets</p> <p>Whole-of-Council approach to waste management</p>
Improve Recycling	<p>Waste avoidance and recycling programs that are sustainable for the community and business, and work toward the New South Wales Government resource recovery targets</p>	<p>Community and business engaged in improving recycling and resource recovery and recycling</p> <p>Development and promotion of recycling opportunities</p> <p>Develop community education and awareness strategy</p> <p>Review ongoing technology options for further reducing waste to landfill</p>
Environment Protection	<p>Ensure that Council meets legislative and regulatory compliance in the protection of the environment with regard to waste management</p>	<p>Positive relationship with environment regulators</p> <p>Responsible management of climate impacts from waste facilities</p> <p>Support regional littering and illegal dumping programmes, and State initiatives</p>

6. AN INTEGRATED WASTE MANAGEMENT STRATEGY

The new, *Integrated Waste Management and Resource Recovery Strategy* comprises seven key strategic themes:

Theme 1. Avoid and Reduce Waste Generation.

Theme 2. Increase Recycling.

Theme 3. Increase Community Recycling, and Improve Problem Waste Capture.

Theme 4. Reduce Littering.

Theme 5. Reduce Illegal Dumping of Waste.

Theme 6. Sustainable, Integrated Waste Management.

Theme 7. Internal Council Waste Management Initiatives.

Within the descriptions of each theme below, Tamworth Regional Council has developed a number of initiatives to deliver its stated objectives.

Theme 1. Avoid and Reduce Waste Generation

Avoiding the generation of waste is based on the idea of preventing waste from being created in the first place or encouraging the reuse of materials. This assists in minimising products and materials discarded in the kerbside rubbish bin.

Waste generation can be reduced through action and initiatives at local and national level. Examples of local action can include reduced use of plastic bags and increased digital newspaper readership. Whilst on a national level, a reduction in use of light-weight packaging, for example, reduces waste generated.

Objectives

Council's objective is to guide the community in reducing the creation of unnecessary waste.

Aims	Initiatives	Measures of Success
Reduced overall waste generated regionally	<p>Initiative 1A Engage with the community to gain support for practical waste avoidance initiatives</p> <p>Develop in conjunction with initiatives 2C and 4A</p>	Decrease in the amount of waste received by Council facilities
	<p>Initiative 1B Support/develop initiatives for reuse within the community</p>	Facilitate community participation in Council-supported/developed programmes encouraging reuse of materials



Source: <http://www.socreativethings.com/9-creative-ideas-to-reuse-plastic-bottles/>
Various Bird feeders created out of reused plastic bottles.

Theme 2. Increase Recycling

Placing used paper, cardboard and containers in the recycling bin allows recovered materials to be used to create new products. This reduces demand for new materials and extends the life of the recycled component. Further more, it reduces material disposal impacts and costs, which provides a direct and tangible benefit for the Tamworth regional community.

Local households already participate in recycling. The relative amount of domestic materials recycled compared to domestic waste landfilled, is 41% compared with previous years of 36% which demonstrates that our region is moving towards the New South Wales target of 70% by 2021/22.

Council is planning to undertake household bin audits, which will identify the percentage of missed opportunities of non recovered recyclable materials (such as containers and paper/cardboard) that have been deposited to landfill instead of recycled.

A garden organics collection and processing service is already in place in Tamworth city and the towns of Moonbi, Kootingal and Attunga. This collection and processing service converts garden organics into valuable mulch, which is readily available for purchase from Forest Road Waste Management Centre.

The next logical step is to focus on the food waste in household garbage bins. These garbage bins contain a high proportion of food waste, which could be collected together with garden organics and processed to produce either a valuable compost or mulch product.

There is also substantial scope for increased recycling of business waste, particularly commercial organic waste, much of which is currently sent to landfill. The current Commercial and Industrial recycling level is 21% compared to the New South Wales target of 70% by 2021/22.

Objectives

Council's objective is to maximise separation, processing, recycling and/or reuse of all waste materials.

Aims	Initiatives	Measures of Success
Improved diversion of commercial and industrial waste streams	<p>Initiative 2A Develop a strategy to improve recycling of commercial and industrial waste</p> <p>Advising businesses of their obligations under the Protection of the Environment Act in relation to waste management</p>	<p>Produce a strategy document relating to commercial and industrial waste</p> <p>Facilitate workshops between businesses who generate similar waste streams and waste service providers</p> <p>Develop supportive collateral information to educate business on diversion opportunities</p>
	<p>Initiative 2B Investigate development of a dirty material recovery and sorting facility to recover valuable materials for recycling from mixed, dry business waste</p>	<p>Report produced on the investigation into the establishment of a dirty material recovery and sorting facility</p>
Increase recycling collected from households in the kerbside recycling bin	<p>Initiative 2C Deliver a community education program to households on how best to increase their recycling</p>	Increased recycling volumes from domestic recycling bins
Increase opportunities for public place recycling	<p>Initiative 2D Include in new Waste Contract provision of public place recycling bins.</p> <p>Where possible investigate grant funding opportunities for bin acquisition and installation in the short term period</p>	The number of public place recycling bins provided in Council facilities and spaces

