

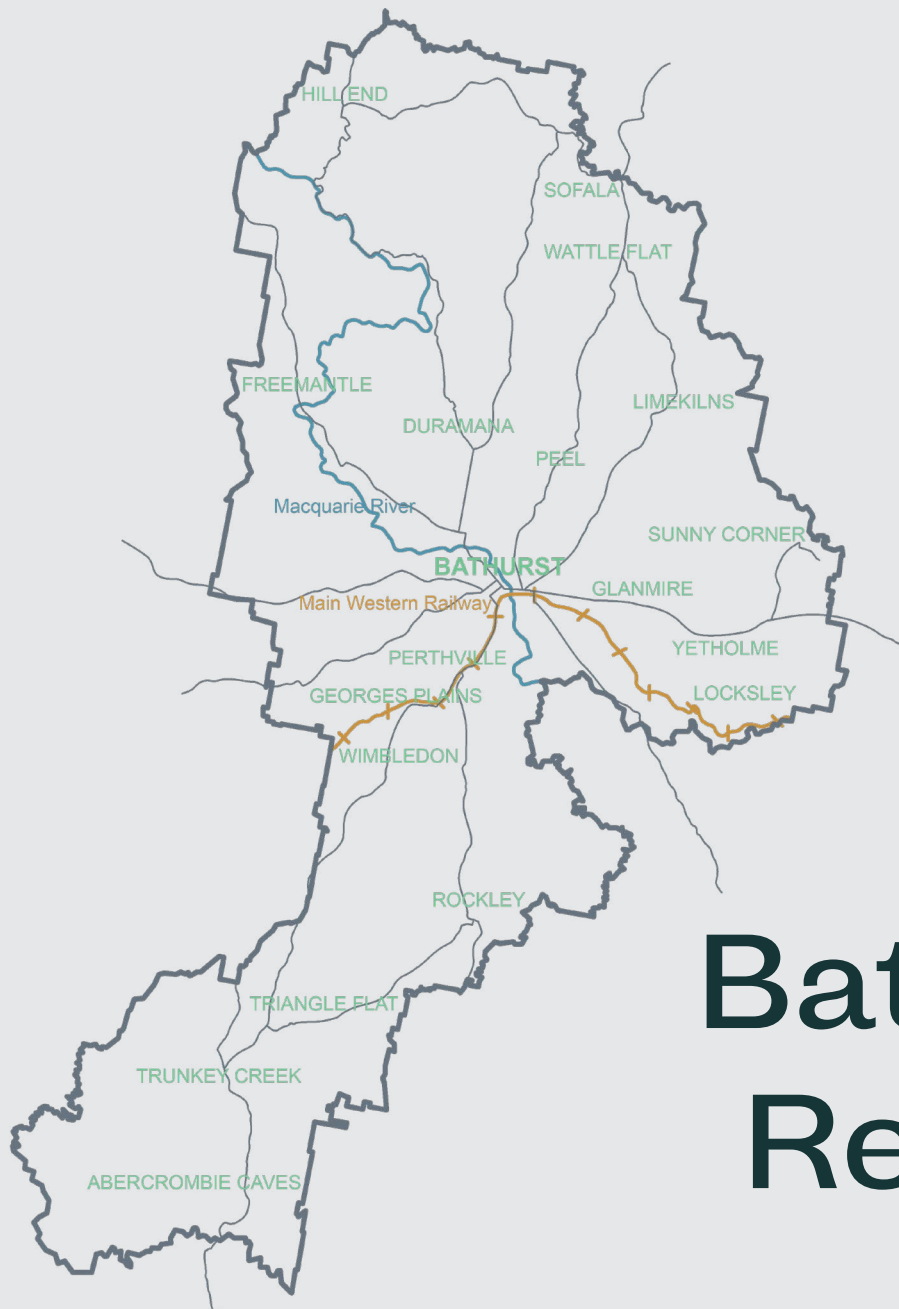


Koala Yarras Lane, Bathurst — Photo by Caroline Forest

State of the Environment Snapshot 2022-23



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:

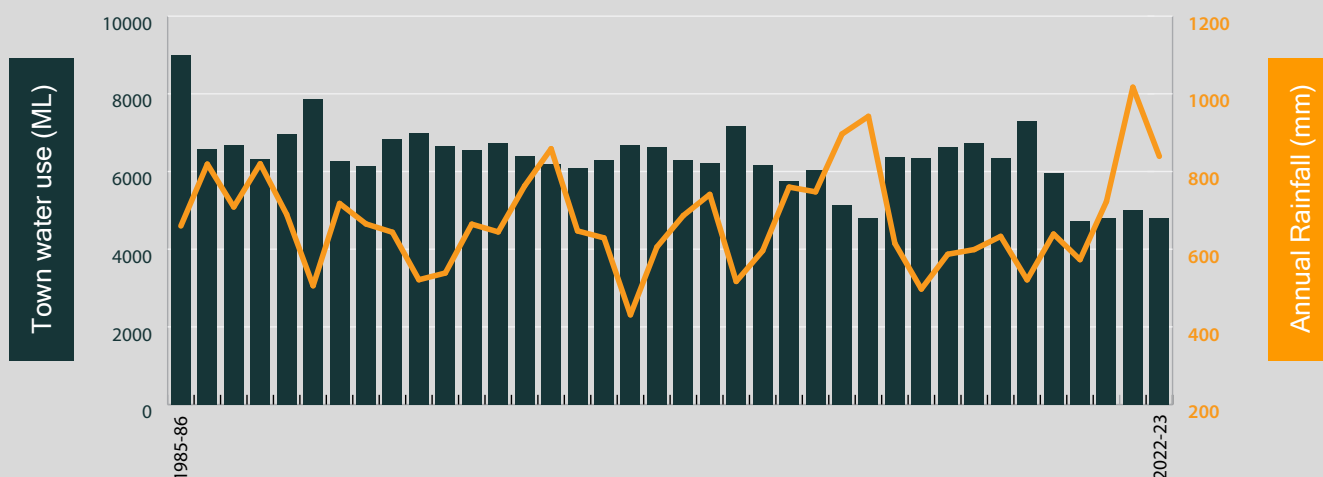
- Protect and improve natural areas and ecosystems, including the Macquarie River – Wambuul and other waterways.
- Improve water security.

- 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 2022–23 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. Higher than usual rainfall over the last three years has kept town water use at below average levels despite a lifting of water restrictions.

