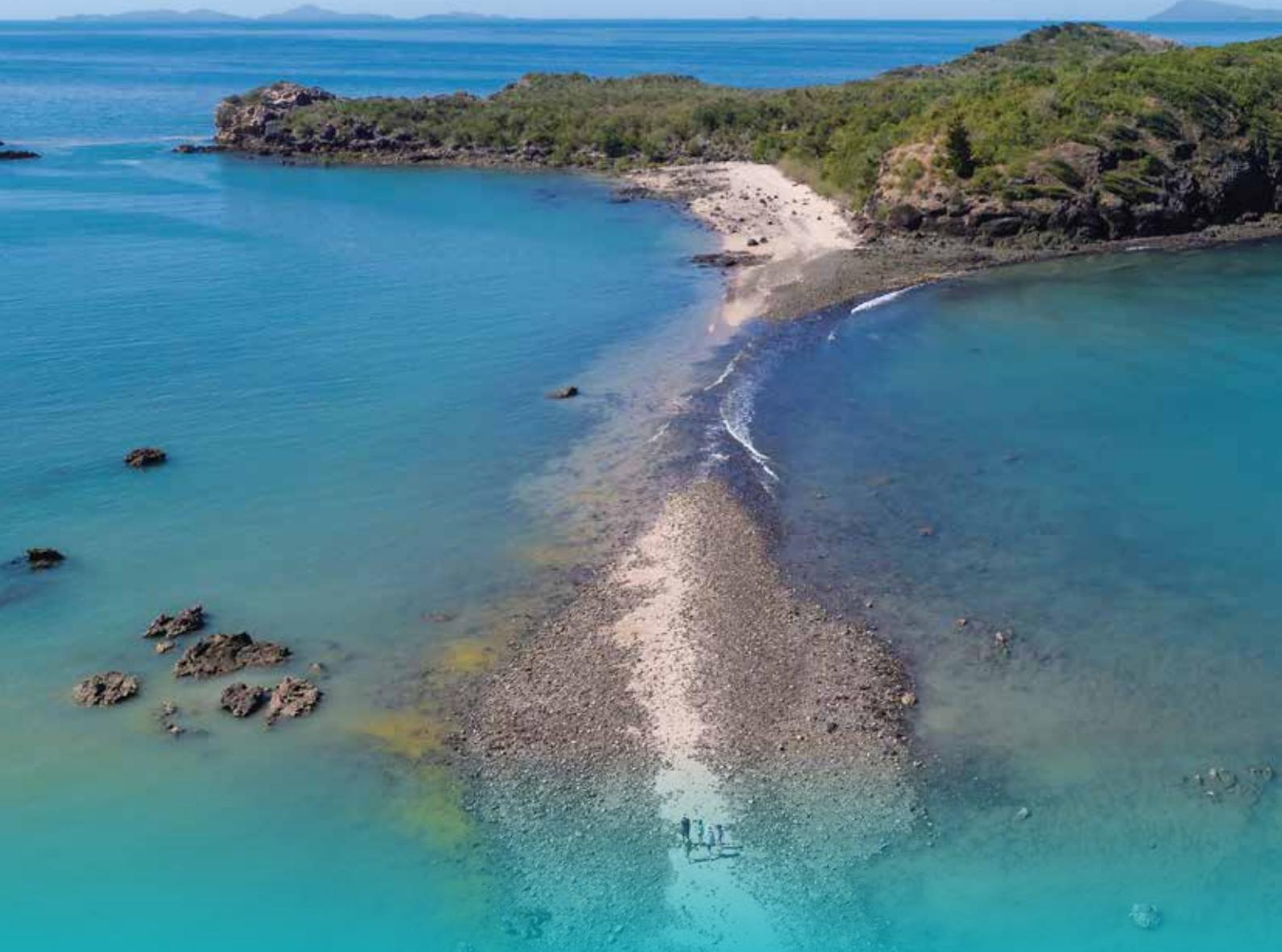




HEALTHY RIVERS TO  
REEF PARTNERSHIP  
MACKAY-WHITSUNDAY-ISAAC



# *Above and Beyond*

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2019-20

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**Stories of Stewardship in the Whitsunday, Mackay and Isaac region over the past 18 months.**

A Stewardship Report brought to you by the Healthy Rivers to Reef Partnership.

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# *18 months in retrospect*

## MESSAGE FROM THE HEALTHY RIVERS TO REEF CHAIRPERSON JULIE BOYD.



The Stewardship Report - **Above and Beyond** created by the [Healthy Rivers to Reef Partnership \(HR2RP\)](#) is a celebration of sustainability initiatives enacted in the Mackay, Isaac and Whitsunday region. These actions undertaken by the partnership organisations, individuals, local business and community organisations with the aim to improve our environment and importantly, our communities waterway health.

The Mackay-Whitsunday-Isaac HR2RP is a collective that includes representatives from local, Queensland and the Australian government, conservation groups, ports and coal organisations, tourism, agriculture, Traditional Owners and other associated parties. All who have a shared mission of improving waterway health, locally.

Each year the HR2RP produces a Waterway Health Report Card that assigns rivers, creeks, dams, estuaries, reefs (inshore and offshore) and other marine areas a grade from A to E, based on performance, much like a traditional school report card. And while the scores may seem simplistic in nature, they represent six years of rigorous science, data monitoring and collection from Proserpine to the Pioneer Valley (and everywhere in between). The HR2RP Report Card provides key insights into water quality, health of freshwater fish seagrass and coral growth in our region.

In recognising that this Report Card demonstrates results and technical data the HR2RP partnership identified that there was an opportunity to showcase the activities that aim to improve these scores. In 2019 we launched the inaugural Stewardship Report with the mission of sharing a handful of the great stories that give you a snapshot of the improved outcomes that are being achieved. These stories demonstrate the significant work that is being led by active members in the partnership and undertaken in our community.

The last 18 months have been jam packed, and in this second edition you will find 20 stories of organisations that have gone "Above and Beyond" for waterway health. In one piece you will learn about outcomes from gardening with an underwater twist. In another, how fish ladders are proving to be a step up for fish ecology. In another, how testing methods in demonstration projects is to reduce paddock scale chemical runoff in the wet. In this year's edition, we take a deep dive into marine debris and plastics collected by Ecobarge and what you at home can do to stop plastics entering our waterways. This year's Stewardship Report - Above and Beyond is intended to be read alongside the 2019 Report Card.

I/we hope you enjoy reading these stories, and learning more about the HR2RP members and their work.

*Julie Boyd.*



# THE WHITSUNDAY ISLANDS TO BECOME THE NEXT *climate change refugees* ALONG THE GREAT BARRIER REEF.

The Great Barrier Reef Foundation (GBRF) announces the Whitsunday Islands as the second site for restoring island reef habitats.



To learn more about the project visit:

[www.barrierreef.org/reef-islands](http://www.barrierreef.org/reef-islands)



Right in the heart of the Great Barrier Reef sit the Whitsunday Islands, a critical habitat sanctuary for the Reef's diverse marine life. In the face of climate change, the islands, connected reefs, and supporting ecosystems need our help to recover from recurring major impacts like coral bleaching and severe cyclones.

The [Reef Islands Initiative](#) (RII) is a \$14 million 10-year program that aims to do just this - protect critical island reef habitats in the Great Barrier Reef. The Whitsunday Islands has been selected as the second site for the RII. The initiative is led by the [Great Barrier Reef Foundation](#), supported by funding from [Lendlease](#), the Australian Government's Reef Trust, the Queensland Government and the [Fitzgerald Family Foundation](#).

Following the launch of RII in the Whitsundays earlier this year, the Great Barrier Reef Foundation and [Reef Catchments](#) have been working closely with the local community, including Traditional Owners, reef managers, and tourism operators to co-design the Whitsunday project vision and priority local actions. The vision is for the Whitsundays to become a recognised hub for:

- 1. Reef restoration stewardship** – piloting new approaches to coral restoration, driven and led by local tourism, community and Traditional Owner partners and
- 2. Reef industry sustainability** – investing in and showcasing climate-friendly Reef projects, technologies, and tourism activities that incentivise behaviour change.

In August, RII put out the call for expressions of interest to assist in the delivery of reef restoration projects that are:

- grounded in science and evidence;
- test a suite of tools and techniques and
- encouraging edu-tourism and Reef restoration upskilling across the local community.

