

2022 – 2032

# Resource Recovery and Residual Waste Strategy



Sharing the Responsibility towards a Circular  
Economy and a Resourceful Community

We acknowledge the Widjabal/ Wia-bal people of the Bundjalung nation, Traditional Owners of the lands and waters on which we operate our business.

We honour their unique cultural and spiritual relationship to the land and waters and their continuing and rich contribution to Lismore City Council and the community.

We pay our respects to them and their culture, their Elders and community leaders both past and present. Additionally, we acknowledge the vibrant contribution that young Aboriginal people make as emerging leaders of the community.



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# Who we are

## Lismore is a major regional centre within the Northern Rivers region of New South Wales.

Greater Lismore covers an area of 1,267 square kilometres stretching from North Woodburn in the south, to Nimbin and the Nightcap Ranges in the North, to Clunes in the east, and Bentley in the West.

Lismore Local Government Area (LGA) borders the northern rivers Councils of Byron, Richmond Valley, Ballina, Kyogle and Tweed. These Councils along with Clarence Valley Council form the North East (NE) Waste group.

We have a population of approximately 45,000 (about 20,000 households) which is expected to rise by 21.4% in the next 15 years to 53,680 people driven

by an increasing number of people from Sydney and Melbourne due to COVID, climate, lifestyle and rising regional coastal housing prices.

Lismore Base Hospital; Southern Cross University, Lismore airport, Lismore City Council, Lismore Court, Norco, the commercial and retail businesses are key employers in our area. Lismore provides regional services used by residents from bordering LGAs. Our region is also renowned for agriculture, forestry and ecotourism. The growth of the existing legal and justice sector and agro-ecology are also potential opportunities.

# Introduction

## This document was commissioned by Lismore City Council as a 10 year waste management strategy, to replace the current 2018-2023 Waste Management and Resource Recovery Strategy.

The strategy brief was to provide clear strategic and operational guidance for the provision of services and investment in waste management facilities for the short, medium and long term with guidance on all waste streams, sustainable options, related regulation, circular economy principles and regional collaborative opportunities.

In its development the timing seemed opportune to move beyond a waste management focus and begin the transition to a more circular approach.

The decision was therefore made to craft objectives and actions that focus on the avoidance, refusal and reuse of items as well as those that stimulate the cycling of materials as opposed to the 'pointy' end of the waste hierarchy that features energy recovery, treatment and disposal.

This is a big shift in consciousness and behaviour but it is a step that must be taken now as resources become more finite.

For example, global supplies of many building materials are expensive and in short supply. This is due to a number of factors that includes an increase in building

projects during the pandemic, delays in shipping and the loss of plantation timbers in 2019 during the drought and fire season in Australia.

The suggested impacts of climate change indicate resource shortages in the future, so it makes sense for us all to become more adept at planning, avoiding, reusing, repurposing and recycling.

This draft Resource Recovery and Residual Waste strategy is Lismore's City Council's ten (10) year approach to shifting from a waste attitude to one where materials and items are valued and cements Lismore's place as a leader in recycling.

It's a strategy that will affect all Council policies and operations and it's a strategy that will affect all of us in the community - Council, households, businesses and other organisations.

It starts with a roadmap that offers direction towards doing things differently. A direction towards Circular Lismore: A Resourceful Community.

Lismore City Council is excited to step into this direction and facilitate and support its community along the journey.





# Our services

## Northern Rivers Waste, a business unit of Lismore City Council was established in 2000.

It is responsible for the management of waste operations in the Lismore region including the Lismore Recycling and Recovery Centre at Wyrallah Road, the Nimbin Transfer Station; all domestic collections and a strong commercial collection service for waste, co-mingled recycling, food and garden organics, paper and cardboard with on request services for oil filters and printer cartridges.

Northern Rivers Waste operate the landfill site at Wyrallah Road as well as a community recycling centre, the Revolve Shop, a Return and Earn collection centre, a material recovery facility (MRF) and the Environmental Education Centre adjacent to the Lismore Rainforest Botanic Gardens.

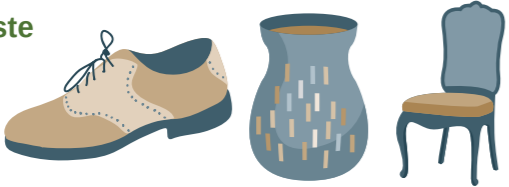




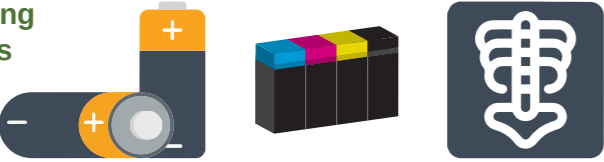
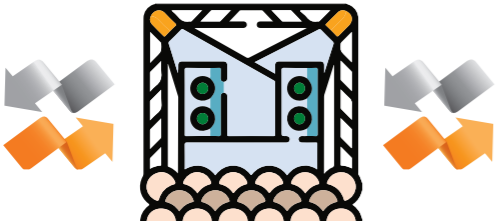
Lismore City Council has a long history of sustainable and innovative waste management and resource recovery programs and was the first Council in Australia to introduce mixed food and garden organics in 1999.

Lismore's compost operation was well used by residents and growers throughout the region until it was affected by a fire in the droughts of 2019. That fire also impacted the regional sharing of Lismore's MRF.

Lismore landfill is one of five trial sites in Australia for the Australian Alternative Cover Assessment Program (AACAP) with the first licensed phytocapping site in NSW commencing in 2013 on a 1.3-hectare old landfill site at Wyrallah Road. The phytocap has been planted chiefly with koala habitat species that are growing a diverse healing understory.



Service	Details
<b>Domestic Collection</b> 	<b>Urban:</b> 240L organic weekly, 140L waste fortnightly, 360L recycling fortnightly. <b>Village:</b> 240L organic weekly, 360L recycling fortnightly, 240L waste fortnightly. <b>Rural:</b> 240L waste weekly, 360L recycling fortnightly.
<b>Commercial Collection</b> 	140L, 240L, 360L, 600L, 1100L Waste, recycling, multistream or organic – daily, weekly, fortnightly and monthly.
<b>Asbestos Disposal &amp; Testing Kits</b> 	Safe removal of up to 10m <sup>2</sup> of Asbestos from homes in these special kits available for purchase.
<b>Waste Voucher</b> 	Access to one voucher per year to dispose of up to 250kg of self-sort waste, steel, concrete and green waste.
<b>Nimbin Transfer Station</b> 	Blade Rd, Nimbin. For disposal of waste and recyclables (no green waste).
<b>Lismore Recycling &amp; Recovery Centre</b> 	For the drop-off of all waste & recycling materials

Service	Details
<b>Revolve Shop &amp; Save 'n' Waste Recycle Store</b> 	Sale of second-hand goods & new, eco-friendly products to help you recycle easier.
<b>Education</b> 	School tours, school visits and the Lismore City Environment Education Centre.
<b>Compost Sales</b> 	Food & garden organics, mulches and compost for sale. Can be used on farms and backyard gardens.
<b>Community Recycling Centres</b> 	Free disposal of household problem waste including paint, gas bottles, fire extinguishers, fluoro globes and tubes, smoke detectors, motoring and other oils.
<b>Botanic Gardens</b> 	Lismore Rainforest Botanic Gardens is a great place to visit to discover and learn about local flora and fauna. Located within the Lismore Recycling & Recovery Centre at 313 Wyrallah Road, East Lismore.
<b>Community Recycling Stations</b> 	Drop off of household batteries, mobile phones & accessories, printer cartridges and x-rays.
<b>Event Waste &amp; Recycling</b> 	Waste & Recycling services for events.

# Why this strategy?

The NSW Government provides an Integrated Planning and Reporting framework (Figure 1 featured right) that guide how councils undertake planning.

This strategy document sits within the section of "other supporting plans, strategies and policies".

This strategy and the related actions are subject to the governance requirements of feasibility, resourcing and funding prior to being undertaken.

and ecotourism. The growth of the existing legal and justice sector and agro-ecology are also potential opportunities.

