State of the **Environment** report **2017-21**

www.qprc.nsw.gov.au

QPRC

Glossary

LGA	Local Government Area
CRJO	Canberra Region Joint Organisation
EPA	Environmental Protection Authority
STP	Sewage Treatment Plant
WTP	Water Treatment Plant
CDS	Container Deposit Scheme
SEPP	State Environmental Planning Policies
MRF	Materials Recycling Facility
P	Phosphorus
N	Nitrogen
PAMPs	Pedestrian and Mobility Plan
ITS	Integrated Transport Strategy
IWCM	Integrated Water Cycle Management
Cond	Conductivity
ANZECC	Australian and New Zealand Environment and Conservation Council
TDS	Total dissolved solids
DO	Dissolved Oxygen
APC	Australian Platypus Conservancy
RAPs	Remediation Action Plans
EMPs	Environmental Management Plans
QCC	Queanbeyan City Council
CO2e	Carbon dioxide equivalent
GHG	Greenhouse Gas
BCRRF	Bushfire Community Recovery and Resilience Fund
kW	Kilowatt
kWh	Kilowatt hour
ML	Megalitres

Contents

Snapshot of Environmental Indicators in QPRC

Key

Status	G Good M Moderate P Poor
Trend	+ Improving ● Stable - Getting worse
Data Quality	✓✓✓ High ✓✓ Moderate ✓ Low

Indicator	2017-18	2018-19	2019-20	2020-21	Status	Trend	Data Quality
Sustainability							
Pedestrian paths (km)	208.67	210.82	211.43	217.41	M	+	✓✓✓
Shared paths (km)	23.71	25.71	36.48	36.48	G	+	✓✓✓
Total registered passenger vehicles	46147	47524	52824	53819	M	-	✓✓
Registered EVs	38	36	19	34	P	●	✓✓
Total third-party certified sustainable infrastructure (Green star, ISCA, LEED, WELL & NABERS)	2	4	4	4	G	+	✓✓
Climate - Weather							
Queanbeyan							
Rainfall(mm)	497.6	532.4	446.6	653.4			✓✓✓
Mean maximum temperature (°C)	21.9	22.1	21.6	20.1			✓✓✓
Mean minimum temperature (°C)	6.8	7.1	7.1	7.1			✓✓✓
Braidwood							
Rainfall (mm)	446.4	659.6	461.8	1226			✓✓✓
Mean maximum temperature (°C)	20.4	20.3	20.3	19			✓✓✓
Mean minimum temperature (°C)	6.5	6.9	6.2	6.6			✓✓✓
Bungendore							
Rainfall (mm)	528.1	528.2	539.6	1111			✓✓✓
Climate - Emissions							
GHG emissions (CO2e t) *Council operations*	11461	12508	12695	11865	P	●	✓✓
GHG emissions (CO2e t) *Community*	1046000	1046000	1040000	No data	P	+	✓✓
Scope 1 emissions(CO2e t) *Council operations*	2049	2607	2893	2812	P	-	✓
Scope 2 emissions(CO2e t) *Council operations*	8070	8635	8618	7958	P	+	✓✓
Scope 3 emissions(CO2e t) *Council operations*	1342	1266	1184	1095	P	+	✓

Please note:
Scope 1 emissions are direct and released as a result of an activity, e.g. driving a petrol car.
Scope 2 emissions are indirect and are released specifically from purchased electricity only.
Scope 3 emissions are indirect any emissions not included in Scope 2.

Total energy consumption (kWh) *Council operations*	41963	45261	45537	41235	M	●	✓✓✓
Total unleaded and diesel fuel consumption (L) *Council operations*	626,669	769,842	886,266	No data	P	-	✓
Annual solar panel system installations	660	752	987	1264	G	+	✓✓✓
Cumulative total of solar panel system installations	4226	4978	5965	7229	G	+	✓✓✓
Annual capacity of solar panel systems (kW)	4502	5611	8275	12,225	G	+	✓✓✓
Cumulative total of solar capacity (kW)	21,900	26,767	34,950	45,961	G	+	✓✓✓
Environmental Health							
Air quality complaints							
Dust	No data	No data	13	1	M	+	✓
Odour	No data	No data	6	10	M	-	✓
Smoke	No data	No data	14	21	M	-	✓
Noise complaints							
Barking dogs	No data	No data	90	103	M	-	✓
Power tools	No data	No data	15	36	M	-	✓
Stereo system (Music)	No data	No data	17	21	M	-	✓
Air conditioners	No data	No data	8	11	M	-	✓
Vehicles	No data	No data	26	24	M	●	✓
Pollution complaints							
Waterways pollution	No data	No data	37	53	P	-	✓
Land pollution	No data	No data	22	36	M	-	✓
Other pollution	No data	No data	42	29	M	+	✓
Biodiversity							
Threatened species	119	119	119	119	P	●	✓✓
Threatened ecological communities	6	8	8	8	P	-	✓✓
Threatened populations	0	0	0	0	G	●	✓✓
Native vegetation (and associated ecosystems) affected by wildfire	0.2%	0	33%	0	P	-	✓✓✓
Native plant species identified at high risk following bushfires	0	0	0	33	P	-	✓✓
Areas of native vegetation cleared	No data	No data	No data	No data	P	-	✓
Biosecurity							
Biosecurity weed inspections	1509	1824	2295	2461	G	+	✓✓✓
New priority weed species detected	No data	No data	No data	No data	M	●	✓✓
Spread of emerging priority weeds	No data	No data	No data	No data	M	●	✓

Impact of widespread weeds	No data	No data	No data	No data	P	●	✓
Environmental Education							
Environmental education events	9	5	4	8	G	●	✓✓
Waste							
Total waste (t) landfill, recycle, organics	27745.9	31904.5	36487.4	29496.2	M	●	✓✓
Waste to landfill (t)	15849	15291.9	20287.3	17254.6	M	●	✓✓
Recycled material (t)	6506.8	9381.5	5767.5	5332.6	M	●	✓✓
Organic material (t)	5544	7230.9	10432.6	6909	G	+	✓✓
Waste from kerbside collections (t) - garbage, recycle, organics	17635	16484.9	17426.4	18802.7	M	●	✓✓
Proportion of waste material diverted	42%	52%	44%	41%	M	●	✓✓
Waste to landfill per capita (kg)	254	245	325	277	M	●	✓✓
Waste recycled per capita (kg) includes organics and other recyclables	194	266	260	196	M	●	✓✓
Catchment, Water and Sewage							
Drinking Water							
Per Capita Daily Water Use-Residential (L)	241	223	199	198	G	+	✓✓✓
Total Water Use (ML)	4300	4022	4307	4329	M	●	✓✓✓
Drinking Water- Samples complying with Standards	89.37%	97.07%	95.45%	99.37%	G	+	✓✓✓
Recycled Water							
Recycled Water Used (ML)	0	42	45	247	G	+	✓✓✓
Sewage							
Total Volume of Sewage Treated (ML)	4139	4638	4147	5287	P	-	✓✓✓
Total Discharge from Sewage Treatment Plants (ML)	3509	3550	3530	4225	P	-	✓✓✓
Catchment Health							
River Water Quality	No data	No data	No data	No data	M	●	✓✓✓
Land use Planning, Community Land and Heritage							
Development							
Development Applications Processed	325	286	522	775	P	-	✓✓✓
Heritage							
National Heritage Items	2	2	2	2	M	●	✓✓✓
State Heritage Items	21	21	21	21	M	●	✓✓✓
Local Heritage Items	545	545	545	545	M	●	✓✓✓
Local Heritage Grants	No Data	No Data	7	5	M	●	✓✓
Value of Local Heritage Grants	No Data	No Data	$19 998	$11 084	M	●	✓✓
Special Heritage Grants	No Data	No Data	6	7	M	●	✓✓
Value of Special Heritage Grants	No Data	No Data	$150 000	$150 983	M	●	✓✓

Introduction

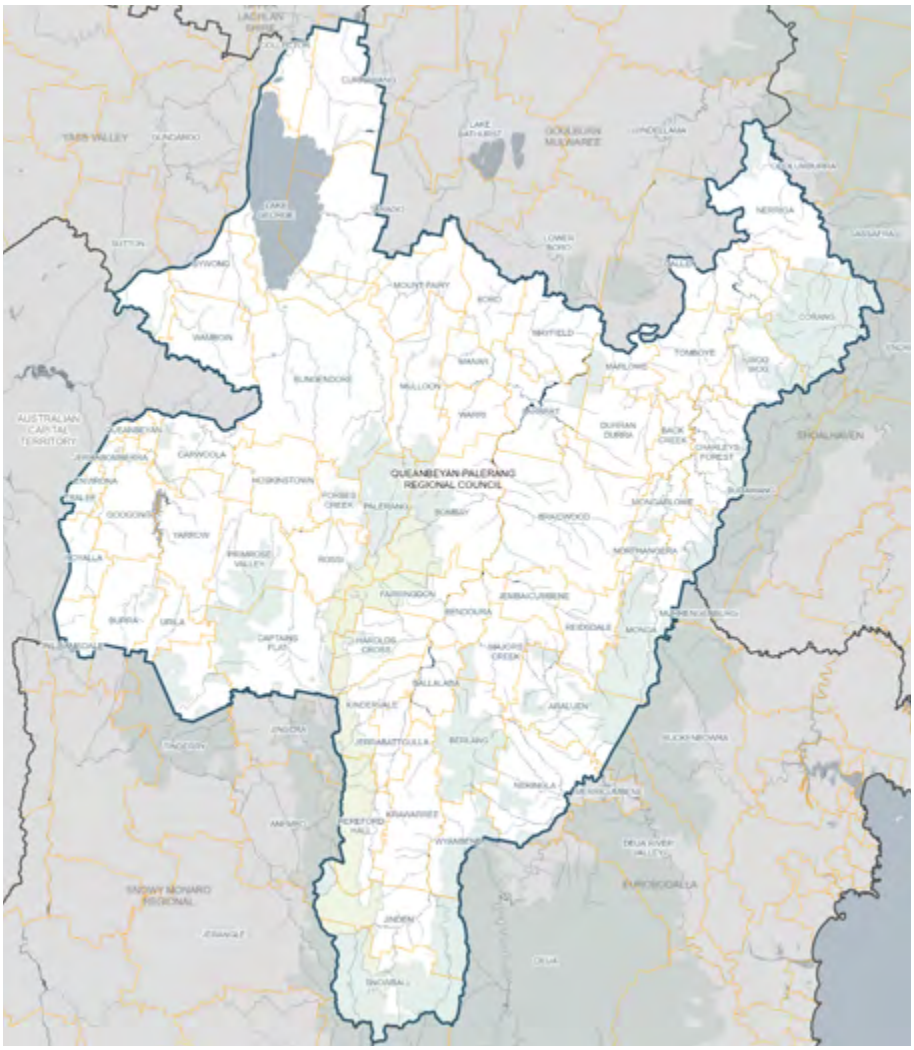
On 12 May 2016, the NSW Government announced a merger of Queanbeyan City and Palerang councils to create the Queanbeyan-Palerang Regional Council. The new local government area of Queanbeyan-Palerang has a population of 56,771 (projected to reach 76,000 by 2031) and an area of 5,319km^2. Population growth is naturally reflected in the growth of the number of households within the LGA.

