



**Draft  
Environmental  
Sustainability  
Strategy**

**maitland**  
city council

# RECOGNITION FOR THE WONNARUA PEOPLE

The Maitland area has been, for tens of thousands of years, the home of the Wonnarua People. As the first people of this country – and the longest continuous culture on earth – Aboriginal People managed and nurtured the land and waters of this place for thousands of generations.

Before European settlement, the floodplain of the *Coquun*, *Yimmang* and *Dooribang* (the Hunter, Patterson and Williams Rivers) were covered in lush rainforest. Aboriginal people called the district Bu-Un, or place of the heron waterfowl, and made use of the abundant resources provided by the river and the rainforest for food, medicine, tools and shelter.

Wonnarua People have a strong connection to the *Coquun*, *Yimmang* and *Dooribang* flowing through and around Maitland as this is where the Great Spirit Baiame is strongest.

After European colonisation, vast swathes of rainforest, including the mighty red cedar, were cleared for furniture building and to make way for the highly productive farmland the valley is famous for, followed by the townships that make up Maitland today.

Maitland City Council acknowledges the Wonnarua People as the Traditional Owners and Custodians of the land and waters within Maitland. We pay respect to all Aboriginal Elders past, present and future, and commit to improving the way we care for the local environment as a sign of this respect for First Nations people and their spiritual connection with the land and waters of this area.





# STRATEGY OVERVIEW

This is a strategy for a more liveable and sustainable Maitland. It sets out a pathway to improve community health and wellbeing and economic opportunity through improving the health of our local environment.

## PURPOSE

### Where we want to be

*Maitland is a vibrant river city, where community health, wellbeing and economic opportunity is supported by healthy ecosystems. It's a place where we can access high quality local bushland, wetlands and waterways for recreation, keep cool in hot summers and respond well as a community to natural hazards like floods, storms, bushfires and drought. Our Council shows environmental leadership and supports us to reduce our environmental impacts and avoid waste.*

### Why is this important?

This Environmental Sustainability Strategy (ESS) responds to community feedback on environmental priorities received over recent years, it focuses on meeting our obligations under National, State and Regional plans, policies and legislation. It aligns with Council's Local Strategic Planning Statement (LSPS) and Maitland + 10 Community Strategic Plan (CSP) and builds upon the CSP's – Let's live sustainably theme. It identifies our significant challenges such as flooding, urban heat, reducing landfill space and declining ecosystem health whilst our population and urban footprint expands significantly. It also identifies opportunities to improve the quality of our environment and make our city more liveable and sets out our commitment to lead, facilitate, collaborate and advocate for a more sustainable Maitland. This ESS sits as an informing strategy within Council's Integrated Planning and Reporting (IP&R) Framework. It has a timeframe aligned with the Maitland +10 and will be reviewed at the start of each Council Term.

### The Integrated reporting and planning framework

At Maitland City Council, the IP&R framework comprises of the Community Strategic Plan, Delivery Program and Operational Plan. Along with informing strategies like the ESS.



## PLAN ON A PAGE

The strategy includes twelve targets across four theme areas, with actions Council will take and indicators which will be measured and reported upon over time to track our progress.

### Themes

#### THEME 1: A GREEN & BLUE MAITLAND

A healthy and resilient natural environment where people and native wildlife can thrive.

#### THEME 2: LIVEABLE & RESILIENT COMMUNITIES

Neighbourhoods that enable high quality of life with connected communities that bounce back from natural hazard events and adapt to a changing climate.





#### THEME 3: LIVING SUSTAINABLY

A community that is supported to reduce its reliance on non renewable resources and use water wisely.

#### THEME 4: GOING CIRCULAR WITH WASTE

A community with access to services, facilities and products designed to maximise the value and end of life options for valuable materials.

### Targets

 <b>GREEN &amp; BLUE MAITLAND</b>	 <b>LIVEABLE &amp; RESILIENT COMMUNITIES</b>	 <b>LIVING SUSTAINABLY</b>	 <b>GOING CIRCULAR WITH WASTE</b>
1.1 Deliver functional wildlife corridors	2.1 Increase community preparedness for natural hazards	3.1 Increase active and sustainable transport opportunities	4.1 Divert 80% of domestic waste from landfill by 2030
1.2 Improve waterway health	2.2 Understand and plan for our climate risks	3.2 Reduce greenhouse gas emissions by 50% by 2030 and to net zero by 2050	4.2 Use more recycled products
1.3 Increase community participation in environmental events and volunteering	2.3 Aim for 30% canopy cover in residential areas	3.3 Reduce per capita water consumption from potable sources	4.3 Reduce illegal dumping

### Reporting

Communicating the status of progress is essential for the success of our first comprehensive environmental sustainability strategy. Regular measurement of indicators and reporting on progress will help us track how we're going and identify areas that need more attention.

If you want to see live data on how we're performing against the goals of this strategy or make your own commitment to help us become more sustainable, visit [data.maitland.nsw.gov.au/pages/home](https://data.maitland.nsw.gov.au/pages/home) to view our Smart & Sustainable City Platform.

# HOW THIS STRATEGY HAS BEEN DEVELOPED



## BACKGROUND DATA REVIEW

To get us started on our journey, we first looked at what had already been achieved and previous engagement data to provide a clear picture of the current status and community needs.



## CONSULTATION WITH GOVERNMENT PEAK BODIES, AND ADJOINING LOCAL COUNCILS

Speaking with State, Federal and Local governments on relevant strategies to ensure policy compliance and opportunities for alignment.



## TECHNICAL STUDIES

Detailed studies across heat mapping, vegetation, flooding, waste and other relevant topics to gain baseline data relevant to our local environment.





## DEVELOPER FORUM

Meeting with local developers to identify opportunities for sustainability initiatives and any barriers.



## INTERNAL CONSULTATION

By working across disciplines in Council to identify priorities, needs and opportunities, we have sought to create a strategy that is relevant to all teams and can deliver economic, environmental and community outcomes.



## COMMUNITY ENGAGEMENT

Asking community what they see as the most pressing environmental issues has helped us prioritise key issues and actions and helped us understand how community are already implementing sustainability behaviours at home. Consultations included:

- Environmental attitudes online survey measuring our communities' attitudes and behaviours towards sustainability issues (August 2022, 400+ surveys)
- Environmental attitudes phone polling from a representative resident sample (August 2022, 500 surveys)
- Pop up community engagement kiosk (August 2022)
- Waste services online survey measuring our communities support for existing and future waste (November 2022, 2000+ surveys)
- Waste service phone polling from a representative resident sample (November 2022, 500 surveys)
- Maitland Environmental Youth Forum 2023 (May 2023 50+ students from local primary and high schools)









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# INTRODUCTION

## WHAT IS ENVIRONMENTAL SUSTAINABILITY?

Sustainability is a way of considering how our economy, natural environment, social interactions and governance structures (laws and ethics) interact to define the world we live in with the aim of balancing and improving them all with our decision making.

These four pillars of sustainability are all important and need consideration. The focus of this strategy is to consider environmental goals and actions in detail to provide a pathway to achieving these goals while considering the other sustainability pillars.

**'SUSTAINABLE DEVELOPMENT IS THE PATHWAY TO THE FUTURE WE WANT FOR ALL. IT OFFERS A FRAMEWORK TO GENERATE ECONOMIC GROWTH, ACHIEVE SOCIAL JUSTICE, EXERCISE ENVIRONMENTAL STEWARDSHIP AND STRENGTHEN GOVERNANCE.'**

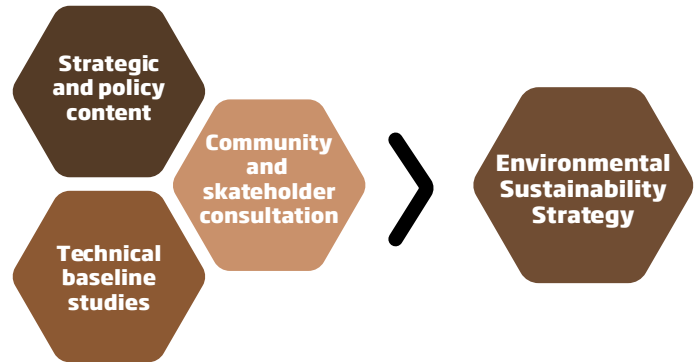
**– Ban Ki-Moon**

## WHY WE NEED AN ENVIRONMENTAL SUSTAINABILITY STRATEGY

The health and wellbeing of our community is linked to the health of our environment. Improving the quality of the natural environment, reducing our impact and becoming more resilient to environmental change are important steps to secure the social and economic wellbeing of our community for generations to come. As a rapidly growing community with a population increase of 54,800 or 61% by 2041, Maitland faces environmental challenges and opportunities that require strong planning and strategic action. A strategic focus on environmental sustainability is required so that the community's aspirations, as outlined in our Local Strategic Planning Statement and Community Strategic Plan, can be achieved.

The development of this comprehensive Environmental Sustainability Strategy is an opportunity to collate and update existing actions supporting environmental sustainability in Maitland. This strategy also proposes new priority areas (themes), targets, actions and resources required to envision and create a more environmentally sustainable Maitland.

Importantly, this includes how we will play our part in meeting our obligations under National, State and Regional plans, policies and legislation.



## HOW THIS STRATEGY WAS DEVELOPED

Maitland's first comprehensive environmental sustainability strategy has been developed from extensive technical studies to understand the current state of Maitland's environment, international, national and state policy review, identification drivers of environmental change, and community and stakeholder feedback to set realistic goals for improvement that are aligned with community expectations and State government targets.

## THE SUSTAINABLE DEVELOPMENT GOALS

The United Nations Agenda for Sustainable Development 2030 provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are the 17 UN Sustainable Development Goals, which were adopted in 2015 by 193 countries, including Australia. The goals promote prosperity, while protecting the planet. They provide us with an internationally agreed framework to improve sustainability.

The Maitland Environmental Sustainability Strategy contributes to the sustainable development goals relating to the environment, especially goals 11 to 15.

# SUSTAINABLE DEVELOPMENT GOALS



## HOW THIS STRATEGY IS LAID OUT

As our first comprehensive Environmental Sustainability Strategy, this document will combine the following to guide and communicate progress to the community:

### THEMES

While there is cross over between them, having four theme areas allow the range of environmental sustainability considerations to be identified and communicated effectively. For each theme area the strategy describes the current state, challenges and opportunities.



