



Being the change that is *needed*

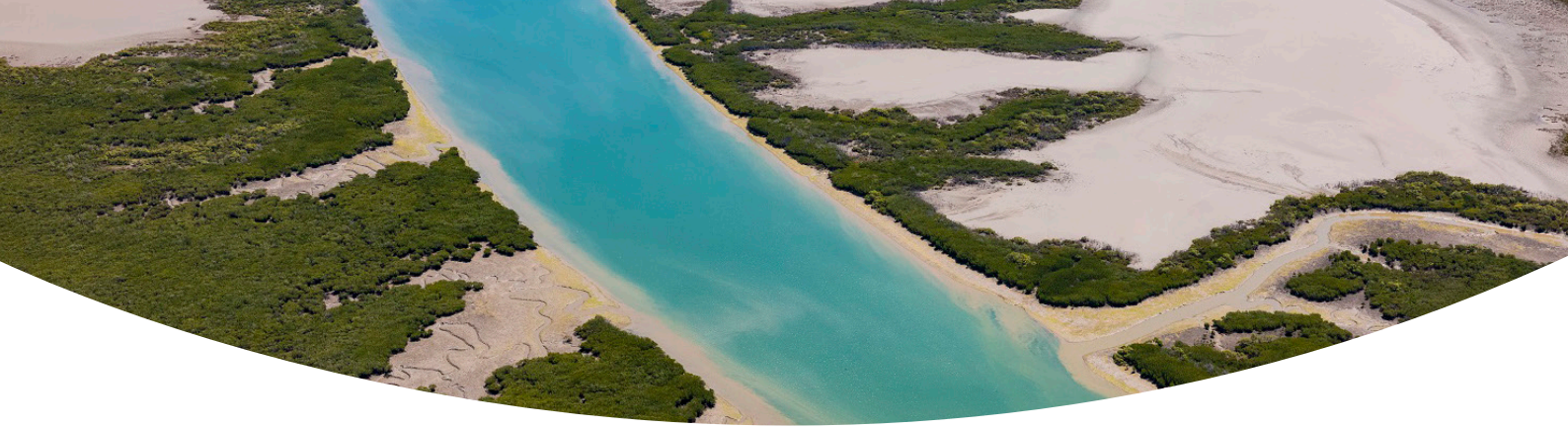
Stewardship Report | 2024

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Chair's foreword



A message from the FPRH Chair

For more than a decade, Fitzroy Partnership for River Health (FPRH) has connected and united stakeholders - resource sector, agriculture, academia, government, and community - in the monitoring and reporting on the health of the waterways of the Fitzroy Basin.

We aim to ensure that the information we provide in our annual Report Card is reliable, robust and relevant. This allows Basin stakeholders to use this information to inform future stewardship projects and ultimately improve the Basin's water quality for the benefit of the environment and the wider community. At its core, this is what we believe environmental stewardship is all about and the projects featured in the 2024 edition of *'Being the change that is needed'* exemplify how our partner organisations have used such findings to address key issues or undertake environmental improvement actions.

In this edition, we highlight eight new stewardship projects that have been undertaken by partners across agriculture, mining, energy and government to actively improve local water management practices and contribute to the ongoing protection, maintenance and restoration of the region's waterways. From sediment run-off prevention programs for graziers to new initiatives saving megalitres of freshwater on mine sites, these projects show how our partner organisations are tangibly prioritising water management and sustainability in their day-to-day operations.

As a result, our Stewardship Report alongside our Annual Report Card, are central to our advocacy for the many water management improvement outcomes that are achieved across the Fitzroy Basin each year. Most importantly, these outcomes aren't just about ticking a box to satisfy regulations or social responsibility obligations. They're about showing the community that water stewardship is important and something that we, as a collective, are continuously striving to improve.

We like to extend our thanks to the organisations who have contributed a story to the 2024 edition of *'Being the change that is needed'* and commend the work that all our partner organisations are doing in looking after our region's waterways and ecosystems.

Tim Kendrick



The first stewards

With utmost respect we acknowledge that First Nations people have cared for this continent for over 65,000 years and pay our respects to them, their cultures and Elders past, present and emerging. We acknowledge the Barada Barna, Widi, Jangga, Barada Kabalbara Yetimarala, Gaangalu Nation People, Koinjmal, Darumbal, Woppaburra, First Nations Bailai, Gurang, Gooreng Gooreng, Taribelang Bunda People, Wulli Wulli Nation People, Wadja, Iman/Jiman, Western Kangoulu, Kanolu, Bidjara, Karingbal and Wangan and Jagalingou (Clermont- Belyando) Area People as the First Nations peoples of the waters, and lands, within our reporting region.