The major population centres include Queanbeyan, Googong, Bungendore, Braidwood and Captains Flat. There are also several rural villages and large residential populations living in rural-residential areas to the west of the LGA near the ACT border.

QPRC is in a unique position within NSW as our proximity to Canberra creates some additional lifestyle opportunities for the region.

As such, Queanbeyan is quite different to other similar sized regional centres, using the water supply and waste facilities of the ACT. The Queanbeyan Seweage Treatment Plant is located in the ACT at Oaks Estate and is planned for upgrade in the next few years with planning already underway.

Population growth in QPRC is significant due to the demand for new housing surrounding the ACT. The new urban land release area of Googong Township has seen enormous growth during the reporting period. This population growth is a key driver for many of our social, economic, environmental and governance pressures.



Sustainability and Climate

Council has become more environmentally conscious since 2017, aiming to demonstrate sustainability and environmental best practice for our community.

Sustainability

Council has a role in demonstrating sustainability and environmental best practice. Council's goal is to conduct our decision-making and operations in a responsible and ethical manner that protects the environment, benefits the community, and exemplifies leadership. Council plays an equally important role in enabling and facilitating sustainability and environmental best practice within the community through education, support and providing resources.

Sustainable Certified or Registered Non-Residential Building or Infrastructure
Queanbeyan Government Services Centre 11 Farrer Place | Greenstar certified | 5.5 Star Energy and Water
Queen Elizabeth II Park Queanbeyan | IS certified | Excellent as Built
Queanbeyan Indoor Sports Centre Yass Road | Greenstar certified | 4 Star- Best Practice
Googong Development | Greenstar certified | 5 Star - Australian Excellence
Poplars Innovation and Services Precinct Jerrabomberra - Greenstar registered only
Queanbeyan Civic and Cultural Precinct - Greenstar registered only
New Queanbeyan STP | Queanbeyan ISCA registered only

Sustainable Procurement

Sustainable procurement practices have been of increased focus for Council in recent years. Development of life-cycle analysis tools and sustainability guidelines is included in our procurement policy and tender documents. This directs Council operations down the path of best practice for minimising our environmental impacts from office stationary to chemical disposal and contractor environmental obligations.

Sustainable Buildings and Infrastructure

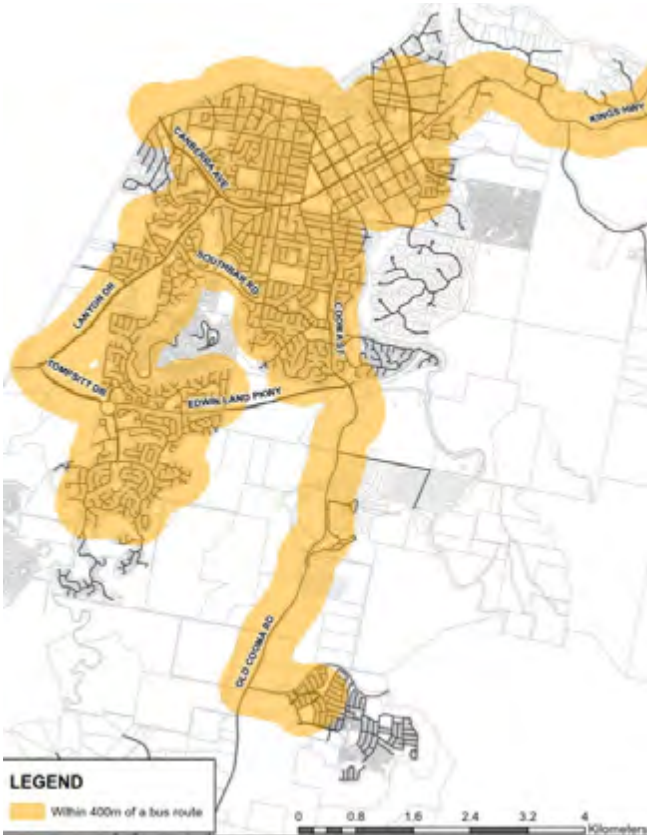
Queanbeyan-Palerang has seen significant growth (50% increase) in the number of third-party sustainability certified non-residential buildings and infrastructure since July 2017. Significantly, Queanbeyan-Palerang now has the highest proportion of Greenstar registered and certified non-residential buildings and infrastructure in non-metropolitan southern NSW.

Council has adopted the Sustainable Design for Council Buildings Policy to ensure Council buildings or infrastructure are built in accordance with sustainability and environmental best practice and will contribute to the sustainability of Council operations.

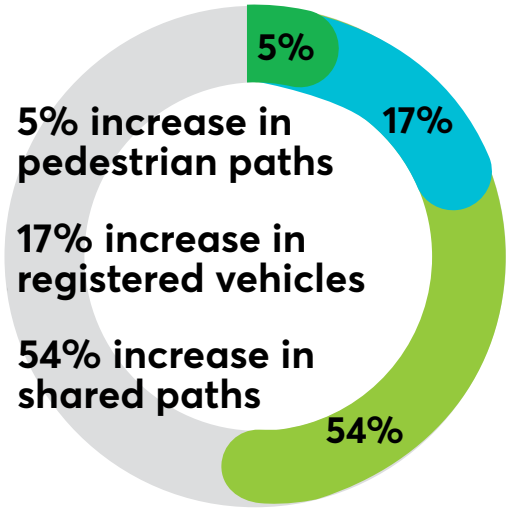
Sustainable Transport

There has been significant growth in the transport sector over the past four years. More than 21km of pathways have been added to the network since July 2017, which now encompasses over 250km of pedestrian and shared pathways. The number of registered 'private' vehicles continues to grow each year, this is likely due to continued population growth within the region.

In June 2020, Council adopted the Integrated Transport Strategy (ITS) and the Pedestrian and Bike Plans (also known as Pedestrian and Mobility Plans or PAMPs) for Braidwood, Bungendore, and Queanbeyan. The ITS and PAMPs will guide the development of road and public transport options into the future with a focus on key transport issues such as interactions between transport and land use, transport safety, traffic congestion and parking.



400m walking distance to QCity bus routes- QPRC ITS



Sustainability Communication

Council's website is regularly updated with sustainability and environmental information and plays an important role in raising awareness and encouraging sustainable practices

Recently Council has also established the quarterly 'All Things Sustainability' Newsletter that showcases sustainability, initiatives, projects, grants, and events from across the LGA.

Please contact Council's sustainability team at **sustainability@qprc.nsw.gov.au** to be included within the mailing list or if you have any projects, events, or initiatives that could be shared or promoted.

Sustainability Awards

Over the past four years Council has won a number of awards and accolades for our work within the sustainability and climate change sectors.

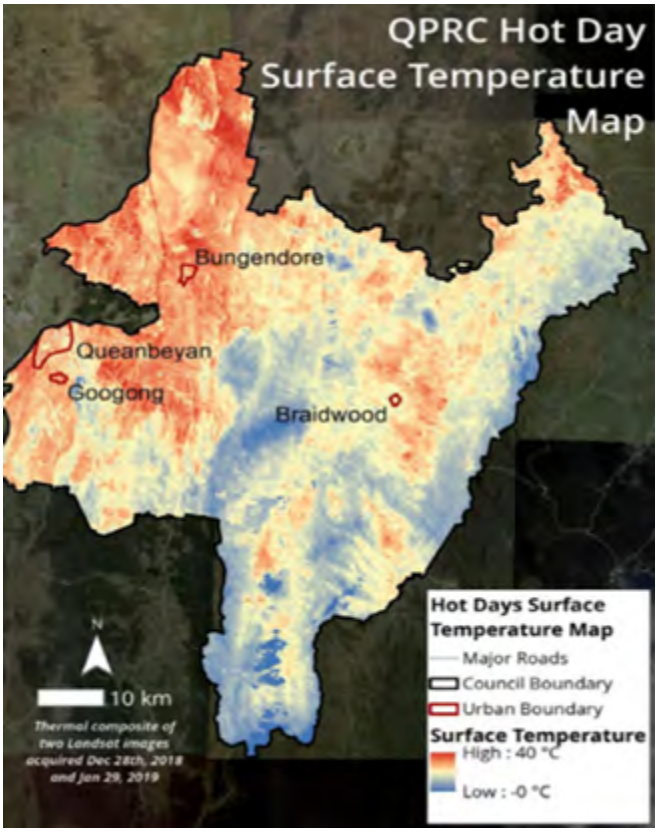
Most notably Council received the 'Infrastructure Sustainability Council of Australia Impact Award' for the Queen Elizabeth II Park and Collett Street redevelopment and the 'Keep Australia Beautiful NSW Renewable Energy Award' for Council's Renewables and Energy Efficiency projects.