**level
2A**

water restrictions
since 17 March
2022

189

average litres
per person per
day

6%

more domestic water
used than previous
year

9

litre per person
per day increase
compared to the
previous year

192

thousand
litres of water used
per household last
year

18

Council facilities
with Solar Panels

765

kW installed

816

tonnes CO₂e in
avoided greenhouse
gas emissions

42.5

kW
average system
size

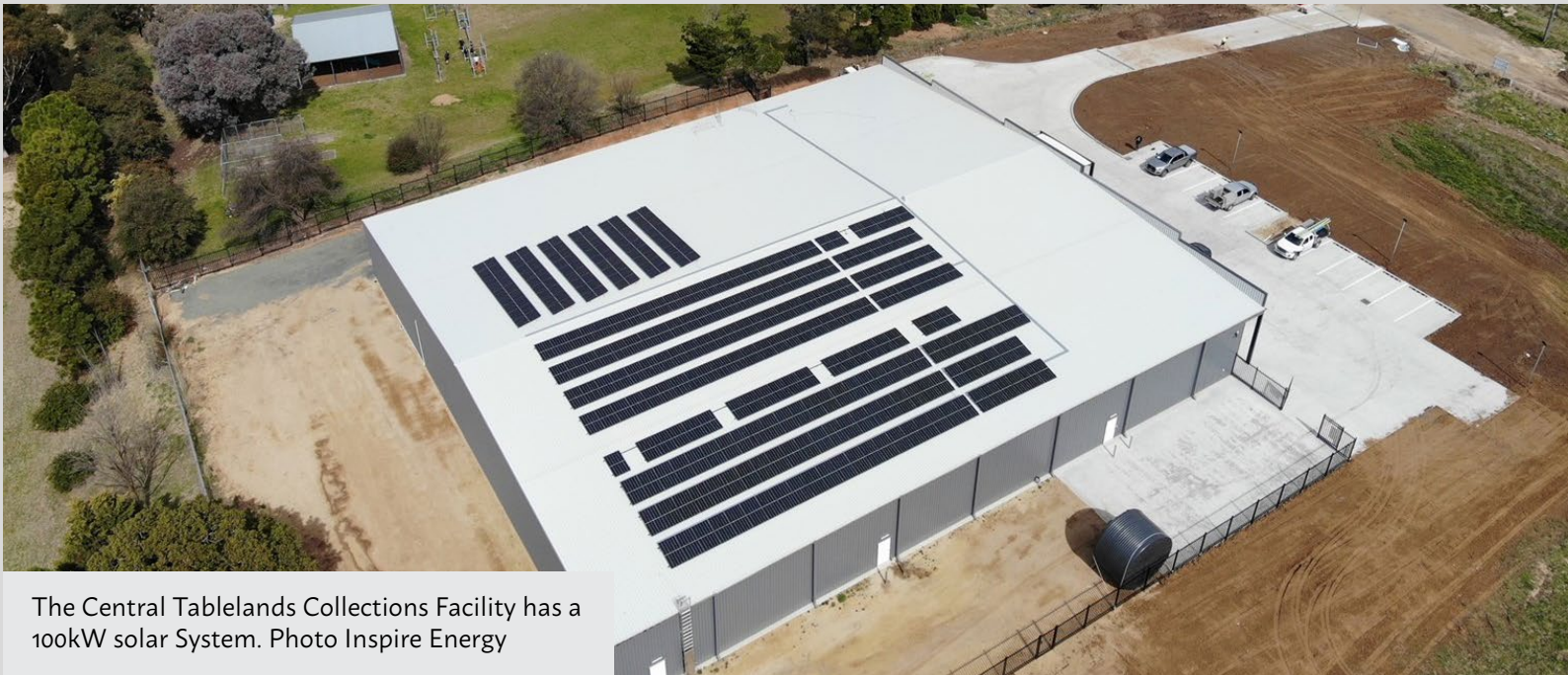
7.8%

of energy
powered by our
own solar

50.5

kWh battery capacity

Council's Renewable Energy profile



The Central Tablelands Collections Facility has a 100kW solar System. Photo Inspire Energy

Energy

RENEWABLE ENERGY ACTION PLAN

Adopted June 2020:

- Target of 15% improved electricity efficiency 2018-19 by 2023
- 25% of Council operations powered by Renewable Energy by 2023 and 50% by 2025

1.07 tonnes

carbon dioxide
(equivalent) emissions per
resident, a 14% decrease
on the previous year.

After five years of declining energy use at Council facilities, energy consumption rebounded in the reporting period to pre-COVID levels. This year Council used 66,000 gigajoules of energy and spent \$3.9 million on electricity and gas.

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 11% over this time while residential use (including controlled load) has increased by almost 16%. Energy exported to the grid from small scale solar continues to increase.

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

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

Bathurst LGA has:

13 public destination

+ 7 fast electric vehicle chargers

As of 1st January 2023 Council facilities are now powered by 100% renewable electricity, meaning Council has met and exceeded the renewable electricity target of 50% renewable electricity by 2025, two years early.

