Whitsunday Regional Council

REEF GUARDIAN COUNCIL ACTION PLAN









Australian Government

Great Barrier Reef Marine Park Authority



Reef Guardian Council program

The Reef Guardian Council program (RGC program) is a collaborative stewardship arrangement between local government in the Great Barrier Reef catchment and the Authority, which recognises that local and regional approaches are central to protecting and managing the Reef and the communities it supports.

The RGC program was first launched in 2007 and in 2020 has grown to include 18 member councils covering an area of 300 000 square kilometres and a population of more than one million people.

Whether Reef Guardian Councils and their communities are large or small, they are making continuous improvements to help the Reef.

Action plans

This Action Plan records the diversity of council actions and projects that contribute to Reef health. It aligns with Queensland and Australian Government objectives to improve the long-term outlook for the Reef.

Actions are scalable reflecting each council's financial and technical capacities. To be a member, councils with a population of less than 50,000 residents must commit to at least one action for each item (climate change, coastal development, land-based run-off, direct use, heritage values), while councils with greater than 50,000 residents must commit to at least three actions per item. Examples of actions are provided in Table 1 of the Reef Guardian Council program Terms of Reference, however the program empowers councils to drive change and deliver innovative solutions to help the Reef by identifying other actions beyond those provided.

Endorsement

The council recognises the importance of the Reef Guardian partnership and values the contributions made by staff and the community 'working together today for a healthier Reef tomorrow'.

Period of Action Plan: 200/2021.

Endorsed: LS 19 1202

Council signatory



Climate Change

Reef 2050 Objective

Communities adapt and respond to a changing climate by taking action to avoid impacts on the Great Barrier Reef and coastal ecosystems.

What councils can do

Help communities to mitigate and adapt to the impacts of a changing climate:

- Assess council and community risk and vulnerability due to a changing climate
- Prepare for and respond to climate change through planning and policies
- · Introduce sustainability principles to council procurement
- Encourage efficient use of energy by council and community



Current Projects

		Financial/Resource	B	Responsible	Businest Status	Deef 2050 Actions
Action	Description	Commitment	Partnerships	Department/Position	Project Status	Reef 2050 Actions
Whitsunday Coastal Hazard Adaptation Strategy (CHAS)	The CHAS will assess the risk of climate change on existing and development and assesses risk for future planning. Phase 6 regarding public consultation and financing options as well as phase 7 being the multi-criteria analysis have been completed.	QCOAST2100	NIL	Directorate: Community Services	Phase 6 and 7 have been completed and phase 8 which is the last phase is underway.	CBA7, CBA4, CBA9

Onsite Solar Energy Generation and Plant Upgrades – Collinsville WTP and STP	Upgrade equipment and controls at Collinsville WTP and STP and deliver on-site solar array to allow Collinsville WTP and STP to use up to 80% self-generated renewable power. This will turn the expensive to maintain oversized WTP, STP and Reservoir system (compared to population) in Collinsville into an opportunity to significantly transition to self-generated renewable energy. In addition, this project will integrate a diesel back up generator to improve emergency resilience of these essential services.	Whitsunday Water / WRC Project / / Building Better Regions / Department of Infrastructure, Regional Development and Cities	Building Better Regions Fund (Australian Government)	Directorate: Infrastructure Services, Development Services and Corporate Services	Grant funding achieved – Preparing Tender documents	EHA10, CBA9
Cannon Valley Reservoir	Council is constructing a new regional water reservoir for the greater Airlie Beach Region and in the medium term this capacity will allow water production scheduling to align mostly with renewable energy generation timeframes. It will also improve resilience for the Greater Airlie Water Supply region.	Whitsunday Water (Council) / Building Our Regions / Department of Infrastructure, Regional Development and Cities	Building Better Regions Fund (Australian Government)	Directorate: Infrastructure Services	Underway	WQA11
Investigation and Prioritisation of Water and Sewage Treatment Plants Suitability for Onsite Solar Energy Generation	Analyze the historic energy demands, and possibly future energy demand profiles for key electricity using assets and ranking the sites in order of suitability for on-site solar energy generation and	Whitsunday Water / WRC Project	NIL	Directorate: Infrastructure Services and Corporate Services	Summary Complete and Second Project being rolled out	WQA11