### What Success Looks Like

Four theme areas allow the range of environmental sustainability considerations to be identified and communicated effectively. Each theme has a set of statements articulating what success looks like based on community input and State government requirements.



### Targets

When setting targets, we considered community priorities and alignment with State Government Policy positions. Some targets can be clearly defined in numbers, while others communicate a direction that requires the broader use of indicators to track progress.



### Indicators and Reporting

Communicating the status of progress is essential for our first comprehensive Environmental Sustainability Strategy. Regular reporting showing progress of a target will help us and the community celebrate progression and identify where more attention is needed.



### How Council will show leadership

Key actions Council will take to contribute to meeting the targets and report on indicators of progress.

# MAITLAND'S ENVIRONMENT AT A GLANCE



## GREEN & BLUE MAITLAND



## LIVEABLE & RESILIENT COMMUNITIES

### ECOLOGY



APPROXIMATELY

**8534 ha** native vegetation



**15.6%** overall canopy cover



**425.6 km** of river and creeks



**695** flora species



**45** threatened fauna species



**3** active landcare sites



**9** threatened ecological communities



**85 ha** bushland revegetated



**536** fauna species



**15** threatened flora species



The Hunter River estuary is classed  
**126/160** in waterway health in NSW

### POPULATION AND URBAN GROWTH

	2001	2021	2041
Population (people)	<b>56,060</b>	<b>89,750</b>	<b>144,550</b>
Dwellings (number)	<b>20,650</b>	<b>36,680</b>	<b>61,870</b>
Urban footprint (ha)	<b>4,200</b>	<b>6,200</b>	<b>8700</b>



**396km<sup>2</sup>**  
Total land area

### CLIMATE



**190mm**  
estimated maximum rainfall intensity in 24 hours



**16 days/year**  
Very high to extreme fire danger days



**120/year**  
Rainy days



**>37°C**  
averaged hot days: 7 days/year

### COMMUNITY RESILIENCE



**63%** of residents felt prepared or very prepared for natural disasters in 2022 Environmental Attitudes Survey



**75%** of residents felt somewhat or very connected with **88%** seeking to be somewhat or very connected



## LIVING SUSTAINABLY

### ENERGY CONSUMPTION AND GREEN HOUSE EMISSIONS



Council operational emissions

**9,313 t** CO<sub>2</sub> in 2019-20



Community emissions

**783,000 t** CO<sub>2</sub> in 2019-20

12 tonnes of CO<sub>2</sub> per person



**31%** of households had solar in 2022 saving an estimated

**90,000 t** CO<sub>2</sub> per year



## GOING CIRCULAR WITH WASTE

### WASTE COLLECTION



**25,987 t** waste were collected in 2021-22



**5,462 t** recyclables were collected in 2021-22



**12,153 t** organics were collected in 2021-22



**2,137** mattresses were collected for recycling in 2021-22 via the mattress muster program

### WATER EFFICIENCY



**186L** per person per day residential use

Total (residential, industrial commercial)

use **7,022,822 kL**

**106,829 kL** used in Council Facilities

### WASTE COMPOSITION



Food waste makes up **24%** of the general waste bin by weight



A further **21%** by weight is recyclable material

### TRANSPORT



**108** Electric Vehicles Registered in January 2023

**4** Destination charging locations

**0** fast charger locations

**5%** distance travelled not in a passenger vehicle

### RESOURCE RECOVERY



Maitland is achieving a domestic resource recovery rate of approximately **40%**

## WHAT DOES OUR COMMUNITY WANT?

We've looked at everything the community has been telling us about Maitland's environment over recent years, including during the development of our Local Strategic Planning statement and the most recent Community Strategic Plan.

Further, we specifically engaged the community about environmental sustainability in July and August 2022 via phone and web survey.

What we have heard is that environmental sustainability is a priority, and as a community we are seeing the pressures on our environment but also the opportunities to shape a more sustainable Maitland.

We heard you want to be involved in the journey and see our organisation lead with our own actions, supporting you to do more.

You told us you want:



**Become more prepared and better informed for when we are faced with natural hazards**

**Encouragement for businesses to develop solutions that reduce waste (such as recycling our waste and turning it into new products)**

**Improved access to local recycling and resource recovery facilities to reduce landfill**

**A reduction in illegal dumping**

## COUNCIL'S ROLE

You made it clear that everyone has a role in the journey to a more sustainable Maitland, including all levels of government and the community itself.

You expect us to show leadership and take on a level of responsibility that is appropriate to our level of control and influence.

As we have done in our Community Strategic Plan, we will lead, facilitate and advocate as appropriate to progress toward the aims of this Environmental Sustainability Strategy.

### Lead

For the things that Council can directly control, we will take a leadership role and commit to embedding the principles outlined in the strategy in our decision making processes.

### Facilitate and Collaborate

Where Council has the capacity to create linkages between community, business and other organisations to achieve better environmental outcomes we will do so. This may include resources to attract additional opportunities, such as grant funding, to achieve more than we can on our own.

### Advocate

Where Council cannot lead or facilitate, we will advocate for action from other levels of government to support progress.



**Native bushland to be preserved and increased, by planting more trees in suburban areas, and creating safe natural corridors for wildlife**

**Council facilities to be more sustainable through use of renewable energy, and reducing reliance on water from the mains supply**

**An increase in shared pathways for walking, and cycling and Council to advocate for improved public transport**



**14** LIFE BELOW WATER



**15** LIFE ON LAND



*Powerful Owl*





# THEME 1: A GREEN & BLUE MAITLAND

## OVERVIEW OF THE CURRENT STATE

Over the years, Maitland's natural ecosystems have changed significantly due to land clearing for timber, agriculture and urbanisation leading to widespread land degradation, habitat loss and reduced biodiversity. In addition, various activities have impacted aquatic ecosystems negatively through the discharge of pollutants, erosion and sedimentation of our local waterways.

The community highly values Maitland's remnant rural landscape and local environment, the protection and improvement of which was highlighted during consultation as a key priority.


Maitland possesses remnant bushland that provides habitat for a vast array of species, including threatened species such as squirrel gliders and powerful owls. In turn, these species are essential for the health of our local ecosystems. For example, powerful owls are apex predators that play an important role in regulating populations of small mammals, while squirrel gliders are crucial to the pollination of our native plant species.


The Hunter River, Paterson River and Lochinvar, Wallis, Swamp-Fishery, Stony and Four Mile Creeks are our key waterways. Creeks, rivers and floodplains provide important 'ecosystem services' to our community including storm water drainage, flood storage and mitigation, water for irrigation and stock, visual amenity and recreation opportunities and cultural values.


Maitland retains a variety of significant wetland habitats including Tenambit, Woodberry, Wentworth and Dagworth Swamps. These wetlands provide feeding habitat for internationally important migratory species such as Latham's Snipe, a shy wetland bird that breeds in Japan and Russia and flies 8,500 km to eastern Australia each year to spend its non breeding season feasting on tasty critters in mudflats and shallow open water.

### VEGETATION

 **8,534 ha** native vegetation

 **9** threatened ecological communities

 **15.6%** overall canopy cover

 **85 ha** bushland revegetated

### SPECIES

 **536** fauna species

 **695** flora species

 **5** threatened flora species

 **45** threatened fauna species


### WATERWAYS


 **425.6 km** of river and creeks

 The Hunter River estuary is ranked **126 out of 160** NSW estuaries for health

 Algal blooms are common in Maitland's lagoons such as Rathluba and Telarah

### COMMUNITY AND THE ENVIRONMENT

 **3** active landcare sites

 **16%** participation in environmental volunteering

## OUR CHALLENGES

- Bushland is fragmented and lacks connectivity
- Risk of further clearing and fragmentation associated with development
- Threats from invasive species
- Erosion, sedimentation and pollution of our waterways leading to low water quality
- The Hunter River is a dynamic system which is impacted by activities upstream

## OUR OPPORTUNITIES

- Wildlife corridors can be used to connect between larger areas of habitat in Dungog, Cessnock and Port Stephens
- Our rivers, floodplain and wetlands, although currently in poor health, can become an important opportunity for local recreation and eco-tourism as our city grows
- The Maitland community is interested in environmental volunteering
- Maitland has established the Hunter Estuary Alliance to focus on improving the health of the tidal part of the Hunter River and its tributaries

## WHAT DOES SUCCESS LOOK LIKE

- ✓ A healthy and resilient natural environment that supports a good quality of life for the community
- ✓ A well connected and accessible network of bushland reserves, wetlands and waterways that provide functioning habitat for wildlife
- ✓ A growing sense of ownership and pride in our local environment and the way it is managed to balance conservation and development as our city expands

## TARGETS

- 1.1** Deliver functional wildlife corridors
- 1.2** Improve waterway health
- 1.3** Increase community participation in environmental events and volunteering



*The benefits of having access to local green space include increased physical activity, improved mental health and wellbeing and local food access*

'I can observe birds in their natural habitat in my own area.'

'My kids can see native animals in the wild locally.'

'I can meet like minded people while we care for our local environment.'

'I can access the river for recreation.'

## HOW COUNCIL WILL SHOW LEADERSHIP

We will:

- 1.1.1** Include controls in our development plans to establish and protect wildlife corridors, reduce clearing of native vegetation and improve water quality controls
- 1.1.2** Review our approach to clearing for Council projects such as road upgrades, sports fields and community buildings including avoiding and minimising clearing and establishing an offsetting policy where clearing cannot be avoided
- 1.2.1** Work with our neighbours and state government to improve the health of the Hunter River and local wetlands and waterways
- 1.3.1** Seek out opportunities to establish publicly accessible environmental reserves
- 1.3.2** Increase opportunities for the community to be involved in Landcare on public land and conservation projects

## WHY IT MATTERS

Healthy ecosystems are important for community health, wellbeing and economic opportunity.

Our bushlands, wetlands and waterways provide a range of 'ecosystem services' to the community. These services translate into social, economic and environmental benefits including improved air quality, cooling of urban environments, improved scenic and visual amenity of streets, parks and neighbourhoods, improved property values, access to passive recreational uses, cultural services, sediment and erosion control, protecting water quality and providing wildlife habitats, to name a few.

The benefits of having community access to green space are well documented and include increased activity providing physical and mental health benefits.