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

postcode **2795**

6,654 small
solar systems =
44.0 MW = 14%
increase from
2022-23

National energy use 2022-23

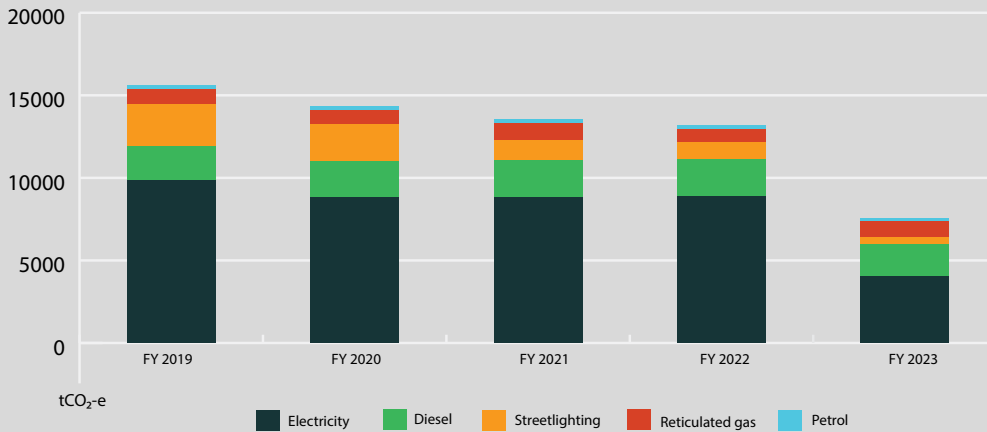
36.7% of Australia's electricity came from **renewable sources**.

Renewable energy generation **grew 16%**.

58% of Australian Energy was from Coal.

Energy from **fossil fuels declined 3.4%** in the last year and 26% since 2012.

Most of Council's emissions arise 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, however this system only captures a small proportion of the landfill gas. During the reporting period Council commenced planning for a significant upgrade of the landfill gas collection system and methane flare which, once constructed, will significantly reduce overall Council emissions.

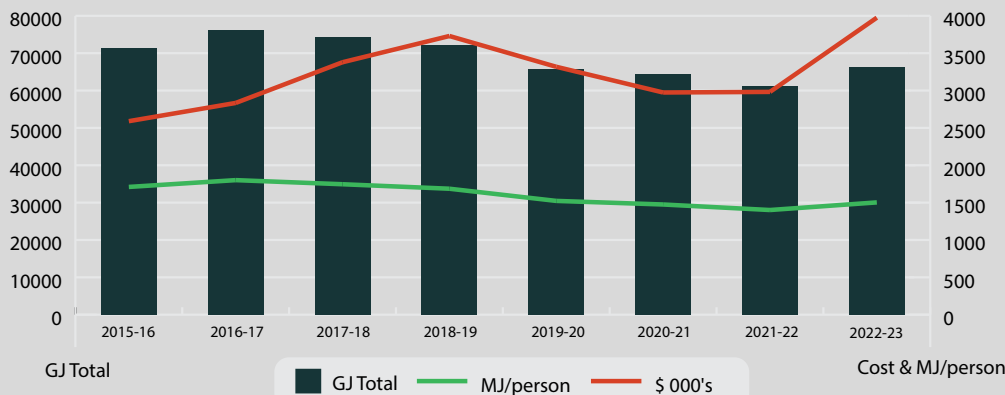


Greenhouse gas emissions - Council energy and fuel (Scope 1 & 2)

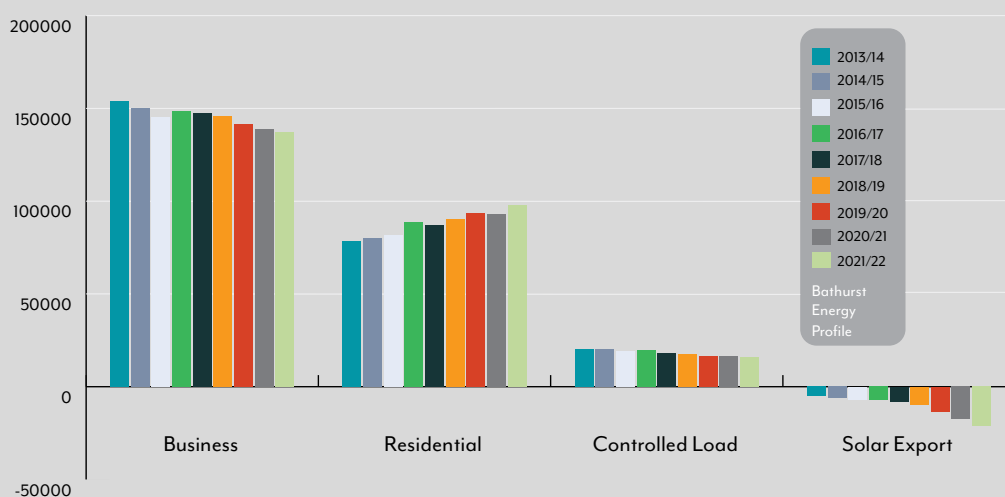
Total emissions from Council operations **declined by 15%** over the previous reporting period, with emissions from energy and fuel used in Council operations **falling by 43% over the previous year** due to continued improvements in efficiency and the purchase of renewable electricity.