Keeping it Cool – Vegetation and Heat Adaptation Projects

In early 2020, Council was successful in receiving $44,000 in grant funding from the NSW Government to undertake several vegetation and heat adaptation projects over two years including:

- Developing heat maps of the QPRC region. *Completed*
- Undertaking climate vulnerability assessments of current urban trees. *Completed*
- Developing a QPRC Urban Forest Strategy. *Ongoing*
- Undertaking experimental pilot plantings of future climate-ready trees. *Ongoing*
- Educating and informing the community and elected Council on vegetation and heat adaptation. *Ongoing*

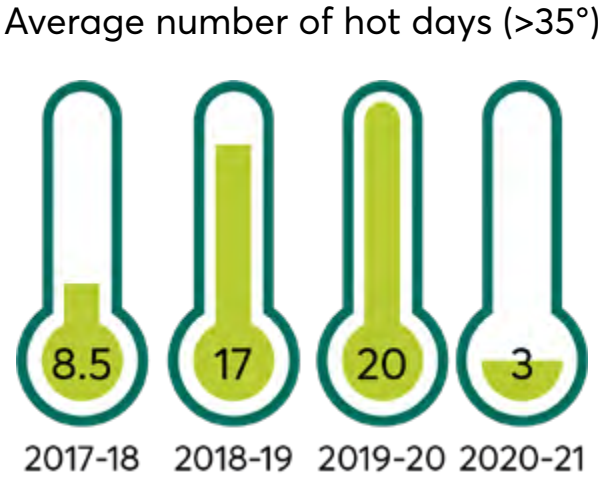
It is anticipated that the remaining 'ongoing' projects will be completed by December 2021.



Climate and Emissions

Weather

Overall, the mean maximum temperature during the reporting period was moderately (0.5°C) above the long-term mean across the region.



Long term average 8.5 hot days per year.

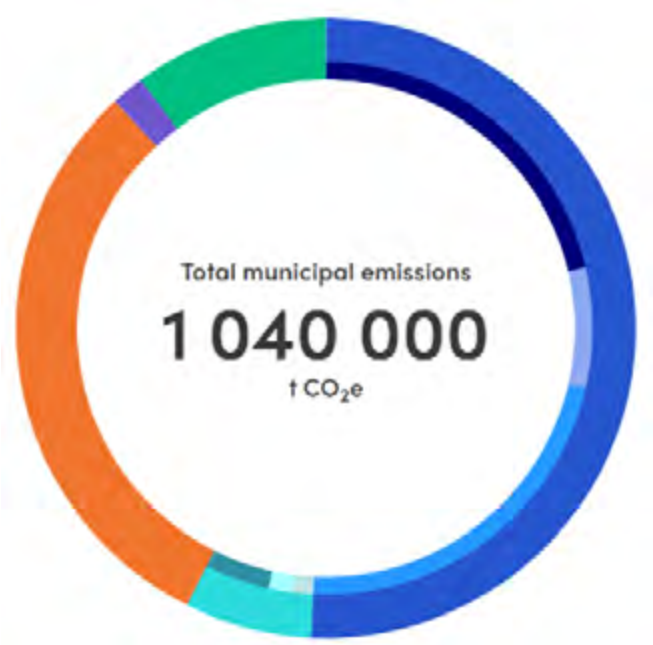
Troublingly, the region experienced a 42% increase in the number of days above 35°C during the reporting period when compared to the long-term average. Precipitation has also been extremely variable over the past four years, with the region experiencing a 26% decrease in rainfall during the 2019-20 financial year in contrast to a 53% increase in rainfall during the 2020-21 financial year.

Over the past four years, the QPRC region has experienced several extreme weather events including severe drought, bushfires, and flooding events, this has resulted in over $8m worth of damage to Council infrastructure and assets. More than 122,000 hectares of land were burnt and 57 houses, along with numerous facilities and outbuildings were destroyed in the Black Summer bushfires. These bushfires were some of the largest and most destructive ever recorded in the region.

Emissions

Greenhouse gas emissions decreased within the community by 1% from July 2017 to June 2020. This 1% decrease equates to a 6000-tonne saving of carbon dioxide equivalent (CO2e) and reduces the community's greenhouse emissions profile to 1,040,000 tonnes of CO2e per annum. This is primarily driven by a reduction in electricity emissions as a result of increased penetration of renewable energy into the grid.

Community Emissions Profile, Financial Year 2019-20



Source	Sector	Emissions (t CO_2e)
Electricity	Residential	222 000
	Commercial	76 000
	Industrial	230 000
Gas	Residential	14 000
	Commercial	14 000
	Industrial	41 000
Transport	On road	319 000
	Domestic air travel	0
Waste	Landfill	10 000
	Water	8 000
Agriculture		106 000
Land Use		-5 000

Land Use data is not used in the chart nor the displayed total municipal emissions.

Within Council operations greenhouse gas emissions have increased from 2017-18 levels by 4% to 11,864 tonnes of CO2e for the 2020-21 financial year. This is principally driven by a 37% increase in scope 1 emissions. However, the increase in emissions needs to be further considered in the context of the unreliability of the data for the 2017-18 financial year (as a result of Council amalgamation) which is thought to have substantially contributed to the significant increase in scope 1 emissions during the reporting period.

In this regard, further analysis of greenhouse gas emission data, including the removal of unreliable data, provides for a 5% decrease in operational emissions from 2018-19 levels to 2020-21. This decrease can be somewhat attributed to a range of renewable energy and energy efficiency projects completed by Council as well as reduced energy demand as a result of COVID-19. It important to note that Council has an increasing number of facilities and assets. This places increased operational demands for the management of greenhouse gas emissions. Councils' positive outcomes in terms of stabilising and reducing greenhouse gas emissions must acknowledge the proactive management of emissions in the face of a growing number of assets.

LED Streetlighting Upgrade

Throughout late 2020 to mid-2021 Council worked alongside Essential Energy to replace 5,487 inefficient streetlights with energy-efficient LED's throughout the LGA. This will result in a 1,402MWh per year reduction in power use, delivering savings to Council of approximately $441,000. It is anticipated that from this project alone, Council's operational emissions will be reduced by a further 5 to 7.5% during the 2021-22 financial year.

QPRC Climate Change Action Plans

The QPRC Community Climate Change Action Plan & QPRC Council Operations Climate Change Action Plan were developed with considerable input from the community and were adopted by Council in May 2020. Both Action Plans cover the period from 2020 to 2030 and recognise the roles that Council and the community have in ensuring that QPRC contributes to local, national, and global efforts to mitigate and adapt to climate change.

The Council Operations Climate Change Action Plan highlights pathways and opportunities for Council to make significant reductions in emissions through a program of actions within day-to-day operations. Currently, Council is committed to a 30% operational emissions reduction target by 2025.

QPRC Community and Council Operations Climate Change Action Plans

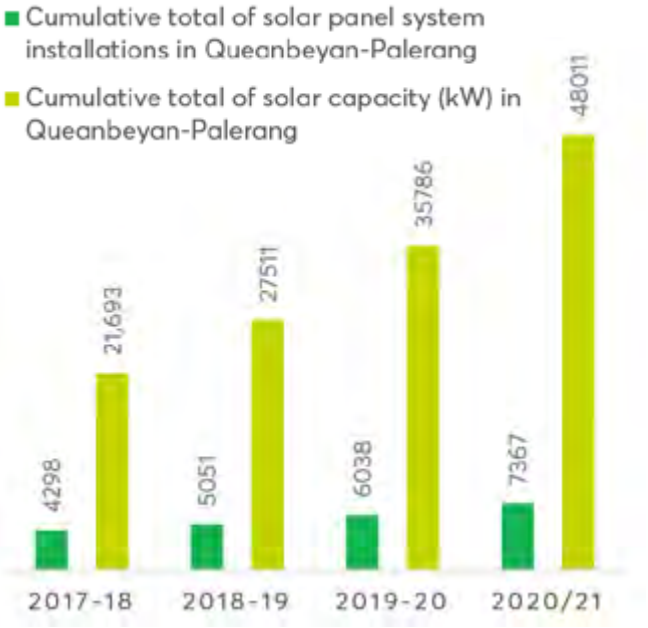
On the other hand, the QPRC Community Climate Change Action Plan recognises the important role the community has in addressing climate change and highlights measures the community can take to mitigate and adapt to climate change with the support of Council. The plan also commits Council to support the NSW Government's goal of reaching net-zero community emissions by 2050.

As at 30 June 2021, four of the 128 actions have been completed while 26 actions are currently in progress. Some notable actions which have been completed include:

- Review of Council's waterwise program.
- LED streetlighting upgrade across major and minor roads within the LGA.
- Development of a heat adaptation and urban forest strategy for the region including heat mapping.

Data available from the Australian Government Clean Energy Regulator and the Australian PV Institute shows that by the conclusion of 2020-21 there was a cumulative total of 7367 Solar Generation Units (solar panel systems) within the LGA with a combined output of 48,011kW. Subsequently, approximately 27.7% of all dwellings in Queanbeyan-Palerang have a solar panel system installed, this is slightly above the NSW average of 26.5%.