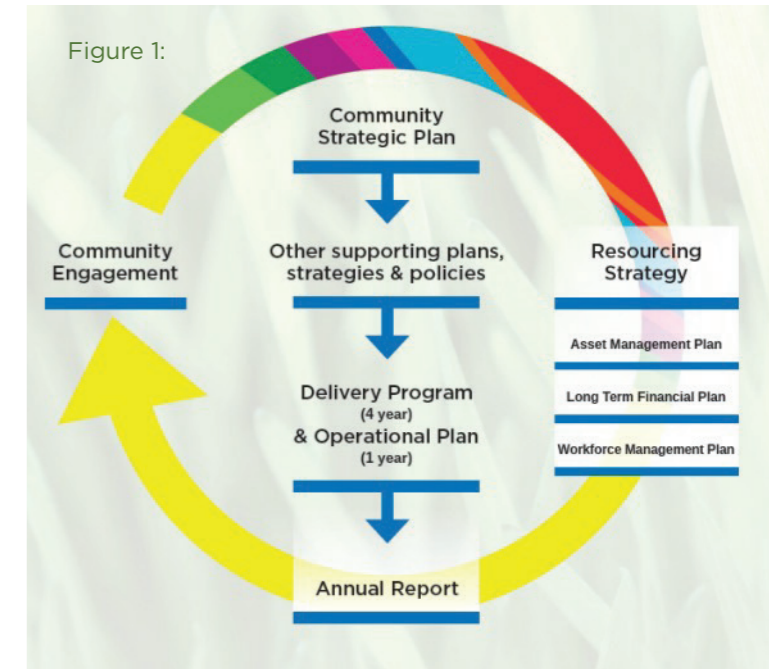
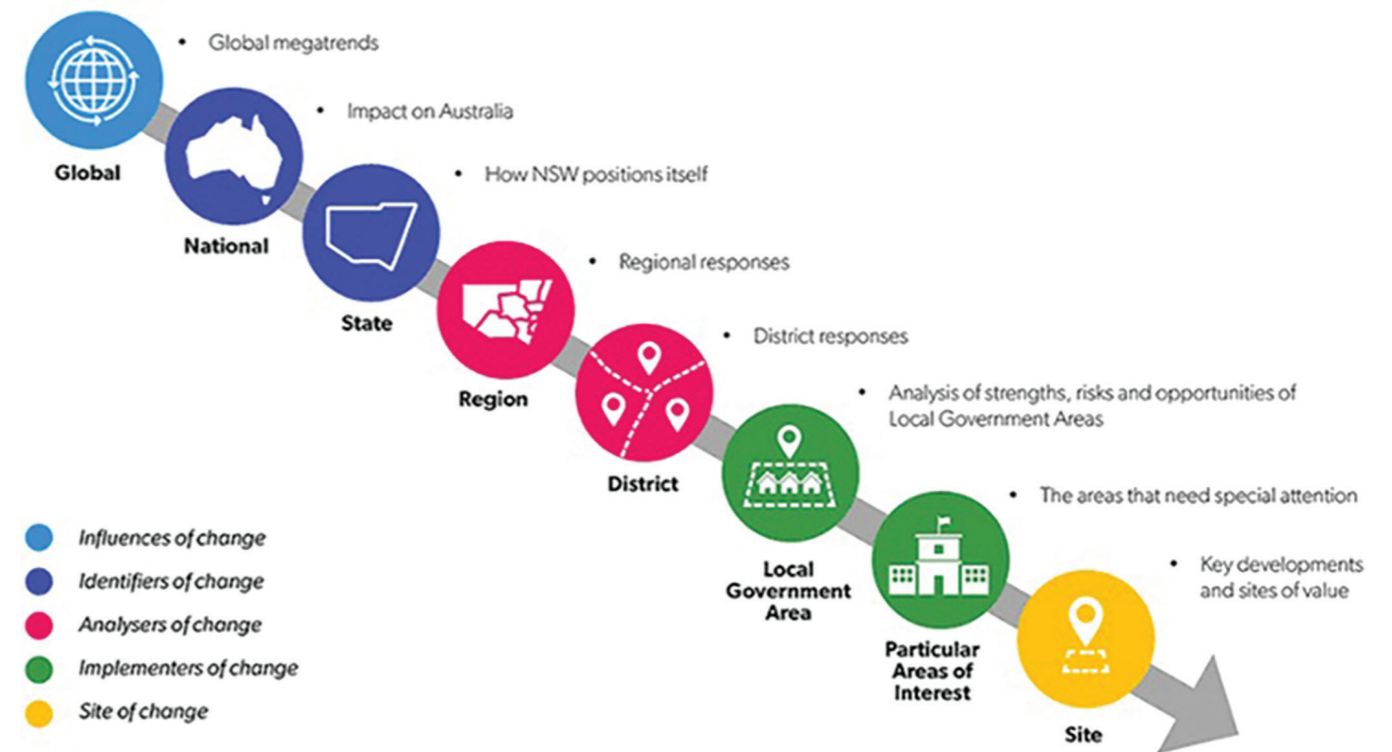


Figure 2 below shows how local planning is effected by international, national, state and regional influences.



Source: Planning NSW

# The Influences

Level	Year	Policy/Initiative	Influence
International	2013	'Towards the Circular Economy: Economic and Business Rationale for an Accelerated Transition'	EU: product case studies and economic analysis, this report details that the EU manufacturing sector could stimulate economic activity in the areas of product development, remanufacturing, and refurbishment
	2015	Employment and the Circular Economy: Job Creation in a more Resource Efficient Britain	An examination of public policy scenarios looking towards 2030 and estimating the creation of new businesses and employment opportunities
	2015	UNEP Sustainable Goal 12	Australia and other UN members adopt goals to be achieved by 2030, focus on responsible consumption and production patterns to help prevent waste
	2016-17	Recycling export market	> 1.25 million tonnes recyclables sent to China from Australia (Source: EPA NSW)
	2018	China National Sword Policy	China restricts 24 recycled materials from all nations (including PET, polyethylene, PVC and polystyrene with paper and cardboard limited to stricter contamination levels)
National	2018	Australian National Waste Policy 'Less Waste, More Resources'	Developed in response to China import restrictions, and outlines an Australian shift to a circular economy
	2019	Australia Export Ban	Unprocessed used plastic, paper, glass and tyres
	2020	Australia Recycling and Waste Reduction Act 2020	Create demand for high-value recycled commodities; address plastic ocean pollution and prevent waste exports causing harm to the environment
	2021 (By 2025)	National Plastics Plan	100% packaging reusable, recyclable or compostable 70% plastic packaging recycled or composed 30% average recycled content all packaging No single use plastics via design or alternatives
State	1997	Protection of Environment Operations Act POEO	Explicit protection of environment policies, innovative to reducing pollution
	2015	Waste Regulation	The Waste Regulation specifies thresholds for environmental protection and waste levies.
	2018	Container Deposit Scheme	Established sites to take back certain containers for a redeemable deposit
	2019	Circular Policy Statement	Guide NSW to transition to a circular economy and provides principles to guide resource use and management
	2021	NSW Waste and Sustainable Materials Strategy 2041 Stage 1: 2021-2027  NSW Plastics Action Plan	Focus on plastic waste, infrastructure investment, reduce carbon emissions, sustainable material use, and pollution protection eg phase-out single-use lightweight bags, cotton-buds, straws and stirrers and NSW bin roll-out for food and organic waste.
Regional	2013	North-East Waste	Members from NR Councils 2022 regional waste strategy in development
	2018	Northern Rivers Joint Organisation (NRJO)	Made up of NR councils -the waste intent is innovative approaches to improve environmental and service delivery outcomes.

## Connecting with Lismore's Community Strategic Plan Deliverables

Ref	Strategy
<b>1 Grow</b>	
1.1	Attract new business, industry and employment opportunities
1.2	Support and advocate for innovation in business, research activities, education and creative industries
1.3	Work with businesses, planners and government at all levels to facilitate key infrastructure to support business growth
1.4	Facilitate events that attract visitors and support the local economy and the vibrancy of Lismore and Nimbin
1.5	Recognise and strengthen Lismore's role as a hub for education, health, tourism, creative and agricultural industries
1.10	Advocate strongly for the interests of Lismore and its community in relation to planning and economic development and improved housing.
<b>2 Live</b>	
2.1	Preserve, maintain and enhance the unique character of Lismore and villages built, natural and cultural heritage and local history
2.2	Strengthen the liveability and vibrancy of towns and villages through planning
2.3	Plan and deliver public spaces that fulfil and support diverse community needs and life
2.4	Provide parks, open space, and recreation areas that are diverse and accessible
2.5	Advocate strongly for the interests of Lismore and its community
<b>3 Protect</b>	
3.1	Provide and advocate for protection and rehabilitation of natural areas
3.2	Encourage and support active community participation in local environmental projects
3.3	Develop community awareness of environmental opportunities, issues and impacts
3.4	Maintain clean healthy waterways and catchments
3.5	Protect Lismore's koala population and expand their habitat
3.6	Improved waste management and minimised waste generation, increased resource recovery and the protection of the environment
3.7	Maximise the efficient use and reuse of our water resources
3.8	Develop and promote initiatives to reduce water, energy and waste in consultation with the community
3.9	Investigate and implement renewable energy technologies
3.10	Advocate strongly for the interests of Lismore and its community in relation to environmental outcomes
<b>4 Care</b>	
4.1	Provide the facilities, spaces and programs that support wellbeing and active and healthy communities
4.2	Plan and provide services and infrastructure for current and future community needs
4.3	Promote recreation, health and wellbeing programs
4.4	Celebrate Aboriginal and Torres Strait Islander cultures and history
4.5	Actively engage Aboriginal people in the development of programs, policies and strategies
4.6	Grow Lismore's reputation as a leading creative and cultural hub, celebrating and supporting diverse creative industries and the arts
4.7	Advocate for accessibility and inclusion
4.8	Support individuals and communities to prepare, respond and recover from the impact of natural events and climate change eg: floods and bushfires
4.9	Advocate strongly for the interests of Lismore and its community in relation to community outcomes.
<b>5 Lead</b>	
5.1	Develop trust through transparent, regular communication and inclusive participatory community engagement
5.2	Undertake visionary, integrated, long term planning and decision making, reflective of community needs and aspirations
5.3	Ensure responsible, sustainable, ethical and open local government
5.4	Deliver innovation, excellence, efficiency, effectiveness and integrity in Council processes and services
5.5	Build a resilient, safe and supported workplace that provides efficient and effective services to our customers
5.6	Collaborate with partners to deliver positive outcomes for the community, economy and environment
5.7	Advocate strongly for the interests of Lismore and its community
<b>6 Connect</b>	
6.2	Ensure safe road networks through effective planning and maintenance
6.4	Continue to upgrade, extend and promote cycle, pedestrian and rail trail networks
6.5	Advocate strongly for the interests of Lismore and its community in relation to infrastructure

# Changing our behaviours

The waste hierarchy (Figure 3) is a pyramid tool that has long been used to indicate an order of preference away from a waste mindset

The aim of the waste hierarchy is to extract the maximum practical benefits from products and to generate the minimum amount of waste.