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 those from the power station that supplies our energy.



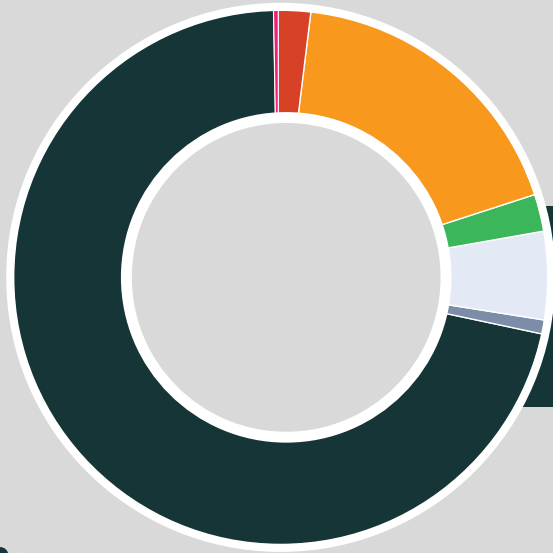
Council Facility Energy Use and Cost



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

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.



BRC CO₂ emissions

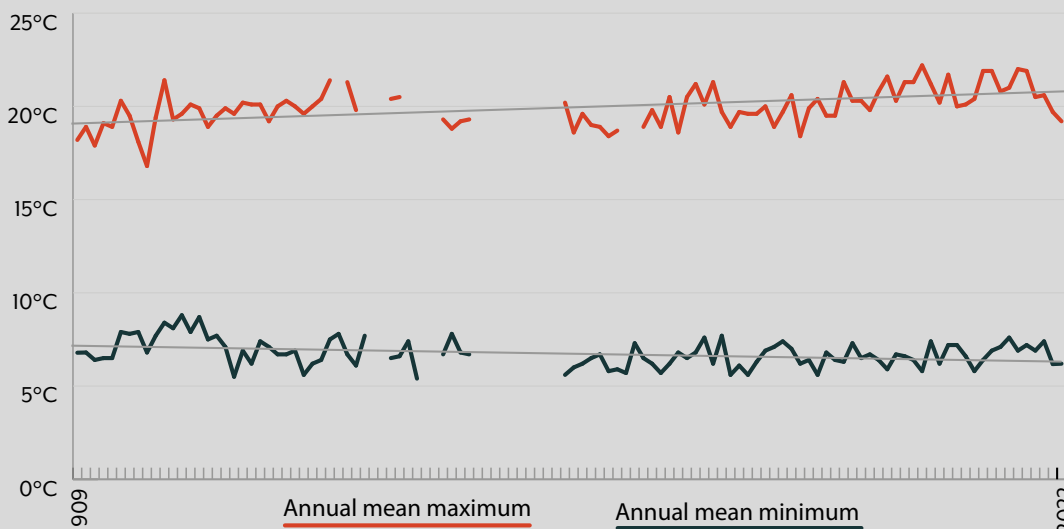
Net Landfill Emissions 38237 tonnes	Fleet 2131 tonnes
Street Lighting 465 tonnes	Waste water 1278 tonnes
Reticulated gas 927 tonnes	Electricity 4035 tonnes
Refrigerants (estimated) 69 tonnes	

Weather conditions (cold and hot temperatures and drought) **influence energy use** at Council operations by the need to 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.