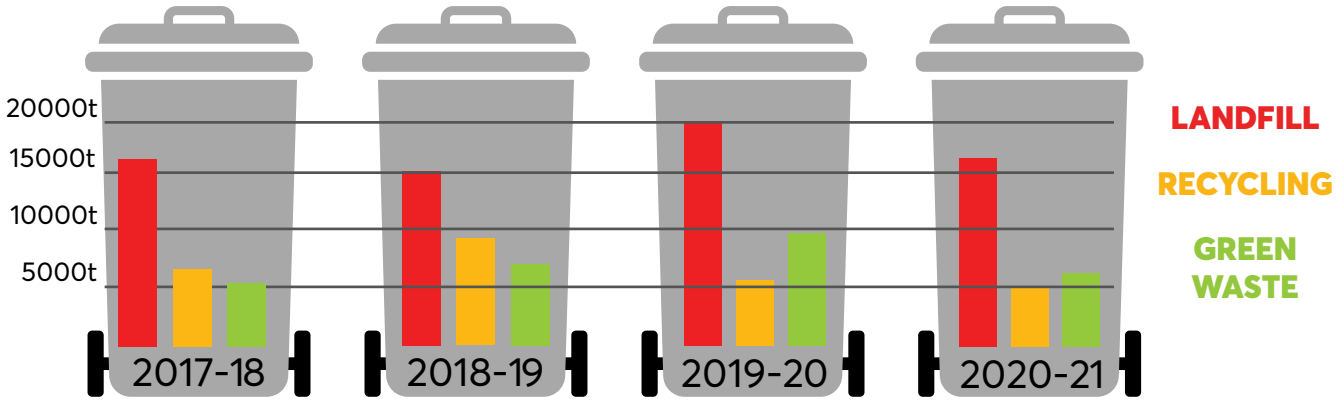
Total solar panel system installations and capacity(kW)



Waste

"Waste isn't waste until we waste it."
Between 2017-2021 there has been a 6% increase in total waste, which includes kerbside collections and drop off at waste facilities.

Tonnes of waste dropped of and picked up in QPRC



There has been a 6% increase overall in waste collected or dropped off from households, however not all this waste went to landfill. There was an increase in green bin organics of 28% which includes some food organics. This material does not go to landfill, it is reused as a beneficial garden mulch, compost, or food source for the Black Sword larvae.

The food organics collected from the three townships of Braidwood, Captains Flat and Bungendore are used by GoTerra to feed the Black Sword larvae. The larvae are then used as feed in the agriculture sector. This innovative project provided a solution for household food waste and has been extended to the business community.

Council won a Keep Australia Beautiful NSW Tidy Towns award for this project in 2020.

GoTerra Waste Data	kg
Food waste recycled from residents	11813.57
Livestock feed created	472.54
Insects fed per day	2362.71
CO2 emissions prevented	22436.78

Recycling was down 18%. The introduction of the Container Deposit Scheme Return and Earn in December 2017 may have contributed to this result.

The QPRC area has two Container Deposit Machines and two bulk drop off sites for CDS approved containers. One of the Return and Earn machines in Queanbeyan is one of the highest used machines in NSW.

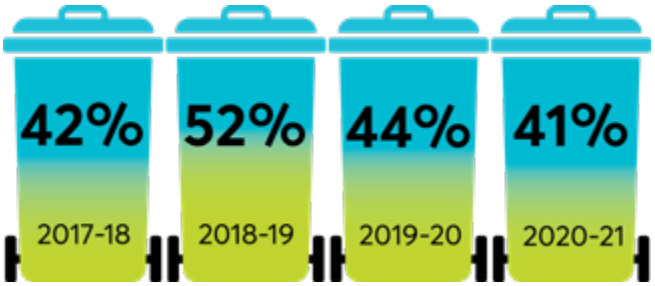
The tonnages collected via the Return and Earn machines, that would have normally gone into resident's yellow topped bins, are not provided to Council. This makes it very difficult to determine the true amount of recycling from the QPRC area.

Waste to landfill has increased by 9%. This may also be reflective of COVID-19. Lockdowns may have attributed to more home cleanouts, or a large increase in single use disposable items including take away food, masks and cleaning items.

Data collection at our transfer stations has also been improved from previous years which may also reflect the increase in waste to landfill.

Council had a major bush fire in 2019-2020 and significant flooding events in 2020 and 2021 which caused considerable damage to people's properties. Residents used the transfer stations to dispose of items damaged during these events which is reflective in the larger amounts of waste to landfill.

Proportion of total materials recycled or reused



QPRC Waste Strategy

Council adopted a new waste management strategy in June 2021 for the next 30 years.

Adoption of the Waste Strategy will allow the community and Council to take a significant step towards reducing waste sent to landfill and to find better uses for some waste products. The Waste Strategy will enhance the sustainability outcomes of the community and Council. The Strategy broadly aligns with the key ambitions and actions of the ACT Waste Strategy, the NSW Waste and Sustainable Materials Strategy and the Canberrra Region Joint Organisation (CRJO) Regional Waste Strategy, including:

- Reduce total waste
- Increase average recovery rate from all waste streams
- Increase the use of recycled content
- Phase out problematic and unnecessary plastics
- Reduce the amount of organic waste sent to landfill
- Community education

Food waste is not currently collected in the area of the former QCC LGA. This represents a significant amount of material that can be diverted from landfill. The introduction of FOGO (food organics and garden organics) across all urban areas in QPRC is the biggest goal in the strategy to reduce waste to landfill. The three townships of Braidwood, Bungendore and Captains Flat have FOGO, servicing around 3000 homes. This will be rolled out to the urban area of the Queanbeyan City increasing to around 20,000 homes.

Population growth in areas with a Domestic Waste Management service in the former Palerang LGA has reached the point where the number of collection trucks and drivers is not sufficient to appropriately manage the service.

Remote and rural residents are required to self-haul all their wastes to Council-provided collection points such as bin compounds, rural recycling stations and landfills. Localities that self haul include parts of Nerriga, Majors Creek, Carwoola, Araluen, Macs Reef Road and Burra.

Waste Transfer Stations

In the last four years the Braidwood, Macs Reef and Bungendore landfills were closed and transfer stations opened in their place. The transfer stations allow greater separation of waste with areas to drop off mixed recyclables, metals, green waste, mattresses, tyres, batteries and paints.

There are also Buy Back Centres which residents can drop off items that may be sold on or repurposed. The new transfer stations create an easy drop off area that encourages diversion of reusable and recyclable items from landfill.

Litter

Litter has considerably reduced across NSW, surpassing the NSW Government's 40% litter reduction target. Council has had a number of NSW EPA litter grants which included education, enforcement, cleanup, litter counts and infrastructure. Bins have been placed in locations around Queanbeyan using the EPA Don't Be a Tosser campaign material.

One litter grant worked with a local Indigenous group to design new bins for an area that was commonly highly littered. This project gave ownership to the users of the area.

Council was also involved in a Butt Littering Trial with other councils across NSW to determine the best approaches to change butt littering behaviour using different strategies. This trial partnered with engineering students from the ANU, who use the trial as part of their fourth year final project.

The results were then used to produce the NSW EPA **Identifying effective strategies to reduce cigarette butt litter** 2019 and the Butt Litter index 2020 report on Cigarette Disposal Behaviour.

Council won two Keep Australia Beautiful NSW Sustainable Tidy Towns awards for these projects.

Queanbeyan-Palerang is not included in the litter counts for NSW and it is difficult to gauge the overall amount of litter, there has been a noticeable reduction in CDS containers littered since the introduction of the Return and Earn program.

Waste Education

Refuse, Reduce, Reuse, Repair, Recycle.

Council has been involved with the Canberra Region Joint Organisation (CRJO) waste working group and conducts joint education projects with the other councils and the ACT Government.

The Recycle Right campaign was introduced in 2019 across the South East area as most of the councils on the CRJO waste working group use the ACT Material Recovery Facility (MRF). This ensured consistent messaging across the councils that use the ACT MRF.

Community Recycling Centres

QPRC has two Community Recycling Centres (CRCs), in Bungendore and Queanbeyan. Residents can drop off their difficult household items including batteries, paints, oils, fluorescent globes, and smoke alarms.

The CRCs are a convenient drop off point and they allow residents to divert these harmful items from landfill.

Household Chemical Cleanout

Council continues collection of difficult to dispose of items including chemicals, poisons, fluoro globes and oils at the annual Household Chemical CleanOuts in October each year.

This is provided at 2 locations: Braidwood Saleyards or the Collett Street Car Park in Queanbeyan.

Illegal dumping

Illegal dumping is a huge problem for our LGA, which has not changed significantly during the reporting period. Some improvements have been made with the use of RIDonline NSW, which has increased the reporting of illegal dumping. RIDonline enables better data capture on illegal dumping and identification of hot spots, materials types and costs to council.

Council is an active member of the illegal dumping cross border working group, which works together on strategies to deal with the movement of waste across the borders of councils that surround the ACT. Council investigates as many reported dump sites as possible, however resources are limited and prosecution requires a lot of evidence. Council have reviewed a number of options for minimising illegal dumping and littering in public spaces, on roads and at waste management facilities.

Clean Up Australia Day

Council supports Clean Up Australia Day as a means of managing litter and to educate the community on illegal dumping.

In recent years, the risks associated with cleanup events held along rural roads have been reviewed. Council has resolved to receive waste from any resident for free on Clean Up Australia Day. This may change with the new Waste Strategy.

ACTSmart business recycling

This program was extended to include the townships of Braidwood and Bungendore. There are also businesses that used the NSW Bin Trim program. This program will be provided by Council in the future with staff using the Bin Trim program tools to assist businesses with waste minimisation.

Catchment, Water and Sewage

Our region has four very different water supplies and treatment systems alongside five waste water treatment plants, including the recycled water in Googong.

Drinking Water supplied by Council

The Queanbeyan-Palerang drinking water supply system has four very different water supplies and treatment systems. All of these water and sewer networks are maintained by Council.

Braidwood, Bungendore and Captains Flat each have their own water treatment plants (WTP) which service the urban areas of the three towns. QPRC has an agreement with Icon Water to purchase bulk potable water for the Queanbeyan and Googong area.

Together the four systems supply treated water to an estimated serviced population of over 49,586. Three of the schemes source their water from surface based supplies while Bungendore is sourced from groundwater.