Local Reef Champions have stepped up to the plate with work underway to develop a cohesive long term-program plan with these interested project partners. Watch this space.

# 1 MILLION PIECES OF RECYCLED PLASTIC USED IN CAMPGROUND RECONSTRUCTION.

Isaac Regional Council provides an upgrade to the popular Carmila Beach Campground.

The popular [Carmila Beach Campground](#) has seen an upgrade by Isaac Regional Council. Completed in July 2020 the new and improved campground has been rebuilt with a conservation twist.

Carmila Beach Campground is located approximately 6km east of Carmila. It is an unspoilt paradise and convenient rest and camping area for all those travelling between Rockhampton and Sarina. The spot is very popular with fishing enthusiasts who trawl through the creeks north and south of this camping oasis.

Historically, the undeveloped coastal area has lacked defined camping facilities and recreational areas. With the increase of visitors, car tracks, camp sites and campfires were progressively encroaching into the surrounding dunes and essential wildlife habitats. Isaac Regional Council quickly identified the potential for negative impacts on the natural environment from this recreational use and jumped into action.

Reconstruction works on the facility have restored the balance between the campers, the community and the environment. A number of dedicated campsites have been defined, signage improved, toilets, barbeques, picnic tables and boat ramps upgraded.

As part of a larger masterplan for Carmila Beach, recycled plastic fences and bollards have been used to define campsites and prevent access to the foredune and the endangered coastal vine thicket surrounding the site.

These preventative conservation efforts will allow the regeneration of foredune vegetation and the stabilisation of the dunes by limiting coastal and stream bank erosion.



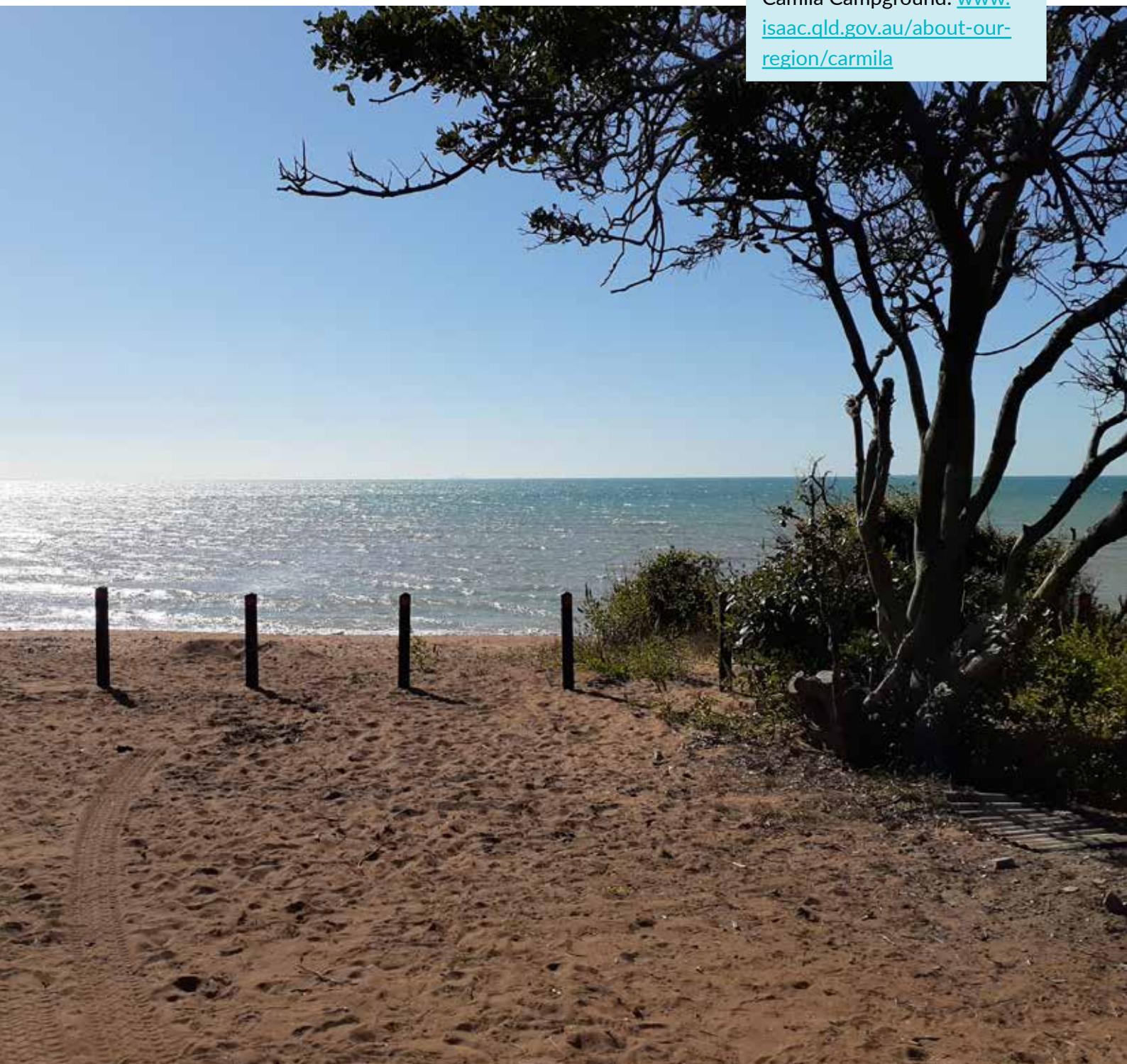
*The project was completed using over 1 million recycled single-use plastic materials, which equates to diverting 4,371kgs, from ending up in landfill.*

The reconstruction of the Carmila Beach Access is funded under the Natural Disaster Relief and Recovery Arrangements (NDRRA) Environmental Recovery Package, a joint funding initiative of the Queensland Government and the Australian Government to help communities recover from the effects of natural disasters.

*Want to plan  
a local getaway?*



Information on how to book  
Carmila Campground: [www.  
isaac.qld.gov.au/about-our-  
region/carmila](http://www.isaac.qld.gov.au/about-our-region/carmila)



# NQBP DEDICATES \$5 MILLION TO *tech driven* MARINE SCIENCE RESEARCH.

North Queensland Bulk Ports Corporation (NQBP) and James Cook University (JCU) come together to safeguard the Reef in a new \$5 million, five-year partnership.

The environmental monitoring agreement builds on the existing, long-standing collaboration between JCU and NQBP. A relationship that has seen the monitoring of waterway quality, seagrass and coral in the marine environments surrounding NQBP's ports in Mackay, Hay Point, Abbot Point and Weipa.

In the coming five years, NQBP will embrace new technology to support insight outcomes from this ongoing monitoring. JCU researchers will introduce remote camera systems, trial next generation photo mosaicing and use automated/remote operated vehicles to get a clearer picture of what is happening in our underwater habitats.

This five-year partnership with JCU builds on NQBP's extensive ambient monitoring program which includes 6km of coral transects (paths) 30,000 hectares of seagrass and numerous water quality loggers transmitting 900,000 data logs each year.

Late in September the partnership was launched at JCU's Science Place to guests from across the industry and saw live demonstrations of a remote operated vehicle in a two-storey aquarium.

Associate Professor Michael Rasheed from JCU's Centre for Tropical Water and Aquatic Ecosystem Research (TropWATER), a co-director of the project said NQBP's operational footprint offers a one-of-a-kind opportunity for marine science research and student learning.

As a long-standing partner and supporter of the HR2RP, NQBP is the only port authority in the world with three priority ports located on the shores of the Great Barrier Reef. NQBP balance commerce - \$40bn of trade globally, local employment - 27,000 in agriculture and mining in a world-leading dedication to waterway research and health.