We look forward to continuing to engage with these first stewards and their contacts and representatives to understand their care for country, their connection to waterways and to ensure their values and priorities are considered as industry, government, environment and community moves forward together.



Agricultural stewardship

The Fitzroy Basin is home to some of the most productive farming and grazing land in the nation. As the world changes, government, natural resource management organisations, consultants and agricultural producers are working harder to manage our environmental assets while building on their capacity for a better future.

Fitzroy graziers reduce sediment run-off to the Reef thanks to GRASS



A projected 9,280 tonnes of sediment is being prevented from reaching the Great Barrier Reef each year thanks to the efforts of Fitzroy graziers and the Queensland Government's Grazing Resilience and Sustainable Solutions (GRASS) program.

GRASS is funded through the Queensland Reef Water Quality Program and delivered by the Department of Agriculture and Fisheries, Fitzroy Basin Association, Burnett Mary Regional Group, and NQ Dry Tropics.

Phase one of GRASS which included an investment of \$6.8 million worked with graziers across the Fitzroy, Burdekin and Burnett Mary regions to improve land condition.

Tailor-made action plans for land management were developed to assist graziers to enhance production, provide business benefits, achieve environmental outcomes and to meet the Reef protection regulations.

Over three years, 222 action plans for land management (APLM) were developed covering 878,001 hectares of grazing land in the Fitzroy region. Almost a third of the businesses that completed an APLM went on to receive incentive funding to carry out on-ground works identified in the plan.

Sixty-seven incentive projects were undertaken across the Fitzroy with on-ground works including remediating gullies, erecting fences and installing new infrastructure such as watering points.

Phase two is now underway and will operate until 2026. If you would like to find out more or become involved, visit GRASS or contact the Fitzroy Basin Association.

The Queensland Government's \$289.6 million Queensland Reef Water Quality Program is managed by the Department of Environment, Science and Innovation and funds a range of projects working with industry, producers, communities and Traditional Owners across the Great Barrier Reef, including the Fitzroy region.



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Building a circular economy and changing Fitzroy's water future *one weed at a time*

As central Queensland's Natural Resource Management organisation, Fitzroy Basin Association (FBA) is leading the way in building a sustainable and profitable future for the region.

FBA's innovative work on improving the health of the region's waterways is a perfect example of this, with a new program set to remove 500 tonnes of an invasive, fast spreading weed from the Murray Lagoon near Rockhampton.

The Hyacinth Recovery and Reuse Pilot project is part of the Rockhampton Regional Council's "Making Water Work" Program and is managed by FBA.

The project aims to remove 500 tonnes of hyacinth from the lagoon, turn it into mulch or compost, and trial it for improving soil nutrition and microbe activity at three properties in the region.



“
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FBA Adoption Manager Daniel Boshoff said the Hyacinth Recovery and Reuse Pilot program is about water stewardship through community collaboration and working towards a circular economy.

“By turning a waste into a commercial product while reducing weed infestation and impacts on the river and wildlife,” Daniel said. “We want to use a waste product and make something useful so it replaces fertiliser and mulch that land managers usually have to pay for.”

FBA Waterway Management Coordinator Braden Mitchell said hyacinth is highly reproductive and can double in volume within a week, choking the river and waterways.

“It causes damage by obstructing navigation, blocking, and damaging irrigation, impeding drainage, destroying wildlife habitat and food, restricting outdoor recreation and impacting the habitat of the critically endangered White throated snapping turtle and endangered Fitzroy River Turtle,” Braden said.

Braden also said the removal of the weed from rivers in the region, would also have benefits to the Reef.

“When hyacinth is flushed out to sea it dies and becomes anoxic, meaning it reduces the amount of oxygen in water. This can impact fish and marine invertebrates. Hyacinth is also high in nitrogen. Nitrogen is a problem because in high quantities it can cause algal blooms that reduce light availability and can harm coral.”

The hyacinth will be made into mulch and compost for the first trial, and potentially biochar and stockfeed in the future.

“We’re working with three land managers for the project at the moment who will test how well the hyacinth mulch works on their properties,” Braden said. “The properties include cropping, fruit and grazing properties so we hope to get a good idea of how the product works across a range of operations.”