Optimising Pumping Energy Use – Variable Speed Drive Set Points	Council are partnering with local contractors to use a range of variable speed drive set points for dry and wet season pumping, to save total energy consumption (>10% for modified pumps). Additionally, we are working with Instrumentation & Control contractors for advanced system optimisation and efficiency.	Whitsunday Water Project	NIL	Directorate: Infrastructure Services	Continued roll out / optimisation to observed conditions	WQA11
Optimising Water and Sewerage Treatment Chemical Consumption	Council has internally reviewed and optimised the use of chemicals in our water and sewerage processes and has reduced chemical usage by ~5%, reducing chemical production and transport GHGs.	Whitsunday Water (Council) Project	NIL	Directorate: Infrastructure Services	Underway	EBA5
Sustainable Destination Accreditation	Work towards the attainment of a Sustainable Destination Accreditation	WCCIH project	Council and Climate Hub	Climate Change Innovation Hub	Underway	CBA8
Internal Climate Change and Sustainability Committee within Council	Working Group to discuss and review Climate Change and Sustainability initiatives across Council.	Within council budget	Council and Climate Hub	Directorate: Community Services, Climate Change Innovation Hub	Underway	CBA4, MTR CBA1
Climate Change Innovation Hub	Lead the collaboration required to maximise the resilience of the Whitsunday communities to climate change. Applying research and building engagement.	WCCIH project	Council and Climate Hub	Directorate: Community Services, Climate Change Innovation Hub	Underway	CBA4
Carbon and Biodiversity Offset Investigation	Provide Council with guidance on offsets and provide a framework to prioritise options	Within Council budget	NIL	Directorate: Community Services, Climate Change Innovation Hub	Underway	EHA18

LGSherlock	Calculate more accurately	Within Council	NIL	Directorate:	Underway	EBA5	
Carbon	carbon emissions from Council	budget		Community Services,			
Emission	operations to better understand			Climate Change			
Calculation	how to reduce emissions and			Innovation Hub			
	save costs.						

Action	Description	Financial/Resource Commitment	Partnerships	Responsible Department/Position	Reef 2050 Actions
Whitsunday Planning Scheme Amendments	Description	Council Budget / External Funding	Nil	Directorate: Development Services	CBA4, CBA5, CBA7, CBA8, CBA12, EHA7, EHA15, GA7, GA10, WQA4, WQA5, QA12, WQA13

Project Name	Description	Financial / Resource Requirements	Reef 2050 Actions
Critical and Sensitive Areas Study	To review, grade and map areas of local significance and to protect these areas from future development.	Within Council budget	BA16
Implement the Recommendations of the CHAS by Creating an Implementation Schedule	The CHAS is nearly completed and it is expected that a number of actions to implement the findings will result from the final report.	Funding required	CBA7, CBA4, CBA9
Communities Emissions Profile	Complete an emissions profile of the Whitsundays. This will enable targeted work on the highest emitting industries/areas.	Funding required	EBA5
Review and Evaluation of the Whitsunday Council Climate Change Mitigation Strategy	Complete a review to re-assess the baseline in light of more precise data and assess if Council is on track to achieve its reduction targets.	Within Council budget	EBA5

Land Management

Reef 2050 Objective

Education and on-ground actions target the source of marine debris and reduce the volume of debris entering the Great Barrier Reef.

What councils can do

Help to restore catchments - For example:

- Incorporate environmental mapping and priorities in planning schemes and development decisions
- · Help to restore landscape and waterway connections and functions
- Use best practices in council and industry developments
- · Manage weeds and pests and restore disturbed council land
- Establish beach management plans



Action	Description	Financial/Resource Commitment	Partnerships	Responsible Department/Position	Project Status	Reef 2050 Actions
Implement WRC Bushfire Plan and Policy	Implement plan to improve bushfire hazard and mange vegetation	Within Council allocated budget	QFES	Directorate: Community Services	Underway	EHA10
Develop and Implement Community Bushfire Management Plans	Develop Community Bushfire Plans for rural residential areas; Shute harbor, Dittmer, Mango Tree Estate, Conway, Woodwark	Within Council allocated budget	QFES	Directorate: Community Services	Underway	EHA10