To find out more visit:  
[www.nqbp.com.au/jcu](http://www.nqbp.com.au/jcu)





*"NQBP take their environmental responsibilities very seriously. To this end, JCU provides scientifically robust and credible information on key port marine environmental assets for government agencies, stakeholders and the community" Dr Rasheed commented.*

In addition to the new monitoring program NQBP have announced \$75,000 for five \$5,000 annual scholarships for Bachelor of Science (Marine Science) students over the next three years. During this time NQBP and JCU will also fund one PhD scholarship each, worth a combined \$200,000, plus 10 internships opportunities for undergraduate students. [Find out more about these opportunities.](#)

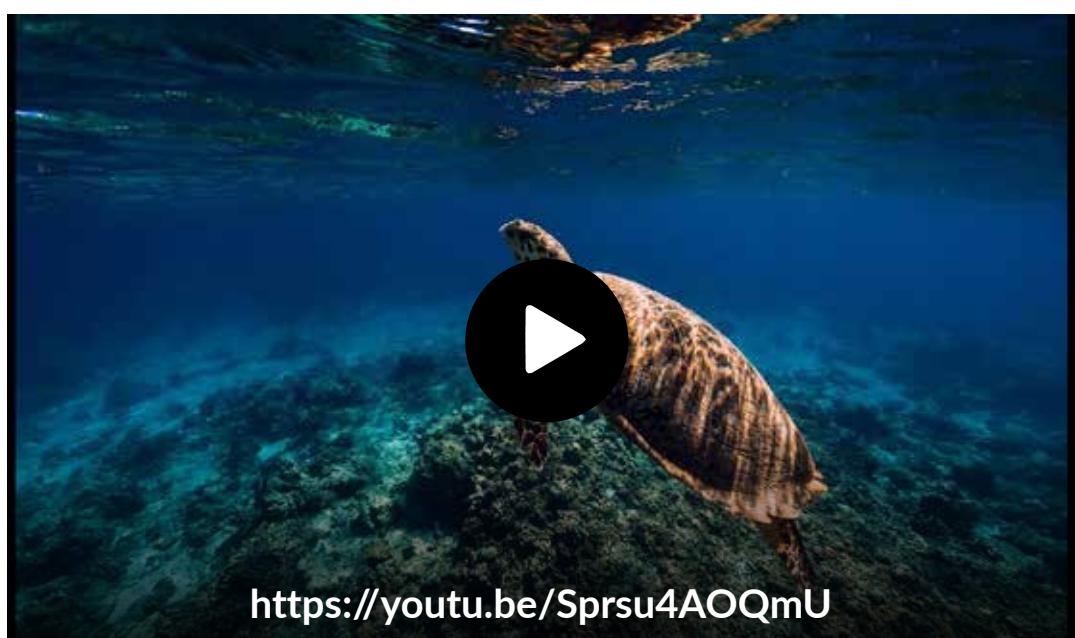
NQBP CEO Nicolas Fertin feels the JCU and NQBP partnership will build on the "exceptional success" of the three years of partnership which commenced in 2017.

*"We want to deliver best practice science, monitoring and management of port marine environments while training the next generation of industry and job-ready science graduates."*

JCU Vice Chancellor Sandra Harding said it was an important partnership that stretched back over 25 years.

*"Both JCU and NQBP have an enduring commitment to and expertise in the north - the new agreement is a perfect match of capabilities and experience that will benefit the university and its students, the ports and their employees and the environment we enjoy here in the tropics," she said.*

Data collected by NQBP and JCU is available on dashboards via NQBP's website and is used to inform local marine health and reef reporting - like the Mackay-Whitsunday-Isaac Healthy Rivers to Reef Partnership annual waterway report card.



# THE URBAN WATER STEWARDSHIP FRAMEWORK TO BE ROLLED OUT.

*Local Councils kick off using learnings from the Urban Water Stewardship Framework.*

Very rarely you think about where your water goes once it is flushed down the toilet or emptied from your sink. Water used in your home and urban areas, including stormwater, grey water, sewage and other forms of urban runoff have the ability to impact on local waterways and the Reef.

In our community, there are a host of people working together behind-the-scenes to ensure that urban water is managed effectively. In 2019, the Whitsunday, Mackay and Isaac region was selected by the Office of the Great Barrier Reef, of Queensland Department of Environment and Science, alongside Cairns and Townsville to take part in a pilot program to assess the level of practice being applied to urban water quality management.

The Urban Water Stewardship Framework looked specifically at practice levels associated with urban water management activities. These actives relate to land development, wastewater treatment, sewer network operation, maintenance and drainage in urban areas.

Initial workshops as part of the pilot have been undertaken with [Whitsunday Regional Council](#) and the [Mackay Whitsunday Isaac Healthy Rivers to Reef Partnership \(HR2RP\)](#) and the [Queensland Government Department of Environment and Science](#). The pilot study workshops assessed over 60 urban water management-related activities on a four point (ABCD) scale to highlight those that being done well and those that could benefit from being improved.

The workshops assessed 69 activities related to urban water. 48 of these are linked to erosion and sediment control and stormwater management, while 17 were linked to sewage treatment plant and sewer system operation.

Workshops based on the revised and endorsed methodology will be held in late 2020. Subject matter experts across sewage treatment plant, system operation, maintenance, town planning, construction, storm water, water catchment and broader environmental management are invited to attend. With learnings emerging from the initial pilot study and the methodology refined, the focus has turned to including the assessment into regional waterway report cards. Over the next few months HR2RP will work with the three regional councils in our region - Whitsunday Regional Council, [Mackay Regional Council](#) and [Isaac Regional Council](#) to deliver this urban water reporting process. Stay tuned.

*Going above and beyond*



Watch what you wash down your drains, gutters and what you flush down the toilet. It can end up in our waterways and seas.

# FARMING INNOVATION. *Knowledge shared.*

The Annual Project Catalyst Forum 2020, held in Mackay in February was a showcase event for experts to share knowledge, trial results and innovations with growers, industry representatives and on-ground service providers.

Join any conversation at the Project Catalyst Forum and you will witness instances of epic collaboration and knowledge sharing. In one discussion, you may learn about innovative farming practices like banded mill mud application. In another, how drone technology is helping with cropping systems. The Annual Project Catalyst Forum 2020 is host to not only 190 growers but also the collision of ideas, projects and innovation.

Organised by [Catchment Solutions](#) under the banner of [Project Catalyst](#), this year's theme was centred around soil health. This year's Forum covered topics such as irrigation application and management, mixed legume fallows, pesticides use and monitoring and finally nutrient use efficiency.

In true forum style the speakers were not to disappoint, David Freebairn a Soil Scientist opened with his keynote on 'How changes in management influence hydrology and water quality.' Graeme Sait who is as serious-about-soil-as-it-gets delivered a special dinner address on 'The Anthropocene -Consequences and agricultural solutions'. As a representative of [Nutritech Solutions](#) he spoke on the importance of soil health as being important for achieving higher yield and agricultural sustainability.

Other stand out speakers included Charlie Clack speaking on 'Price, Trade and Climate, the 2020 Outlook and Beyond,' and Charlie Morgan speaking on the 'Mackay-Whitsundays-Isaac Healthy Rivers to Reef Regional Report Card.'

Project Catalyst commenced in 2009 as a pioneering partnership between [WWF-Australia](#) the [Coca-Cola Foundation](#), [Reef Catchments](#) (NRM) and a dedicated group of cane farmers in the Mackay Whitsunday region in the state of Queensland. Project Catalyst is funded by the [Reef Trust Partnership](#) – a partnership between the [Australian Government's Reef Trust](#) and the [Great Barrier Reef Foundation](#).

Missed out on this year's forum? Not to worry, watch the recordings of the forum on the



[Project Catalyst Youtube Channel](#).

Or you can learn more in the 2020 Project Catalyst

Forum magazine

'[Our Reef Legacy, improving Water Quality](#)' on the [Project Catalyst website](#).



*Over 190 Growers participated in the 2020 Project Catalyst Forum.*

*Going above and beyond*



Also serious about soil quality? You can help at home.

It is estimated that approximately 50% of the rubbish Aussies put in the bin could be used in the garden or returned to agricultural land to improve soil quality.



[Start a home compost.](#)

# Burning down barriers.

Eight Traditional Owners, representing people from Yuwibara, Koinjmal/Koinmerburra, Barada/Widi and Ngaro/Gia/Juru groups participated in firefighting training in collaboration with Reef Catchments, Queensland Fire and Emergency Services and local Rural Fire Brigades at Dumbleton and Eton.