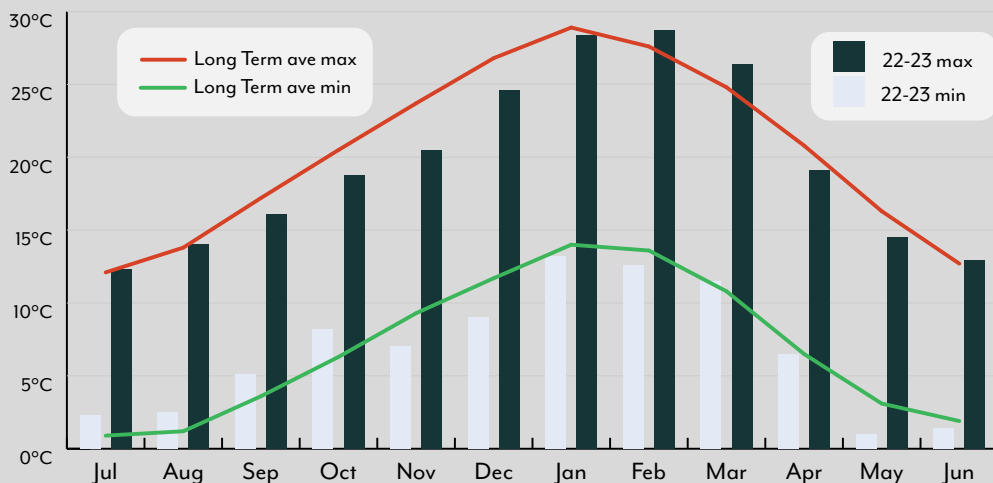
Annual (calendar year) daily mean max and min temperatures for Bathurst

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 temperatures.

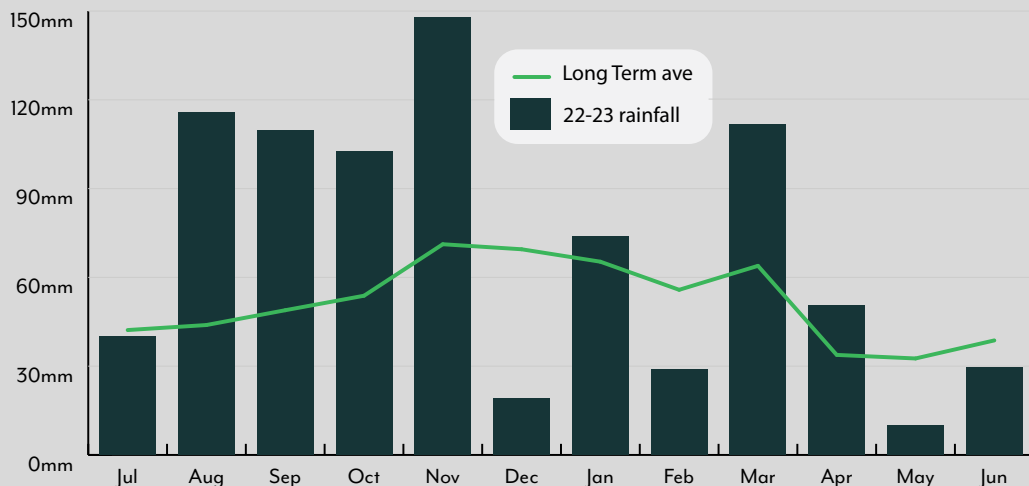


Photo by DJM Photography Australia

Weather



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



2022-23 Monthly Rainfall

Bathurst Airport Long Term Average (1994 to present)