*Latham's Snipe*



## HOW WILL WE KNOW WE'RE IMPROVING?

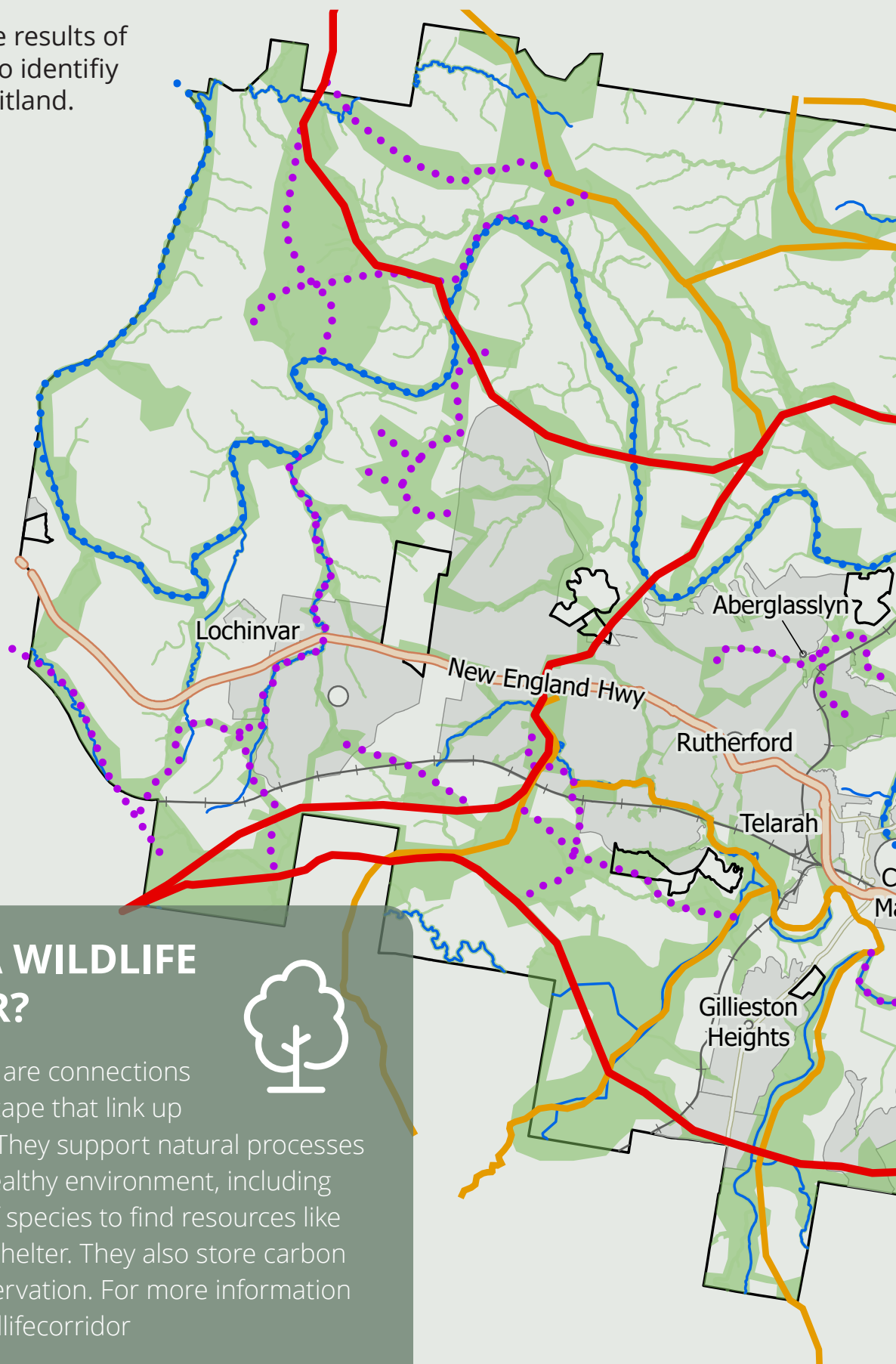
We will report our progress via our Smart and Sustainable Cities Platform<sup>1</sup> to allow the community to view the latest information available. Headline indicators and trends we are aiming for will include:

TARGET	INDICATOR	TREND	SOURCE AND REPORTING FREQUENCY
1.1	Hectares of bushland revegetated each year and in total	Increasing	Reported on Council Greening Plan report card as new sites are rehabilitated and annually
1.1	Hectares of native vegetation in the LGA	Increasing	Updated aerial photography and LiDAR is collected for the city
1.2	Water Quality Report Card	Improving	Council measures water quality at sites along the river and in the catchment and this will be used to report trends in water quality as collected and annually
1.2	Report on waterway health	Improving	Reported as the health rank reports are produced
1.3	Report on participation in community conservation events	Increasing	Reported as events occur and annually

<sup>1</sup> [data.maitland.nsw.gov.au/pages/home](https://data.maitland.nsw.gov.au/pages/home)

## GREEN & BLUE GRID MAP

This map shows the results of a range of studies to identify key corridors in maitland.







### WHAT IS A WILDLIFE CORRIDOR?



Wildlife corridors are connections across the landscape that link up areas of habitat. They support natural processes that occur in a healthy environment, including the movement of species to find resources like food, water and shelter. They also store carbon and enable conservation. For more information visit [mait.city/wildlifecorridor](http://mait.city/wildlifecorridor)

### LEGEND

- |   |  |
|---|--|
|  Maitland LGA              |  Green Blue Corridor        |
|  Major Centres             |  Planned Investigation Area |
|  Regional Corridor         |  Urban Zoned Land           |
|  Regional Corridor - River |  Railway line               |
|  Sub-regional Corridor     |  New England Highway        |
|  Local Corridor            |  Major Roads                |
|  Major Watercourse         |  |





**11** SUSTAINABLE CITIES AND COMMUNITIES



**13** CLIMATE ACTION







## THEME 2: LIVEABLE & RESILIENT COMMUNITIES

### OVERVIEW OF THE CURRENT STATE

Maitland and our surrounding Hunter Region is well known for its historic climate variability and extremes. Historical records show that rainfall varies between years and decades, and we can move quickly from drought conditions and extremely hot summers to wet, rainy seasons and floods.

Our town centres are surrounded by floodplains and we are known for large historic floods, as well as our recent event in July 2022. We benefit from the Hunter Valley Flood Mitigation Scheme which provides flood risk management to 250,000 people across the Hunter. The scheme includes management areas in Morpeth, Largs, Wentworth, Maitland and East Maitland. Despite the protection the scheme provides, average residual flood damages across the Hunter are estimated at \$200 million annually.


Our climate is changing. The latest climate science shows that Maitland is likely to experience increasing temperatures, more hot days and increased fire weather. We are also likely to experience increasing rainfall in autumn and decreasing rainfall in winter and spring.


In recent years we've experienced extreme heat, drought, bushfires and flood, and our community has pulled together through these events. Community resilience to natural hazards like extreme heat, drought, bushfires and floods refers to our capacity to bounce back after a shock or disturbance. This includes not only how we maintain our livelihoods and lifestyles, but also how we transform them in response to change.


Two key indicators we have used to understand our community's current level of resilience include preparedness (how prepared we feel for an extreme event) and connectedness (how connected we feel to our community). We found there is room for improvement both in connectedness and preparedness.

#### CLIMATE AVERAGES FOR MAITLAND (1980-2007)


 Hot days **↑**  
**37°C**  
7 days/year


 Estimated Max 24 hour rainfall intensity  
**190mm**


 **120** Rainy days/year


 **16** Fire danger days/year (very high – extreme)


#### CLIMATE CHANGE SCENARIO

 hot days


 maximum and minimum temperatures

 rainfall to increase in autumn


 rainfall to decrease in winter and spring

 fire danger days

#### HOW PREPARED WE FEEL FOR EXTREME EVENTS


 **63%** of residents felt prepared or very prepared for natural disasters in 2022 Environmental Attitudes Survey


#### HOW CONNECTED WE FEEL TO OUR COMMUNITY

 **75%** of residents felt somewhat or very connected with **88%** seeking to be somewhat or very connected

#### HEAT VULNERABILITY

 **1.2%** to **52.4%** suburban canopy cover

 In 2019-20 urban zone surface temperature was **3.7°C** warmer on average than surrounding rural areas

 Suburbs most vulnerable to heat impacts include Gillieston Heights, Aberglasslyn, Rutherford, Oakhampton and South Maitland

## OUR CHALLENGES

- Some communities become isolated during large flood events
- 33% of the community reported a moderate to low level of preparedness for an extreme event
- Those least likely to feel prepared are renters and young people
- Maitland's urban areas already show signs of the urban heat island effect
- Urban canopy varies across different suburbs, with higher canopy cover being correlated with lower heat impact on communities
- Areas more vulnerable to heat are located in the west. This is also where the next urban release areas are located

## OUR OPPORTUNITIES

- Collaborating with other agencies is a key strategy to provide strong disaster response
- Improved technology provides opportunities to quickly share information with residents and visitors
- Community centres and libraries can provide hubs for information and skill sharing to support community preparedness
- Increasing urban vegetation including street and park trees is a good way to improve community resilience to heat
- As new suburbs are planned, the latest tools and techniques can be used to improve grey, green & blue infrastructure and housing so that communities are more resilient

## WHAT DOES SUCCESS LOOK LIKE

- ✓ A resilient community that can adapt to natural hazards and changing climate
- ✓ A strong and shared understanding of climate risks and natural hazards that affect the local area
- ✓ Active liveable neighbourhoods with an urban forest that cools down our suburbs

## TARGETS

- 2.1** Increase community preparedness for natural hazards such as flood, heat, bushfire, and drought
- 2.2** Understand and plan for our climate risks
- 2.3** Aim for 30% canopy cover in residential areas



'I can sit in the shade of a tree while my kids play at the playground.'

'I can walk from home to shops, parks and playgrounds.'

'I feel more prepared for floods and storms and I know how to get information to support me.'

'Staying cool in hot summers is affordable and easy for me.'