Estimated population on reticulated water for each township within QPRC:

- Queanbeyan – 37,223
- Googong – 4,554
- Braidwood – 1,783
- Bungendore – 4,657
- Captains Flat – 1,369

The majority of Queanbeyan's drinking water supply comes from the Cotter system, which consists of Corin, Bendora and Cotter dams. The other major storage is Googong Dam, which is used when the Cotter system is shut down for essential maintenance or during drought. Bulk water supply is sourced and supplied under agreement with Icon Water.

In 2015, the former Palerang Council embarked on an Integrated Water Cycle Management (IWCM) project for its LGA. Bungendore requires additional water sources, treatment and wastewater treatment to support the township's growth. The IWCM identified that Bungendore almost certainly has sufficient water entitlement to support the existing village (as well as any of its infill development) but it would require additional allocations to support any further greenfield residential expansion.

There are two water sources for Bungendore:

- Bungendore alluvial bore
- Currandooly bore

The current Bungendore water supply scheme consists of the original water supply scheme at Bungendore and a supplementary water supply scheme at Currandooly.

In Braidwood, water is sourced from the Shoalhaven River and processed at Council's Braidwood Water Treatment Plant. The availability of non-potable water supplies for Braidwood are limited. Recycled water is not available from the Braidwood treatment plant and Council does not have access to any ground water in the Braidwood area. The possibility of enhancing the Braidwood surface water system with ground water is being considered as a longer term option. Further work will be undertaken in the future to assess the viability of this.

Stage 2 water restrictions were introduced on the Braidwood water supply on 22 November 2019. By December, the entire QPRC LGA was either in drought or drought-affected. Sections of the Shoalhaven River had ceased to flow. This meant that council staff had to place several pumps along a stretch of the river

adjacent to pools, to provide enough flow for town demands and the level in off-river storage ponds was below 80%. Water was trucked from Bungendore to supplement Braidwood's supply

The Captains Flat Water Treatment Plant sources raw water directly from the on-stream dam on the Molonglo River. The dam is a post-tensioned concrete gravity structure 16m high with a crest length of 65m and a storage capacity of 820ML. Captains Flat Dam was constructed in 1939 by Lake George Mines Ltd. to provide a water supply to serve their mining operation and the town of Captains Flat. Tailing dams adjacent to the on-stream dam, failed during the 1940s releasing highly contaminated water and sediment into the Captains Flat Dam. The tailings banks were rehabilitated and re-graded to a more stable condition in the 1970s to reduce the risk of slope failure and of both sediment and polluted seepage being washed into the river. In 1981, the residents of Captain's Flat expressed deep concern regarding the quality of the water supply.

Council hired divers to explore the dam and after they recommended the intake pipes be raised higher up the dam wall, the problem was quickly rectified. The dam had never been intended for use as a supply of domestic water but after the mines had closed, it was upgraded and work carried out to improve the quality of water. Major works have since been undertaken to completely overhaul and upgrade the water supply.

Unpowered boating only is permitted on Captain's Flat Dam. Suitable for canoes, kayaks or roof top boats. There is no boat ramp provided.

In addition to testing and quality assurance checks carried out at each of the WTPs, Council undertakes routine drinking water sampling in accordance with the NSW Drinking Water Monitoring Program. Regular chemical and weekly microbial samples of the reticulated water distributed to the community are taken to analyse the quality of the water from each of the supplies. The quality of drinking water across the LGA remained consistently high during the reporting period.

Recycled water in Googong

On 1 December 2020 the Googong Water Recycling plant began supplying Googong with recycled water through the purple pipe network. Each water source - rainwater, recycled water, stormwater, wastewater and drinking water - is effectively used or reused for its own unique purpose.

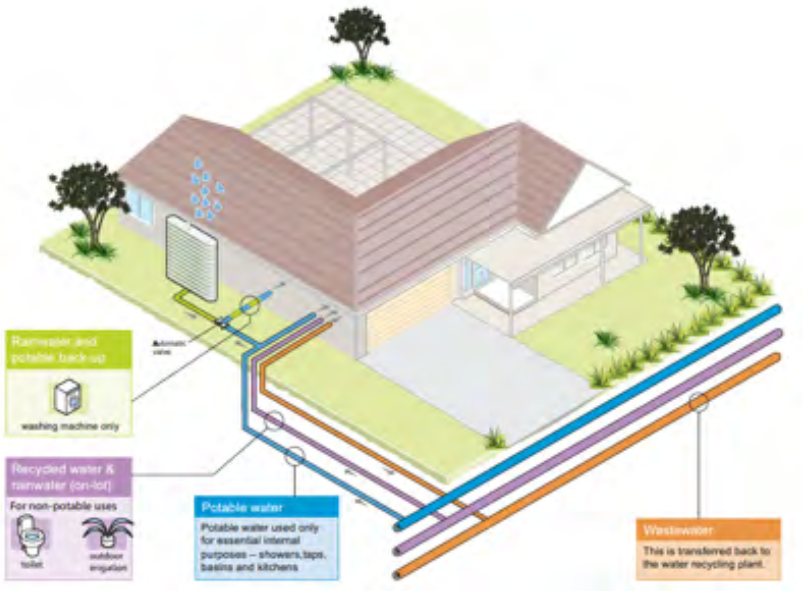
The recycled water can be used for:

- Flushing toilets
- Watering lawns and gardens
- Washing cars, brickworks and windows
- Watering fruit and vegetable gardens (recommend washing with potable water prior to eating)
- Watering sportsfields and parks
- Fighting fires

Homes, streetscapes and parklands at Googong are all part of the township's Integrated Water Cycle system, helping to drought-proof the community. Recycled water is also used to irrigate public parks and sports fields. Council operates, monitors and maintains the plant where water is treated to a high standard and undergoes ongoing monitoring. Over the 2020-21 financial year, the plant supplied 247ML of recycled water.

Do not put cooking oils, nappies, food, or wipes down the drain. These items can harm the environment and upset the efficient recycling of water. Put them in the bin.

All properties in Googong have a three pipe system, with access to both potable (drinking) and non-potable (non-drinking) water sources as shown in the diagram.



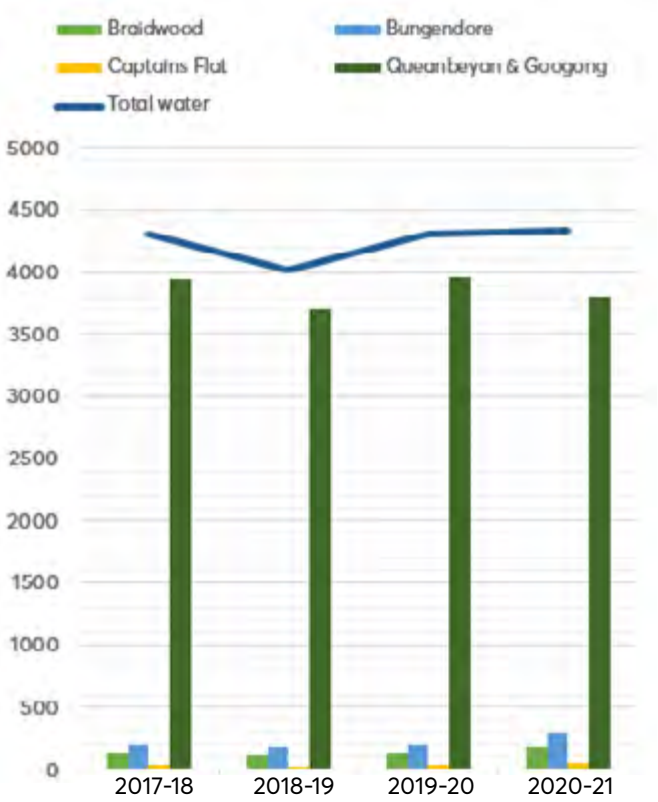
Water Consumption

After years of drought and increasing water conservation measures, water restrictions were lifted at various dates in the first half of 2020. This is believed to be the reason for an uptick in water consumption in most of our water networks in the 2020-21 financial year. It is pleasing to see how seriously restrictions were taken in our drought affected townships that water use was kept so much lower than 'normal'.

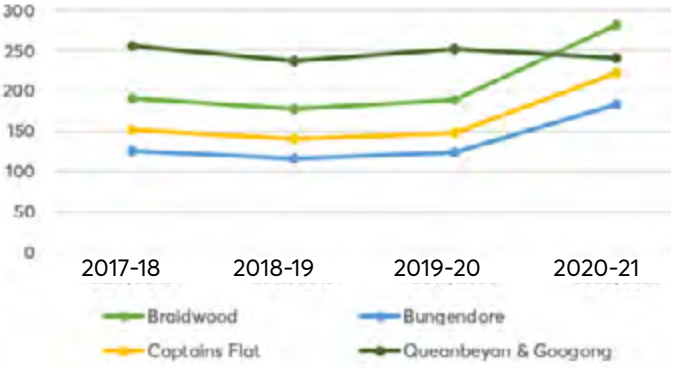
During the 2020-21 year, the only network to see a drop in per capita water consumption was the Queanbeyan and Googong supply, which is part of an ongoing downward trend. This is attributed to the impact of water saving requirements at the design stage of all Googong developments – including the requirement for rainwater tanks to supplement water for laundry use – and the Googong Water Recycling Plant beginning to supply water for irrigation and toilets during the year.

Permanent, mandatory water conservation measures apply year-round in Queanbeyan and Googong.

Total water consumption (ML)



Per capita water consumption (ML)



River water quality

Council undertakes monthly surface water quality monitoring in Queanbeyan at 9 sites to measure the physical, chemical and biological characteristics of our waterways. This water testing allows Council to monitor the health of the river system and compare it to Waterwatch ACT indicators and ANZECC guidelines for recreational use.

