



Macquarie River - Photo by David McKellar

# State of the Environment Snapshot 2023-24



BATHURST  
REGIONAL  
COUNCIL

# Bathurst Regional LGA



The local community helped develop the [“Our Region, Our Future” Bathurst 2022 Community Strategic Plan](#) which includes an agreed pathway to help protect our environmental values.

The Community Strategic Plan identifies five strategies which underpin the objective to Strengthen Environmental Stewardship:

- Protect and improve natural areas and ecosystems, including the Macquarie River – Wambuul and other waterways.
- Improve water security.

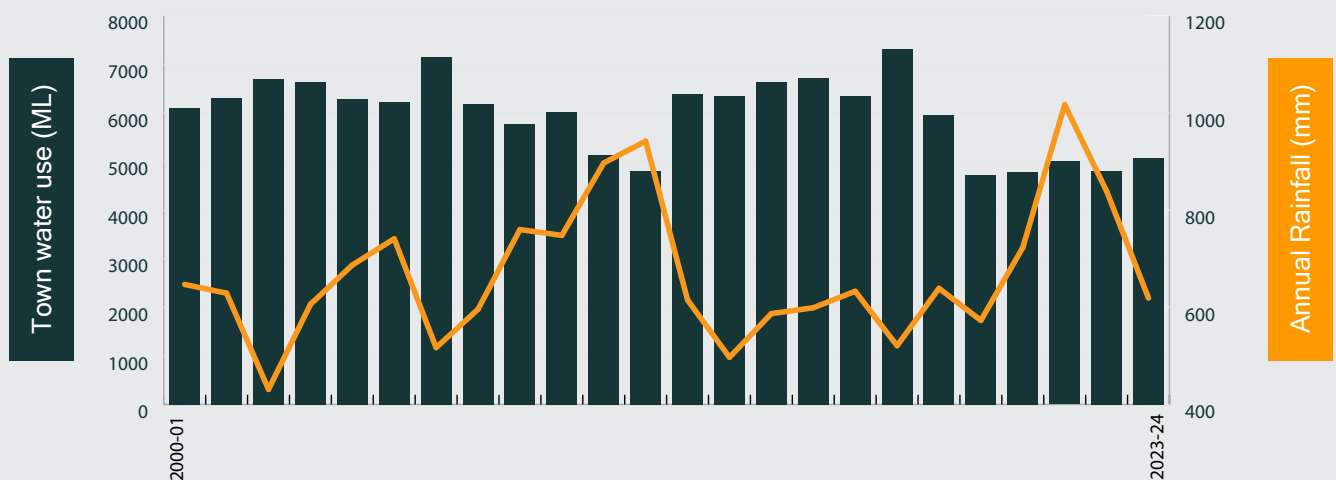
- Minimise the City’s environmental footprint, live more sustainably and use resources more wisely.
- Protect and improve the region’s biodiversity.
- Increase resilience to natural hazards and climate change.

The 2023–24 State of the Environment Report helps us track our progress towards this objective.





# Water



Bathurst town water supply comes from Chifley Dam and the Fish River System. Chifley Dam volume remained at around 100% for the full reporting year.

Water use of the Bathurst Community – water use by households is strongly correlated to rainfall patterns.

level  
**2A**

water restrictions  
since 17 March  
2022

**243**

average litres  
per person per  
day

**14%**

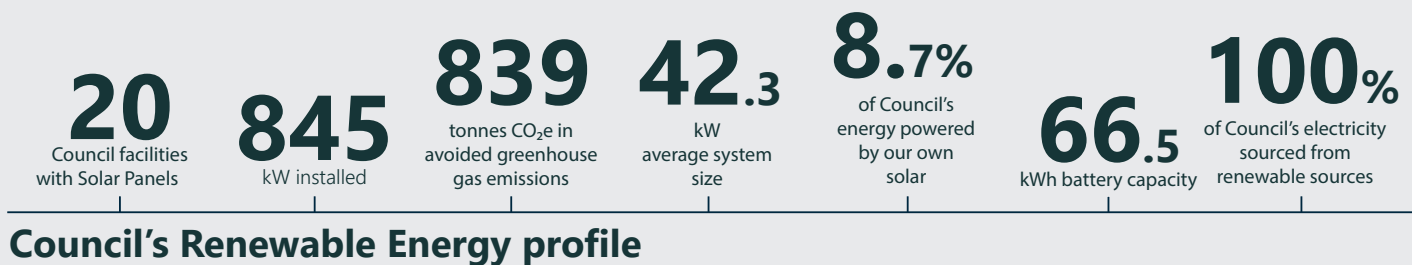
more domestic water  
used than previous  
year