The Mackay, Whitsunday and Isaac Traditional Owner Reference Group (TORG) identified the need to share knowledge and skills that would lead to an increase in Traditional Owner involvement with planned burns. The long-term view is to rejuvenate and incorporate Traditional Fire Knowledge in the region's modern day practices.

To kick things off, Traditional Owners in the region participated in basic fire training and were credited in units such as 'assist with prescribed burning', 'prevent injury' and 'work in a team'.

The knowledge, skills and relationships that have been achieved through this training is just the "spark" of the journey. The TORG and collaborators are keen to build on the momentum through exploration of the next level in firefighting training. Funding is also being sought to enable on-country cultural burning workshops to share knowledge and awareness of assessing country and cultural burning.

Basic level firefighting training was jointly funded under the Commonwealth/State Disaster Recovery Funding Arrangements under the Flexible Funding Grant Program.

*Bushfire management training undertaken by Traditional Owners.*



## Going above and beyond



Get to know your local  
Traditional Owner groups.  
Let's connect and care for  
the country together.

Learn more [www.reefcatchments.com.au/  
traditional-owners/](http://www.reefcatchments.com.au/traditional-owners/)

*Nominated Traditional Owners from  
TORG participate in firefighting training.*



# STUDENTS GET THEIR *hands dirty* IN A LOCAL WETLAND RESTORATION PROJECT.

Dalrymple Bay Coal Terminal Pty Ltd (DBCT P/L) is proud to be partnered with Pioneer Catchment Landcare and Mackay Christian College (MCC) on the Vines Creek Wetland Project.

The project provides a unique opportunity for students, teachers, and community members alike, to get their hands dirty and participate in the restoration of this local wetland. Over a ten-year period, the group aims to ensure the sustainable management of the Vines Creek Wetlands and improve the ecological and community outcomes.

In this educational project, year five students were able to take learnings from the classroom and apply them in the field. They were directly involved in delivering actions from the Wetland Management Plan - tree planting and ongoing site maintenance (including; weeding, watering, infill planting).

In a wetland presentation by a Department of Agriculture and Fisheries Officer, students learned about the importance of wetland ecosystems and the interconnection with water quality and reef health.

*Collaborative efforts lead to better management of Vines Creek Wetland.*

Learn more about the project: [www.pioneercatchment.org.au/what-we-do/past-projects/](http://www.pioneercatchment.org.au/what-we-do/past-projects/)



## Achievements of the project to date:

**70**  
**students**

attended the Mackay Natural Environment Centre and wetlands to learn about plant propagation.

**750**  
**local native trees,  
shrubs and grasses**  
were planted.

**The site has been restored**  
and invasive weed species removed.



*Going above  
and beyond*



If pulling weeds makes you want to pull your hair out, there's a simple solution... and it doesn't involve nasty chemicals. Did you know that you can use a tarp (black is best) to smother weeds?

DBCT P/L's Manager- Safety, Risk & Environment, Ricci Churchill, is a passionate supporter of environmental education activities such as the Vines Creek Wetland project.

*"DBCT P/L believes the Vines Creek Wetland project to be of great importance, not only to the surrounding community; but it's a fundamental tool in educating MCC's students on their surrounding environment whilst providing them with ownership of the Wetlands."*

The long-term vision of the project includes the installation of a boardwalk, viewing platform and education signs to provide safe pedestrian access. A place that encourages monitoring of bird life and wetland vegetation.



# 12,748 KILOGRAMS OF MARINE DEBRIS REMOVED FROM THE WHITSUNDAY ISLANDS.

Globally, it is estimated that between 4.8 and 12.7 million tonnes of marine debris and plastics enter the ocean each year. One organisation here in the Whitsundays is fighting the war on marine debris, piece by piece.

Marine debris, as you may know, is harmful to marine life including to protected species of birds, sharks, turtles and marine mammals. It can cause injury or death to this wildlife through drowning, entanglement, or starvation following ingestion. But what you may not know is that plastics and marine debris also impact the health of our local waterways through transporting invasive species and chemical contaminants.

In 2019 with the helpful hands of 55 members and 1500 registered volunteers, Eco Barge Clean Seas reached a huge milestone - the removal of 200,000 kilograms of marine debris from the Whitsunday region. 25 of these cleanups were funded by the [Coca-Cola Foundation](#) and the remaining 16 were thanks to [Reef Catchments](#) and the Australian Government funded ReefClean project.

*Thanks to the work led by [Eco Barge Clean Seas Inc.](#) and clean up volunteers.*



### During 2019

**41**

organised marine  
clean ups

**506**

volunteers

**4,307**

volunteer hours

**310,590**

individual pieces of  
marine debris

**12,748**

kilograms of marine  
debris removed

**310**

kilograms removed  
per trip on average

*Going above  
and beyond*



Would you like to help  
reduce marine debris in the  
Whitsundays?



[Register to volunteer  
your time with Eco Barge.](#)

### Top 7 rubbish nasties found



Plastic pieces  
(hard and soft)



Thongs and rubber  
soles



Plastic lids and  
bottle tops



Foam insulation and  
packaging



Plastic drink  
bottles



Bleach and  
cleaner bottles

From 2020 onwards,  
the Healthy Rivers  
to Reef Partnership will  
be reporting on  
marine debris -  
download your  
free copy of the  
[2019 Waterway  
Health Report  
Card](#).



# PREVENTING PLASTICS FROM ENTERING OUR WATERWAYS.

## *What you can do to help.*

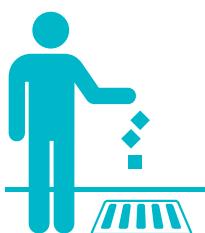
If you are sitting there scratching your head - wondering "what can I do?" Don't despair! We sat down with Dr Elly Pratt a marine Technical Officer from Healthy Rivers To Reef Partnership to get her handy tips for preventing plastic from entering our waterways.



*Hi Elly, so where does this plastic and marine debris come from?*

Even if you are far from the coast, the plastic you throw away could make its way into the sea. There are three main ways the plastic we use every day ends up in the oceans.

### 1. Littering



Litter dropped on the street doesn't stay there. Rainwater and wind carries plastic waste into streams and rivers, and through drains. Drains lead to the ocean!

### 2. Throwing plastic in the bin when it could be recycled



Plastic you put in the bin ends up in landfill. When rubbish is being transported to landfill, plastic can be blown away because it's lightweight.

### 3. Products that go down the drain



Many of the products we use daily are harmful to our waterways. This includes microfibres when we wash our clothes, microbeads from our beauty products, wet wipes, cotton buds and sanitary products. Be careful what goes into your toilet or down your sink.

*So what are the ways that you would recommend people can reduce their plastic use and minimise the impacts of waste?*

Reducing your plastic use is an ongoing process. Once you start to look for ways to reduce plastic and recycle it - you will find it everywhere! Here are a couple of ways you can reduce the impacts of your plastic use.

### 1. Remember your enviro bags.

After you unpack your shopping, put your reusable bags back in the car so you don't forget them next time around. For bonus points test reusable produce bags.



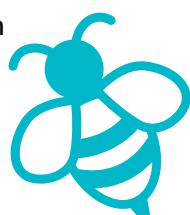
### 2. Collect glass and plastic containers and earn some coin.

\$180 million has been returned to participants since the Department of Environment and Science launched the program in 2018. Every day Queenslanders return an average of four million containers to one of 300 refund points across the State. Join the Containers for Change program and receive a 10 cent refund for each eligible container returned.

 [Find your local drop off point](#)

### 3. Live cling wrap free.

Beeswax wraps are today as cool as. You can make them yourself or buy them from your local market.



### 4. Re-think your need for plastic.

There are many alternatives to plastic packaging on the market now, thankfully. I set myself a challenge in 2020 to convert my shower area to 100% no plastic packaging and I'm pleased to say I've succeeded! I use good old fashioned bars of soap, shampoo and conditioner bars, even moisturizer bars for your face. No plastic, no problem.



### 5. Bin your butts.

Smoking may be a bad habit. But a habit, even worse - is dropping your cigarette butts. When you are out and about, look for council provided butt bins or carry a small container.



### 6. Recycle your soft plastics.

Did you know that you can recycle most soft plastics? Anything that passes the "scrunch test" like chocolate and snack wrappers can be recycled at most Woolworths and Coles supermarkets.