The model preferences avoidance and then reuse prior to less sustainable options, however economic drivers and subsequent human consumption patterns have seen priorities targeted lower down the hierarchy with most emphasis on recycling and disposal.

While we will need to continue recycling for some time, it's time to seek a new approach.

Circular innovations now become the objective. Investing in these new directions today will result in leadership tomorrow.

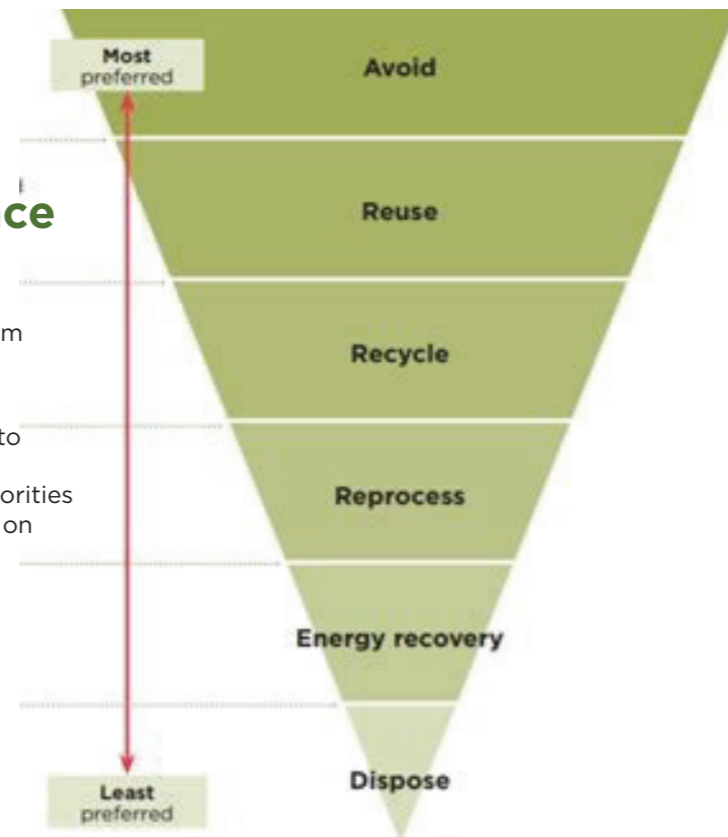


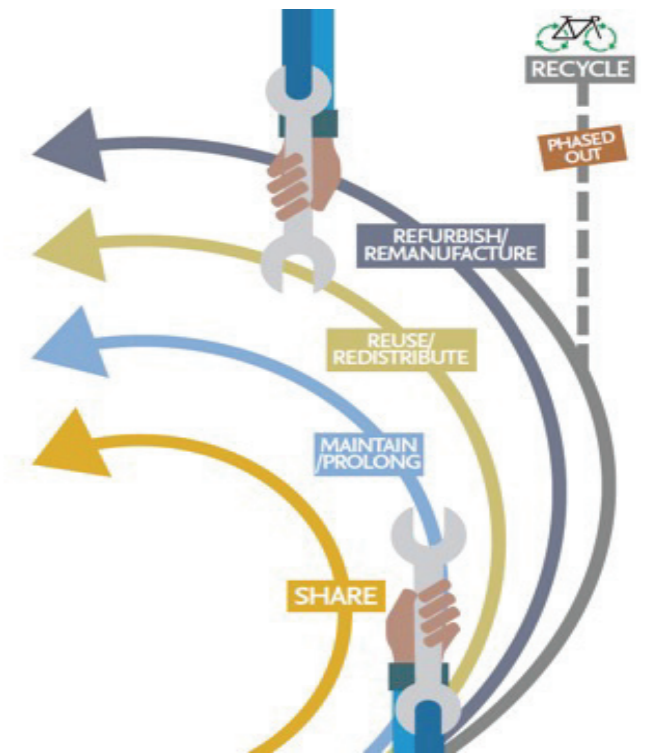
Figure 3: The Waste Hierarchy



# Circular Economy

The circular economy model shifts attention away from a waste-based model of Take, Make, Break, Waste to a Circular approach that:

- Recognises waste and pollution as design flaws that shouldn't exist
- Designs products to be reused, repaired, or remanufactured. Food and packaging is kept circulating through organics, soil health and regenerative farming practices.
- Knows no waste. Like nature, everything is food for something else eg leaves feed the soil and the microorganisms that in turn feed others that enhance the natural system.



Source: Making it Magazine

## A Circular Economy

- Sets goals and incentives that stimulate circularity whilst disincentivise activities that perpetuate 'end of life' (linear) activities.
- Procurement, investment, legal and planning activities shift to rewarding avoidance and choosing solutions that involve no waste or very little waste
- Working collaboratively begins to make more sense between council departments, with community, businesses, other organisations and across regions
- Opens up a new approach with diversity of actions that engage and connect people through events and sharing to build sustainable practices into their work, play and home lives
- Offers Councils facilitation tools to help the business community share societal and environmental objectives of long-term thinking and collaboration
- Can stimulate opportunities for loans and subsidies for circular economy activities
- Helps boost social capital via networks and sharing cultures

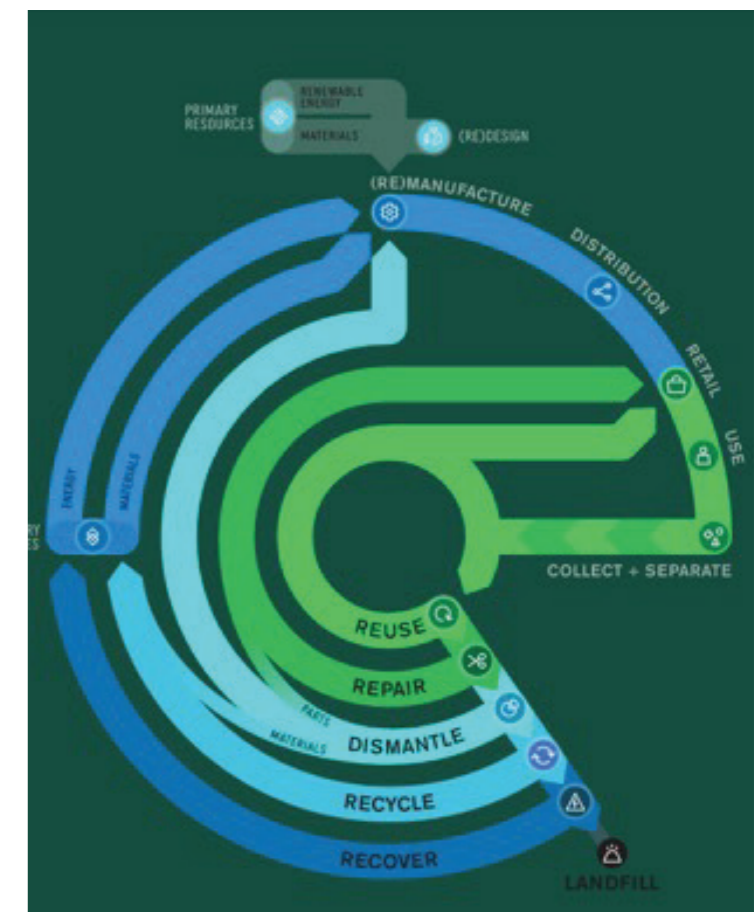


Figure 4: Circular Economy Model  
Source: Australian Circular Economy Hub

# Our strategic vision

## A Shared Responsibility for a Circular Economy and a Resourceful Community

### As we transition to a Circular Economy we will:

- Change the language and change behaviour
- Map materials, business activity, community needs, Council policies, Council procurement, regional opportunities
- Deepen discussions internally and with community, businesses and regional organisations
- Fund and provide resources to support transition
- Review current activities
- Develop clear business modelling to support initiatives
- Embed circular economy approaches across all of Council activities, policies and planning
- Change how we assess, buy and use goods and services across all of our activities
- Rebrand our collection and other related services
- Partner with our community and local businesses towards this new approach