**28**

litre per person  
per day increase  
compared to the  
previous year

**217**

thousand  
litres of water used  
per household last  
year

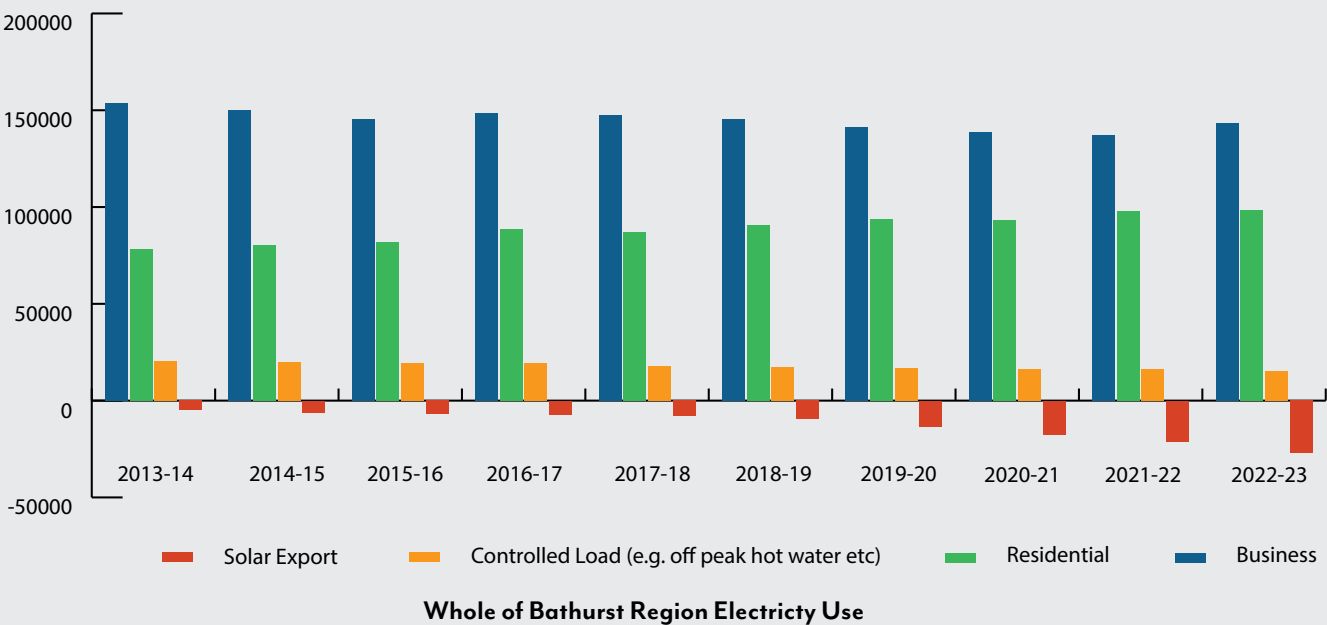


# Energy

Overall electricity use for the whole of the Bathurst Regional Council Local Government Area has remained quite static since 2013-14 despite a growing population. Business use has declined by about 7% over this time while residential use (including controlled load) has increased by almost 26%. Energy exported to the grid from small scale solar continues to increase.

This year Council used 64,455 gigajoules of energy and spent \$4.1 million on electricity and gas. This is a decrease of almost 11% over Council's baseline year in 2018-19. Per resident the decline is even more pronounced, with a reduction of 14 % to 1445 megajoules per resident.