 [Look for the redcycle bins](#)

### 7. Get a reusable drink bottle.

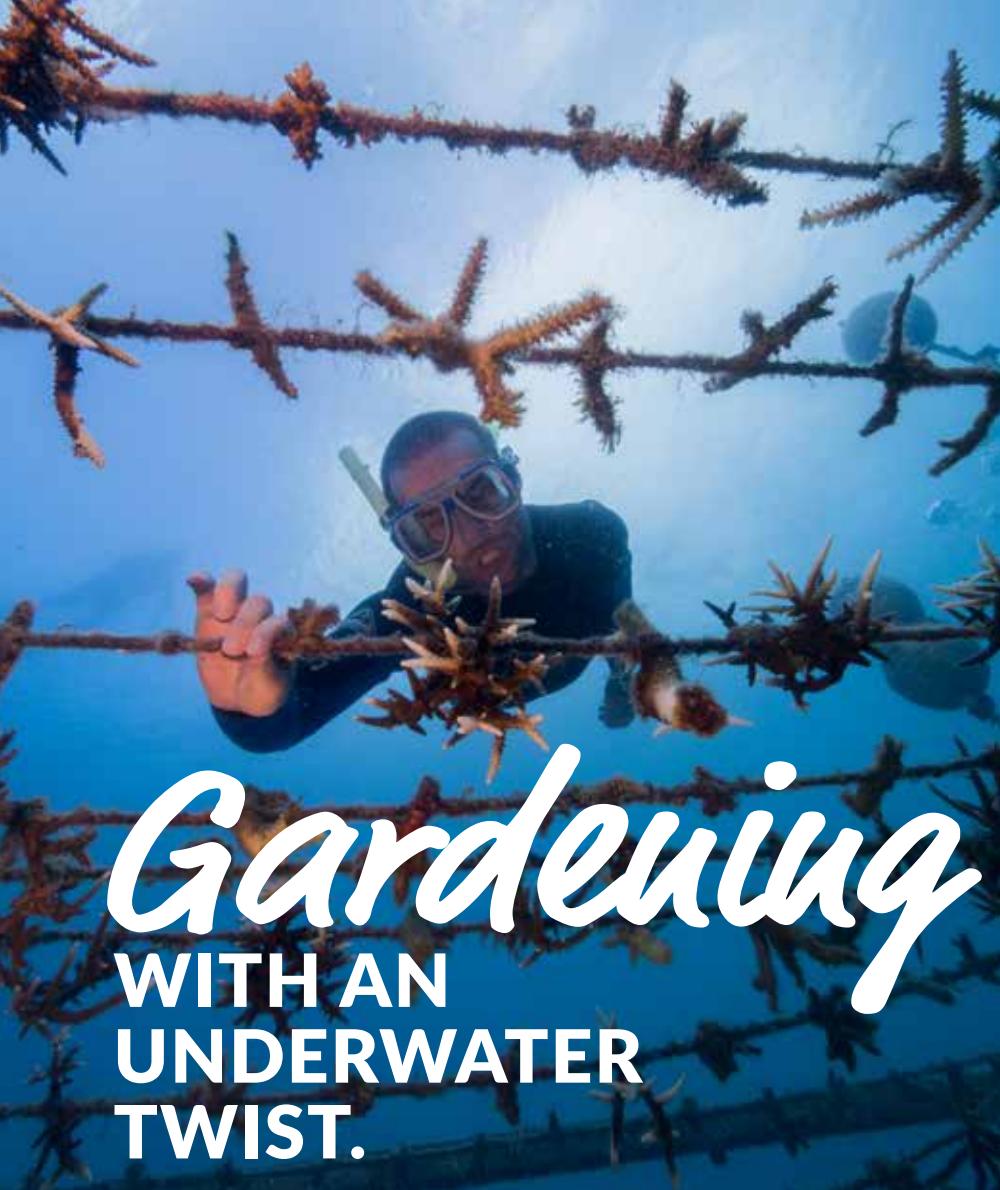
A million plastic bottles are bought every minute, globally. Save yourself some coin and the environment by getting a reusable water bottle.



### 8. On that, say no to single-use cutlery and packaging.

Carry your own reusable food container, fork, spoon, straw and knife. Enjoy a night out, rather than getting takeaway. Say no to unnecessary plastic items - like plastic straws.





*Underwater coral gardening  
with Reef Ecologic.*



# Gardening WITH AN UNDERWATER TWIST.

Mention “gardening” and what usually springs to mind are images of people tending their backyards and garden patches. Visit Blue Pearl Bay, Manta Ray Bay or Lover’s Cove in the Whitsundays and you will discover a very different kind of gardening taking place: coral gardening.

In 2017 Cyclone Debbie blew through the Whitsundays with strong winds of up 250km/h and seas up to 12 metres. Debbie, the category four cyclone, left a trail of destruction in her path. Reef sites up and down the coast were not exempt; coral bommies overturned, coral colonies smashed and overall live coral cover reduced in prime tourism sites.

The community and tourism industry were faced with a choice: let these inshore reefs sink or swim. To their credit, partners of the Whitsunday Reef Recovery and Art Project with Daydream Island came up with innovative new approaches to reef rejuvenation: coral gardening.

Coral gardening projects like those in the Whitsundays, are relatively new to Australia and represent complex planning and science. Really, they can be best understood as the process of “gardening underwater.” First you collect a piece of coral, then you grow the coral in a nursery, and finally when it is healthy enough you plant it back onto the reef. And the results are pretty good! An international scientific review of the project suggests that 40-70% of corals survive replanting after a year. The methods used at Daydream Island last year exceeded this - realising a survival rate above 85%.

*Reef Ecologic,  
Daydream Island  
Resort and tourism  
providers trial  
innovative coral  
gardening methods.*

For the past two years [Reef Ecologic](#) and [Daydream Island](#) have led the projects, with the local tourism industry jumping on board. Dr Adam Smith commented on the beauty of this collaborative effort.

*"It is brilliant to see these divers work with us, point out the fish they know and look at their favorite boorries and see us collectively help and heal them."*

To learn more visit  
[reefecologic.org/  
project/wrap](http://reefecologic.org/project/wrap)  
or download  
the smartphone  
app '[Coral  
Whitsundays](#)'.



## But what about the results?

**3**

nurseries on  
Daydream  
Island.

**3**

trials of different  
methods achieving a  
90% survivorship.

**3**

sites Blue Pearl Bay,  
Manta Ray Bay and  
Lovers Cove.

**300**

square metres  
of controlled coral  
gardens.

**3,700**  
coral colonies  
have been  
grown.

**2,150**  
coral colonies  
planted back onto  
the reef.

**60-80%**  
of corals survive replanting  
after a year in Manta Pearl  
Bay and Blue Pearl Bay.

**85%**  
of corals survive  
replanting after a year  
at Daydream Island.

With success realised at these sites Reef Ecologic and Daydream Island are looking for opportunities to replicate and roll out to other affected reef areas.

This project is an example of the [Reef Islands Initiative](#) (RII) in action.

This is a program of the [Great Barrier Reef Foundation](#), supported by funding from [Lendlease](#), the Australian Government's Reef Trust, the Queensland Government and the Fitzgerald Family Foundation.

This project has further been supported by the Australian and Queensland governments, Daydream Island Resort, [G Adventures](#), [Planeterra Foundation](#), Citizen, [Explore Whitsundays](#), [Tourism Whitsundays](#) and the [Whitsunday Regional Council](#).

Additional support from [Aqua Dive](#), [Ocean Rafting](#), [Red Cat Adventures](#), [Prosail](#), [Whitsundays](#) and [True Blue Sailing](#).



# **PUTTING A** ***spring in your step*** **AT SUNRISE.**

Ever wanted to get up close and personal with Skippy-The-Bush-Kangaroo? Mackay Tourism is now offering free guided tours at sunrise with the wallabies and kangaroos at the stunning Cape Hillsborough Beach.

As one of Australia's iconic wildlife experiences, the Sunrise with the Wallabies Tour gives locals and guests the opportunity to witness Eastern Grey Kangaroos and Agile Wallabies coming onto the beach to feed, set to the beautiful backdrop of sunrise over the Coral Sea.

Nowhere else in the wild can you get so close to view kangaroos and wallabies. Set in beautiful Cape Hillsborough - rich in history and culture, this magical experience will leave you transformed.