## Understanding our roles in the circular economy

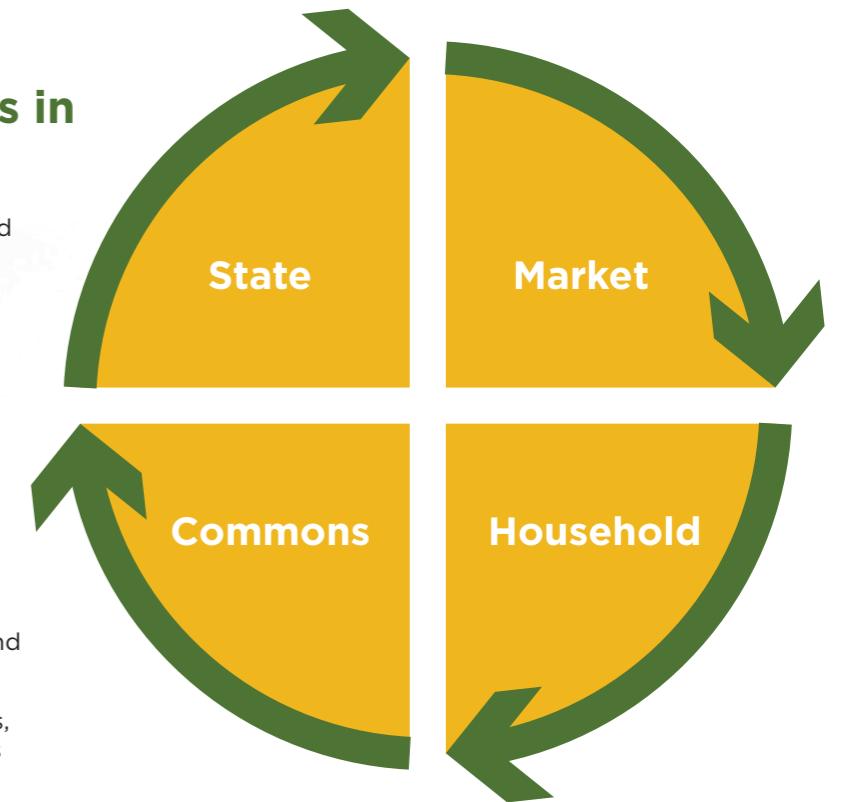
Donut economics is a circular model designed by Kate Raworth. She uses this 'embedded economy' diagram to guide the relationship between the economy and ecosystem thinking. In this diagram, the economy has 4 key functions or 4 roles that we each play in our everyday lives:

**State:** we are all influenced by government decisions

**Market:** we all buy goods and services from private organisations

**Commons:** We all connect somehow with education centres, charities, not for profits and non government organisations

**Household:** We are all members of families, communities, friends, citizens and consumers





# Where are we now?

At the time of writing this strategy we identified the key strengths, challenges, opportunities and threats to transitioning to a circular economy.



## Strengths (What enables us to thrive)

- LCC's Resource Recovery team – strong in knowledge, experience, loyalty, ideas, proactivity
- High-level community awareness of resource recovery
- Regional city status with also rural communities
- Central to the region
- University town
- Unique services – Council owned and operated collection to market (life cycle) eg material quality and control destiny
- Experience and history of MRF recycling'



## Challenges (What constrains us doing better)

- Fire / Floods
- China Sword/ Export Ban
- Community challenges, such as value for money
- Rising costs
- Logistics complexity
- Local market opportunities
- Landfill space/planning



## Opportunities (What is possible?)

- Empowering the community along the journey of transitioning from a waste community to a resourceful community
- Commonality of circular economy opportunities changing rural versus city perception
- Businesses/industry are essential to the circular approach (SCU and CRC partnerships)
- Digital innovation (service efficiency, data tracking)
- Access to funding (more opportunities for circular economy 'early adopters')
- Affordable and sustainable
- Broader community appeal (Fun)



## Threats (What is uncertain?)

- Unknown regional projects
- Lack of regional consensus on specialisations
- Regional Councils competing for material streams
- Community 'uncertainty and distrust' through regular service changes since fire in 2019 and recurring floods'
- Unknown disruptors (technology, changing regulatory environment, levy allocation)
- Lack of agility to respond to change or opportunities

# Where are we heading?



TAKE MAKE DISPOSE

## Lismore (Now/2022)

Today, Lismore is a city with highly aware community members many of whom are passionate about reducing waste and protecting our natural assets, in the context of rapid global change and concern about the planet's sustainability.

- Status quo linear economic model Take>Make>Dispose
- 280kg of general household waste per person each year
- Approximately 28,000 tonnes of waste to landfill
- State and regional push to transition from landfill to waste to energy
- Some innovations in resource recovery and reuse eg recycled glass and plastic bitumen trials
- Some local business sustainability initiatives in response to consumer expectations
- Regional renewable energy investment
- Active community to reduce waste
- Established reuse initiatives and emergence of new opportunities
- Phyto capping program for koala habitat trees on landfills
- Commitments to city greening and magnificent regional conservation areas



## Circular Lismore (2032)

By 2032, Lismore will have commenced the deepening of conversation and partnering with all our community, local businesses and organisations towards building a circular economy.

- Circular initiatives established
- Council CE policy framework developed, implemented and guides all decisions
- Council now procuring all goods and services with clear and measurable CE goals and outcomes
- CE - Indigenous aligned perspectives sought and incorporated into processes
- Building approvals are aligned with CE
- Diverse jobs created
- Established sharing and service economy
- Carbon levels reduced, waste to landfill declining, increased resource recovery
- Digital sharing platform is well used stimulating and supporting circular behaviours
- Renewable energy innovation, solar panel repair and recycling and education
- All material, water and energy resources are valued and are working toward closed loop systems
- Resource cost savings reinvested back to the local economy and community
- Thriving networks exist between council, businesses and the community
- Is a leader in recycling'

# What do we need to do?



## Key Theme 1:

# Transitioning to a Circular Economy

**Lismore is poised to step into a new phase that takes the focus from the ‘end of the pipe’ and places it where it should be – at the ‘front of the pipe’.**

This readjustment then allows us as a community to engage deeply and seek solutions that support us toward being more resourceful.

Transitioning to a Circular Economy (CE) means adopting practices and supporting programs and activities that prevent residual wastes. These include making do with something else, making better products that last longer, making better purchasing decisions, repairing something broken, sharing with others or seeking other uses for a material so it gives it a new life and keeps cycling.

As we transition, we will all be learning how to better engage with each other and how to value all materials as potential resources.

### Lismore City Council commits to leading this transition for the community with the following aims:

- We will embed circular economy actions and principles into our own Council operations and planning including adjusting to how we purchase and use materials
- We are changing the oral and written language we use and will be moving to using terms avoidance, refuse, reuse, share, care, repair as the first steps in our transition
- We will support our employees toward a circular economy with training and new policies
- We want to deepen our conversation with our community, local businesses and organisations to better understand what materials and volumes we have and how we can shift how they are used and managed
- We will be partnering with others to find solutions including Southern Cross University
- We will be working with our villages to identify localised solutions
- We want to create a vibrant hub in the CBD where we celebrate the value of materials. Our Revolve shop, upcycling microbusinesses, share library, repair cafe, building and art activities and other opportunities will form the heart of this precinct
- We envisage an annual Repair and Share event and other activities that celebrate creative reuse of materials
- We will resource the transition to Circular Lismore with a dedicated team and necessary funding
- We believe this transition will spark new life into our community with jobs, creation of small businesses, product ideas, new skills and other opportunities

## Action Plan Summary

Our objectives are linked to Lismore’s Community Strategic Plan and Regional City Action Plan priorities

Transitioning to a Circular Economy Objectives	Maximising Resource Recovery Objectives	Determining Solutions for Residual Waste Objectives
1 Lead the Circular Economy transition	1 Maintain quality controls, costs and operational efficiencies	1 Implement and compliantly manage ‘end of pipe’ Options
2 Maintain suitable partnerships and develop new strategic partnerships to drive change	2 Deliver viable, valuable and versatile services that maximise efficient resource use	2 Manage assets compliantly and professionally
3 Plan for resilience and future flexibility	3 Lead and participate in our region’s recycling approach	3 Maintain and implement solutions that prevent littering
4 Deepen conversations and understanding by communicating, promoting and educating	4 Work with business sector to increase C&I and C&D materials recovery	4 Implement solutions that prevent illegal dumping
5 Identify and participate in viable circular economy, avoidance and re-use project initiatives	5 Conduct education activities that raise awareness and drive behavioural change	5 Support businesses with residual waste challenges
6 Value our villages		6 Investigate cost effective and environmentally responsible alternatives to landfilling
7 Develop a vibrant circular economy precinct (aka The Hub) around the CBD		
8 Conduct a mapping exercise to support circular economy opportunities		
9 Employ and seek appropriate resources to support a Circular Economy transition		
10 Repurpose materials into roads and other infrastructure		