It is difficult to interpret too much or establish ongoing trends over the period 2017 -21, as results over the period varied up and down even when averaged. There appears to be a small downward trend in pH, an improvement which resulted in all sites coming into a good rating for this parameter over the period. Conductivity (Cond) and Total Dissolved Solids (TDS) increased (poorer water quality) along the Queanbeyan River over 2018 to 2020, before dropping back to 2017 levels in 2020-21, and in Jerrabomberra Creek and Lake had an overall downward trend (improvement). Dissolved Oxygen (DO %) overall improved at all sites except Beltana Pond, which declined. Nitrogen remained fairly steady over the period, however Phosphorous had poor results, and has shown increases (worsening) at most sites, though this has varied up-and-down year to year.

River report card for 2020-21

	PH	Cond	TDS	DO	P	N
Googong	🟢	🟢	🟢	🟢	🔴	🟡
Wickerslack Lane	🟢	🟢	🟢	🟢	🔴	🟢
Barracks Flat	🟢	🟢	🟢	🟢	🟡	🟢
Dane Street	🟢	🟢	🟢	🟢	🟡	🟡
QEII Park	🟢	🟢	🟢	🟢	🔴	🟢
Cemetery	🟢	🟢	🟢	🟢	🔴	🟡
Beltana Pond	🟢	🔴	🟢	🟡	🔴	🟡
Jerra Waterfall	🟢	🟡	🟢	🟢	🔴	🟢
Jerra Lake	🟢	🟢	🟢	🟢	🔴	🟢

Good water quality 🟢
Okay water quality 🟡
Poor water quality 🔴

Wastewater Discharge to the Environment

Council operates five wastewater treatment plants, with the one in Googong returning water to the community as recycled water. Our wastewater treatment plants treat the wastewater before it's re-used or discharged to rivers. They follow strict licence conditions issued by the **NSW Environment Protection Authority (EPA)** or in the case of Queanbeyan, ACT Environment Protection Authority (EPA) requirements. As the site is located in Oaks Estate and discharges to the Molonglo River. The discharges are regularly monitored to ensure final treatment is of high water quality and safe for aquatic life.

The Queanbeyan Sewage Treatment Plant (STP), constructed in the mid-1930s, treats sewage from Queanbeyan prior to discharge into the Molonglo River. Council has upgraded the STP on a number of occasions, with the latest upgrade being in the mid-1980s. While maintenance works are regularly undertaken on the STP, the plant is no longer fit-for-purpose. A significant works program is required to address issues including structural failure, equipment obsolescence, maintenance issues and work health and safety issues, as well as bring the treatment process in line with modern practices.

The upgrade will take vital infrastructure from its current design capacity of 40,000 equivalent persons (EP) to cater for 60,000 EP. Planning for the project is well advanced, with master planning complete and the concept design being finalised.

Licensed sewage effluent discharge	**2017-18**	**2018-19**	**2019-20**	**2020-21**
Total volume inflow (sewage treated) ML				
Queanbeyan	3,467.94	3,880.00	3,414.56	4,269.74
Googong	203.00	330.00	316.00	531.00
Braidwood	206.00	151.00	144.00	118.06
Bungendore	231.00	243.00	241.78	310.68
Captains Flat	32.00	34.00	31.33	57.93
Volume discharged ML				
Queanbeyan	3,082.56	3,017.63	2,955.31	3,616.92
Googong	108.10	192.37	243.70	193.78
Braidwood	129.86	133.00	137.50	121.41
Bungendore	157.88	174.00	161.66	238.60
Captains Flat	31.00	33.00	32.08	55.18
Mass load Nitrogen (kg)				
Queanbeyan	105,070.20	188,354.00	No data	236,648.00
Googong	No data	No data	No data	746.60
Braidwood	425.64	850.10	877.00	418.49
Bungendore	321.50	666.60	408.30	856.20
Captains Flat	178.30	161.40	137.04	22.40
Mass load Phosphorous (kg)				
Queanbeyan	1,195.76	2,213.53	No data	3,603.90
Googong	No data	No data	No data	3.10
Braidwood	15.10	25.70	10.30	6.10
Bungendore	35.70	32.40	15.70	21.10
Captains Flat	130.40	200.40	19.00	1.00

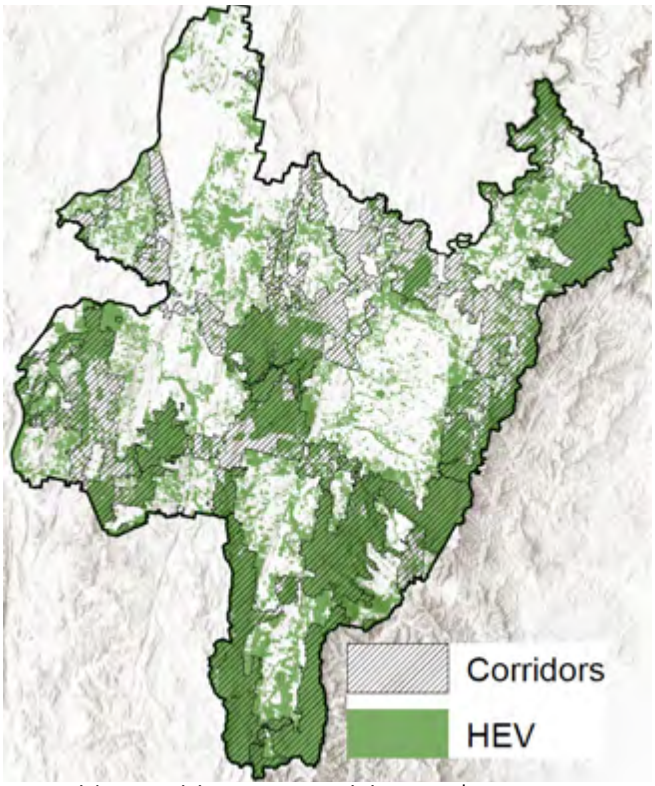
Biodiversity

The Queanbeyan-Palerang region is home to more than 3,000 native species and 34 plant community types. Six 'endemic' species are found nowhere else on earth and all six are threatened with extinction.

Native species

The Queanbeyan-Palerang region is home to more than 3,000 native species. Six 'endemic' species are found nowhere else on earth and all six are threatened with extinction – the Araluen Gum, Araluen Ziera, Bombay bossiaea, Corang Cypress Pine, Majors Creek Leek Orchid and Nerriga Grevillea.

The majority of the region (59%) is still covered with native vegetation, with 38% being modified native vegetation and 3% non-native. A significant area (39%) has been mapped as High Environmental Value vegetation and 41% as wildlife corridors. More than 5,000 seedlings were planted on Council land during the last four years.



Native Vegetation Map - showing vegetation corridors and areas of High Environmental Value

Threats

The extent of native vegetation is mainly threatened by land clearing. Following the 2019-20 bushfires many burnt trees were removed for roadside safety and boundary fence reconstruction.

The condition of native vegetation is largely threatened by climate change and extreme events. Many trees died during the drought to late 2019, one third of the native vegetation was burnt in the 2019-20 bushfires, and many trees have fallen due to saturated soils during the subsequent wet period. Weeds and pest animals continue to apply pressure, with dieback from disease a growing concern.

Cleared boundary fence line

Opportunities

Around 20% of land is protected for conservation, including National Parks estate (15.8%) and private conservation agreements (4.5%). Landholders can seek funding for conservation activities from the Biodiversity Conservation Trust. The new QPRC Local Environmental Plan and Development Control Plan will specify some local controls on biodiversity conservation, and a Biodiversity Strategy has been proposed.

Revegetation should be actively encouraged. Annual high-resolution aerial photography would improve monitoring by land managers and regulatory agencies. Mapping of carbon emission and absorption rates could help determine the value of vegetation in carbon neutral accounting.

QPRC is developing Plans of Management for 660ha of community land classed as a natural area, some under conservation agreement to offset clearing for road construction. Council is mapping high value roadside vegetation and developing a roadside vegetation management plan to help balance conservation and driver safety at priority sites.

Threatened ecological communities

The Queanbeyan-Palerang region is home to 34 plant community types. Eight ecological communities are endangered or critically endangered with extinction, including the Araluen Scarp Grassy Forest that is found nowhere else.

During the last four years Box-Gum Woodland was upgraded to Critically Endangered in NSW and two new communities were listed as Critically Endangered – the Monaro Grassy Woodland and Werriwa Grassy Woodland.

Common threats include clearing, weed invasion and overgrazing.

Threatened species

119 native species found in the region are threatened with extinction, including 77 animals and 42 plants. 39 species are Endangered and 10 Critically Endangered. During the last four years the Budawangs Wallaby Grass and a Rice Flower Pimelea bracteate were upgraded to Critically Endangered. There are no threatened populations listed.

10 of the threatened plant species, plus another 23 plant species not previously determined to be threatened, are at high risk following the 2019-20 bushfires and require urgent management intervention.

Key threatening processes are mostly related to clearing native vegetation and habitat, weeds, pest animals, disease and climate change.

Bombay bossiaea

Opportunities

QPRC is assessing the risks posed by weeds at priority environmental asset sites and regularly obtain grants to manage weeds on priority Crown public land.

Council could play a more active role in mapping, monitoring and protecting communities and species threatened with extinction, or at high risk following bushfires, particularly those that live nowhere else. Council's Biodiversity program currently has no dedicated staff and an environmental levy could fund a Biodiversity Officer and grant management.

Case Study: Corang Cypress Pine

QPRC managed a grant-funded project to survey the impacts of bushfire on the Corang Cypress Pine, which is restricted to the banks along 20km of the Corang River. Of more than 4,000 trees, only 69 mature and 6 juvenile plants were found to have survived the fire and subsequent flooding. Large numbers of seedlings have germinated, however are susceptible to another extreme event during the seven years to maturity.

Burnt Corang Cypress Pine

Biosecurity

Council's priority for biosecurity management is to prevent new weeds from entering and establishing in our region. We aim to eradicate and contain isolated hot spots of Fireweed, Gorse and Ox-eye daisy. The impacts of widespread weeds like Serrated tussock and African lovegrass must be minimised by protecting priority assets.