But this isn't just an opportunity to see our national symbol and Australia's natural beauty in action. The experience is also an educational one, a chance to reflect on our role in looking after Australia's flora and fauna.

In recent years [Cape Hillsborough](#) has experienced a 500 per cent growth in visitors which was having adverse effects on the wallabies and kangaroos food sources and feeding habits. Sporadically, these animals have always headed to the beach to feed on the mangrove pods that get washed ashore. To protect the animals and guests, and as part of the ecotourism program, Mackay Tourism now supplies an additional food supplement. The tour is an example of Mackay Tourism, an active HR2RP partner, playing an important role in developing quality experiences that are the backbone of Mackay's regional tourism economy.

The tour adheres to strict environmental, and sustainability guidelines with the aim of leaving a minimal environmental footprint, sustaining this unique environment, creating lifetime memories for guests and protecting the local wildlife for years to come. The HR2RP is glad to have Mackay Tourism as our 30th member, as iconic nature wildlife based tourism experiences are a win-win for our ecosystems and our communities.



*Sunrise tour*

## **Free guided kangaroo and wallaby tours offered by Mackay Tourism.**

**WHERE:** Cape Hillsborough Beach, Queensland - 48 kilometres north of Mackay CBD, or 125km south of Airlie Beach.

**WHEN:** Everyday 30 mins before sunrise.

**DO I NEED TO BOOK:** No! Just show up on the day.



To find out more visit:

[www.mackayregion.com/wallabytours](http://www.mackayregion.com/wallabytours)



*are only a hop, skip and jump away.*

# Testing methods TO REDUCE PADDOCK SCALE RUNOFF IN THE WET.

A grower-led demonstration trial, monitoring paddock-scale runoff water quality is underway on four farms in the Myrtle Creek Subcatchment - the Proserpine Mill area.

Funded by the [Department of Environment and Science](#), each site compares different management practices related to nutrient or herbicide management on working local farms.

The project has seen trials in targeted band spraying - which is the application of herbicide to the tops of just the individual cane rows and not the unplanted soil rows in between. This method had led to a reduction in applied herbicides when compared to traditional methods like blanket spraying - which sees growers spray the entire paddock.

Justin Blair, a canegrower of a participating farm, was able to allow the expensive, selective herbicides to be applied using the band method only. He now has the practice of band spraying as a helpful tool in his farmer toolbox. Justin had his rig checked by the Department of Agriculture and Fisheries (DAF) and is modifying his rig to improve herbicide application under different situations.

Overall the results from the Myrtle Creek Project support previous research and demonstration results. Recommendations on linking farming practices such as:

- less herbicides and nutrients on, less runoff;
- timing the application of herbicides and nutrients helps to avoid runoff (for at least the first 20 days after application) and
- incorporating herbicides and nutrients below the soil surface with irrigation prevents surface runoff.

## So what happens next?

This coming wet season, the project will move to new demonstration sites, where the participating farmers will look at the use and impact of imidacloprid, and knockdown herbicides.

The Pathways to Water Quality Improvement in the Myrtle Creek subcatchment project is funded by the Queensland Government's [Reef Water Quality Program](#) and delivered by Sugar Research Australia and [Sugar Services Proserpine](#).

Read the fact sheets

[www.sugarresearch.com.  
au/growers-and-millers/  
farming-systems](http://www.sugarresearch.com.au/growers-and-millers/farming-systems)



*Supported by Sugar Research Australia, four farms in Proserpine commit to a demonstration project with the aim of improving water quality.*

# FERAL PIG *hotspots* TARGETED ACROSS THE REGION.

The Coordinated Feral Pig Management Program using aerial control has been undertaken to remove feral pigs from the region.

The Coordinated Feral Pig Management Program is led by [Whitsunday Regional Council](#), and is supported by [North Queensland Bulk Ports](#), [Department of Natural Resources, Mines and Energy](#), [SunWater](#), [NQ Dry Tropics](#) and a number of private landholders and stakeholders.

It is estimated that there are approximately 54,000 feral animals in the Whitsunday region, with 16,000 of these feral pigs.

For the 2019-2020 period 28 flights have been conducted to reduce an array of feral species (including pigs).

## Results of the flights:

**28**  
helicopter flights

**9,678**  
kilometres flown

**3,229**  
feral pigs removed

**16**  
Feral Animal  
Management Areas  
(FAMA)  
  
flown in five local  
government areas.

**102**  
properties  
involved in the aerial control  
operation.

**770**  
pigs removed  
in the Don catchment alone.



# A step up FOR FISH IN MACKAY.

Long-standing HR2RP members [Mackay Regional Council](#) (MRC) and fish passage specialists [Catchment Solutions](#) have recently partnered to restore fish connectivity along Murray Creek to the north of Mackay.

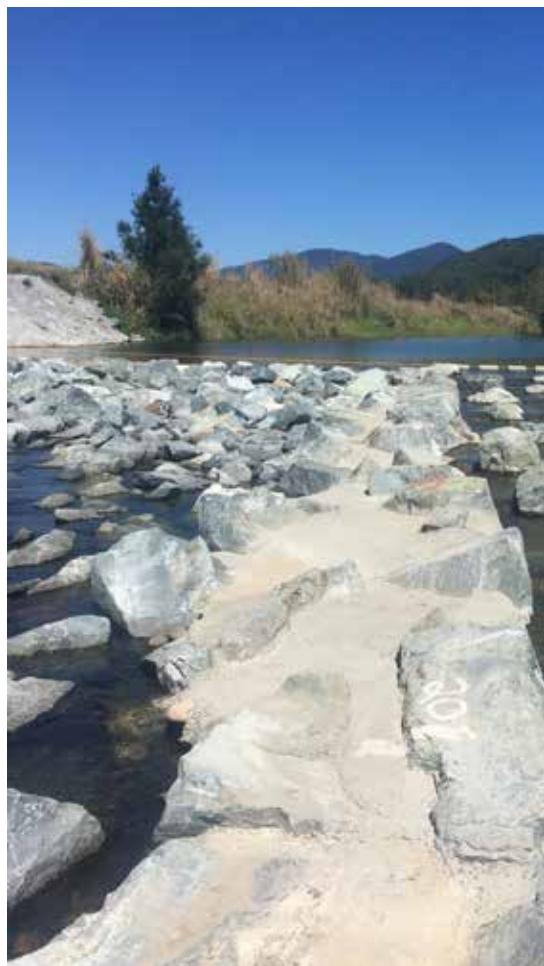
A 10 ridge rock ramp fishway, also known as a 'fish ladder' was constructed to remediate a priority fish barrier between Clews Road at Mt Charlton. Rock ramp fishways act like a set of underwater stairs, allowing fish to ascend past waterway obstructions. Prior to construction, the 500mm water surface drop on the downstream side of the causeway was impeding upstream fish migrations, reducing fish populations and aquatic ecosystem health.

A fish barrier prioritisation project funded by [Reef Catchments](#) and Mackay Council in 2015 identified the causeway as being one of the top priority fish barrier projects (37 out of 3,974 potential barriers projects) in the Mackay Whitsundays region. Construction of the fishway occurred as part of a wider council road upgrade. Activities included;

- construction of a rock-ramp fishway connecting an ecologically significant freshwater wetland to adjacent estuaries and wetlands at Tedlands Wetland;
- fish movement into the Bakers Creek treatment train wetland was reconnected to downstream estuarine habitats through the construction of a 38 ridge rock ramp fish ladder;
- removal of weed chokes that act as biological barriers to fish passage and
- electrofishing surveys undertaken to ascertain the success of fish barrier removal.



*A small barramundi captured undertaking a life-cycle dependent migration between a Mackay estuary and upstream freshwater nursery wetlands. Small fish like this barramundi are extremely poor swimmers and are significantly impacted by fish barriers.*



So how do the fish get from A to B? And why are fish ladders so important for fish and ecosystem health? By building interspersed rock ridges you create deep pools. Deep pools provide a haven for fish to rest and regain their energy as they migrate up or downstream. Fish on this journey utilise 'burst speed' to negotiate the faster flowing water between the rock ridges to gradually ascend through the fishway.