## Key Theme 1: Transitioning to a Circular Economy

CSP Priorities	RCAP	Actions	Stakeholder Responsible	<3 yrs	4 - 7 yrs	8 - 10 yrs	
<b>1. Lead the circular economy transition</b>							
3.2, 3.6, 3.7, 3.8, 3.9, 3.10, 4.1, 4.2, 4.3, 4.8, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7	Live 3 Work & Learn 4/5/6 Play & Protect 14	1.1	Develop and Implement Circular Economy Policy and Framework linked to all of Council planning, decision making and operations	Council	✓		
		1.2	Develop a new procurement policy embedded with CE mechanisms and language goods, services and users purchasing power to drive change Undertake resource mapping across Council on procurement of goods (re-used materials, carbon reduction, water re-use, Human Rights requirements Use Council's buying power to drive change	Council	✓		
		1.3	Establish a Working Group to implement the CE policy	Council	✓		
		1.4	Establish a CE team to implement initiatives with a dedicated CE Officer as the link across the organisation	Council	✓		
		1.5	Ensure Council policies and strategies include CE language and triggers to drive change eg Strategic Plan and Procurement Plan	Council	✓		
		1.6	Establish and maintain a Council avoidance and re-use initiative program across services and operations that identifies and employs opportunities for avoidance and re-use within services and operations eg compost from Council's organics processing re-used in parks and gardens	Council	✓	✓	✓
		1.7	Develop internal CE training program and conduct training for all staff to raise awareness and transition behaviours	Council	✓		
		1.8	Incorporate CE into induction programs	Council	✓		
		1.9	Revise HR policy and incorporate CE into PDs and KPIs	Council	✓		
		1.10	Develop and implement a sub contractor education program that transitions all contractors to CE thinking when working on Council activities Council	Council Contractors	✓		

## Key Theme 1: Transitioning to a Circular Economy

CSP Priorities	RCAP	Actions	Stakeholder Responsible	<3 yrs	4 - 7 yrs	8 - 10 yrs	
<b>2. Maintain suitable partnerships and develop new strategic partnerships to drive change</b>							
1.1, 1.2, 1.3, 1.5, 2.2, 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7	Work & Learn 4/5/6 Play & Protect 14	2.1	Develop CE local business program to build partnerships, awareness and trust that supports data collection, material cycling and CE successes	Council Business Community	✓		
		2.2	Commence a Lismore network group of local environmental and sustainability business personnel and practitioners to deepen connections and conversations. Meet quarterly	Council NEW Circulate NR	✓		
		2.3	Engage with NE Waste and Circulate Northern Rivers to partner on activities with businesses and community that show regional solidarity and avoid duplication. See 2.2 for local network but support and participate in regional network opportunities	Council Businesses Env. leaders	✓	✓	✓
		2.4	Maintain and develop partnership with SCU and CRC Plastics that delivers material avoidance reuse and circular economy outcomes	Council SCU	✓	✓	✓
		2.5	Engage in partnerships with key and relevant organisations that support viable CE transitional activities Develop CE 'Pledge Program'	Council Relevant organisations	✓	✓	✓
		2.6	Ensure MOUs with core agreements are applied to all partnerships	Council	✓	✓	✓
		2.7	Identify and maintain linkages between LCC, organisations, businesses and community that create viable 'cycling' opportunities eg links to The Hub	Council	✓	✓	✓
		2.8	Determine players and partner with key trade organisations eg Master Builders to commence programs that deliver qualitative and quantitative CE outcomes from building sites (see MRR 4.3)	Council Trades	✓	✓	
		2.9	Create resources and mechanisms to support building inspectors with resource recovery monitoring onsite (See MRR 4.6)	Council	✓	✓	✓

## Key Theme 1: Transitioning to a Circular Economy

CSP Priorities	RCAP	Actions	Stakeholder Responsible	<3 yrs	4 - 7 yrs	8 - 10 yrs	
<b>3. Plan for resilience and future flexibility</b>							
1.3, 2.5, 3.10, 4.1, 4.2, 4.8, 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7	Live 3	3.1	Develop business continuity and disaster management plans to ensure resilience against future system shocks and stresses	Council	✓		
		3.2	Undertake a five year review of this Strategy and report annually on performance	Council		✓	
		3.3	Apply and store funding reserves to negate future possible financial risks and ensure resilience	Council	✓	✓	✓
		3.4	Before commencement and promotion, ensure all activities are assessed and approved financially, commercially, socially, environmentally and with CE thinking	Council	✓	✓	✓
<b>4. Deepen conversations and understanding by communicating, promoting and educating</b>							
1.4, 1.5, 3.2, 3.3, 3.4, 3.5, 3.6, 3.8, 3.10, 4.3, 4.8, 5.1, 5.2, 5.4, 5.6, 5.7	Work & Learn 4/6 Play & Protect 16	4.1	Develop and promote a key 'tagline' that commences the shift in thinking to circularity	Council	✓		
		4.2	Rebadge Northern Rivers Waste to a Circular Economy brand in consultation with community to support transition to CE eg Circular Lismore	Council	✓		
		4.3	Lead CE conversation through actions, key messaging and community and business education programs	Council	✓	✓	✓
		4.4	Establish key CE events eg Repair and Share Fair; CE week	Council	✓	✓	✓
		4.5	Have a CE requirement at all key events across Lismore including BYO plates, cups, cutlery or rental plates, cups, cutlery with wash station facilities	Council	✓	✓	✓

## Key Theme 1: Transitioning to a Circular Economy

CSP Priorities	RCAP	Actions	Stakeholder Responsible	<3 yrs	4 - 7 yrs	8 - 10 yrs	
<b>5. Identify and participate in viable circular economy and re-use project initiatives</b>							
1.1, 1.2, 1.3, 1.5, 3.2, 3.3, 3.6, 3.8, 5.2, 5.4, 5.6, 5.7, 6.1, 6.5	Live 3 Work & Learn 4,5,6,7	5.1	Facilitate a CRC for Plastics Pilot Project in the LCC LGA Be an active participant to leverage the opportunities (Board and Committees) Secure and facilitate a pilot project through CRC for Plastics Partnership	Council CRC	✓	✓	✓
		5.2	Pilot a technological innovation project through SCU ReCirculator partnership	Council SCU	✓	✓	✓
		5.3	Explore and facilitate crumb rubber, concrete, soft plastics pyrolysis re-use processing and application opportunities with local businesses	Council Relevant businesses	✓	✓	✓
		5.4	Identify and be well placed for viable SME to larger scale opportunities Create 'shipping container' opportunities for micro to SME CE related businesses	Council Relevant businesses	✓	✓	✓
		5.5	Conduct skills based activities that deliver opportunities for employment, arts, training and funding eg Shedding offers building skills training; TAFE etc	Council TAFE RTOs Local artisans	✓	✓	✓
		5.6	Identify and encourage viable upcycling and reusable options eg textile upcycling opportunities to produce reusable nappies, sanitary items, microfibre cloths etc	Council Community Social Enterprises	✓	✓	✓
		5.7	Investigate the potential for construction and demolition materials for CE programs and upcycling	Council Building Sector	✓		✓
		5.8	Identify local operations that could process and sell LCC organics eg Living Farm Australia, Go Grow	Council Relevant businesses, farms	✓	✓	✓

## Key Theme 1: Transitioning to a Circular Economy

CSP Priorities	RCAP	Actions	Stakeholder Responsible	<3 yrs	4 - 7 yrs	8 - 10 yrs	
<b>6. Value our villages</b>							
1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2, 2.3, 2.4, 2.5, 3.2, 3.3, 3.6, 3.8, 3.10, 4.1, 4.2, 4.3, 4.5, 4.6, 4.7, 4.8, 4.9, 5.2, 5.4, 5.5, 5.6, 5.7	Live 3 Work & Learn 6, 7, 8 Play & Protect 13, 14, 16	6.1	From the Village mapping process (See 8.3) investigate and identify village hub and spoke models and link to the CBD Hub	Council	✓		
		6.2	Empower Village community organisations and small business to investigate circular economy initiatives	Council Village community organisations Village businesses	✓	✓	✓
		6.3	Test the idea and trial the installation of closed loop compost gardens in main village spaces (See MRR 2.6). See Cool seats, Gardenships etc	Council Village community organisations	✓	✓	
		6.4	Create a Village Team consisting of a representative from each village and resource them to oversee projects and be the link back to the Village team and Hub network	Council Village community organisations	✓	✓	✓

## Key Theme 1: Transitioning to a Circular Economy

CSP Priorities	RCAP	Actions	Stakeholder Responsible	<3 yrs	4 - 7 yrs	8 - 10 yrs	
<b>7. Develop a vibrant circular economy precinct (aka The Hub) around the CBD</b>							
1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2, 2.3, 2.4, 2.5, 3.2, 3.3, 3.6, 3.7, 3.8, 3.9, 3.10, 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, 5.2, 5.4, 5.6, 5.7, 6.4, 6.5	Live 2,3 Work & Learn 4, 5, 6, 7 Meet 9,12 Play & Protect 13, 16	7.1	Develop a business plan that considers operational format eg cooperative; links to social enterprises; tourism, funding mechanisms, cost benefits, markets, sponsorships, links to materials with reuse opportunities, other successful models eg Seoul Upcycling Plaza	Council	✓		
		7.2	Identify suitable site/ land (link to Council's LRCAP eg Lismore railway site)	Council	✓		
		7.3	Conduct EOIs for Hub enterprises	Council		✓	
		7.4	Establish The Hub with the existing Revolve operation and other enterprises eg Repair shop Upcycling Centre Skills Enterprise eg Shedding Share Library Textile upcycling Op Shops	Council Businesses		✓	