Aims	Initiatives	Measures of Success
	between the new Waste Contract and existing contract arrangements	
Increased business interest in, and understanding of, the value of recycling	<p>Initiative 2E Deliver an education program to the Tamworth regional business community to build on the New South Wales Environment Protection Authority's Bin Trim (business recycling) program</p>	Increase in business demand for recycling services
Increase diversion of organic waste from landfill	<p>Initiative 2F Investigate development of a new Organic Recycling Facility</p> <p>Investigate the option of kerbside collection of domestic food waste with existing kerbside collected garden organics</p> <p>Investigate diversion of appropriate commercial organic material that has traditionally been landfilled</p>	<p>Successful when a Organic Recycling Facility has been established</p> <p>Successful with the establishment of suitable domestic organic waste collection methods</p>
	<p>Initiative 2G Initiate discussion with waste service providers to encourage provision of collection services of business organic waste for recycling</p>	Meeting with waste service providers held
Reduce disposal of general waste to landfill	<p>Initiative 2H Investigate ongoing development of alternative waste technologies for processing general waste</p> <p>Undertake bin audits annually</p> <p>Record accurate data through weighbridge</p>	<p>Completion of bin audit and review of data obtained</p> <p>Data from weighbridge</p>

Theme 3. Increase Community Recycling and Improve Problem Waste Capture

Council provides a number of opportunities to the community for disposal and recycling of selected wastes. These include periodic collection services for bulky and problem wastes, as well as scope for the public to self-haul and drop-off wastes and recyclable materials.

Council operates a Community Recycling Centre at its Forest Road Waste Management Centre. The Environment Protection Authority grant funded facility allows households to drop-off Environment Protection Authority targeted core wastes for free. Waste materials are collected and either recycled, processed or treated before disposal to landfill.

This facility is part of the small vehicle transfer station footprint at Forest Road Waste Management Centre, which enables the public to drop-off clean and separated products and materials for recycling. Council is investigating the possibility of rolling out Community Recycling Centre's at other Tamworth Regional Council waste sites. Materials that can be recycled include:

- motor oil
- garden organics
- timber and metal recycling
- lead acid batteries
- mobile phones and chargers
- toner cartridges
- fluorescent tubes
- tyres
- e-waste
- paint
- gas bottles and fire extinguishers
- household goods for the Buy-Back Centre
- sharps
- smoke detectors

There is currently limited opportunity for the community to dispose of or recycle household chemicals other than the once each year collection program. Council is investigating increasing its Annual Household Chemical Collection campaign to potentially be either biannual or quarterly to facilitate improved service levels around materials that it is not licenced to store large volumes safely on site.

Problem wastes such as, large plastic wrap, tarpaulins and mattresses are difficult to manage at landfills and affordable recycling options are not presently accessible within the region.

Objectives

Council's objectives are to ensure that comprehensive and sustainable service arrangements are in place for the community to safely dispose of selected wastes.

Aims	Initiatives	Measures of Success
Sustainable management of problem wastes	Initiative 3A Continue to provide public access to the Community Recycling Centre for the disposal of targeted core wastes for free	Volumes of targeted core wastes diverted from landfill



- ▶ Household quantities only
- ▶ 20kg or 20L maximum container size
- ▶ Please transport your materials carefully



Some of the products which can be deposited at the Community Recycling Centre.

Theme 4. Reduce Littering

The New South Wales government has nominated litter reduction as one of its top 12 priorities. Goal 23 of *New South Wales 2021: A plan to make New South Wales number one*, includes the target for New South Wales by 2020 to have the lowest litter count per capita in Australia. The Government's litter reduction target is to reduce the volume of litter by 40% by 2020.

Objectives

Council wants to engage the community in creating a cleaner Tamworth Region where all citizens play an active part in protecting the environment and improving quality of life.

Aims	Initiatives	Measures of Success
Support the New South Wales litter reduction target by achieving a 40% reduction in the volume of litter in the region by 2020	<p>Initiative 4A</p> <p>Develop and implement a litter reduction strategy, with the assistance of Environment Protection Authority funding, comprising:</p> <ul style="list-style-type: none"> - consult the community to identify the top 10 litter hotspots within the region - community litter awareness and education campaign <p>Participate in the Northern Inland Regional Waste Litter</p> <ul style="list-style-type: none"> - Regional Implementation Plan 	<p>Reduced litter volume at litter hotspots</p> <p>Responses received from community during consultation</p>
	<p>Initiative 4B</p> <p>Support introduction in 2017 of the New South Wales Government's proposed container deposit scheme</p>	<p>Promote collection points to the community</p>



Litter fines average \$200.
Don't litter, take your rubbish with you.



epa.nsw.gov.au/litter

Theme 5. Reduce Illegal Dumping of Waste

Illegal dumping of waste creates a threat to the environment, human health, wildlife and ecosystems. It seriously affects local amenity and the clean-up by Council is an unproductive cost to the community as well as affected private landholders.