Prevent and eradicate new weeds

Some high priority weeds have never been recorded in the Queanbeyan-Palerang region, including species known to occur in south east NSW such as Parthenium weed and Orange hawkweed.

Other weeds have already arrived and established in isolated locations, including Fireweed, Gorse, Madeira vine and Oxeye daisy. Council's weed management objective is to prevent these weeds from establishing, or at least contain established infestations from spreading.

Ox-eye daisy

Weed control

Council's weed control program targets the following priority weeds:

- Fireweed – around 30 infestations have been eradicated. One persistent hot spot in Googong is regularly inspected and controlled under the Fireweed Fighters program.
- Gorse – Small infestations on Council land are continually controlled. The Gorsebusters program, supported by drones, kayaks and an amphibious ATV, has been surveying and controlling plants along remote river sites.
- Oxeye daisy – The Keeping an Eye on Oxeye Daisy program located several infestations and offered support to control them on private land.

Weeds Compliance

Council achievements included:

- 7,800km of high risk roadside surveys
- 620 inspections of high risk sites
- 6,620 routine weed inspections and reports
- 1,200 on-site meetings with landholders

3 high priority weeds were detected for the first time - Spanish heath, Spanish broom and Whiskey grass.

Other new pests and diseases

The regional pest plan lists high risk pest animals, including the American corn snake that has been found in south east NSW. Phytophthora dieback has caused extensive damage in the Monaro region and appears to be establishing locally.

Opportunities

Council should continue the awareness and control programs for Fireweed, Gorse, Oxeye daisy and other new weeds. Further analysis of high risk pathways would help determine how new weeds are likely to arrive and what can be done to better intercept and detect them.

Minimise the impacts of widespread weeds

Many exotic plant species are well established in the Queanbeyan-Palerang region, and some of these are proving to be very invasive and difficult to control. These weeds include African lovegrass, Blackberry, Broom species, Serrated tussock, St John's wort and Sweet briar. Council's weed management objective is to minimise the impact of these weeds, specifically by protecting priority assets.

Widespread Broom infestation

Weed control

Seasonal control of priority widespread weeds has been completed along approximately 4,000km of roadside and 2,000ha of Council-managed land.

Following legislative changes, Council's weed control program is transitioning from controlling all declared Noxious Weeds to controlling priority weeds posing a biosecurity impact on the economy, environment or community. Priority assets on Council land are being mapped and assessed to determine which weeds need to be controlled and to what extent. In future, more effort will be placed on a wider range of weed species to protect priority asset sites, and reduced where widespread weeds are posing little or no impact.

Roadside weed control

Weeds Compliance

In addition to inspections targeting new weed species, Council achievements include:

- 60 inspections of priority assets
- 700 re-inspections for weeds that needed further control
- The award-winning $500,000 Beefing up Braidwood project, funded by the Australian Government, that developed a weed management plan for the Braidwood grazing area asset and supported 50 farmers to develop and start implementing property weed management plans

New education programs included Fireweed Fighters in schools, Council's new Biosecurity webpage and the virtual WeedsCon2020.

Fireweed Fighters cartoon in schools

Other widespread pests and diseases

Widespread pest animals identified in the regional pest plan for asset protection management include wild/feral deer, rabbits, pigs, dogs, cats and goats. These pests are managed by Local Land Services, and Council is working with LLS to determine risk assessments and the outcomes expected to manage these animals on Council land.

Opportunities

QPRC has proactively obtained grant funds to help identify priority environmental and agricultural assets, improve risk assessment tools and deliver property-level information online. These draft resources will be merged into a practical toolkit for landholders to better understand their biosecurity duty and prioritise their actions.

Environmental Education

Council engages and educates the community on environmental issues through events, schools and business engagement activities, citizen science campaigns and funding of engagement programs.

Environmental Events

Council supports and promotes local and national environmental events across many different themes such as Clean Up Australia Day, National Recycling Week, National Tree Day and World Environment Day. Onsite events such as the Platypus Walk, generally held each year in August by the Molonglo Catchment Group have increased attendance each year, with citizen science becoming the focus for supporting species monitoring campaigns including FrogID, National Bird Week and Platypus Month.

Council hosted a series of events leading up to World Environment Day on the 5th June 2021. Guest presenters from The Australian Museum and the Australian Platypus Conservancy (APC) covered topics such as river health and post-bushfire species recovery. Workshops including guided walks were hosted for sustainable fashion and local tree heritage. The week ended with a free public screening of a sustainability film at The Q.

Engagement with Schools

Council conducts school education visits tailored to the school curriculum covering topics like waste, sustainability, composting, river health and recycling. This is supported by engagement with theatre groups such as Environmentors and the Eton Gorge Theatre Company.

When the COVID-19 pandemic impacted onsite visits in 2020, Council engaged Eton Gorge Theatre Company to film videos on location at our waste facilities covering greenwaste, community recycling centres, single use plastics and general waste education themes. This content was provided to local schools, and promoted on Council's website and through social media.

Website and social media

Council supports tailored seasonal environmental education campaigns informing the community of issues such as the dangers of free fill (EPA), bushfire and woodsmoke, pest species, waterways health, biosecurity weeds and tree management. Events and campaigns are scheduled and promoted as needed with engagement levels monitored for outreach success.

QPRC Characters

Council makes use of the Malunggang platypus cartoon character originally developed by Swamp Productions to tailor messages to younger audiences. Recently Malunggang has featured in video content and the expansion of this concept to include more characters is currently underway, starting with a Rakali who will be named by the community.

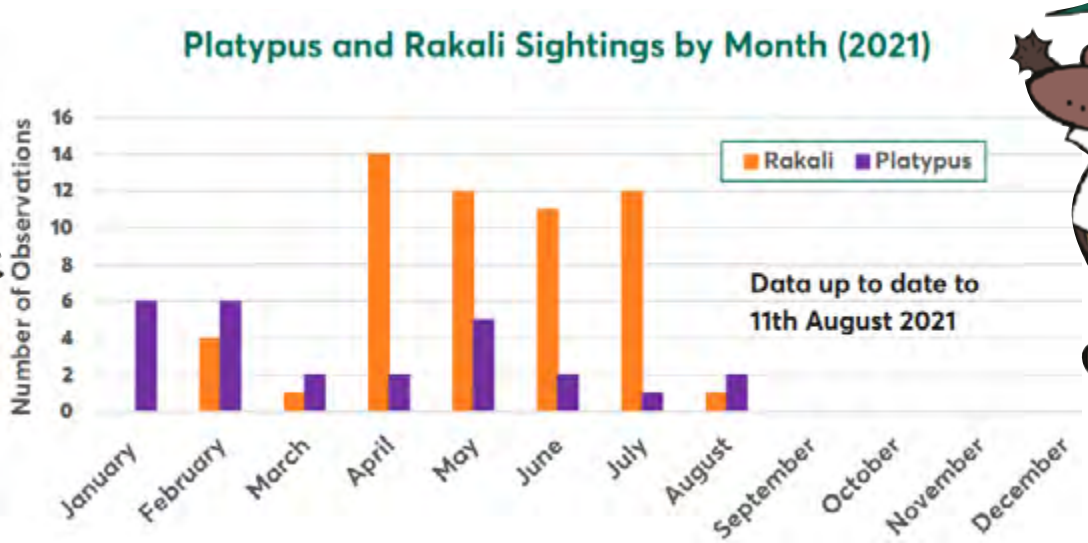
Citizen Science

Since 2014 Council has supported public reporting of Platypus and Rakali sightings throughout the LGA with sightings spanning from Nerriga to Araluen. This program won a Keep Australia Beautiful, Habitat and Wildlife Conservation award in 2020.

Council's online reporting form has seen dozens of new reports and participants every successive year. All reports are sent to the Australian Platypus Conservancy and the Living Atlas of Australia to support ongoing population monitoring.

In 2020 Council received grant funding from Resilience NSW under the Bushfire Community Recovery and Resilience Fund (BCRRF) for use of the Canberra NatureMapr platform. This includes extensive species biodiversity datasets to further promote citizen science through use of their app and website. Council can both upload and download verified species location and sensitivity data to support community learning, appreciation and enhancing local environmental values, as well as Council's species management capability.

NatureMapr



Environmental Health

Council monitors noise, air quality and pollution complaints and this data allows us to gain a snapshot of environmental health in our community. In January 2021 high levels of lead were detected in the disused rail corridor adjacent to Lake George mine site and the Captains Flat Lead Management Taskforce was established.

Air Quality Complaints

Air pollution complaints remained steady over the reporting period. The main source of air quality issues is odour derived from the keeping of animals and wood smoke from solid fuel heaters. A smaller number of complaints arise from light industrial premises such as metal fabricators, vehicle repair, and furniture manufacturers who use lacquers, solvents, and other aerosol paints.

Type	2019-20	2020-21
Dust	13	1
Odour	6	10
Smoke	14	21
Total	33	32

Smoke from domestic solid fuel heaters is a seasonal problem that occurs in the colder months and creates localised temperature inversions trapping the smoke close to the ground.

As the health risks associated with wood smoke are well documented Council has taken an active role in both education and enforcement of wood smoke. Pamphlets are proactively handed out to properties that appear to operate their solid fuel heater inappropriately and legal enforcement action is taken against those that will not adequately control the smoke that their solid fuel heater generates.

To learn more about how to correctly operate a solid fuel heater (wood heater) and achieve the lowest environmental impacts, please visit homeheat.com.au

Noise Complaints

There has been a 25% increase in noise complaints between 2019 and 2021. This may be due to the COVID lockdown period meaning that people were spending more time at home and were more heavily impacted by the activities of their neighbours.

Type	2019-20	2020-21
Barking Dogs	90	103
Power Tools	15	36
Stereo System (Music)	17	21
Air Conditioners	8	11
Vehicles	26	24
Total	156	195

The vast majority of noise complaints across Queanbeyan-Palerang (and NSW) come from barking dogs. Other common noise complaints predominantly consist of residential air conditioner units, vehicle noise, power tools, and stereo systems. All of these common noise complaints can be addressed by Council under the Protection of the Environment Operation Act 1997 with various enforcement tools to ensure that the noise is mitigated or eliminated.