In the Murray Creek Fishway the constructed fish ladders have provided an extra 70mm of water depth and numerous havens for all freshwater fish. Perhaps the greatest impact is for diadromous fish species who spend part of their lives in salt and freshwater, that now have unimpeded access between saltwater environments and upstream freshwater habitats. These include some of the most important fish species in Queensland - Barramundi, Mangrove Jack, Sea Mullet and Jungle Perch. These fish occupy the top of the freshwater food chain, and play an important role maintaining aquatic ecosystem health.

Projects like the Murray Creek Fishway are an important resource that improve the overall aquatic ecosystem and the fabric of many coastal Queensland communities.

With work completed on the Murray Creek Project the project partners have turned attention to other priority fish ladder projects in the region.

*The constructed Murray Creek Fishway has improved connectivity for fish migrating between Clews Road at Mt Charlton.*

*Below is one of the constructed fish ladders in the Murray Creek Fishway.*



# TOURISM OPERATORS LEAD CITIZEN SCIENCE EFFORTS.

Tourism operators have kicked off a citizen science project which will monitor water quality in and around the Whitsunday Islands.

Known as the “The Whitsunday Water Quality Monitoring Blueprint for Tourism Operators Project,” the project aims to shed light on water and reef health in the Whitsundays. The project is funded by the [Reef Trust Partnership](#) – a partnership between the [Australian Government’s Reef Trust](#) and the [Great Barrier Reef Foundation](#) – and [North Queensland Bulk Ports](#).

Driven by a shared passion to ensure the long-term health of Great Barrier Reef a group of tourism operators from [Ocean Rafting](#), [Red Cat Adventures](#), [True Blue Sailing](#), [Southern Cross Sailing Adventures](#), and [Tallship Adventures](#), with support from, [Whitsunday Charter Boat Industry Association \(WCBIA\)](#), [Reef Catchments](#), [Mackay-Whitsunday-Isaac Healthy Rivers to Reef Partnership \(HR2RP\)](#), [James Cook University \(JCU\)](#), [North Queensland Bulk Ports](#) and Whitsunday Bareboat Operators Association came together to commence the project in early 2019.

Ecotourism operators venture out on the aqua blue waters of the Whitsundays on a daily basis. As the “eyes” on the Reef, it was recognised that the crews of these vessels were perfectly positioned to lead this citizen science project using solution-based monitoring.

But first, to ensure the capture of quality water samples, scientists from JCU offered training to participating organisations and their staff. The focus? To ensure the data capture aligns with other monitoring in the region including projects undertaken by the Queensland Government owned North Queensland Bulk Ports Corporation (NQBP) and JCU. Excitingly, this data is also planned to make its way into the [Mackay-Whitsunday-Isaac Waterway Health Report Card](#).

*Boat operators monitoring inshore reef and water quality with the Whitsunday Blueprint Project.*



Early in February the first data loggers hit the water and were deployed at Cairn Beach and Tongue Bay. Data collection commenced, but drew to a halt when the tourism industry shut down in March due to COVID-19. As the restrictions eased, tourism operators were back on the water collecting the crucial water quality data.

Sharon Smallwood, executive secretary of the WCBIA said:

*"Water quality is one of the Whitsunday tourism industry's ongoing challenges. At peak times our region carries more visitation to the Great Barrier Reef than any other on the east Australian coast, so it is vital we understand what is happening at our inshore island reefs."*

Establishing baseline data through this water quality monitoring project will empower us to make the best possible management decisions for the benefit of the environment, a sustainable tourism industry, and the one million visitors a year we welcome to our section of the Great Barrier Reef.

Tourism operators will continue to maintain data loggers and take water quality samples every 4-6 weeks from now and into the foreseeable future.

To learn more about the project visit:

[www.barrierreef.org/news/project-news/tourism-operators-turn-into-citizen-scientists-to-monitor-reef-water-quality](https://www.barrierreef.org/news/project-news/tourism-operators-turn-into-citizen-scientists-to-monitor-reef-water-quality)



# *Island restoration*

## CREATES NEW TOURISM OPPORTUNITIES IN THE WHITSUNDAYS.

The [Queensland Parks and Wildlife Service](#) (QPWS) in collaboration with the [Great Barrier Reef Marine Park Authority](#) (GBRMPA) have been working to recover national park tourism sites in the Whitsundays, following the impacts of Tropical Cyclone Debbie.

Several of the visitor destinations have now been completed, with some amazing new facilities and experiences open for visitors. Short walks and viewing platforms have been built on picturesque Haslewood (Chalkies Beach), Board and Langford Islands. The iconic [Hill Inlet Lookout](#) and walking track network has also had an upgrade. With three platforms, the new and improved facility accommodates larger volumes of visitors.

Across the bay, on the southern end of the world famous [Whitehaven Beach](#) an immense amount of recovery effort have been enacted. Immediately after the Tropical Cyclone Debbie, QPWS rangers were onsite clearing debris and re-profiling sand to reinstate the beach, which was greatly eroded. Trees and native vegetation were also re-planted to accelerate the beach's recovery. This restoration work has been complemented with an upgrade to day use areas and the campgrounds. And like its neighboring island, Haslewood Island has seen the establishment of a new walking track and lookout. This new trail provides incredible views along Whitehaven Beach and around to Pentecost Island.

But there is still more to come. A 29km multi-day walking track ([Ngaro Walking Track](#)) between Tongue Point and Whitehaven Beach is due for completion in 2021. In total over \$10 million has been invested in new facilities to help diversify the visitor opportunities while alleviating visitation impacts across the Whitsunday Islands. These opportunities, not only provide memorable experiences but alleviate the pressures on our in-water fringing reefs as they recover.





Learn more about what Island National Parks have to offer.

[Download your free local guide.](#)



Left: Two park rangers plan a walk on the new trail on the south end of Whitehaven Beach.

Below: 180 degree views from the 'Whitehaven Beach Lookout' - drone footage captured by Enviroedge Group.



# **COLLABORATIVE FARMING EFFORTS TO**

# ***improve water quality***

The 1700ha peaceful waterway, Janes Creek, starts in Farleigh and connects to the popular picnic grounds, Gooseponds, in northern Mackay. It flows under the Bruce Highway, snakes its way to Vines Creek and the Pioneer River, before reaching the ocean near Flat Top Island. The water quality improvement project aims to reduce the amount of sediment, nutrients and pesticides from entering the waterway.

The collaborative project aligns with the Reef 2050 Water Quality Improvement Plan and has an emphasis on stewardship led by farmers. Farleigh grower, Peter Schembri, is one of eight cane growers, four harvest operators and four graziers involved in the project.

As one part of the project, a chain of ponds with rock walls between, known as “treatment trains” or “chain of ponds” have been constructed on Peter’s 70 ha farm. Building on works already undertaken by Peter, the new three tier treatment train aims to filter, process and capture sediment and chemicals onsite - reducing the likelihood of the contaminants flowing further. So how do these trains work? As water moves through the rock riffles (buffers) and ponds (bins) the water begins to slow, allowing contaminants time to drop out.

Peter got involved in the project to be “part of the solution, not part of the problem”.

*“I’ve received a lot of benefit from being a part of this project. Growers are getting a lot of stuff thrown at us and we want to know how much of it is scientific, and what really is in our water, that’s important.”*

*Janes Creek on the northern fringe of Mackay has been selected for a two-year water quality improvement project. Bringing together landholders from along the creek.*



*Peter Schembri a second generation grower on his 90 ha farm.*



Participating landholders are monitoring water quality onsite to test pollutants and compare runoff constituents. Monitoring points have also been set up at different areas in the Gooseponds.

Meanwhile, [Reef Catchments](#) and [Mackay Area Productivity Services \(MAPS\)](#) are working with Peter and the other landholders on other strategies to reduce the risk of contaminants. The growers have received grants to modify and improve existing spray rigs, grub control applicators and harvesters.

The Janes Creek Project is funded by the [Queensland Government's Reef Water Quality Program](#). Due to the successful delivery of the first phase of the Janes Creek project, the project has received further funding and been extended into 2021. Interested participants can [contact Reef Catchments](#) to enquire about opportunities like these in the Plane and Pioneer Catchments.

Above: The constructed chain of ponds designed to capture contaminants.