Hyacinth harvesting at the Murray Lagoon is started in early 2024 and the program’s overall results are expected by the end of the year.

“If we can see the compost is beneficial, it’s hoped to become a permanent product for the region’s land managers,” Braden said.

Through this project FBA is leading innovative solutions for a healthy and productive environment, building a more sustainable future for the Fitzroy region.

The project is funded by the Queensland Department of Agriculture and Fisheries and supported by the Cooperative Research Centre for Developing Northern Australia and Rockhampton Regional Council’s Advance Rockhampton.



Mining stewardship

Resource companies world-wide are prioritising sustainable practices for better business and communities. In the Fitzroy Basin there are a number of operators leading the way.

Burton Mine on track for sustainable rehabilitation



Peabody's Australian operations continue working towards certification under the Minerals Council of Australia's Towards Sustainable Mining (TSM) protocol. These efforts are driving performance, transparency and excellence in key areas of our environmental and social programs.

The TSM Water Stewardship Protocol recognises that water is a precious shared resource with high social, cultural, environmental and economic value. Access to water by the community has been recognised as a right; integral to wellbeing, livelihoods and the spiritual and cultural practices of community members. It's also essential to the healthy functioning of ecosystems and the services they provide.

Through Peabody's risk management framework, each of our mines aligns its water management strategy with the specific challenges of its region and regularly monitors performance to meet environmental and social values.

Peabody's Burton Mine is currently progressing through the mine closure phase. By the end of 2024, the Burton team will have completed a total of 1,479 hectares of rehabilitation, including all closure works, three years ahead of schedule. This achievement will significantly reduce sediment runoff and erosion. Additionally, the rehabilitation project completed the Spade Creek Diversion in 2023 that was in line with Australian Best Practices and maintains the existing Bullock Creek Diversion. These activities will improve the quality and quantity of water available in the Fitzroy Basin via the Isaac River.

As part of our community engagement strategy, Peabody actively participates in catchment working groups including the Fitzroy Partnership for River Health and industry associations to ensure a holistic approach to water management. In Queensland, Peabody has been a long-term major partner in the Fitzroy Partnership for River Health which includes organisations from government, industry, research and the community, who all have an interest in the health of waterways in the Fitzroy Basin.



By the end of 2024, the Burton team will have completed a total of 1,479 ha of rehabilitation.

The Peabody Energy logo, featuring the word "Peabody" in a large, bold, blue sans-serif font above the word "ENERGY" in a smaller, blue, all-caps sans-serif font. The logo is enclosed in a white circle with a teal border. The background of the entire page is an aerial photograph of a mine rehabilitation site, showing a large, irregularly shaped pond with clear blue water, surrounded by brown earth and some green vegetation. The sky is a pale blue gradient.

Peabody
ENERGY

Anglo American projects target freshwater reductions

Two Anglo American sustainability projects are returning 2,200 million litres of freshwater a year to the Fitzroy Basin for the benefit of the community and environment.