Smoke pollution from Wood Heater in Queanbeyan Urban Area

The NSW EPA **Dealing with neighbourhood noise** pamphlet is a good source of information as to what can be done to resolve many different types of noise complaints. A copy of this pamphlet can be via the EPA website.

Pollution Complaints

There has been a 16% increase in pollution complaints between 2019 and 2021, with the largest increase in reports of waterway pollution.

Type	2019-20	2020-21
Waterways Pollution	37	53
Land Pollution	22	36
Other Pollution	42	29
Total	101	118

Queanbeyan Palerang has several very important waterways that feed into, or supply water to, large populous areas such as Sydney and Canberra.

Ensuring that the water quality is not contaminated from human input has become a major focus of Council's environmental health team and resulted in large scale investigations into the pollution of waterways across the LGA. Pollution incidents range from residential properties washing cleaning chemicals into the street gutters, up to large subdivisions not adequately controlling the sediment and erosion onsite.

Most pollution incidents have the potential to reach a waterway in some capacity, although land pollution (mainly through illegal dumping of hazardous materials such as asbestos) has also been reported and investigated.

If anyone sees a pollution incident, please contact Council immediately. The sooner we know about it the sooner we can stop the problem.

Poor erosion/sediment controls on subdivision site.

Living with Lead in Captains Flat

In response to the discovery of high levels of lead in the disused rail corridor adjacent to Lake George mine site in January 2021, the Captains Flat Lead Management Taskforce was established with representatives from the Department of Regional NSW, Transport for NSW, NSW Environment Protection Authority, Department of Planning, Industry and Environment - Crown Lands, Health NSW and Queanbeyan-Palerang Regional Council.

Captains Flat Village and Historical Mine Workings.

Mine contamination was thought to be encapsulated and therefore not a threat to human health. Now studies have revealed that some tailing fill material and exposed soils are in excess of exposure limits.

A total of 80 screening tests were carried out in public and community spaces by the EPA around the town and the EPA has received laboratory analysis results for those samples where elevated levels of lead were detected. The results show that some samples had elevated concentrations of lead, while other contaminants (ie. arsenic, copper and zinc) were below the health investigation level for the relevant land-use.

Most of the contaminated material remains buried under soil and/or turf, when the material is exposed to the surface, dust presents a potential source of lead exposure. The aim now is to prepare a Lead Management Plan to reduce exposure within the community. The testing has meant that several public areas in Captains Flat including the playground at Foxlow Parklet remain closed to the community.

Foxlow Parklet closure - Captains Flat.

Council is also working with the Lead Taskforce to develop materials for community education regarding Living with Lead.

A common way for lead to enter the body is through breathing lead-contaminated dust or consuming lead-contaminated food or water. Once within the body, lead can build up and cause a range of health problems. Exposure to lead is linked to harmful effects on organs and bodily functions. Elevated blood lead levels can cause anaemia, kidney problems, and neurological or developmental effects. Lead can harm people of all ages, but the risks are greater in pregnant women, infants, and children. Other factors that influence the impact of lead on an individual are age, health status, the amount of lead and the duration of exposure.

The education campaign is still in development but is expected to include print material, social media posts and community education activities with various stakeholders including new residents, schools, and community groups. Further information regarding living with lead in Captains Flat can be accessed in an **EPA fact sheet**.

Land Use Planning, Community Land and Heritage

Queanbeyan-Palerang Regional Council covers an area of approximately 5320km^2. The Estimated Resident Population for 2020 is 62,239, with a population density of 11.70 persons per km^2.

QPRC continues to experience large growth in population (2.5%), much higher than the regional NSW average (0.83%) for 2020. This is due to a large demand for new housing surrounding the ACT and includes significant growth in the new urban land release area of Googong Township. This population growth is a key driver for pressures on the natural environment and requires careful land use planning to manage these pressures.

Land Use Planning

Strategic Planning

Council has developed a comprehensive Local Environmental Plan which is currently with the Department of Planning for consultation. This plan aims to standardise requirements across the merged Council areas and improve sustainable development and appropriate land use management. It is expected this plan will be gazetted in early 2022.

Tree Canopy Cover

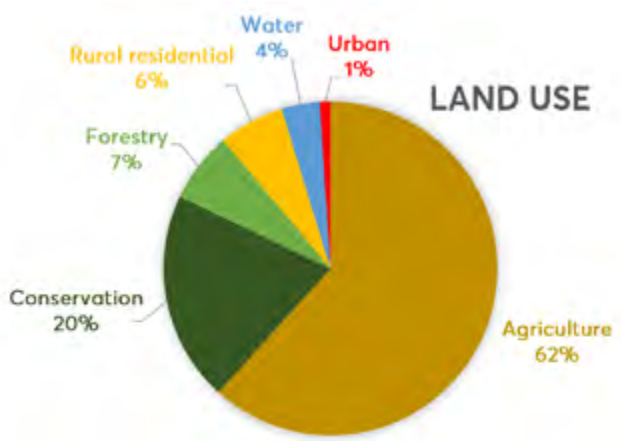
As part of the QPRC Urban Forest and Cooling Strategy tree canopy cover was measured over three urban areas. This data is only available for the 2020/21 financial year. This information provides baseline data to allow Council to make strategic decisions to balance pressures on the environment from continued urban development, and to achieve the following goals:

- A resilient urban forest
- A fairly distributed urban forest
- A cooler, greener urban environment
- Increased biodiversity and tree canopy
- An actively managed urban forest

Area	% Canopy Cover
Queanbeyan	30.9%
Braidwood	19.3%
Bungendore	14.2%

Land Use

Queanbeyan Palerang has a wide variety of land uses ranging from traditional agricultural use including broadacre cropping, livestock production, horticulture, and forestry plantations, to intensive urban uses and nature conservation areas such as national parks. Agriculture continues to be the dominant land use in the area.



Contaminated Land

Council currently has 3984 parcels of land mapped as containing some form of contamination, mostly due to previous land uses. This represents just over 10% of the land parcels in the QPRC area and equates to an area of 3176.15 hectares.

Council has an obligation under the planning and development framework to consider potential contamination in the development process and ensure that the land is suitable for the proposed use. This is managed through the process outlined in State Environmental Planning Policy Number 55 (SEPP55) Remediation of Land.

Extent of Land Contamination

One of the major causes of land contamination (not associated with a historical land use) is contaminated fill material. Due to the close proximity of the ACT, much of the contaminated material brought into QPRC originates from demolition and construction sites in Canberra. This fill is often marketed to rural residents as 'clean fill'.

This 'clean fill' can be contaminated with various materials such as lead, asbestos and building wastes including rubble. This has potential impacts on the health of occupants and the surrounding natural environment as these materials not only contaminate the land but may leach into nearby waterways.

It is important that landowners consider where material is coming from and whether there is reasonable evidence that the fill is clean. If the 'dirt deal' seems too good to be true, it probably is. By accepting contaminated fill on to a property, owners are inadvertently breaking the law and can be left holding the bill for any clean-up costs. The best way to prevent the financial and environmental risks is to stop the material reaching your property in the first place.

Landowners should:

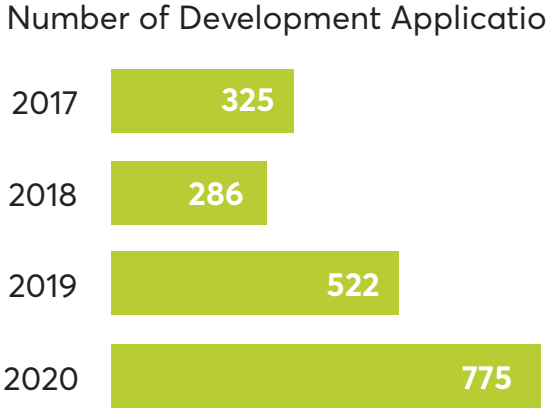
- Check before you start - get Council approval (development approval is needed for amounts over 100m^3 in rural or environmental zoned land)
- Ask questions and keep detailed records - certify the fill
- Supervise delivery
- Understand the risks - fines, contaminated land, health impacts and associated clean-up costs

See the **EPA webpage** for more information.

Free fill brought into QPRC

Development

Within the urban areas QPRC is experiencing significant growth. This is evidenced by the steady increase in approvals, particularly for new dwellings, over the reporting period.



Expansion of Googong Township during reporting period (First photo May 2017, Second Photo June 2021)

Heritage

Queanbeyan-Palerang has a diverse and important range of significant heritage items. These items include National and State Heritage sites, State and Local Heritage items, conservation areas and archaeological sites. They represent both indigenous and non-indigenous heritage items including built form and landscapes. The number of heritage items has remained consistent throughout the reporting period.

Number of heritage items and listing type.

Council's Heritage Conservation program works on the identification, protection, and promotion of heritage sites within QPRC.

- Identification of heritage items for inclusion in the draft comprehensive QPRC LEP
- Provision of advice to the community
- Provision of local and special heritage grants for works to listed buildings

Reliable data around heritage grants is only available for the 2019-20 and 2020-21 financial years. The data shows a decrease in local heritage grants (in number and dollar value) and an increase in special heritage grants (in number and dollar value).

	Number	Value
Local Heritage Grants		
2019-20	7	$19,998
2020-21	5	$11,084.38
Special Heritage Grants		
2019-20	6	$150,000
2020-21	7	$150,983.25

Published by:
Queanbeyan-Palerang Regional Council
256 Crawford St, Queanbeyan NSW 2620
10 Majara St, Bungendore NSW 2621
144 Wallace St, Braidwood NSW 2622
Telephone: 1300 735 025
Mailing address: PO Box 90, Queanbeyan
Email address: council@qprc.nsw.gov.au