## Key Theme 1: Transitioning to a Circular Economy

CSP Priorities	RCAP	Actions	Stakeholder Responsible	<3 yrs	4 - 7 yrs	8 - 10 yrs	
<b>8. Conduct a mapping exercise to support circular economy opportunities</b>							
1.2, 1.3, 3.2, 3.3, 3.6, 3.8, 3.10, 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7	Live 3 Work & Learn 5	8.1	Map all local businesses, their materials and their processing actions to identify opportunities and challenges (NB: also link to maximising resource recovery see 4.1 and 4.3 and residual waste as relevant)	Council	✓		
		8.2	Map all council received and generated materials (also link to procurement mapping see 1.2 above)	Council	✓		
		8.3	Work with the CBD and Villages to map their materials, source, needs and options to explore viable local reuse and upcycling opportunities	Council Businesses Community	✓		
		8.4	Maintain a Lismore data register (of above) with regional links to optimise avoidance and re-use options.	Council NE Waste	✓		
		8.5	Determine if a regional (Circulate)/ local option of AspireME is relevant or if the state based online platform is adequate If regional, ensure access to data is maintained, shared and easily available to avoid misinformation and conflict	Council NE Waste Circulate NR	✓		
		8.6	Determine linkages within Lismore and the region for material provision and use	Council NE Waste Circulate NR Businesses Artisans	✓		
		8.7	Conduct a skills analysis linked to current and future styled employment and arts funding and training opportunities	Council Resilient L/ more Villages	✓	✓	✓
		8.8	Maintain existing Revolve operation while The Hub project is progressed (see Live 7.1)	Council	✓	✓	✓
3.2, 3.3, 3.6, 3.8		8.9	Develop and implement a Plastic Free and Waste Avoidance events program	Council	✓	✓	✓

## Key Theme 1: Transitioning to a Circular Economy

CSP Priorities	RCAP	Actions	Stakeholder Responsible	<3 yrs	4 - 7 yrs	8 - 10 yrs	
<b>9. Employ and seek appropriate resources to support CE transition</b>							
1.1, 1.2, 1.3, 1.5, 3.6, 3.8, 3.10, 4.1, 4.2, 4.6, 4.9, 5.2, 5.4, 5.5, 5.6, 5.7, 6.5	Live 3 Work & Learn 4	9.1	Conduct a resourcing review to determine needs	Council	✓		
		9.2	Recognise value, expertise and knowledge of existing 'waste' team to drive CE initiatives	Council	✓		
		9.3	Look for supporting graduate SCU and potential scholarship opportunities	Council; SCU	✓		
		9.4	Determine funding opportunities across CE thinking eg links to employment, arts, environment, infrastructure, training etc	Council	✓		
		9.5	Develop funding proposals for Federal and State funding to support CE projects eg the Hub	Council	✓		
		9.6	Research, determine and implement appropriate incentive mechanisms to reward and encourage Council, community and business CE performances to drive change	Council Community Orgs. Business Orgs.	✓	✓	✓
<b>10. Repurpose materials into roads and other infrastructure</b>							
1.1, 1.2, 1.3, 1.5, 5.2, 5.3, 5.4, 5.6, 6.1, 6.5	Work & Learn 5, 6 Move 18	10.1	Identify opportunities for glass sand, plastics polymers, recycled RAP, crushed concrete aggregate for re-use in roads, pathways, fencing and other infrastructure	Council NE Waste Industry Waste contractors	✓		
		10.2	Ensure materials comply with specifications for sustainable, safe and efficient outcomes	Council		✓	
		10.3	Undertake trials, ensuring compliance testing and quality assurance is applied before broadscale use	Council		✓	



## Key Theme 2:

# Maximising Resource Recovery

**The second key theme of this strategy is Maximising Resource Recovery.**

It becomes the second step in the transition process but remains as important now as it has been in the previous ten (10) years.

A circular economy needs materials and it needs resources. Within our community we have a surplus of unwanted items that need to be re-valued.

As material recovery and re-use become more important then the cycling truly begins.

### The key aims that support this theme are:

- We will review our operational practices to maintain quality controls, contain costs and optimise efficiencies
- We will deliver services that maximise the recovery of materials and keep them cycling
- We will work with other communities and businesses in the Northern Rivers to support each other to optimise resource recovery and re-use
- We want support local businesses to review their practices so more resources are recovered
- We will deliver education and events to support our community more efficiently re-use and recover resources
- We will ensure all assets and facilities are operating efficiently to support resource recovery
- We will become a recycling leader to better service the region

## Key Theme 2: Maximising Resource Recovery

CSP Priorities	RCAP	Actions		Stakeholder Responsible	<3 yrs	4 - 7 yrs	8 - 10 yrs
<b>1. Maintain quality controls, costs and operational efficiencies</b>							
3.4, 5.2, 5.3, 5.4, 5.5, 5.6	Live 3	1.1	Review and maintain quality control procedures and data system	Council	✓	✓	✓
		1.2	Review and maintain risk register and associated records	Council	✓	✓	✓
		1.3	Review and maintain staff training on risks and procedures	Council	✓	✓	✓
		1.4	Conduct and review annual data collection across all sites and practices	Council	✓	✓	✓
		1.5	Allocate staff resource time for conducting research on markets, technologies and other related resource recovery information and practices	Council	✓	✓	✓
		1.6	Review and determine the value and associated risks of maintaining the current control from collection to market lifecycle across all business decisions including the upgrade of the MRF	Council	✓		

CSP Priorities	RCAP	Actions		Stakeholder Responsible	<3 yrs	4 - 7 yrs	8 - 10 yrs
<b>2. Deliver viable, valuable and versatile services that maximise efficient resource use</b>							
1.1, 1.2, 1.3, 1.5, 2.1, 2.2, 2.3, 2.4, 3.2, 3.3, 3.6, 3.8, 3.10, 4.1, 4.2, 4.3, 4.9, 5.1, 5.2, 5.3, 5.4, 5.6, 5.7	Live 3 Work & Learn 6, 7, 8 Play & Protect 16	2.1	Develop clear cost recovery pricing structures for services	Council	✓	✓	✓
		2.2	Ensure all services are 'value for money'	Council	✓	✓	✓
		2.3	Identify cost savings in service fees, where applicable	Council	✓	✓	✓
		2.4	Offer variety to services to meet the different needs across the community eg urban to rural	Council	✓		
		2.5	Maintain existing window processing while a regional organics solution is identified, with a view to transition away from processing in Lismore	Council	✓	✓	✓
		2.6	Determine, trial and implement suitable close loop programs and process options for diverting organic materials from households and businesses to localised food sources (See CE 6.3). eg Cool seats, Gardenships	Council	✓	✓	
		2.7	Identify, support and establish viable place based solutions eg Nimbin or other rural areas, the viability of localised material reuse opportunities eg composting and material shares Identify sites, relationships, material mapping	Council Villages	✓		
		2.8	Identify potential for specialised rural collection models including banks of bins for recycling and local bins in key locations to make the collection service more cost effective	Council Villages	✓		
		2.9	Mandate source separation at Council organised and other local events Identify if Council has resources to provide these services or what other options could be applied Identify potential service providers (eg Mullum Cares - Splendour/Falls etc)	Council Event Operators	✓	✓	✓
		2.10	Identify local businesses that require an organics collection service where currently not provided	Council Businesses	✓		
		2.11	Identify existing links to businesses providing their organics to 3rd parties eg community gardens etc	Council Businesses Com. Gardens	✓		
		2.12	Review the operation of the Return and Earn bulk depot, reverse vending machine arrangements and investigate other integration with the Return and Earn program	Council	✓		
		2.13	Secure funding for resource recovery initiatives	Council	✓	✓	✓



## Key Theme 2: Maximising Resource Recovery

CSP Priorities	RCAP	Actions	Stakeholder Responsible	<3 yrs	4 - 7 yrs	8 - 10 yrs	
<b>3. Lead and participate in our region's recycling approach</b>							
1.1, 1.2, 1.3, 1.5, 3.3, 3.6, 3.8, 3.10, 4.2, 4.6, 5.2, 5.3, 5.4, 5.6, 5.7	Live 3 Work & Learn 5,6,7	3.1	Lead negotiations for regional recycling strategies and cooperation	Council	✓		
		3.2	Lead the formation of a regional forum where all senior management from each NE Waste member council attend to implement solutions to improve resource recovery in the region	Council NE Waste	✓		
		3.3	Secure regional agreement for specialisation to share the risks across Northern Rivers councils with Lismore being the leader in recycling and providing MRF services to the region	Council NRJO NE Waste	✓		
		3.4	Within the CE partnership program actively maintain a role and relationship with: <ul style="list-style-type: none"> <li>NE Waste</li> <li>Northern Rivers Joint Organisation (NRJO)</li> <li>Circulate Northern Rivers</li> <li>Regional Business Chamber</li> <li>Regional Development Australia</li> </ul>	Council NE Waste NRJO Circulate NR RBC RDA	✓	✓	✓
		3.5	Undertake upgrade or replacement of Lismore's MRF (If 3.3 is secured): <ul style="list-style-type: none"> <li>Refine the business case and risk model (operate or contract operation)</li> <li>Site selection</li> <li>Operating models</li> <li>Technology and automation</li> <li>Funding</li> <li>Staffing</li> <li>Future potentials</li> </ul>	Council	✓		