## HOW COUNCIL WILL SHOW LEADERSHIP

We will:

- 2.1.1** Deliver a community education and awareness program to improve community understanding of natural hazards and support community preparedness
- 2.2.1** Undertake a climate change risk assessment and invest in key preparedness and adaptation plans including floodplain risk management and flood planning
- 2.2.2** Implement built environment and engineering approaches to heat management
- 2.3.1** Plant a minimum of 200 street trees per year focusing on vulnerable suburbs of Aberglasslyn, Rutherford, Gillieston Heights etc
- 2.3.2** Include a budget allocation for environmental works in all projects within the capital works program
- 2.3.3** Develop an Active Transport Plan incorporating updated Shared Pathway / Cycleways/ Bike Plan and public transport advocacy plan with State and Federal agencies

## WHAT IS URBAN HEAT?



The 'urban heat island' phenomenon is temperature differences caused by urbanisation. Urban areas become significantly hotter than surrounding rural areas when there is less green cover and more hard surfaces. This happens because buildings and impervious surfaces absorb and store solar radiation during the day and then release it slowly back into the environment at night.

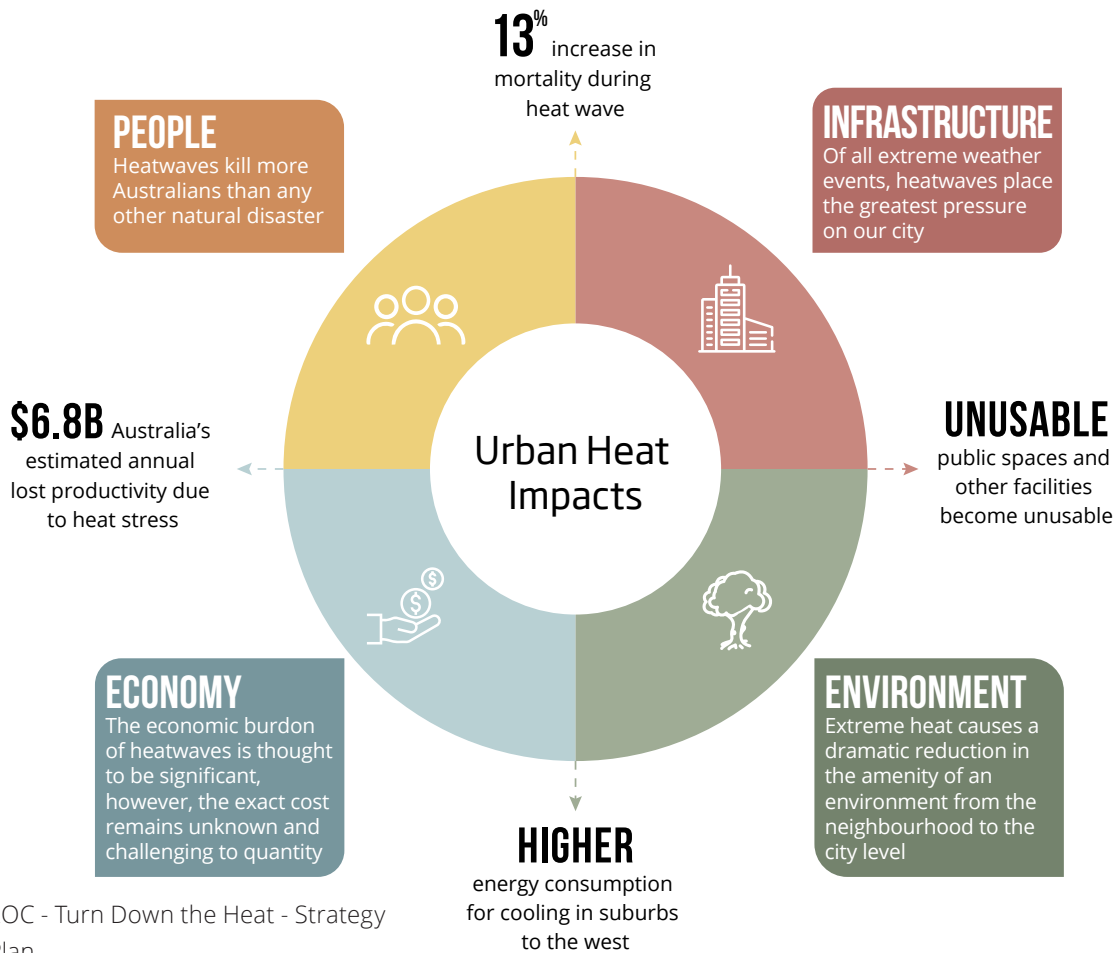
### WHY IT MATTERS

#### Challenges of Urban Heat

The urban heat island situation occurs when buildings and roads within our cities and suburbs heat up from the sun during the day and then take a long time to cool down at night. When cities and suburbs also have a good amount of trees they provide shade to reduce the amount of heat that gets stored in buildings and roads. Trees and grasses also pump water into the atmosphere acting as a natural air conditioner. This keeps the places we live at cooler temperatures, reduces the risk for people that hot days can harm, such as people that are very young or old. It also means we can use less energy for air conditioning. Having more trees in our urban environment also provides shade for walking and cycling pathways and provides more places for native animals and birds to live and move through.

To complement the benefits of trees and vegetation, we can also make choices in our built environment such as lighter colored roofs and exteriors, shade structures and use of new materials that reduce heat absorption.





Source: WSROC - Turn Down the Heat - Strategy and Action Plan

## HOW WILL WE KNOW WE'RE IMPROVING?

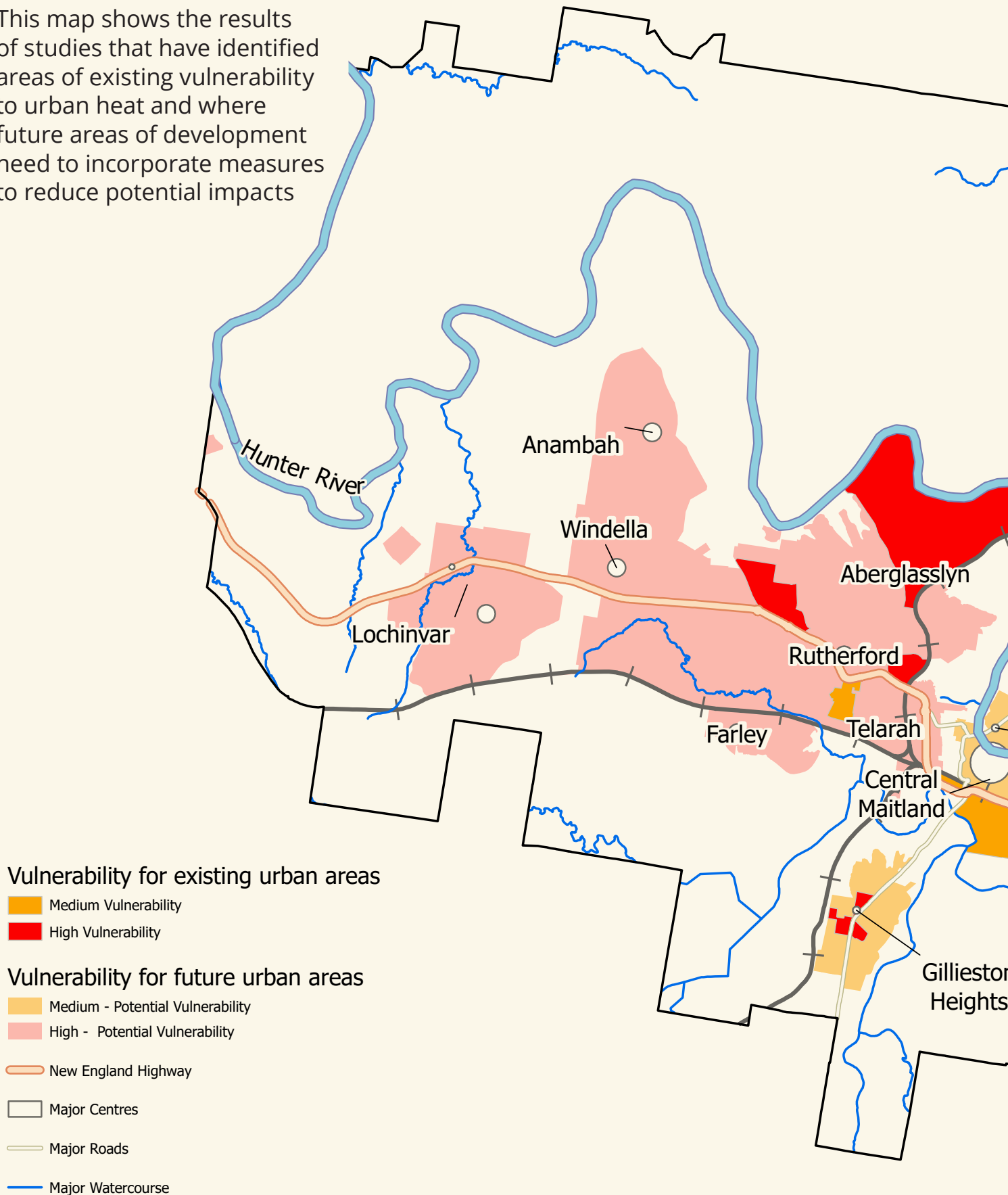
We will report our progress via our Smart and Sustainable Cities Platform<sup>2</sup> to allow the community to view the latest information available. Some key indicators and trends we are aiming for include:

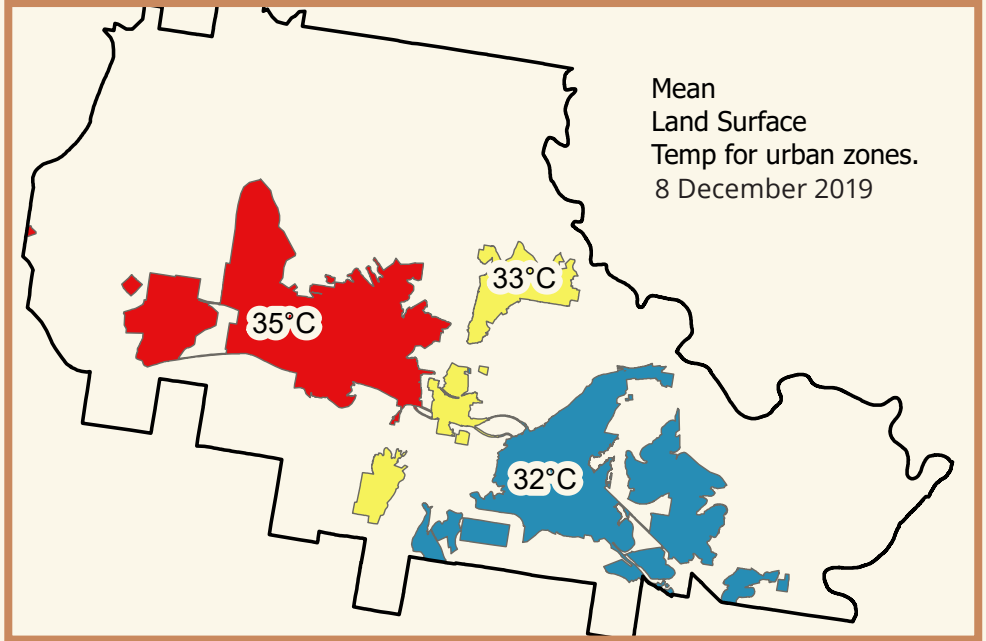
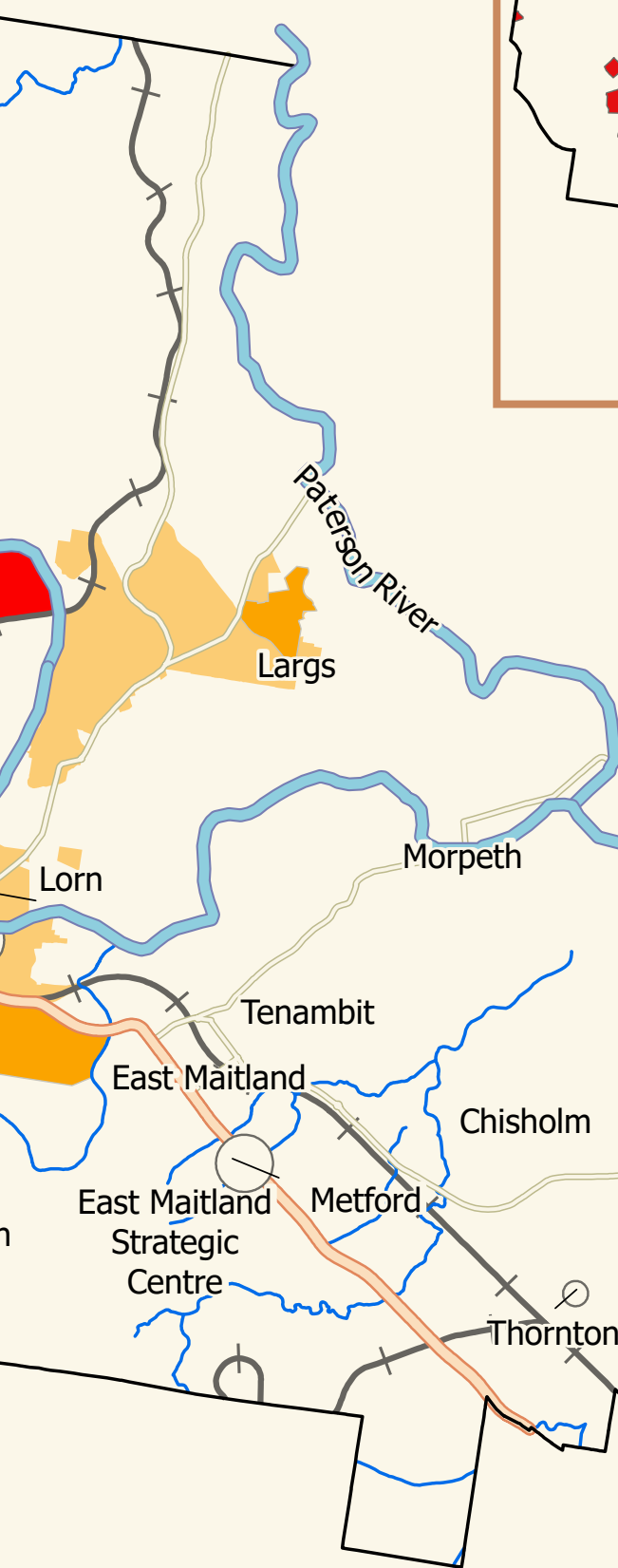
TARGET	INDICATOR	TREND	SOURCE AND REPORTING FREQUENCY
2.1	Level of community preparedness for natural hazards (prepared or very prepared)	Increasing	Reported as Council repeats its community attitudes survey
2.1	Level of connectedness people feel with the local community	Increasing	Reported as Council repeats its community attitudes survey
2.2	Kilometres of shared pathway in the city	Increasing	Reported as Council delivers new shared pathways
2.3	Number of street trees planted annually	200	Reported at the suburb level via a street tree dashboard
2.3	% canopy cover in residential areas	30%	Updated as aerial photography and LiDAR is collected for the city, with new urban released areas assessed for their capacity to reach 30%

<sup>2</sup> [data.maitland.nsw.gov.au/pages/home](https://data.maitland.nsw.gov.au/pages/home)

# URBAN HEAT MAP

This map shows the results of studies that have identified areas of existing vulnerability to urban heat and where future areas of development need to incorporate measures to reduce potential impacts





## WHAT IS THE BENEFIT OF URBAN TREES?

Good urban tree canopy will provide shade and protect against over exposure to sunlight, which can cause skin cancer.





**7** AFFORDABLE AND  
CLEAN ENERGY



**11** SUSTAINABLE CITIES  
AND COMMUNITIES



**12** RESPONSIBLE  
CONSUMPTION  
AND PRODUCTION



**13** CLIMATE  
ACTION







## THEME 3: LIVING SUSTAINABLY

### OVERVIEW OF THE CURRENT STATE

Maitland is facing similar challenges and opportunities for living sustainably as other similar communities across Australia. We are mostly reliant on energy sources for our homes and transport that are currently based on non renewable resources but which are undergoing rapid changes. A focus of this strategy is preparing Council, community and businesses for changes in these sectors, positioning us all to face the challenges and benefit from opportunities.

In this space, the community are taking action. The community is reducing its reliance on non renewable resources through the uptake of solar energy and responding proactively to reducing water consumption in times of drought.

Yet there are many challenges in how to be prepared for new modes of transport and reduce our reliance on private vehicles for transportation.

We are basing our actions on the community expectations and federal and state government policies in regard to greenhouse gas emission reduction and future transport options. We will advocate for support to ensure Maitland has effective plans in place to ensure our community is supported to prepare and benefit from changes ahead.

### EMISSIONS, ENERGY USE, SOLAR 19/20



Council operational emissions

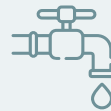
**9,313 t** CO<sub>2</sub>

Community emissions – (19/20)

**783,000 t** CO<sub>2</sub>

12 tonnes of CO<sub>2</sub> per person

### WATER CONSUMPTION 19/20



**186 L** per person per day residential use

Total (residential, industrial Commercial) use **7,022,822 kL**

**106,829 kL** used in Council facilities

### SUSTAINABLE TRANSPORT



**108** Electric vehicles registered in January 2023

**4** Destination charging locations

**0** Fast charger locations

**5%** of total distance travelled was not in a passenger vehicle

### ACTIONS OUR COMMUNITY HAVE TAKEN/WANT TO TAKE



**31%** of households had solar in 2022 saving an estimated **90,000 t** CO<sub>2</sub> per year

Daily per person water consumption was **173 L** per person per day down **19%** from 215 in 2017-18

## OUR CHALLENGES

- We are currently heavily reliant on non renewable resources to power our homes and businesses
- Our residential and commercial buildings have generally been built to meeting minimum standards for energy efficiency
- Transport is largely reliant on by non renewable and imported sources of fuel and limited public transport options
- We lack the infrastructure to be prepared for global shifts to electric and hydrogen transport technologies
- Water security is largely dependent on mains water supply
- Our businesses and work force skills need support to be prepared for future technologies and associated jobs as local and global markets shift

## OUR OPPORTUNITIES

- Businesses and homes are using renewable energy to reduce costs and increase energy security, with local renewable energy businesses bringing skills and jobs
- Increases in residential and commercial buildings to meet population growth can show Maitlands construction industries capacity to produce sustainable buildings with lower energy and water costs
- Maitland can build upon its public transport (train stations) and shared pathways to reduce reliance on cars for recreational and work related transport
- Alternative sources of water (recycled and harvested) are available to support our outdoor spaces and other non drinking uses such as industry

## WHAT DOES SUCCESS LOOK LIKE

- ✓ A built environment that supports a decreasing reliance on imported, finite and non renewable energy sources
- ✓ Where water is used wisely and appropriately based on quality and end use
- ✓ A community where residents and business have the information they need to consider sustainability in their decision making

## TARGETS

- 3.1** Increase active and sustainable transport opportunities
- 3.2** Reduce greenhouse gas emissions by 50% by 2030 and to net zero by 2050
- 3.3** Reduce per capita water consumption from potable sources



'I can cycle and walk between town centres and sites like Walka.'

'I can see Council facilities using solar power.'

'I want young people to have a say in their future, and sustainable job opportunities.'

'I can attract tourists to my business through local Electric Vehicle Charging.'

## HOW COUNCIL WILL SHOW LEADERSHIP

We will:

- 3.1.1** Increase community engagement resources at Council facilities and access to smart and digital technology to provide learning opportunities and support informed decision making
- 3.2.1** Use sustainable design principles to reduce lifecycle environmental impacts and operating costs on new and upgraded facilities
- 3.2.2** Develop a Net Zero Emission Plan for the City that includes community involvement to guide and benefit Council operations from a renewable energy transition
- 3.2.3** Prepare a plan for priority EV charging locations for public charging within the city
- 3.3.1** Develop a comprehensive water resilience plan for outdoor spaces, incorporating drought response and alternative water sources

## WHY IT MATTERS

### Reliance on non renewable resources

There is strong evidence to show that human activities based on the use of fossil fuels including coal, gas and oil that were formed millions of years ago are releasing once locked up greenhouse gases into our atmosphere increasing the power of the greenhouse effect that regulates the earth's temperature. This is resulting in changes that are predicted to increase the number and impact of weather events that can impact on our lives such as flooding and drought. Also, although there are significant reserves of some of these fuels they will eventually run out, and in the case of the petrol that fuels our cars they are imported from other countries and our local supply is limited. This reliance on other countries for very important resources for our economy is referred to as a fuel security problem. Using renewable resources such as wind and solar energy can reduce our reliance on these fuels and reduce the greenhouse gases we are producing. Renewable energy can be harnessed locally and used to power our homes, businesses and increasingly our public and private transport using battery powered electric vehicles and in some cases hydrogen. People in Maitland are using solar power for their homes with over 31% of people with solar on their homes. When it comes to electric vehicles while many people will do a lot of charging at home many people will still need options to charge up in public and Maitland has work to do to make this option for people visiting our city and those that need to charge when not at home.