Implement Council UAV to Monitor Land Management Projects	Use Unmanned Aerial Vehicle (drone) to monitor land management projects to bet better outcomes and to document environmental outcomes	Within Council allocated budget	Nil	Directorate: Community Services	Underway	EHA7, GA7
Open Space Strategy	Identify underutilized Council land for revegetation to offset maintenance costs and promote ecological outcomes. Refining design criteria for conservation areas and drainage corridors provided through development, to reduce maintenance costs and promote re-vegetation where possible. Drainage corridors will be linked to Councils Stormwater Quality Guideline.	Additional funds required.	Nil	Directorate: Development Services	Underway	EHA10
Revegetation of Twin Creek, Cannonvale	1500 plants were planted along Twin Creek within a Council reserve to reduce the area needing mowing and increase the resilience of the creek bank to flooding	Grant and Council budget	Landcare	Directorate: Community Services	Completed with additional stages in the planning	EHA10
Whitsunday Yellow Crazy Ant Management Plan	Management plan to eradicate a yellow crazy ants infestation in Shute Harbor	Within Council budget	Nil	Directorate: Community Services	Underway	CBA4

Improving Rural Roadside Stormwater Management to Reduce Roadside Erosion	Rural roads and drains are a major contributor to sediments reaching the GBR. This project aims at finding ways to reduce the erosion along rural roadside stormwater drains.	Within Council budget	Nil	Directorate: Community Services	Underway	WQA12
Cape Gloucester (West) Foreshore Management Plan	Weed eradication and use plan	Within Council Budget	Nil	Directorate: Community Services	Underway	CBA4

Action	Description	Financial/Resource Commitment	Responsible Department/Position	Reef 2050 Actions
Feral Pig Program	Aerial shooting and 1080 baiting for feral pig management	Within Council allocated budget	Directorate: Community Services	BA16
Herbicide Rebate Scheme	Landholders with a Council approved Property Management Plan are eligible for a 50% rebate on the cost of approved herbicide		Directorate: Community Services	BA16
Develop a Pest Management Committee with Community Stakeholders	The development of a Whitsunday Biosecurity Committee to steer the implementation of the Whitsunday Biosecurity Plan		Directorate: Community Services	BA16
Whitsunday Weed Washdown Strategy	Installing automatic washdown bay at Lake Proserpine to prevent the spread of weeds.	Within Council budget	Directorate: Community Services	BA16

Develop and Implement Rehabilitation and Restoration Projects of High Priority	Work in partnership with regional NRM groups to develop and implement projects which rehabilitate ecosystems – eg. Beach shrubs	External funds to assist	Directorate: Community Services	EHA7, GA7	
Terrestrial					
Ecosystems					

Project Name	Description	Financial / Resource Requirements	Reef 2050 Actions
Mullers Lagoon Management Plan	Investigate a strategy to improve water quality in Mullers lagoon and improve environment and amenity.	TBA	EHA7, GA7
Greater Airlie Beach Area Masterplan	Future Airlie Creek rainforest walk	TBA	EHA7, GA7
Significant Tree Asset Register on Council Land	Identification of significant tree on council land which should be granted protection status. This would include a valuation of significant trees.	TBA	EHA7, GA7

Water Management

Reef 2050 Objective

The quality of water from all sources including industrial, urban waste and storm water sources has no detrimental impact on the health and resilience of the Great Barrier Reef.

What councils can do

Continuously improve the quality of water entering the reef from wastewater and storm water sources through urban water cycle initiatives:

- Promote water sensitive urban design in new developments
- Adopt best practice storm water management
- Monitor and if necessary upgrade sewerage treatment plants
- · Provide collection facilities for chemicals, waste oil and other pollutants
- Protect and rehabilitate waterways



Current Projects

Action	Description	Financial/Resource Commitment	Partnerships	Responsible Department/Position	Project Status	Reef 2050 Actions
Implement WRC Erosion and Sediment Control Program	This project will implement the Council's current ESC program	Within Council allocated budget	Nil	Directorate: Community Services	Underway	CBA5, WQA5, WQA7, WQA10, WQA12, GA7