**Helpful hint: One MW = 1 Megawatt or one million watts**



**38.1%** of  
Australia's electricity  
came from **renewable  
sources**.

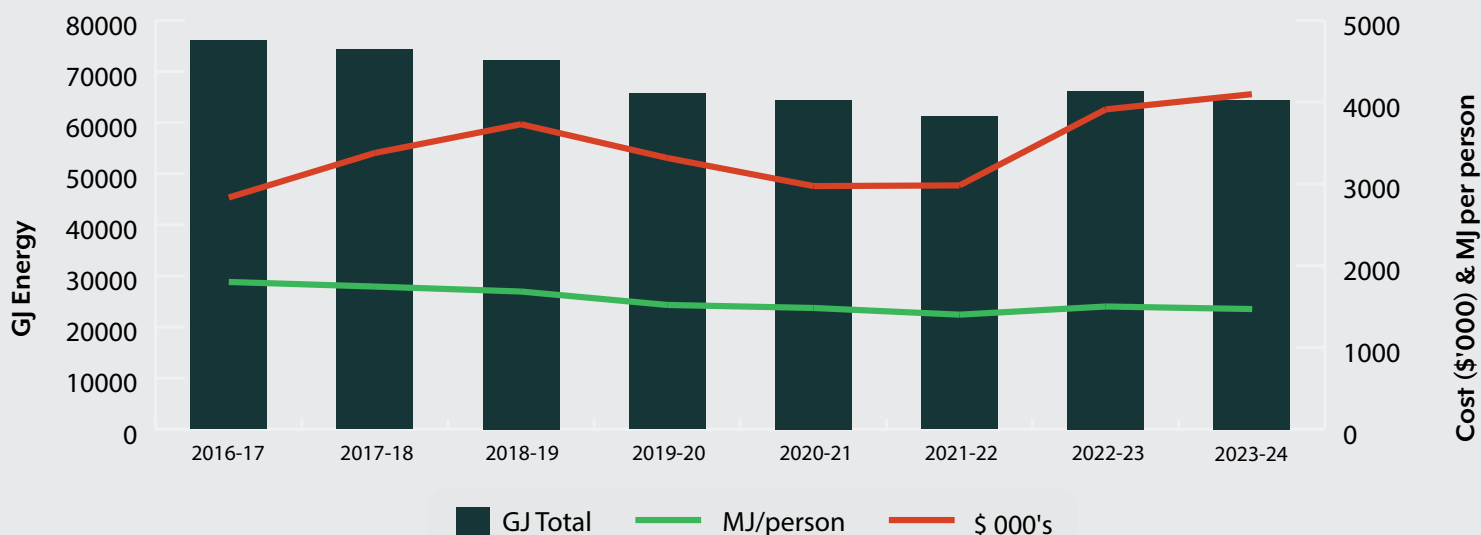
Renewable energy  
generation nationally  
**grew 4%**.

postcode **2795**

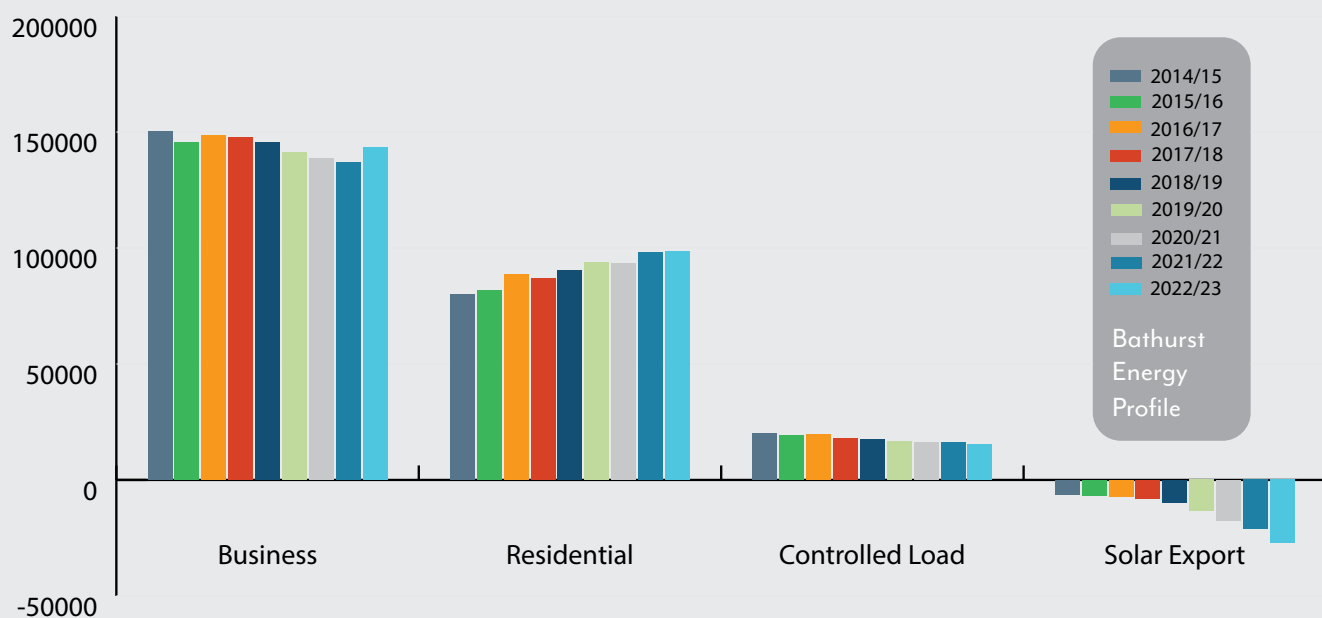
7,397 small  
solar systems  
= 51.4 MW =  
17% increase  
from 2022-23