Council also needs to be prepared for new low emission vehicle options entering Council's fleet as vehicle manufacturers move away from traditional fuels and as new options become the cheaper option.

Embracing new technology comes with challenges like making sure we have ways of recycling them at the end of their life but they provide options to enjoy the benefits that current energy resources have given us without the long term environmental impacts.

## HOW WILL WE KNOW WE'RE IMPROVING?

We will report our progress via our Smart and Sustainable Cities Platform<sup>3</sup> to allow the community to view the latest information available. Headline indicators and trends we are aiming for will include:

TARGET	INDICATOR	TREND	SOURCE AND REPORTING FREQUENCY
3.1	No of public EV chargers in the city	Increasing	Reported via public EV charging websites plugshare and smart cities platform
3.2	Number of low emission vehicles (Hybrids, Electric, PHEVS, H2) in the city	Increasing	Transport for NSW data
3.2	Community emissions - Tonnes – CO2 per year	50% by 2030	Reported annually using data from publicly available resources
3.2	Council's operational emissions - Tonnes – CO2 - per year	50% by 2030	Reported annually using data from utilities and Council data
3.3	Average residential water consumption litres per person per day (L/p/day)	155 L/p/day	Reported via Hunter Water annual data for the LGA
3.3	Council's potable water use per year per population serviced	Reducing	Reported annually taking climate and population serviced into account

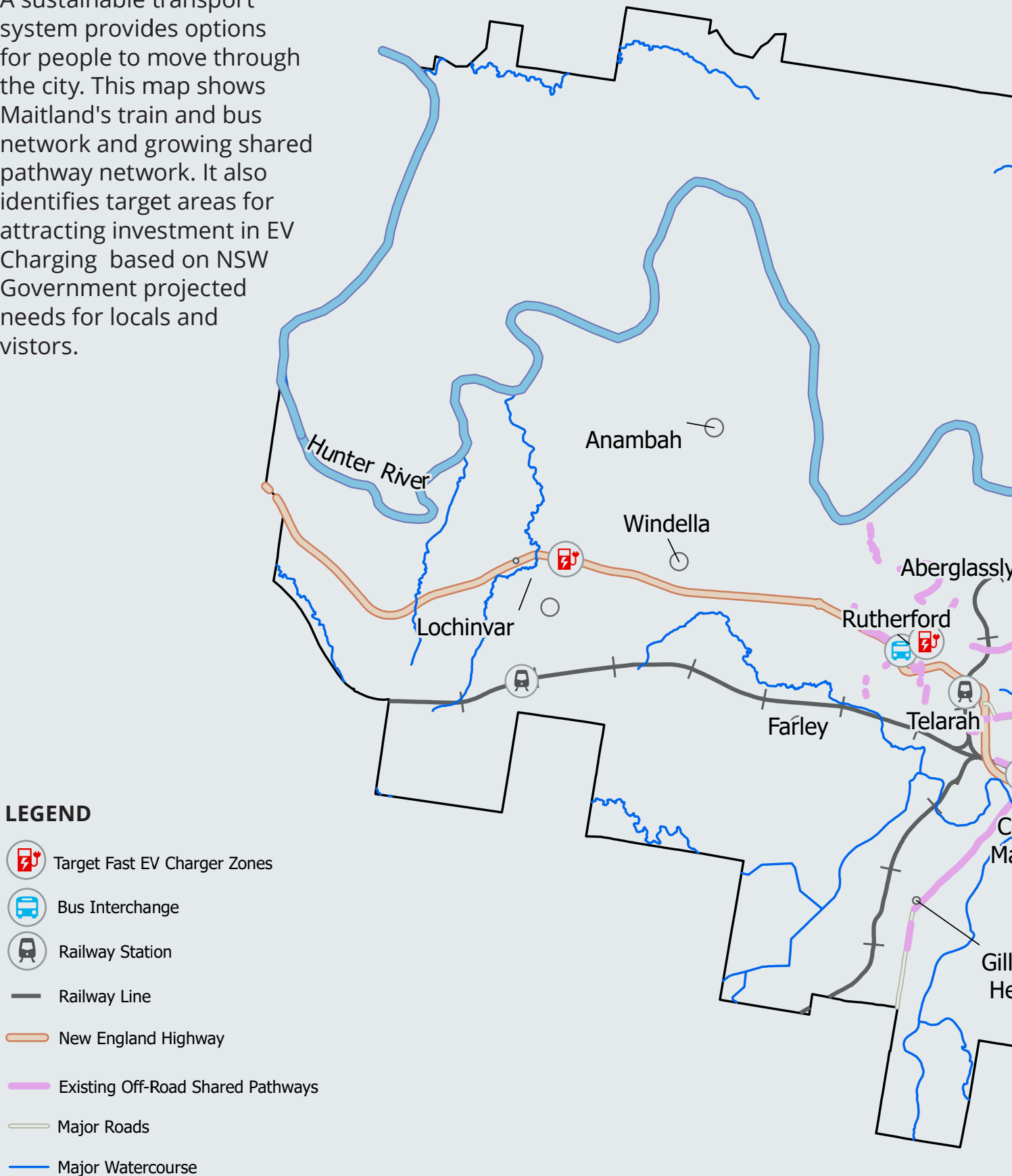
<sup>3</sup> [data.maitland.nsw.gov.au/pages/home](https://data.maitland.nsw.gov.au/pages/home)











*Considering how we use water even in times where storage levels are high sets us up for being better prepared when times of restricted supply occur. Also we need to think about how the way we use water can have impacts on water quality in our creeks and rivers*

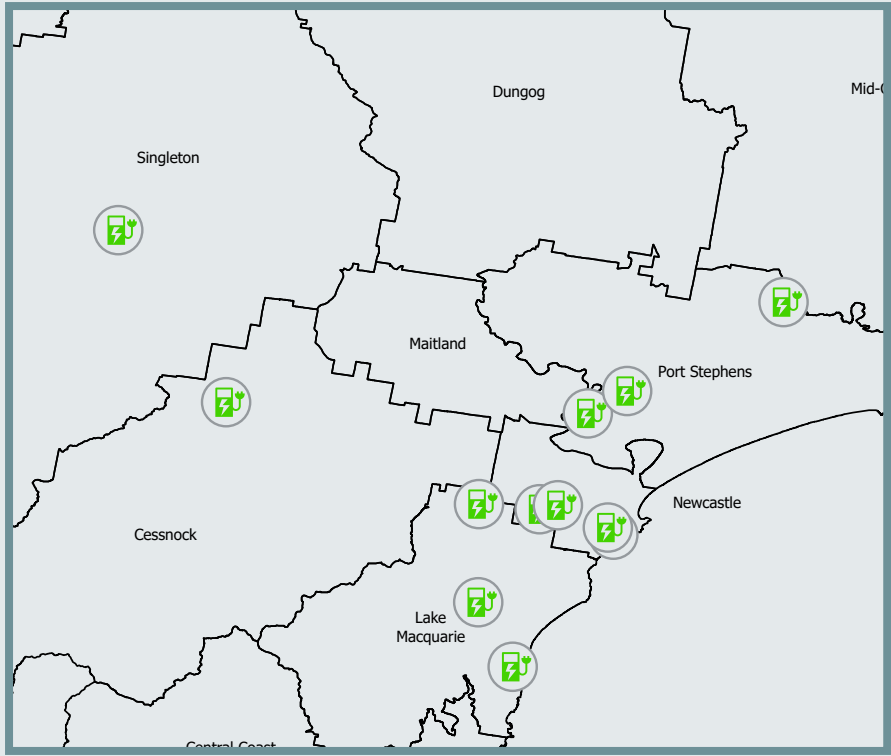
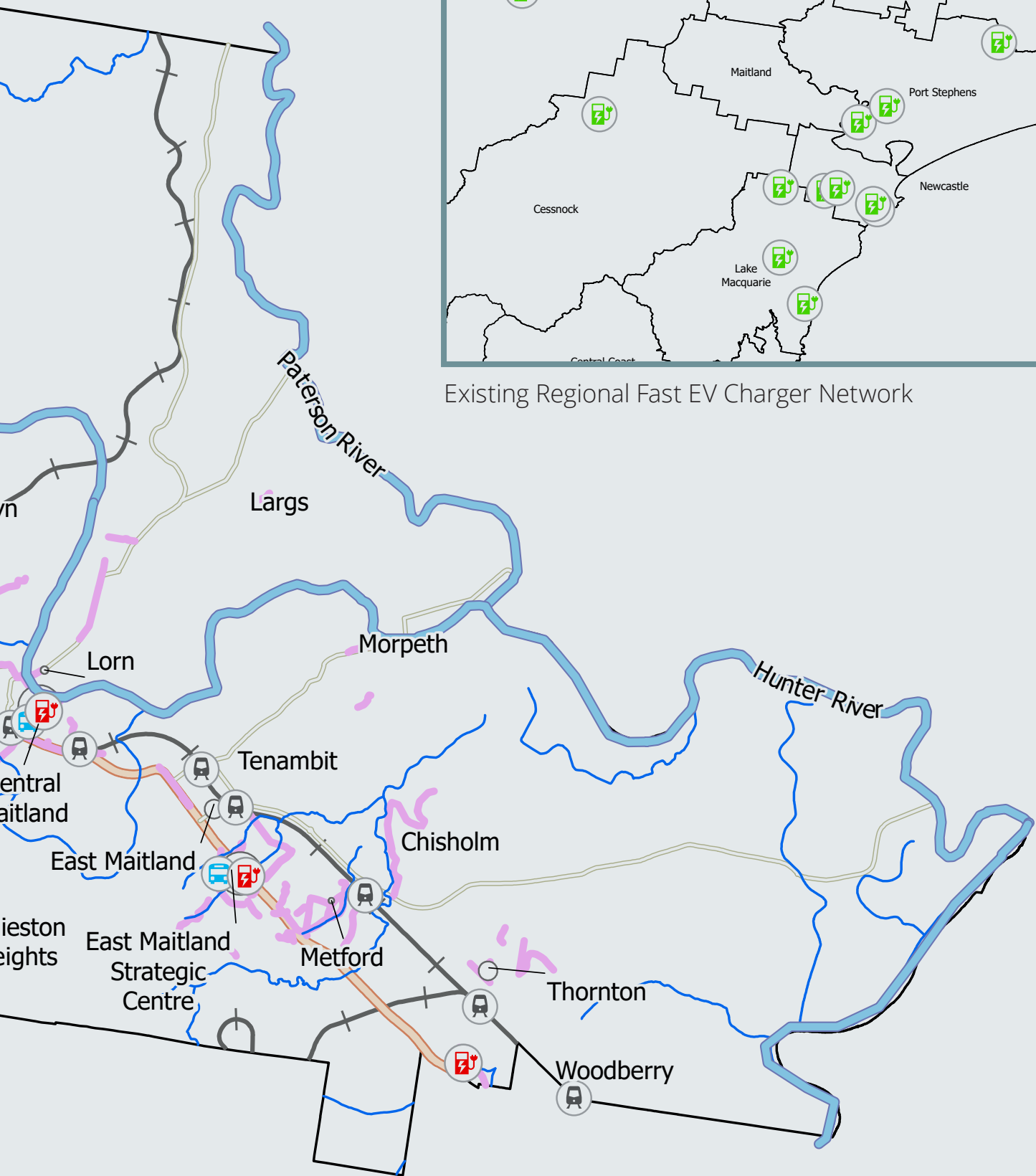
# SUSTAINABLE TRANSPORT MAP