## Key Theme 2: Maximising Resource Recovery

CSP Priorities	RCAP	Actions	Stakeholder Responsible	<3 yrs	4 - 7 yrs	8 - 10 yrs	
<b>3. Lead and participate in our region's recycling approach</b>							
1.1, 1.2, 1.3, 1.5, 2.3, 3.6, 3.8, 3.10, 5.2, 5.4, 5.6, 5.7, 6.1	Live 3 Work & Learn 5,6,7,8	3.6	Investigate Recovery Options for a Circular Economy industry precinct including: <ul style="list-style-type: none"> <li>Plastics facility</li> <li>Regional glass facility (glass sand to road base, trench fill or concrete)</li> <li>Regional tyre crumbing facility</li> <li>Solar system infrastructure collection hub</li> <li>Undertake Waste stream mapping, strategic land acquisition, funding models, development of business cases and operating models.</li> </ul>	Council	✓	✓	
		3.7	Collaborate with other Councils and member organisations to lobby and achieve cost recovery of landfill levy fees from the State to deliver resource recovery and residual waste programs	Council NRJO NE Waste Other Councils LGNSW	✓	✓	✓
		3.8	Coordinate a regional organics workshop to gather regions' councils, local stakeholders and potential other stakeholders to fully explore processing and market options for the region.	Council	✓		
		3.9	Maintain oversight of emerging opportunities in the resource recovery market	Council	✓	✓	✓

## Key Theme 2: Maximising Resource Recovery

CSP Priorities	RCAP	Actions	Stakeholder Responsible	<3 yrs	4 - 7 yrs	8 - 10 yrs	
<b>4. Work with business sector to increase C&amp;I and C&amp;D materials recovery</b>							
1, 1.2, 1.3, 3.2, 3.3, 3.6, 3.8, 3.10, 4.6, 4.8, 5.2, 5.4, 5.6, 5.7	Live 3 Work & Learn 4,5,6,7 Meet 9	4.1	Map existing material streams with the C & I sector (refer to Action 8.1)	Council Businesses	✓		
		4.2	Identify C&I streams suitable for recycling and undertake business case to either provide the service or facilitate the recovery eg cardboard Work with businesses to identify precinct collection points for materials and/or re-use opportunities within CBD Work with business sector to increase C&I materials recovery and re-use Cross reference and link materials to local businesses e.g. The Hub	Council Businesses	✓		
		4.3	Identify C&D material streams suitable for recycling (refer to Actions 8.1, 2.8)	Council	✓		
		4.4	Explore collaborative reuse options for material streams Work with business sector to increase C&D materials recovery and re-use Cross reference and link materials to local businesses e.g. The Hub	Council Businesses Master Builders HIA	✓	✓	✓
		4.5	Review Development Control Plan to enforce the reuse or recovery of C&D materials from small to large building sites (including residential)	Council	✓		
		4.6	Allocate resources to support inspectors on building sites	Council	✓	✓	✓

CSP Priorities	RCAP	Actions	Stakeholder Responsible	<3 yrs	4 - 7 yrs	8 - 10 yrs	
<b>5. Conduct four (4) key education activities that raise awareness and drive behavioural change</b>							
3.2, 3.3, 3.4, 3.5, 3.6, 3.8, 3.10, 4.1, 4.8, 5.1, 5.2, 5.3, 5.4, 5.7	Live 3 Work & Learn 4, 6,	5.1	Conduct ongoing promotion and education on Council's resource and recovery services <ul style="list-style-type: none"> <li>Continue community and schools' education program, key events, signage, and promotion of services</li> <li>Consider actions to build community trust</li> <li>Change communication styles and types to suit stakeholders and ensure consistent messaging</li> </ul>	Council	✓	✓	✓
		5.2	Maintain and deliver Lift the Lid Campaign which provides incentives to reduce contamination (eg households with minimal contamination go into the monthly draw to win a gift voucher) <ul style="list-style-type: none"> <li>Measure reduction of contamination levels in recovered materials</li> </ul>	Council	✓	✓	✓
		5.3	Create and deliver an education campaign around "user pays" to highlight how service charges are allocated and what amounts the state government absorbs back to NSW Treasury The purpose of the campaign is to support the community to understand the full associated costs of: <ul style="list-style-type: none"> <li>collection processes, gate fees and levy</li> <li>cost vs benefit</li> <li>how Lismore is providing value for money services</li> <li>amount of annual revenue generated in regional areas that goes to the state government</li> </ul>	Council	✓	✓	✓
		5.4	Conduct education program on the issues and management of residual wastes: <ul style="list-style-type: none"> <li>uses of technology and landfill processes to minimise environmental impacts</li> <li>costs of residual waste management options</li> <li>impacts of littering and illegal dumping</li> </ul>	Council	✓	✓	✓
<b>6. Optimise services and asset management</b>							
3.1, 3.4, 3.5, 3.6, 3.7, 3.9, 3.10, 4.1, 4.2, 5.2, 5.4, 5.5, 5.6, 5.7, 6.5	Live 3 Work & Learn 6	6.1	Annual review of services and risks	Council	✓	✓	✓
		6.2	Create Masterplan of LCC Resource and Recovery facilities to define role of site	Council	✓		
		6.3	Review existing facilities to ensure that layout, design and infrastructure are sufficient to ensure future needs will be accommodated	Council	✓	✓	✓
		6.4	Investigate and employ appropriate digital technology solutions that deliver service and material efficiencies and support quality outputs.	Council	✓	✓	✓

# Determining Solutions for Residual Waste

**In developing this strategy we deliberately avoided using the term waste to describe the previous objectives and actions.**

We believe that it is time for the transition to a new way of thinking and behaving.

Waste is a concept. In the past we have applied the term to a surplus of items that could have found new life.

There may be some items that won't cycle as easily. This is because of their toxicity or the difficulty in finding other solutions.

In this strategy, these are recognised as Residual Waste items. Overtime as we get better with 'front of pipe' actions these items may disappear or may simply be known as 'residuals'.

## **Our key aims for determining solutions for residual wastes are:**

- We will maintain a compliant and well managed landfill site that will receive items that don't yet have life cycle solutions
- We will work to extend the life of the current operating landfill cell while also developing a new landfill cell to support the management of residual wastes in the coming years
- We still have the responsibility to manage older landfill cells and we will maintain our phyto-capping program with koala habitat trees
- We will continue to encourage litter prevention through education, Return and Earn, public place collection and other activities
- We hope as we transition towards valuing materials that less items are illegally dumped. We will implement actions to encourage the reduction of dumping
- We want to understand which of our local businesses have residual waste challenges, what those items are and consider solutions that minimise their impact
- We do not support Waste to Energy from residual waste stream incineration in the Northern Rivers and will continue to lobby the NSW Government with respect to their pressures to increase landfilling costs.
- We will continue to investigate cost effective and environmentally responsible alternatives to landfilling.



## Key Theme 3: Determining Solutions for Residual Wastes

CSP Priorities	RCAP	Actions	Stakeholder Responsible	<3 yrs	4 - 7 yrs	8 - 10 yrs	
<b>1. Implement and compliantly manage 'end of pipe' options</b>							
3.1, 3.4, 3.5, 3.6, 3.7, 3.9, 3.10, 4.1, 4.2, 5.2, 5.4, 5.5, 5.6, 5.7, 6.5	Live 3 Work & Learn 7	1.1	Develop new landfill site and undertake appropriate planning actions <ul style="list-style-type: none"> <li>Conduct site assessment of identified site</li> <li>Strategic land acquisition (including buffer zone)</li> <li>Licensing processes</li> <li>Zoning and Development Assessment</li> <li>Environmental Impact Assessment</li> <li>Consultation with adjacent landowners</li> <li>EOI for Tenders</li> </ul>	Council	✓	✓	
		1.2	Determine and implement the minimum State strategy requirements for residual wastes <ul style="list-style-type: none"> <li>Capture landfill gas</li> <li>Move to a carbon neutral landfill operation</li> <li>Ensure compliance with NSW EPA requirements</li> </ul>	Council	✓	✓	✓
<b>2. Manage facilities and assets compliantly and professionally</b>							
3.1, 3.4, 3.5, 3.6, 3.7, 3.9, 3.10, 4.1, 4.2, 5.2, 5.4, 5.5, 5.6, 5.7, 6.5	Live 3 Work & Learn 7	2.1	Maintain and improve current assets eg infrastructure, plant, leachate, air quality, closure plans	Council	✓	✓	✓
		2.2	Compliantly and proactively manage, monitor and report on all Council operations that have environmental protection licences under the POEO Act 1997 and address health, air, noise, waste and land contamination issues as well as discharges to waters from premises	Council	✓	✓	✓
		2.3	Develop and implement comprehensive asset management plans	Council	✓	✓	✓
		2.4	Review existing facilities to ensure that layout, design and infrastructure are sufficient to ensure future needs will be accommodated	Council	✓	✓	✓
		2.5	Maintain landfill rehabilitation program phyto-capping with koala feed trees	Council	✓	✓	✓
		2.6	Create a funding reserve to underwrite unknown, future impacts to assets	Council	✓	✓	✓