Bowen Sewerage Treatment Plant (BSTP) Upgrade	Delivering a major upgrade to the BSTP with a major effluent reuse scheme to significantly reduce nutrients discharged to the Bowen Harbour and Great Barrier Reef Lagoon and GHG by replacing potable water pumped from 70km away with fit for purpose recycled water.	Whitsunday Water (Council) / Building Our Regions / Department of Infrastructure, Regional Development and Cities	Building Better Regions Fund (Australian Government)	Directorate: Infrastructure Services	Commissioning underway (95% complete)	WQA11
Greening and Growing Bowen	Bowen Recycled water network to public space, sporting facilities and potentially industrial and other users. Aims to reuse most Bowen STP's effluent on large scale water demands to reduce potable water demand whilst enhancing the economy and liveability of Bowen. Also aims to reduce the very high potable water use volumes on Public Parks in Bowen and replace it with a local fit for purpose water.	Whitsunday Water (Council) / Building Our Regions / DLGIP	Building our Regions Fund (Queensland Government)	Directorate: Infrastructure Services and Community Services	Initial stage connected and future stages concept designed for Council funding decisions	WQA11
Bowen Water Treatment Plant (BWTP) Intake Energy Optimisation	Design and deliver optimised intake arrangement at BWTP to further reduce energy consumption and move water production to times where solar generation is available. Being delivered in stages to carefully manage ratepayers cashflow.	Whitsunday Water (Council) Project (Stage 1 funded)	Building Better Regions Fund (Australian Government	Directorate: Infrastructure Services	Underway	WQA11
Proserpine Recycled Water Pipeline and Treatment Plant Upgrade	Council is delivering a solids handling upgrade at the Proserpine Sewer Treatment Plant and a recycled water pipeline to reuse our compliant effluent for irrigation instead of discharging dry weather flows to the Proserpine River.	Building our Regions and Council Whitsunday Water Project	Building our Regions Fund (Queensland Government)	Directorate: Infrastructure Services and Community Services	Infrastructure Delivery Complete. Recycled Water Management Plans being finalised	WQA11

Stormwater	Development of stormwater	Council budget	NIL	Directorate:	Part of 20/21	CBA5, WQA5,	
Management	guidelines to inform future			Infrastructure	budget	WQA7, WQA10,	
Plan	network management and		12.	Services	.550	WQA12, GA7	
5 55565	identification of areas in the						
	network that require upgrade						

Action	Description	Financial/Resource Commitment	Responsible Department/Position	Reef 2050 Actions
Implementation of WRC Stormwater Quality Guideline	The guideline clearly articulate WRC's requirements for new development and redevelopment with respect to how storm water quality is managed. Council is working with industry to implement this guideline	Within Council budget	Directorate: Community Services	CBA4
Delivery of 400kW Solar Array at Bowen Water Treatment Plant (BWTP)	Council will deliver a 400kW Solar Array at the BWTP that will produce an estimated 664MWh of power equivalent to 538.1t of GHG p.a. and will operate the BWTP using all of the self-generated energy as a Climate Change mitigation activity.	Council have implemented an hourly set point operating system to allow for the first level of optimisation and continue to refine this optimisation	Directorate: Infrastructure Services	WQA11
Back Up Diesel Generation at Bowen Water Treatment Plant (BWTP)	Council will deliver 450kVA of permanent diesel backup generation as a climate change mitigation activity at the critical infrastructure asset Bowen Water Treatment Plant (BWTP).	Upgrade occurring in line with Whitsunday Critical Asset Resilience Program (CARP) which will install a single 500 KVA genset with larger external fuel storage and redeploy the smaller parallel operating generator sets at Collinsville and other sites.	Directorate: Infrastructure Services	WQA11

Water Efficiency and Non- revenue Water Reduction	Council have been targeting leaks and losses and encouraging water efficiency, leading to a direct reduction in energy and chemical consumption and GHG production.	Non-revenue water (NRW) has reduced by 50% (on a per connection basis) from 340 L/c/d to 160 L/c/d) with the two northern towns still recording the most NRW	Directorate: Infrastructure Services	WQA11
Work with Local Electricity Distribution Authority in Load Shedding (using generators for emergency resilience)	Leverage the emergency generation capacity for Water and Sewage Treatment Plants to support the wider energy system if needed and improve resilience to the wider community.	Minimal, working with Ergon to leverage this and other opportunities.	Directorate: Infrastructure Services	WQA11