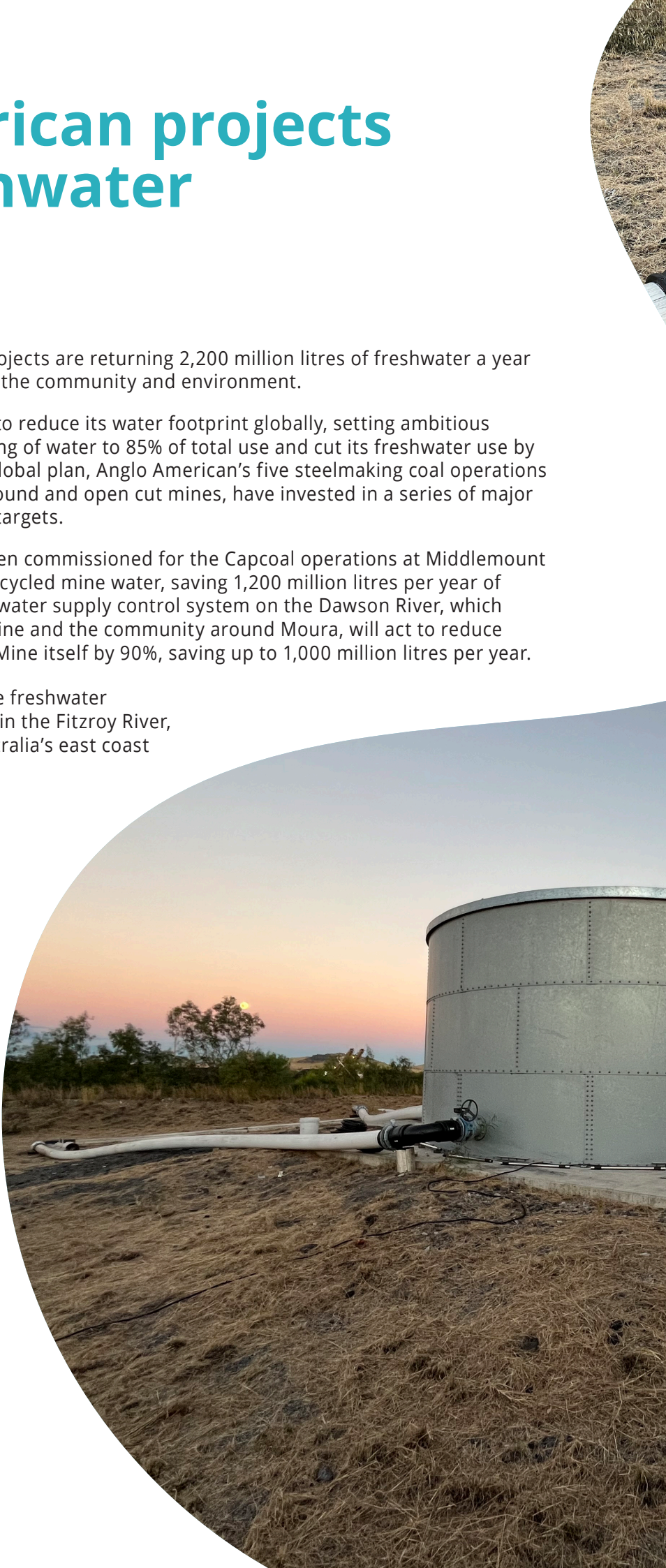
Anglo American embarked on a plan to reduce its water footprint globally, setting ambitious targets to increase re-use and recycling of water to 85% of total use and cut its freshwater use by 50% by 2030. Playing its part in this global plan, Anglo American's five steelmaking coal operations in Central Queensland, both underground and open cut mines, have invested in a series of major projects that aim to deliver on these targets.

A reverse osmosis plant (ROP) has been commissioned for the Capcoal operations at Middlemount to replace freshwater imports with recycled mine water, saving 1,200 million litres per year of freshwater. In May 2024, a new mine water supply control system on the Dawson River, which supplies freshwater to the Dawson Mine and the community around Moura, will act to reduce freshwater imports into the Dawson Mine itself by 90%, saving up to 1,000 million litres per year.

These two projects alone will save the freshwater equivalent of nearly 24 hours of flow in the Fitzroy River, the largest river system draining Australia's east coast and the largest flowing into the Great Barrier Reef.



A reverse osmosis plant at the Capcoal operations in Middlemount replaces freshwater imports with recycled mine water, saving 1,200 million litres per year of freshwater.





Anglo American water specialists Tim Kendrick and Hugo Marais believe projects like these are a hallmark of Anglo American and, by extension, the wider mining industry's commitment to improving water stewardship across the regions of operation. Specifically, these freshwater volumes will now remain within the Dawson and Nogoia riverine systems in the Fitzroy Basin to the benefit of communities, ecosystem values, culture, heritage and local economies. Inside the mine gate, the benefits of increasing reuse and recycling include improved operational water security and better mine closure outcomes. This is all aligned with Anglo American's objective of re-imagining mining to improve people's lives.

Central Queensland is a region subject to prolonged periods of low rainfall which creates an opportunity for traditionally large water consumers to leverage readily available technologies and systems to reduce freshwater demands on the Fitzroy Basin's riverine systems and pivot to using the extensive water inventories locally available at mining complexes across the region.

Read more about Anglo American's Sustainable Mining Plan on the Anglo American website: www.angloamerican.com



Healing Country with modern gully remediation techniques and traditional custodianship

On Gaangalu Country near the small community of Woorabinda, Greening Australia and BHP Mitsubishi Alliance (BMA) worked with Traditional Owners, the Woorabinda Rangers and the community throughout 2022 to rebuild and stabilise an eroding gully in Lily Creek.