Objectives

Council wants to engage the Tamworth Regional community in helping to reduce illegal dumping.

Aims	Initiatives	Measures of Success
Work in partnership with the community and Northern Inland Regional Waste group to minimise the incidence of illegal	<p>Initiative 5A</p> <p>Support development and implementation of the proposed Northern Inland Regional Waste Regional</p>	<p>Reduction in the number of reports of illegal waste dumping</p>

Aims	Initiatives	Measures of Success
waste dumping	Illegal Waste Dumping Program by: <ul style="list-style-type: none"> - Preparing baseline data on the extent and scale of illegal dumping in the region - Assisting in developing the case for a Regional Illegal Dumping Squad - Assisting in implementing a community awareness and education program 	

Theme 6. Sustainable, Integrated Waste Management

The aim of sustainable waste management is to protect the environment and conserve resources, while meeting community needs, efficiently running the “business” of waste management, and ensuring sound management of public assets. A whole-of-Council approach to modern waste management and resource recovery practices will ensure that all parts of Council set the example of sustainable waste management.

Objectives

Council’s objective is to develop, manage and improve infrastructure and waste services consistent with protecting the environment and best use of resources within the region.

Aims	Initiatives	Measures of Success
Sustainable energy reuse	Initiative 6A Develop options for beneficial reuse of captured Landfill Gas from the Forest Road Waste Management Centre	Positive commercial return from Landfill Gas
Data for developing operational improvements	Initiative 6B Develop a <i>waste data</i> strategy based on the idea of auditing/monitoring waste and recycling flows to provide an empirical basis for delivery of strategy, infrastructure planning, and operations management Linked to Initiative 2A	Improved ability to develop efficient waste management and recycling systems Reduced cost and uncertainties of its regulatory reporting
Asset management	Initiative 6C Investigate the business case for use of alternative daily cover material at Forest Road Waste Management Centre	Reduce consumption of landfill space by daily cover

Aims	Initiatives	Measures of Success
Best use of resources within the region	Initiative 6D Investigate the business case for recycling soils received at Forest Road Waste Management Centre Linked to Initiative 2A	Conservation of valuable landfill capacity Commercial return from recycled materials
Development and Planning assessment	Initiative 6E Investigate the potential for businesses to reduce, separate and recycle waste with development approval conditions provided	Improved landfill diversion of C+I waste Engagement and input of the Sustainability Unit with Development Control Plans (DCP).
Ensure landfill assets are available and sufficient for future disposal of housing asbestos	Initiative 6F Investigate the future impact of asbestos disposal from renovation/demolition of regional buildings will have on consumption of landfill void space	Landfill void space available for the compliant burial of asbestos
Business recognition program	Initiative 6G Investigate Green Star Business recognition program options Linked to Initiative 2A	Green Start Business options investigated and if feasible implemented with participating businesses If feasible, promotion of Green Star Business Awards

Theme 7. Internal Council Waste Management Initiatives

The aim of Internal Council Waste Management initiatives is to have a whole-of-Council approach to modern waste management and resource recovery practices. This strategy focuses on ensuring all parts of council set the example of sustainable waste management, achieved through internal educational opportunities and waste management practices for all staff.

Objectives

Council's objective is to educate, develop, manage and improve waste management services and infrastructure within its own buildings and facilities where possible. Council's aims include:

Aims	Initiatives	Measures of Success
A whole-of-Council approach to waste management and resource	Initiative 7A Integrate waste	Waste Management Policy

Aims	Initiatives	Measures of Success
recovery	<p>management functions and strategy across Council divisions and business units, including planning approval provisions</p> <p>Establish an internal whole-of-Council waste management contract</p> <p>Linked to Initiative 2A</p>	<p>document created</p> <p>New Waste Management Contract Implemented</p> <p>Increased recycling performance of commercial and industrial waste streams</p>
Develop waste management plans for Council facilities	<p>Initiative 7B</p> <p>Conduct site audits at council facilities to assess waste generation</p> <p>Develop site specific waste management procedures based on audit data</p>	<p>Completion of site audits</p> <p>Implementation of waste management procedures at council facilities</p>
Improve internal education opportunities for staff about council waste management and resource recovery activities	<p>Initiative 7C</p> <p>Investigate suitable methods for internal delivery educational opportunities</p> <p>Linked to Initiative 7A and 7B</p>	<p>Upon commencement of new waste management services, education provided to all existing staff members through internal communication methods</p> <p>Education provided to new staff members through Induction training and information manual</p>
Investigate new diversion opportunities as they arise	<p>Initiative 7D</p> <p>Analysing Recoverable Resource Markets</p> <p>Working with the Environment Protection Authority</p> <p>Analysis of new Technologies as and when they are developed</p> <p>Linked to 2H</p>	<p>New diversion opportunities investigated as and when they are available</p>