**56.7%** of  
Australian Energy was  
from Coal.

Energy from fossil  
fuels **declined  
2.7%** nationally  
in the last year and  
**31%** since 2012.



Energy use and cost at Council facilities, 2023-24



Whole of Bathurst Region energy use and solar exports (MWh) (Source Essential Energy)





Our LGA has  
**17 public destination**  
and **11 fast** electric  
vehicle chargers.

Bathurst Regional Council has purchased a SEA Electric Truck – it is used by the waste management team to deliver and collect bins, collect waste from the town centre and to pick up illegally dumped material in the Bathurst area. The truck can travel up to 200km on a single charge and recharges each day at the Waste Management Truck shed once the daily run is finished. The truck shed has solar panels so that most of the electricity used to charge the truck is sourced from Council's own solar.

Council has an Electric Vehicle Transition Plan. At the end of the reporting period Council's vehicle fleet includes:

- |   |  |   |                               |
|---|--|---|-------------------------------|
| <b>2</b> electric pool vehicles (or EV's) | <b>1</b> plug in hybrid electric vehicle (or PHEV) | <b>6</b> lease-back hybrid electric vehicles (or HEV's) | <b>1</b> light electric truck |
|---|--|---|-------------------------------|



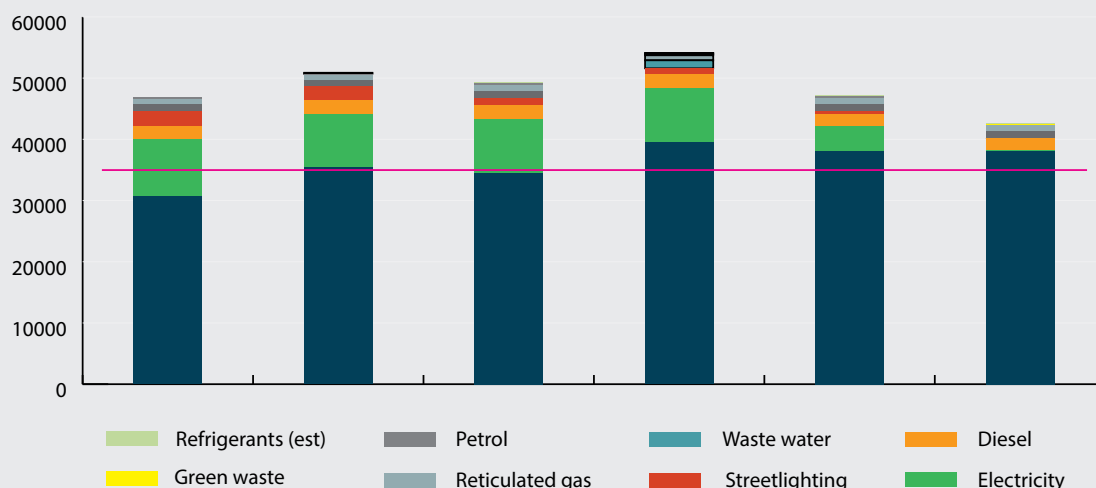
New charging stations at Elizabeth Street Car Park



New landfill gas flare at Council's Waste Management Facility

# Emissions

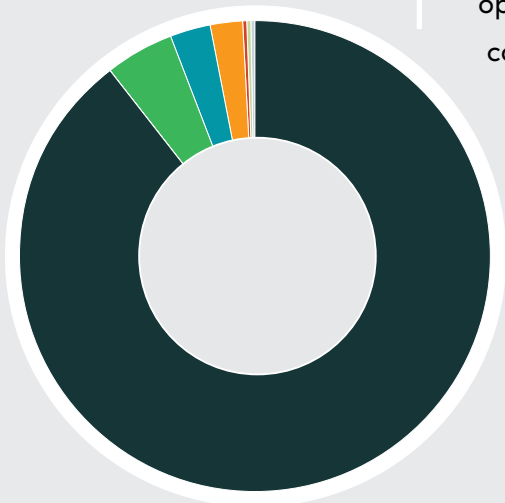
## Greenhouse gas emissions - Council energy and fuel (Scope 1 & 2)



### Note:

Scope 1 emissions refer to direct emissions such as from a tail pipe or a gas hot water system, whilst Scope 2 emissions include electricity from the grid.