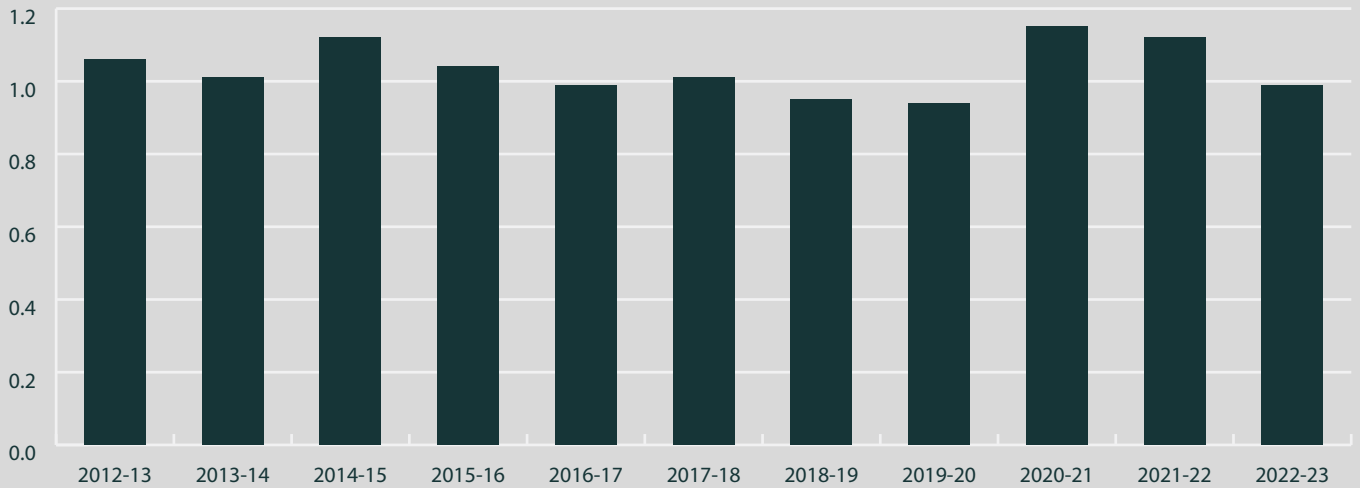
NOTE :

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

Temperatures during 2022-23 were cooler than average, and rainfall was significantly above average for the third year running, reflecting the influence of the dominant La Nina climate pattern during this time. The annual total rainfall at Bathurst Airport was 839mm, 219mm above the long-term average. Most rain came during a very wet spring with conditions drying over summer.

Waste to landfill per resident

Tonnes per person



Waste



- 43,634 tonnes General Waste to Landfill (Kerbside and delivered to WMC)
- 2,584 tonnes of Green Waste delivered to WMC
- 4,759 tonnes Organics kerbside collection
- 2,137 tonnes volume of material collected kerbside for recycling
- 1,796 tonnes volume of recycled material at WMC

20.5%

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

Council received **101 complaints** regarding illegal waste disposal 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.



Photo by DJM Photography Australia

Biodiversity

Connecting Koalas: Protecting the Rockley Mount Koala Population

The Rockley Mount Koala population is the largest Koala population in the Bathurst Region, yet little is known about the population size or extent. Council has therefore partnered with Central Tablelands Land Services and other organisations in a project to improve the knowledge of the distribution and movement of koalas in the Rockley Mount district through population mapping using remote sensing, acoustic recording, and visual surveys. The survey work will inform habitat restoration and enhancement work to contribute to the long-term survival of the Koala in NSW. The project has been assisted by the Australian Government through its Koala Community Grants.

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.

River Connections

The project “River Connections – knowing and caring for the Macquarie River - Wambuul” continued during the reporting period. River Connections is an engaging nature-based program to connect students at local schools with the river and its catchments. Students are involved in a learning program including Wiradyuri cultural perspectives, science, art and inquiry-based exploration as well as field-based “Big River Days” at local rivers. Over the course of the project 475 students from nine different schools have been directly involved in the program which was a collaboration between Wiradyuri Elders and Council environmental education staff. As part of the project Council created teacher resources so that schools can continue to engage between program visits. During the reporting period the River Connections program won the National Local Government Indigenous Recognition Award.

Aussie Bird Count





DJM Photography Australia – Grey-headed Flying-fox

Flying Fox habitat restoration

In 2022, Bathurst Regional Council secured a \$264,650 grant from the Local Government NSW Flying-Fox Camp Habitat Restoration Program. This funding will support the restoration of 700 meters of flying-fox habitat along the Macquarie River Wambuul in Bathurst, a crucial site for Little-red Flying-fox and threatened Grey-headed Flying-fox.

The project is focused on eradicating invasive species, including willow, blackberry, poplar, and elm, to enhance riparian vegetation and flying-fox roosting habitat. In late 2023, 3,500 riparian and roosting-specific plants, including She-oak and Ribbon Gum, will be planted by volunteers and contractors.

Community involvement is key, with tree planting events, information sessions, signage, and digital campaigns promoting flying-fox awareness. This restoration project aligns with the Machattie Park & Kings Parade Camp Management Plan 2018, by addressing habitat restoration for flying-foxes.