Every year, millions of tonnes of fine sediment flow from eroding land onto the Great Barrier Reef, choking fish, seagrass and coral, and reducing the Reef's ability to recover from the impacts of climate change. Eroding creeks and gullies can also have a negative impact inland, reducing habitat for native animals and culturally important species, worsening the overall health of Country, and undermining infrastructure such as roads and tracks.

Repairing Lily Creek was identified by the Woorabinda Project Reference Group and the Woorabinda Shire Council as a priority activity for the Queensland Indigenous Land and Conservation Project (QILCP). QILCP is an innovative five-year collaboration between Traditional Owners and First Nations Communities, Greening Australia and BMA.

The Lily Creek project included a Cultural Heritage survey of the site delivered by Gaangalu Traditional Owners; hydrological modelling to inform the design of the gully restoration; earthworks to construct water diversion banks and rock armouring; and revegetation via direct seeding to stabilise the topsoil and help reinstate the natural flow of water across the land. An Indigenous contractor Walawaani Workforce was engaged to complete the earthworks, overseen by the engineering expertise of Neilly Group Engineering. The Woorabinda Rangers were also involved in on ground works, revegetation and monitoring.



BMA



BHP Mitsubishi Alliance

The Woorabinda Rangers continue to care for this environment. The collaboration across the project helped generate local employment and training outcomes for those involved.



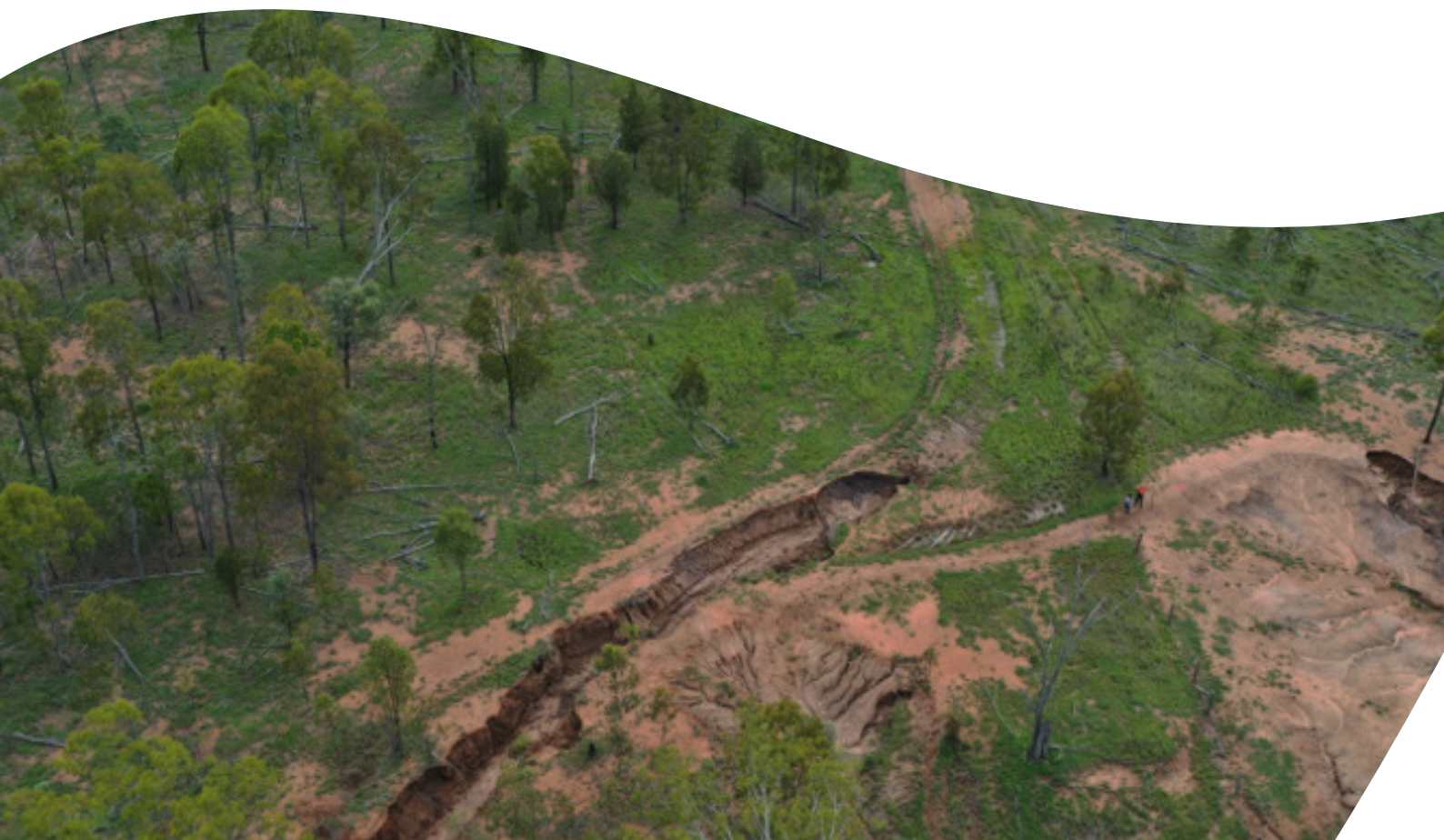
Aaliyah Fisher and Roger Leisha, two of the Woorabinda Rangers said: “Lily Creek was a good first experience restoring an eroded gully and working with new partners. The gully looks better from these improvements.”