**0.95 tonnes** carbon dioxide (equivalent) emissions per resident, a 33% decrease on the previous year.



Total emissions from Council operations **declined by 9.3%** over the previous reporting period, with emissions from energy and fuel used in Council operations **falling by 59%** due to continued improvements in efficiency and the purchase of renewable electricity.

### BRC CO<sub>2</sub> emissions

Refrigerants (est) 69 tonnes	Waste water 1144 tonnes
Green waste 111 tonnes	Diesel 2047 tonnes
Petrol 155 tonnes	Electricity 14 tonnes
Reticulated gas 909 tonnes	Landfill waste (net) 38111 tonnes

Most of Council's greenhouse gas emissions come from fugitive emissions from community waste sent to the Bathurst landfill. A methane flare burns some of the landfill gas - transforming the gas from methane to carbon dioxide which has a much lower atmospheric warming impact. Historically this system only captured a small proportion of the landfill gas, however during the reporting period Council engaged Landfill Gas Industries to construct a new landfill gas collection system and methane flare which will significantly reduce overall Council emissions. The new system was commissioned in March 2024 and has already had a significant impact, flaring 1,030,060 m<sup>3</sup> of landfill gas by the end of the year.

## Did you know?

Did you know? A warming climate results in more extremes of weather. For every degree of warming, the atmosphere can hold 7% more moisture and more storm energy which increases the risk of intense rainfall events and dangerous storms.

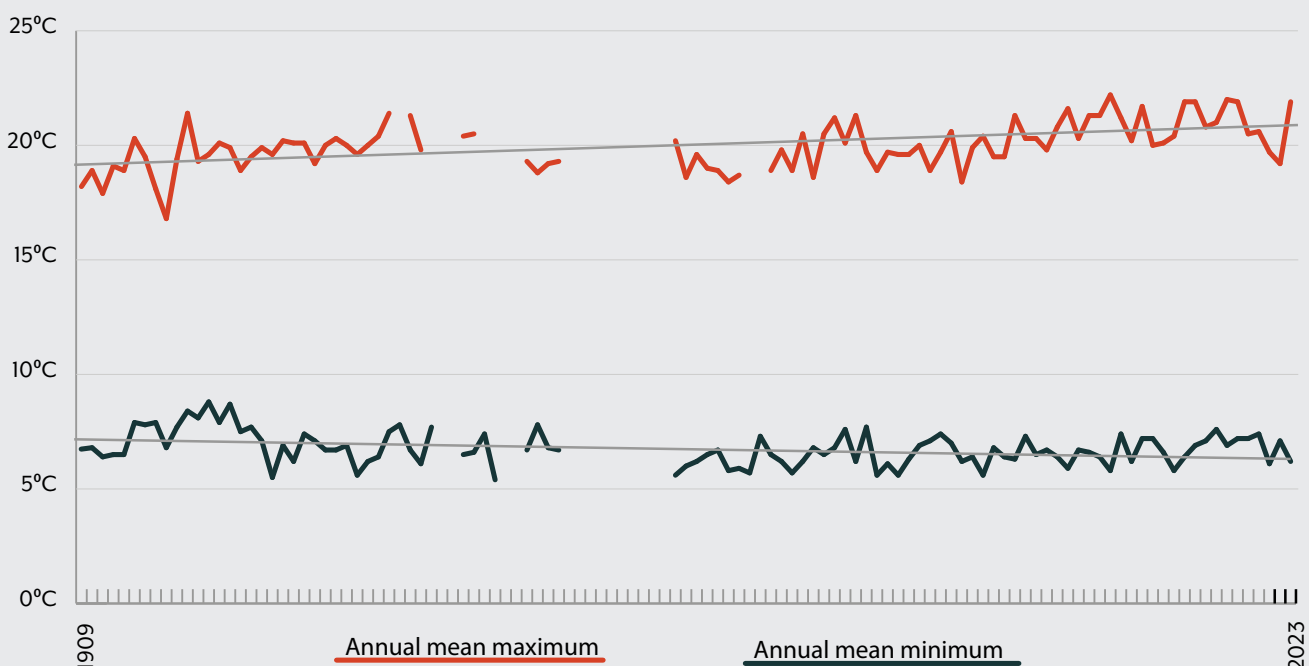
The long-term trend is for increasing average maximum temperatures. Temperature data, recorded at the Bathurst Agricultural Research station since 1908, demonstrates that there has been a clear shift in average daily maximum temperature.