A sustainable transport system provides options for people to move through the city. This map shows Maitland's train and bus network and growing shared pathway network. It also identifies target areas for attracting investment in EV Charging based on NSW Government projected needs for locals and visitors.



## LEGEND

-  Target Fast EV Charger Zones
-  Bus Interchange
-  Railway Station
-  Railway Line
-  New England Highway
-  Existing Off-Road Shared Pathways
-  Major Roads
-  Major Watercourse



Existing Regional Fast EV Charger Network



**11** SUSTAINABLE CITIES AND COMMUNITIES



**12** RESPONSIBLE CONSUMPTION AND PRODUCTION







## THEME 4: GOING CIRCULAR WITH WASTE

### OVERVIEW OF THE CURRENT STATE

Maitland's 35,000 properties have waste collected at the kerbside. Residual waste in the red bin goes to landfill, with recycling and garden organics going to reprocessing facilities outside the LGA. Our waste transfer station will bring some of this processing back to Maitland, creating jobs and better circular economy outcomes.

Recent community consultation showed the community is supportive of Council providing additional recycling, composting, and other services to enable 80% of household waste to be diverted from landfill, in line with National and NSW State Government targets.

The engagement also showed strong community support for improving access to local recycling and resource recovery facilities to reduce landfill.

Maitland currently achieves a 38% diversion of domestic waste from landfill.

There are opportunities for a reduction to waste to landfill, particularly food organics, soft plastics, textiles, and recyclables (cans, glass, cardboard etc) in the wrong bin. Capture and recycling of these materials will progress Maitland towards the 2030 target.



**35,000** properties have three bins



**1,200** new households are added to the collection service every year



**7,000** waste bins get serviced by Council's garbage trucks every day



**25,987 t** waste collected in 2021-22



**5,462 t** recyclables collected in 2021-22



**12,153 t** organics collected in 2021-22



**2,137** mattresses were collected for recycling in 2021-22 via the Mattress Muster program



Food waste makes up **24%** of the general waste bin by weight



A further **21%** by weight is recyclable material



Maitland is achieving a domestic resource recovery rate of approximately **40%**

## OUR CHALLENGES

- The Waste Management Centre is expected to reach its capacity in less than ten years
- The current diversion rate for domestic waste from landfill is 38%, which is significantly lower than the 80% target set by the State and Federal Governments
- Waste and resource collection vehicles and services will need to support strong population growth in the City
- Recycling rates are constrained by available end markets for use of recycled materials

## OUR OPPORTUNITIES

- Our Maitland Resource Recovery Facility, once built, will allow us to recycle more waste and divert what can't be recycled to landfill or alternative treatment facilities in the region, once they become available
- We can use our combined buying power between businesses, Council and residents, to increase demand for recycled products and materials
- Libraries are the original share economy and there are opportunities to increase reuse through borrowing programs

## WHAT DOES SUCCESS LOOK LIKE

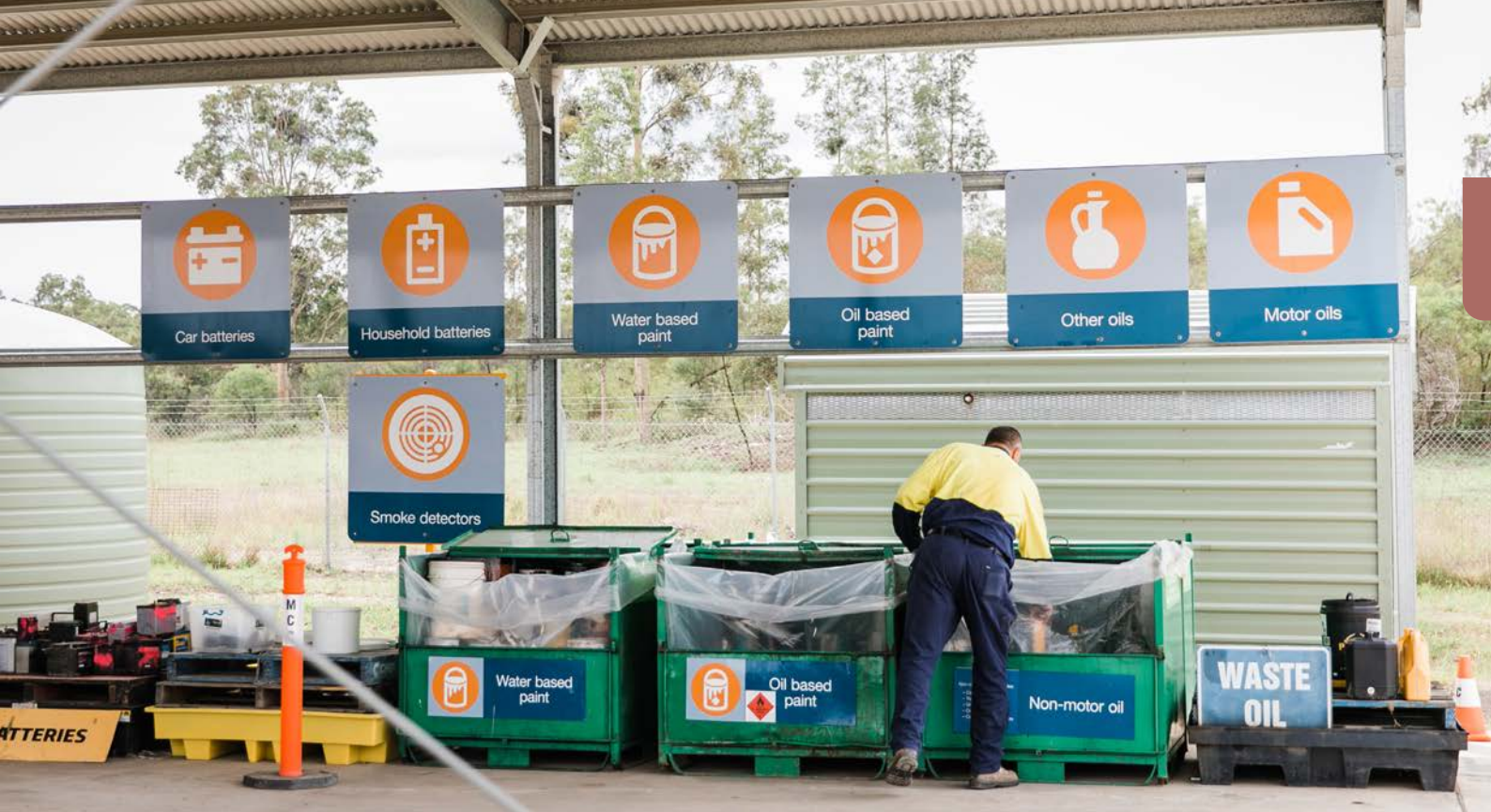
- ✓ Deliver efficient and effective waste management and recycling services that are accessible to all
- ✓ Contribute to a shift towards a circular economy in which resources are conserved, the value of materials is maximised and markets are created for reused, recycled and recovered resources and products
- ✓ A clean and well presented city where illegal dumping is being reduced

## TARGETS

- 4.1** Divert 80% of domestic waste from landfill by 2030
- 4.2** Use more recycled products
- 4.3** Reduce illegal dumping



*Recycled glass sand mix used for pipe bedding*



'Our local environment is free of litter and waste.'

'I have access to services and facilities that make it easy for me to reduce waste and recycle.'

'I can see Council using recycled and recyclable materials for equipment in parks.'

'I can see Council using a circular economy approach to reduce waste.'

**HOW COUNCIL WILL SHOW LEADERSHIP**

We will:

- 4.1.1 Start a food organics collection service from March 2025
- 4.1.2 Provide access to local recycling and resource recovery facilities for existing and emerging wastes within Maitland and via partnerships with others
- 4.2.1 Implement sustainable provisions within Council's procurement policy to support circular economy principles and maximisation of recycled content where fit for purpose and economically viable
- 4.2.2 Review and update our Manual of Engineering Standards (MoES) to facilitate use of recycled materials in Council and developer civil works
- 4.3.1 Develop and deliver a waste avoidance and reuse education program
- 4.3.2 Monitor and investigate illegal dumping and undertake compliance action to reduce illegal dumping



## WHY IT MATTERS

Each item we buy is produced from natural resources like wood that is grown or metals and plastics that are mined. In the past we have not always considered what will happen to items when they are no longer useful with materials ending up in landfill. This is referred to as a 'Take, Make, Waste' linear economy. This creates long term impact as materials decay and valuable materials like steel and aluminium are lost from the economy.

Recycling has been successful at keeping some materials out of landfill for longer. A circular economy builds on recycling to also focus on good design and recycling practices that can reuse materials many times over, reducing environmental impact and increasing the economic and social benefits that these resources provide.