Remediation, repair and protection of the environment has always been at the heart of caring for Country for Traditional Owners. Repairing Lily Creek brought together scientists, natural resource managers, engineers, the Woorabinda Aboriginal Shire Council and Gaangalu descendants and Traditional Owners, to improve the health of Country. The work will also have positive flow on effects over 200 kilometres away, with approximately 11 tonnes of sediment expected to be prevented from reaching the Reef each year.

Before (left) and after rehabilitation. Image credit: Greening Australia.



Repairing Lily Creek brought together scientists, natural resource managers, engineers, the Woorabinda Aboriginal Shire Council and Gaangalu descendants and Traditional Owners, to improve the health of Country.





Government stewardship

Investing in renewables and continuous improvement at Fitzroy River Water



Rockhampton Regional Council's Sustainability Strategy (Towards 2030) recognises the need to create a sustainable future for the Rockhampton Region and to strengthen our community, environmental and economic resilience. As we move towards 2030, Council is working together with our residents, communities, businesses, industries and other levels of government to lead a variety of strategic actions via four pathways. The Strategy focuses on the need to prioritise a healthy natural environment, transition towards net zero emissions, create a climate resilient region and build a low-carbon circular economy.

Council is nearing completion of a major renewables project that will help to accelerate Council's transition towards net zero emissions, whilst reducing reliance on the electricity grid. The installation of a 1,375 kW solar system at Council's largest energy consuming site, Glenmore Water Treatment Plant (GWTP), is expected to reduce grid energy usage by around 2,500,000 kWh per annum and save up to 2,200 tCO₂e per year. This initiative is a key action outlined in Council's Corporate Emissions Reduction Plan and emissions reduction roadmap, that is supporting Council to reduce net emissions by around 43% by the end of the decade, in line with Queensland and Australian Government targets.



The installation of a 1,375 kW solar system at the Glenmore Water Treatment Plant, is expected to reduce grid energy usage by around 2,500,000 kWh per annum and save up to 2,200 tCO₂e per year.



The Glenmore Water Treatment Plant, operated by Fitzroy River Water (FRW) and located adjacent to the Fitzroy River, is a crucial piece of infrastructure that provides clean and safe drinking water to every person in the Rockhampton Region connected to Council's water supply network. This renewable energy project reflects FRW's commitment to continuous improvement and has been delivered in conjunction with the first stage of major improvements to the facility which include upgrades to the control room and laboratory, dosing system, main electrical switchboard, all electrical wiring, and refurbishment of all ten filters at the plant.

In addition, FRW is undertaking actions to optimise operation of equipment such as pumps, aerators and blowers to reduce the required energy use, including digitising asset performance indicators and trends on centralised control systems (SCADA systems), incorporating process failure identification algorithms into the SCADA system to notify operators of system inefficiencies in near real-time, and reviewing available technologies to ensure relevance to the site's activities.

Rockhampton Regional Council is taking a proactive approach to the sustainability of the Region and the Fitzroy Basin. The continuous improvement at FRW is a testament to this, leading the community by example and cost-effectively accelerating the local transition towards net zero emissions.



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Citizen science & partnerships

Fitzroy Waterwatch - Part of the solution to a better water future

Waterwatch is a network of citizen scientists monitoring waterways in the Fitzroy Basin. Fitzroy Partnership for River Health reinvigorated the Fitzroy Waterwatch program this year as an initiative to help us monitor and sustainably manage our most precious natural asset – fresh water. We're part of a nation-wide effort to understand and care for waterway ecosystems.