**Weather** conditions (cold and hot temperatures and drought) **influence energy use** at Council operations by the need to filter and pump the town water supply and to **heat and cool** Council facilities.

# Climate

**Weather** is the daily temperature, wind, rain that we experience.

**Climate** is the trend or average over a long period of time.



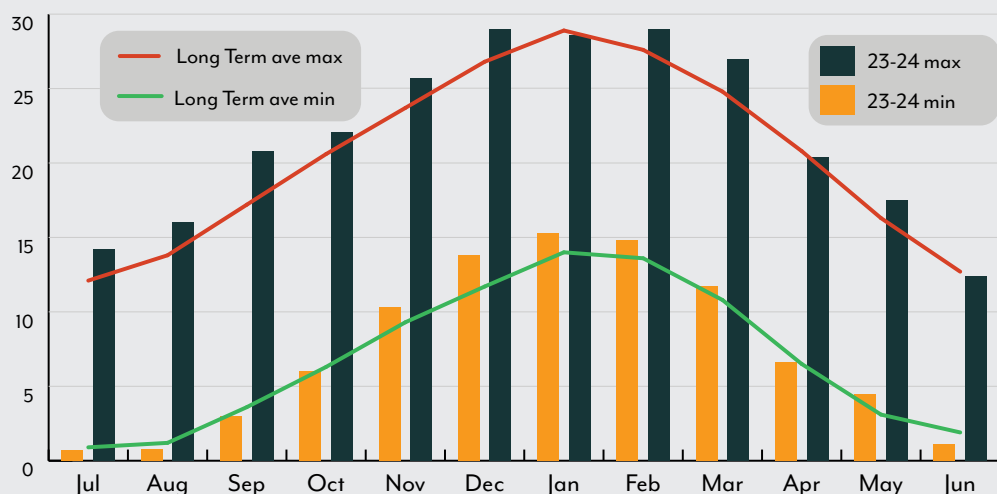
Annual (calendar year) daily mean max and min temperatures for Bathurst Research Station





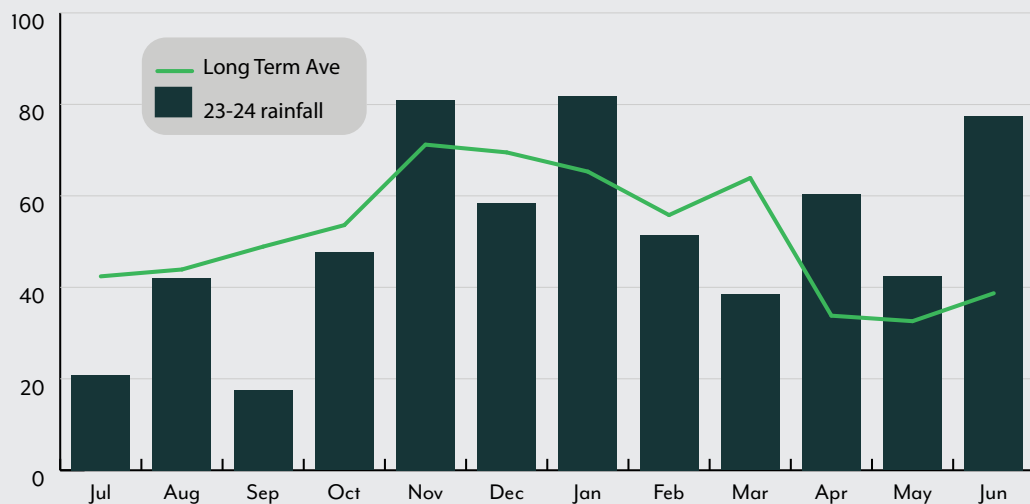
Photo by David Roma Photography

# Weather



Maximum and minimum temperatures compared to long term average  
Bathurst Airport (1990 to present)

Temperatures during 2023-24, were warmer than average, while rainfall was near average after three years of significantly higher than average rainfall.