CSP Priorities	RCAP	Actions	Stakeholder Responsible	<3 yrs	4 - 7 yrs	8 - 10 yrs	
<b>3. Maintain and implement solutions that prevent littering</b>							
1.4, 2.1, 2.3, 2.4, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.8, 3.10, 4.1, 4.3, 4.8,	Play & Protect 14	3.1	Review public place collections including bin types, sizes, collection technology	Council	✓	✓	✓
		3.2	Link Public Place recycling to CDS processing	Council	✓	✓	✓
		3.3	Identify revenue opportunities such as advertising on bins, obtaining NSW EPA littering funding	Council NSW EPA	✓	✓	✓
		3.4	Promote Return and Earn as a litter reduction initiative	Council	✓	✓	✓
		3.5	Determine opportunity to provide trailer with bins for public events and promotional branding with links to CE activities	Council	✓		
<b>4. Implement solutions to prevent illegal dumping</b>							
3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.8, 3.10, 4.3, 4.8,	Play & Protect 14	4.1	Investigate viability of free drop-off events for certain bulk goods (annual offering)	Council	✓		
		4.2	Review voucher system and suitability to reinstate	Council	✓		
		4.3	Seek illegal dumping funding for education and deterrence	Council	✓	✓	✓
<b>5. Support businesses with residual waste challenges</b>							
1.2, 3.1, 3.4, 3.6, 3.8, 3.10, 4.1, 5.2, 5.6, 5.7	Live 3 Work & Learn 6	5.1	Implement waste stream mapping to identify residual waste options for businesses	Council	✓		
		5.2	Provide information on suitable disposal options	Council	✓	✓	✓
<b>6. Engage transparent discussion regarding the suitability and viability of Waste to Energy for the Northern Rivers</b>							
1.10, 2.1, 2.2, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.8, 3.9, 3.10, 4.1, 4.7, 4.9, 5.1, 5.2, 5.5, 5.7,	Play & Protect 14	6.1	Map the residual waste stream for type and quantity	Council	✓		
		6.2	Investigate different technologies and by-products (excluding residual waste to energy by incineration)	Council	✓	✓	✓
		6.3	Lismore City Council does not support Waste to Energy from residual waste stream incineration in the Northern Rivers	Council	✓		
		6.4	Consult community on options for future residual waste management	Council	✓		
		6.5	Keep abreast of NSW priorities on residual waste and landfill approvals	Council	✓	✓	✓
		6.6	Continue to lobby the NSW Government with respect to their pressures to increase landfilling costs				

# Transitioning to a Circular Economy

The shift into a circular model is a big initiative. It relies upon everyone doing most everything differently together.

For Lismore, it represents an evolving and systemic shift that builds long-term resilience, generates new business and economic opportunities with environmental and societal benefits. It means sustainable products are the norm; that consumers and procurers including Council are empowered in making holistic choices that include whether or not to purchase and assessing necessary purchases against key criteria.

It focuses on sectors that use most resources and where potential for circularity is high eg: electronics, ICT, batteries, vehicles, packaging, plastics, textiles,

construction, buildings, food; water and nutrients. Waste becomes undesirable. Solutions fit our community and we join the global circular economy.

This initiative opens up to exciting and thriving activities that include the creation and deepening of local networks, linking villages and connecting Council to community, learning centres and businesses.

Whilst discussion is important, the transition to doing things differently is crucial to realising real benefits. So, Council propose the formation of activities that demonstrate change and educate such as sharing and repairing events like the repairfair.net event shown above; the CBD hub precinct; the industrial hub and a range of trial projects that show avoidance and cycling values for materials that once had shorter life cycle.



## Key Ideas from Ireland's Circular Economy Strategy 2021-22

### Construction

- Increased use of offsite design and manufacture
- Modular building design
- Refurbishment and retrofitting of existing stock
- Tackling dereliction and bringing buildings back into occupancy
- Deconstruction - the reverse of construction
- Increase use of Construction & Demolition Waste as a secondary construction material

### Transport

- Increased use of telecommuting, as well as of local and regional hubs
- Prioritising resource efficient personal mobility eg walking and cycling
- Expanding public transport capacity and promoting shared mobility schemes
- Efficient end-of-life vehicle waste management schemes

### Food

- Rather than bending nature to produce food, food can be designed for nature to thrive
- Localised ingredients
  - Grow your own
  - Farmers valued highly
  - Direct farm -market sales
  - Single use packaging unnecessary. Other packaging reduced (considering food safety and hygiene requirements)
  - Reduction of fossil fuel and chemical inputs
  - Organic materials diverted into the Bioeconomy
  - Less food waste retail, commercial, household

### Consumer Goods

- Promote design for improved repair, durability and increased energy efficiency
- Increase level of remanufacturing for consumer goods
- Increased Extended Producer Responsibility (EPR)
- Promote leasing and sharing based business models
- Incentivise take-back and refurbishment models for large household goods
- Address product liability for repaired and re-used goods



## Key initiatives

# Community Circular Economy Hub

**The establishment of a Community Circular Economy hub offers exciting new opportunities that will stimulate the Lismore CBD.**

The hub will support a number of social economy initiatives such as a repair shop, upcycling outlets, reverse garbage centre, share library, textiles and electronics upcycling, opportunity shops and new small to medium scale reuse, pre-processing and recycling initiatives.

The Lismore Revolve Shop will relocate from the Wyrallah Road site to this vibrant hub site.

The hub will create a range of prospects including employment, new small to medium scale circular economy initiatives and social enterprises.

It will support small businesses; community groups and social enterprise whilst also provide significant education and training opportunities linked to community education providers.

The hub will provide activation, link to the CBD, South Lismore and the riverbank and leverage projects such as the rail trail.



## Key initiatives

# Regional Materials Recovery Facility (MRF)

**A new Regional MRF is proposed to be built at the Lismore Recycling and Recovery Centre on the site of the existing Lismore MRF.**

The old Lismore MRF will be decommissioned and dismantled providing a clear site for the new project. Components of the project will include site services, roadways, hardstand area, MRF facility shed, the MRF equipment, mobile plant and facility office

**The Lismore Regional MRF project will result in:**

- Establishment of the new Council management structure for MRF operation
- Create additional employment in the region and flow on benefits to suppliers, trades and fabricators

- Construction of a 40,000 tonne per annum modern and technologically advanced MRF to meet market demands and create capacity for future population growth
- Link strongly to other circular economy projects
- Allow for flow on industries to be established within the region such as micro-factories using processed recyclables and potentially larger industries centred on plastics and glass, including a plastic flaking facility and pre-cast concrete (incorporating glass sand) facility.



# Industry Circular Economy Precinct

The strategy includes investigations of circular economy and resource recovery industrial projects that include plastics processing, glass processing, tyre crumbing and solar system infrastructure collection hub.

To make efficient use of space and material flows it is proposed to establish an Industry Circular Economy Hub that co-locates all of these processing facilities at the Lismore Recycling and Recovery Centre.

**Example: regional plastics facility:**

The project will see a new regional plastic processing facility that will use baled plastics from the Lismore Regional MRF as well as other industrial and commercial sources. The facility will wash the plastic and extrude, pelletise or flake the product based on market requirements. This will result in raw plastic products that can be commercially used within Australia or exported overseas.

The aim is to develop a plastic recycling industry in the Lismore Region that supports local employment and flow on industries.

**The Lismore Plastics Facility project will result in:**

- Construction of an 8,000 to 9,000 tonne per annum plastic recycling facility that will turn waste plastics into extruded, pelletised or flaked plastics for the Australian and export markets
- Create additional employment in the region and flow on benefits to suppliers, trades and fabricators
- Link strongly to other regional waste management projects
- Allow for flow on industries to be established within the region such as micro-factories using the processed plastics projects such as the rail trail.

# How do we measure?

The city of Peterborough in the UK has established itself as a pioneering city in circular economy transition.

At the heart of the Circular Peterborough initiative is a collaborative approach recognised in the World Economic Forum's report on Circular Economy in Cities. Their initiative stemmed from engaging and listening to local businesses and to better understand the challenges. Peterborough is not becoming 'circular' for the badge but to address real challenges in their city.

Peterborough has applied the following models to indicate and measure how the city is performing against circular economy objectives.

Each indicator is designed to reflect different aspects of the circular economy: economic, social, energy and waste elements.

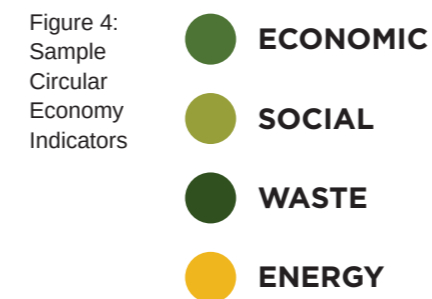


Figure 4: Sample Circular Economy Indicators

Figure 5: Sample Circular Economy Performance Measurement

Indicators (Year)	Lismore	State or National Average
% CE jobs of total employment	15	12
% CE businesses total businesses	25	20
Shares on portal	700	700
% cars /capita on the road	65	45
% bikes	62	55
% public transport users	25	50
CO2 emissions/capita	3	8
Amount renewable energy available (M/Wh)	2	2
% h/hold waste recycled	42	36
% commercial waste recycled	33	44
% waste avoided	30	30

Better than average

On average

Below average



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