Waterwatch programs support communities to monitor the health of waterways, learn through hands on environmental experience, and to participate in natural resource management. Being a citizen scientist allows individuals to actively contribute to the advancement of knowledge as well as practice stewardship over their local waterways.

Fitzroy Waterwatch is made up of individuals, community groups, and school groups who monitor the chemistry, biology and ecology of their local waterways. Using a new and improved online platform it is easy and accessible to record and use the information they collect. Making the data accessible and transparent for citizen scientists and the community is an important aspect of the Fitzroy Waterwatch program. Check out the Fitzroy Waterwatch page to see monitoring sites and download the data.

Along with an upgrade to the interactive data portal new methods for assessment of riparian vegetation and in-stream habitat condition in our region have been released. These methods have been designed to provide reliable indications of waterway health, be completed rapidly, and be accessible to newbies, citizen scientists, and experts alike.

The renewed program launched in the Emerald Botanical Gardens in March this year. It was a beautiful day the Fitzroy Partnership for River Health team spent meeting Theresa catchment locals and sampling the Nogoia River. We hope we can reach more and more communities across the Fitzroy Basin to monitor, connect and protect our waterways.



fitzroy
partnership
for river health

Waterwatch programs support communities to monitor the health of waterways, learn through hands on environmental experience, and participate in natural resource management.



Merging scientific and cultural insights for *waterway health*

Monitoring waterways and ecological health of the Fitzroy Basin is an important task and a key focus for the Partnership.

A local team of scientists from one of FPRH founding members, CQG Consulting has been conducting water quality testing, delivering environmental monitoring programs and ecological surveys across the catchment for over 20 years.

In 2019, the CQG team formed Tunuba, a company with the Darumbal People to collaboratively deliver a comprehensive approach for clients, through a merging of scientific skills underpinned by tens of thousands of years of cultural knowledge.

As part of this collaboration and a two-way knowledge sharing, CQG's scientists have been training Tunuba Rangers to undertake water quality monitoring, treat weeds and to capture and protect fauna.

CQG's Founder and Director, Patrice Brown said scientists can learn a lot about natural environments and the relationships between waters and land by working with Traditional Owners and listening to the stories told by the elders. Our scientists have an enormous respect for First Nations People and are fortunate to regularly learn about the natural environment from them.

"In western science we think of water as a separate entity, whereas we should realise it is part of country, the land, the animals, the trees and humans. First Nations people have a more holistic view of the environment where everything is connected and interdependent.

"We should listen more and learn from First Nations People to inform our decision making. Taking of water, changing watercourses, discharging wastewaters all have impacts on ecosystems. Water quality data can be irrelevant if the bigger picture of the health of the country is not considered. Impact assessments must take into account the knowledge of First Nation People to ensure we minimise impacts and protect the natural environment.

To learn more visit www.cqgroup.com.au. CQG Consulting have offices located in Rockhampton, Gladstone, Brisbane, Mackay and Townsville.





Become a water warrior



Join a community group or event that samples or improves the health of your local creek or river.



Take shorter showers. Put a timer on for 4 minutes.



Make recycling a habit at home and at work.



Join the Containers for Change program, recycle your glass and plastic containers and make some savings while you're at it!



Say no to single use plastic. Always carry a refillable water bottle and remember your reusable bags when you shop.



Don't litter - and even better, pick up litter in your yard, street and community.



Reduce fertiliser and pesticide use. Think about rain before you spray for weeds or fertilise your garden.



Plant trees or shrubs on hills or slopes near creeks and water ways to reduce run-off.



Pick up after your pet. Pet poo is just raw sewage.



Sweep your driveway, don't hose and take debris to the dump as garden waste.



Wash your car on the lawn, not the driveway, or take your car to a water-wise car wash.



Flush wisely - use your half and full flush options.

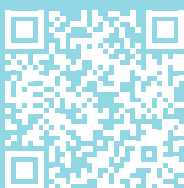


Our Partners

We recognise our partners as being the change that is needed for Fitzroy Basin's water future;



Get in touch to
find out more



riverhealth.org.au/water-stewardship



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[FitzroyPartnership4RiverhHealth](https://www.facebook.com/FitzroyPartnership4RiverhHealth)



[Fitzroy Partnership for River Health](https://www.linkedin.com/company/FitzroyPartnershipforRiverHealth)



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