Maitland City Council has a specific role as waste managers to keep things like metals, compostable food and garden waste separate so they can be turned into useful things. A circular economy also needs Councils, businesses and everyone to buy products that contain recycled materials. Supporting companies that allow for easy recycling of their products is something we need to consider when we shop.

## HOW WILL WE KNOW WE'RE IMPROVING?

We will report our progress via our Smart and Sustainable Cities Platform<sup>4</sup> to allow the community to view the latest information available. Headline indicators and trends we are aiming for will include:

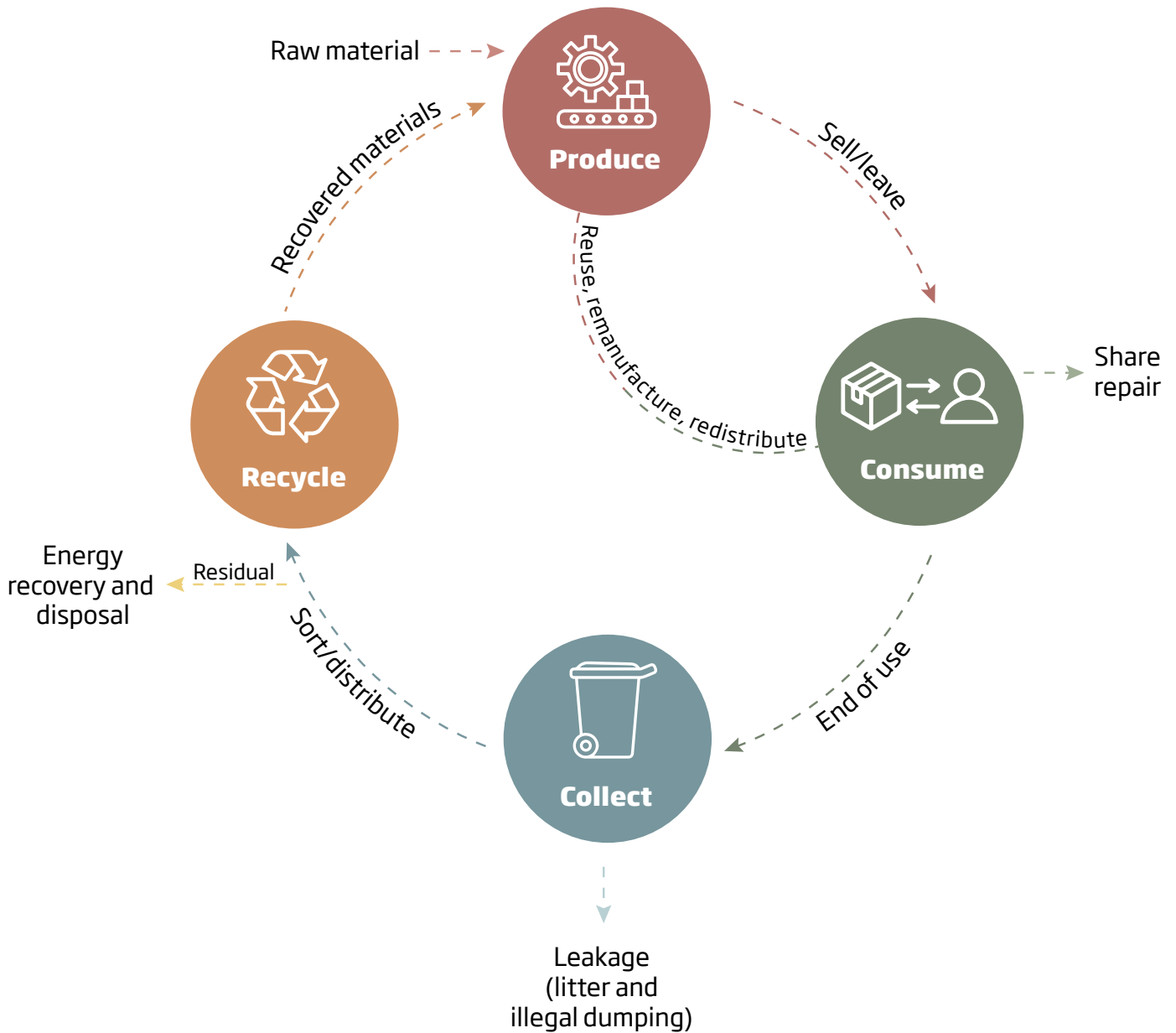
TARGET	INDICATOR	TREND	SOURCE AND REPORTING FREQUENCY
4.1	% waste diversion from landfill	80%	Using tonnages from our three bins and weighbridge to calculate our diversion % annually
4.1	% of food waste diverted	Increasing	Report food diversion % with periodic waste audits
4.2	% recycled materials in capital works	Increasing	Annual report the % of recycled materials used in council's construction projects
4.3	Tonnage of materials collected from illegal dumping sites	Decreasing	Report annually the amount of material collected from illegal dumping sites
4.3	% of illegal dumping incidents with infringements issued	Increasing	Report on number of public infringement notices issued

<sup>4</sup> [data.maitland.nsw.gov.au/pages/home](https://data.maitland.nsw.gov.au/pages/home)

## What is the circular economy?

A circular economy is an economic system aimed at minimising waste and promoting the continual reuse of resources. It aims to keep products, equipment and infrastructure in use for longer, thus improving the productivity of these resources.

Waste materials and energy be used for other processes: either a component or recovered resource for another industrial process or as regenerative resources for nature (e.g. compost).

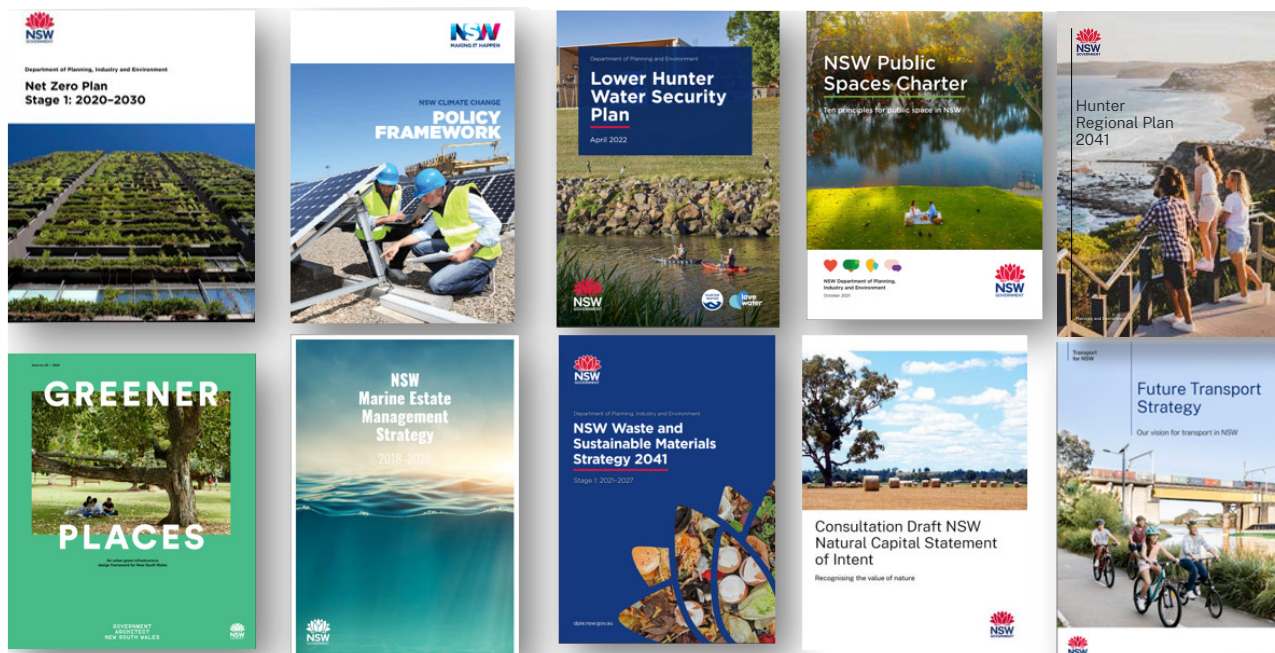




# HOW THE STRATEGY ALIGNS WITH OTHER POLICIES AND PLANS











The Environmental Sustainability Strategy has been prepared to ensure consistency and compliance with national, state, regional and local policies and plans relevant to environmental sustainability. A summary of how the themes and targets address different policies and plans is provided in the following table.

## NSW POLICY CONTEXT







MAITLAND THEME AND RELEVANT SDGS	MAITLAND TARGETS	MAITLAND COMMUNITY STRATEGIC PLAN	HUNTER REGIONAL PLAN 2041
<b>1. GREEN &amp; BLUE MAITLAND</b>   	1.1 Deliver functional wildlife corridors  1.2 Improve waterway health  1.3 Increase community participation in environmental events and volunteering		
<b>2. LIVEABLE &amp; RESILIENT COMMUNITIES</b>   	2.1 Increase community preparedness for natural hazards  2.2 Understand and plan for our climate risks  2.3 Aim for 30% canopy cover in residential areas		
<b>3. LIVING SUSTAINABLY</b>     	3.1 Increase active and sustainable transport opportunities  3.2 Reduce greenhouse gas emissions by 50% by 2030 and to net zero by 2050  3.3 Reduce per capita water consumption from potable sources		
<b>4. GOING CIRCULAR WITH WASTE</b>   	4.1 Divert 80% of domestic waste from landfill by 2030  4.2 Use more recycled products  4.3 Reduce illegal dumping		

**REGIONAL POLICY ALIGNMENT** (INCLUDING CROSS REFERENCE TO PLAN ACTIONS OR TARGETS WHERE RELEVANT)

GREATER NEWCASTLE METROPOLITAN PLAN	NSW GREENER PLACES INFRASTRUCTURE FRAMEWORK	NSW PUBLIC SPACES CHARTER	NSW MARINE ESTATE MANAGEMENT STRATEGY	NATIONAL STRATEGY FOR DISASTER RESILIENCE	HUNTER AND CENTRAL COAST ENABLING REGIONAL ADAPTATION	LOWER HUNTER WATER SECURITY PLAN	FUTURE TRANSPORT STRATEGY 2056	NET ZERO PLAN STAGE 1: 2020 - 2030	WASTE & SUSTAINABLE MATERIALS STRATEGY 2041

For more information about the  
Environmental Sustainability Strategy

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