<https://youtu.be/yvODrEbnR1c>

# COMBATING CLIMATE CHANGE *locally.*

The Whitsunday Climate Change Innovation Hub is an initiative of [Whitsunday Regional Council](#). The Hub is taking charge of developing collaborative real-world innovative solutions to assist the region in facing climate change challenges.

The Hub is a resource available to climate change practitioners, researchers, business and the wider community alike. It provides these local organisations with information, tools, network and project opportunities.

The Hub first opened its doors in September 2018 and will now be housed within the new Whitsunday Council Administration Building in Proserpine. Premier Anastacia Palaszczuk opened the building in September 2020 alongside Mayor Andrew Willcox and guests.

Mayor Andrew Willcox thanked the Australian and Queensland governments for their generous support, which will ensure the Whitsunday community will reap the benefits of the new building for many years to come.

*"The new building will enhance our region's ability to prepare for and respond to disasters and climate change hazards," he said.*

The Climate Hub is a rich source of information and is guided by an Advisory Panel made up of both National and International climate and other experts in the fields of law, climate adaptation, finance, insurance, tourism and agriculture. The Hub provides a unique opportunity to connect researchers, stakeholders, Council and the community with the latest research in improving resilience to increasing climate change hazards, such as storm tides.

*Projects and resources are available at the Whitsunday Climate Change Hub.*

To learn more about the Whitsunday Climate Hub visit [www.innovationhub.whitsundayrc.qld.gov.au](http://www.innovationhub.whitsundayrc.qld.gov.au) or connect with us on Facebook [@whitclimatehub](https://www.facebook.com/whitclimatehub)



## *Did you know?*

The climate in our region is predicted to be more like the tip of the Cape York Peninsula by 2050 and more like areas east of Darwin by 2090. [Learn more about climate change and impacts on our community.](#)



Above: Tidal swell in Cannonvale following Cyclone Debbie.

Left: Official opening of the Whitsunday Climate Change Innovation Hub and the Proserpine Administration Building. (Left to right) Queensland Treasurer and Minister for Infrastructure and Planning - Cameron Dick, Queensland Premier - Annastacia Palaszczuk, Whitsunday Regional Council Mayor Andrew Willcox and Member for Dawson - George Christensen.

## The Hub's suite of current projects look at:

- build capabilities in disaster resilience;
- tackle the impacts of rising temperatures in rural towns;
- finance methods for coastal adaptation and
- build sustainable industries, locally.

The new building received \$3.6 million from the Australian Government's Building Better Regions program to fund the Climate Change Innovation Hub.

*Going above  
and beyond*



If you are a local business and want to improve your environmental and carbon footprint - [sign up to become an accredited ecoBiz](#). You will gain free advice and an eco certification along the way.

# TWIN CREEK GETS A *makeover.*

*Half a hectare of Cannovale creekline gets rehabilitated.*

The restoration of Twin Creek located in Cannonvale, takes a local approach to addressing two of the largest threats to the Reef - climate change and water quality.

Through restoration efforts - including planting native species along the degraded creek embankment, the project looks to bind sediments, slow water flow, reduce suburban runoff and stream bank erosion. The project also aims to create a biodiversity corridor for local wildlife and recreational areas for the community.

Since the project's inception in 2016, the [Whitsunday Regional Council](#) (WRC) and project participants have progressively restored sections of the creekline. In 2020, another half a hectare was rehabilitated through funding from the [Reef Trust Partnership](#) – a partnership between the [Australian Government's Reef Trust](#) and the [Great Barrier Reef Foundation](#). It was endorsed by the [Whitsunday Local Marine Advisory Committee](#) (WLMAC).

[Whitsunday Catchment Landcare](#) propagated 1,500 native plants for the project and coordinated the planting and site maintenance with support from volunteers from the local community, WLMAC and WRC. The contribution by all involved is a great example of Healthy Rivers to Reef Partnership collaboration and participants' ability to transform Twin Creek into a healthy waterway.



Learn more about the project: [www.reefcatchments.com.au/projects/community/twin-creek](http://www.reefcatchments.com.au/projects/community/twin-creek)

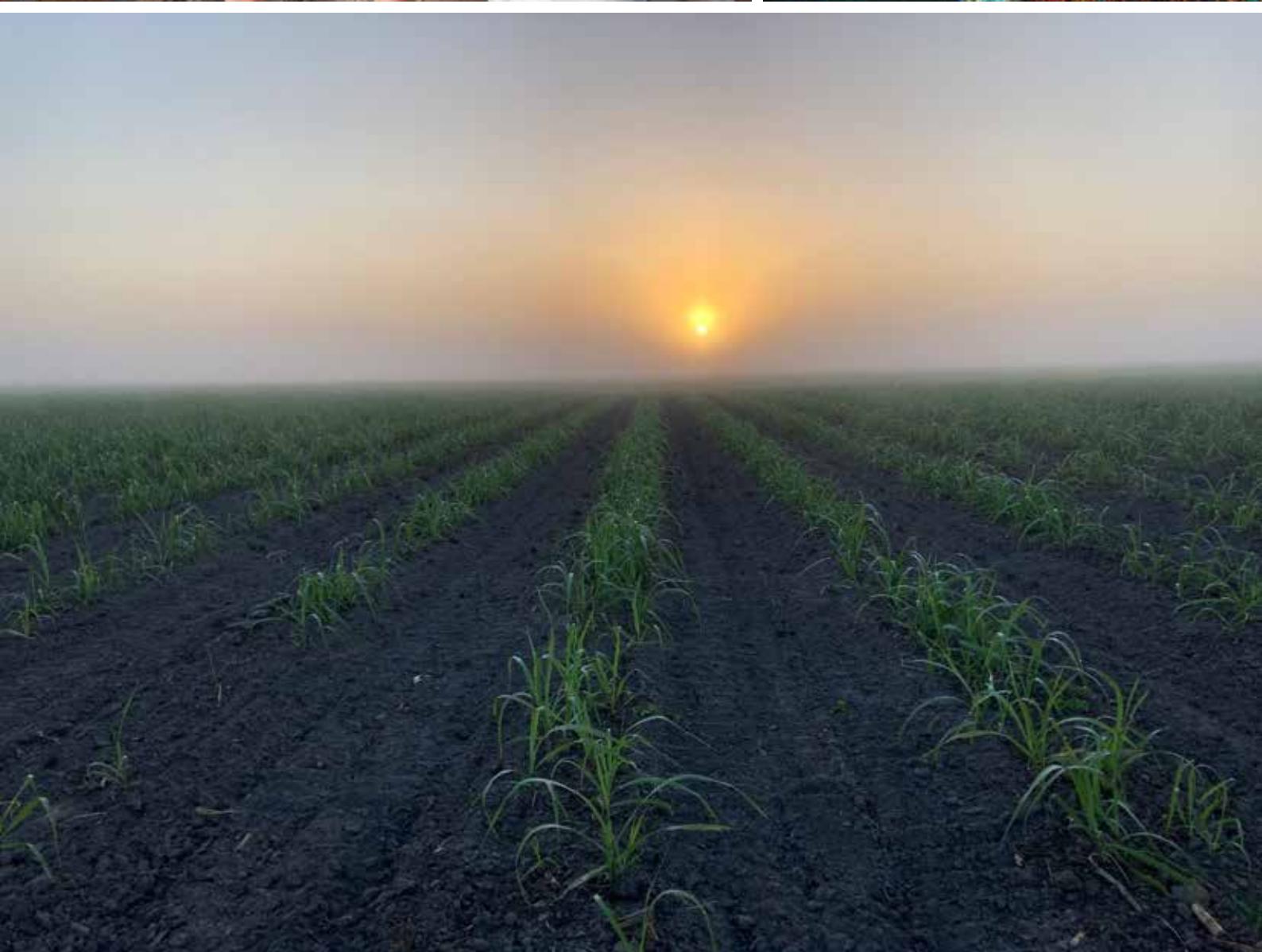


## Achievements of the project to date:

**5,000m<sup>2</sup>**  
**of suburban creek**  
rehabilitated in 2019.

**1.5ha**  
**rehabilitated**  
in 3-4 years with the help of  
**40 volunteers**  
over this period.

**4,500**  
**seedlings planted**  
over the 3-4 years.





## OUR PARTNERS



**BHP**



### Stay in touch!

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