2023-24 Monthly Rainfall

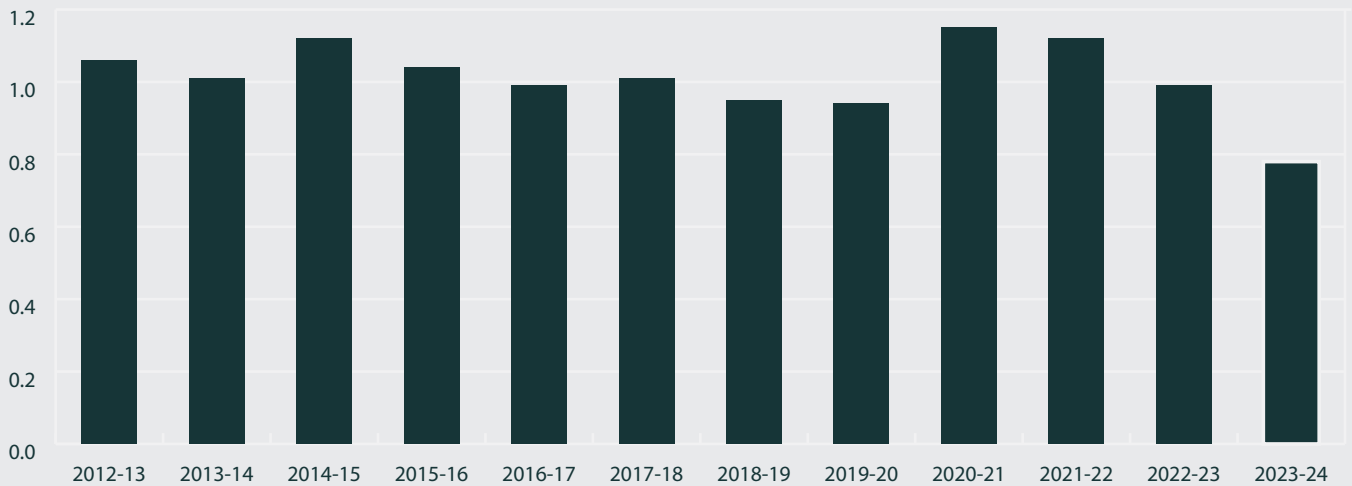
Bathurst Airport Long Term Average (1994 to present)

## NOTE:

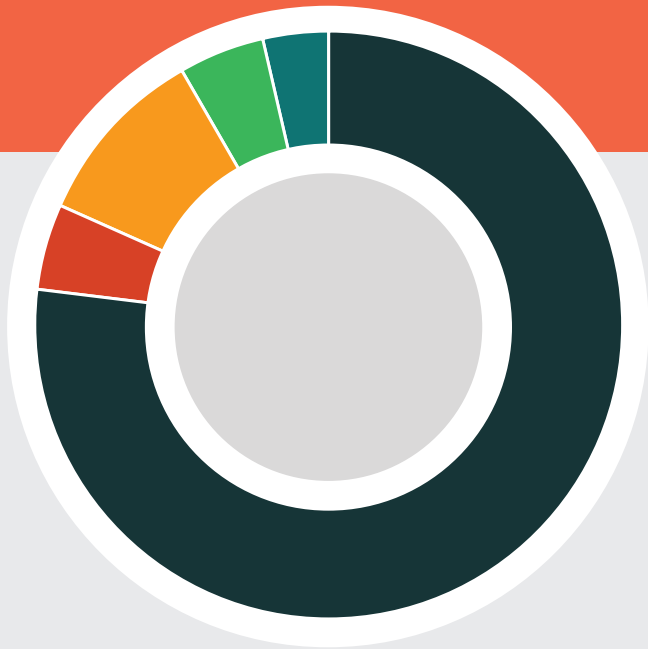
Due to many data gaps at Bathurst Ag monitoring station in recent times data from Bathurst Airport monitoring station has been used.

## Waste to landfill per resident

Tonnes per person



## Waste



- 35,016 tonnes general waste to Landfill (kerbside and delivered to WMC)
- 2,141 tonnes green waste delivered to WMC
- 4,567 tonnes organics kerbside collection
- 2,149 tonnes volume of material collected kerbside for recycling
- 1,593 tonnes volume of recycled material at WMC

# 23%

of kerbside collected material and waste delivered to the Waste Management and Transfer stations was diverted from landfill.

Council received **147 complaints** regarding illegal waste disposal and land pollution during the reporting period.

Council works with other agencies including the NSW Environment Protection Authority, Forestry Corporation and NSW Police and the local community to **monitor** activity, and to **identify** and **penalise** illegal dumpers or litterers.





# Sustainability

Bathurst was named the New South Wales Tidy Town for 2023 in recognition of the strong collaboration between the community and Council in environmental sustainability. Council has several overarching strategic documents and plans that direct implementation of projects to make Bathurst a more liveable, healthy, and sustainable town. All environmental sustainability programs are facilitated through Council's Sustainable Bathurst Team with collaboration from other Council departments and community partnerships. Projects like Waste 2 Art, Banishing Bathurst Butts, and River Connections target the impact of litter and waste on our environment. Engaging community through quality education, interactive events, workshops, and improved infrastructure is embedding community understanding and establishing social norm expectations on litter and waste management. The results are improved aquatic habitat, water quality, and health and wellbeing of our community.

Other Sustainable Bathurst projects like Water Let's Make it Last, Sustainable Scallywags, Council's Conservation Volunteer Program and Building Momentum to Net Zero are all projects that demonstrate Bathurst's commitment to a more sustainable future. Producing and using clean energy, conserving water in a dry climate, consuming responsibly, improving aquatic and terrestrial habitat through the planting of locally grown endemic seedlings and educating the next generation are actions and behaviours that Sustainable Bathurst strives to continually improve.



Images courtesy of Gerarda Mader - Walang  
Glanmire NSW RFS Brigade/Napoleon Reef Landcare



## Hillview Estate Reserve Napoleon Reef Ecological Burn Program

In May 2024, Council with the assistance of the NSW Rural Fire Service - Chifley Lithgow District, Napoleon Reef Landcare, Napoleon Reef Residents Association and Napoleon Reef landholders undertook an ecological burn at Hillview Estate Reserve at Napoleon Reef.

In Australia, fire is a natural event that has changed and shaped the Australian landscape over time. For many vegetation communities including that at Hillview Estate Reserve – a Red Stringybark, Brittle Gum & Inland Scribbly Gum Dry Open Forest, fire is an important ecological process that shapes relationships between native plants, animals, and their environment.

This ecological burn was undertaken in accordance with the Hillview Estate Reserve Ecological Burn Plan which was adopted by Council in 2019. The plan is based on a flora survey undertaken at the reserve by Napoleon Reef Landcare and includes guidance on techniques and safeguards to implement the burn.

A low intensity, cool burn was carried out to encourage the regrowth of native herbs, forbs and grasses, with the vegetation purposely burnt in a patchy mosaic manner so that only approximately 50% of the plot was burnt. The works will also assist in reducing the fuel build up at the reserve and the risk of an uncontrolled bushfire occurring in the hotter months.

# Biodiversity



## Flying Fox habitat restoration

In 2022, Bathurst Regional Council secured funding through the Local Government NSW Flying-Fox Camp Habitat Restoration Program. The grant is helping fund the environmental restoration of 700m of flying-fox or budharu (the Wiradjuri word for flying-fox) habitat along the Wambuul Macquarie River in Bathurst. The project site is an area of high conservation value as it is a seasonal camp for the Little-red Flying-fox (*Pteropus scapulatus*) and the threatened Grey-headed Flying-fox (*Pteropus poliocephalus*).

Revegetation works commenced in October 2023 with the planting of 3,500 native riparian and roosting specific species including She-oak and Ribbon Gum. The work was done by community and school volunteers, along with local environmental conservation contractors.

Community education and engagement has played a big part in the success of the project with Council-hosted community and school's tree plantings days, Bat Night @ Kings Parade (a flying-fox information evening), and digital media that focuses on raising awareness of flying-foxes within the community.



Each year, Bathurst residents participate in the annual Aussie Bird Count which runs for one week each October as part of a national citizen science project. Council has coordinated the local effort since 2015.

## Aussie Bird Count

**81**

participants  
(down 40% from 2022)

**282**

Surveys submitted  
(down 30% from 2022)

**127**

different species of  
bird recorded

**6**

different  
threatened species  
recorded

**9,792**

birds counted in the  
October 2023 count  
(down 22% from 2022)