Project Name	Description	Financial / Resource Requirements	Reef 2050 Actions
Urban Stormwater Quality Catchment Management Plans	The plans will quantify water quality quantity and values of targeted urban catchments and create geo-specific and fit for purpose intervention plan to offset development pressures and improve water quality in the Great Barrier Reef.	TBA	CBA5, WQA5, WQA7, WQA8, WQA9, WAQ11, WQA12, WQA13
Review of Council's Stormwater Quality Guideline	Review of Council's stormwater quality guideline which assist developers to comply with SPP Policy.	TBA	CBA5
Bowen Utility Resilience Program	Improve flood immunity for the Up-River Rd crossing of Six Mile Creek to ensure reasonable flood immunity to the Bowen WTP	Design Complete, seeking resilience funding / co-funding to deliver	EBA5
Foxdale Bores - Solar	Behind the meter solar to support the operation of the Foxdale bores and water supply to Cannonvale Airlie	Taking up of unallocated state land and money	EBA5
Proserpine WTP - Solar	Behind the meter solar energy supply to support Proserpine WTP operation	Roof top solar enhanced with additional north facing roof on the high lift PS	EBA5

Coastal WTP - Solar	Behind the meter solar energy supply to support Coastal WTP operation	Roof top solar enhanced with additional land given the high lift PS	EBA5
To JW Membrane Replacement	Facilitates capacity upgrade without high embodied energy works	Within Council allocated budget	WAQ11
To JW Collinsville WTP Process Optimisation	Optimise mechanical and piping assets to recover two water qualities, a high quality potable water and a fit for purpose irrigation supply that could benefit a nearby business or livability	Within Council allocated budget	WAQ11
Collaboration and Data Sharing on Reef Water Quality	Data sharing and collaboration on diffuse nutrient pollution between community groups and Whitsunday Water to inform future offset opportunities	Within Council allocated budget	EBA5
Floodplain Management Plan	Development of management plan for the identified floodplains resulting in better disaster response and guidelines for managing floodplain	Applied for funding. Possible Council funding in the future.	CBA5, WQA5, WQA7, WQA8, WQA9, WAQ11, WQA12, WQA13

Waste Management

Reef 2050 Objective

Education and on-ground actions target the source of marine debris and reduce the volume of debris entering the Great Barrier Reef.

What councils can do

Minimise waste entering the Reef from land-based sources:

- Control litter coming from landfills and public bins
- Introduce waste minimisation programs for Council and community
- Introduce littering and illegal dumping penalties
- Encourage community clean-ups before the wet season
- Install pollution traps on urban waterways

Current Projects

Action	Description	Financial/Resource Commitment	Partnerships	Responsible Department/Position	Project Status	Reef 2050 Actions
Biosolids Reuse Project (Methane Generation Reduction) and Reduce the Need for Chemical Fertiliser in the region	Investigation, de-risking and long-term trial to re-use biosolids from STPs on a small number of sugar Cane and grazing properties as fertilizer, soil ameliorant and micronutrient blend. Prevents anerobic digestion of biosolids within landfill creating methane.	Whitsunday Water / WRC Project	Sugar Services Proserpine	Directorate: Infrastructure Services and Community Services	Final risk assessments underway and approval of storage site granted. Project currently un-funded	WQA10

Action	Description	Financial/Resource Commitment	Responsible Department/Position	Reef 2050 Actions
Recycling Stations at Landfills	Continuation of recycling facilities	Within Council allocated budget	Directorate: Infrastructure Services and Whitsunday Water	EHA27

Project Name	Description	Financial / Resource Requirements	Reef 2050 Actions
Monitor Kerbside Recycling	The monitoring of the success of the recycling bin program to residents	Within Council allocated budget	EHA27
Water Management Strategy	Review the 2017-2021 waste management strategy	Within Council allocated budget	EHA27
Educate and Promote Recycling	Hire a Recycling Education Officer	Within Council allocated budget	EHA27

Community

Reef 2050 Objective

Local, regional and reef-wide community benefits are understood, and the community is actively engaged in managing reef activities

What councils can do

Celebrate community connections to the Reef and encourage stewardship:

- Introduce education campaigns to reduce impacts on the Reef
- Build community capacity to tackle threats to the Reef
- Form partnerships to achieve ongoing improvements to Reef health





Action-	Description	Financial/Resource Commitment	Partnerships	Responsible Department/Position	Project Status	Reef 2050 Actions
Partnership with Whitsunday Landcare	Develop a MOU between Whitsunday Regional Council and Whitsunday Catchment Landcare to explore partnership projects.	Within Council allocated budget	Whitsunday Catchment Landcare	Directorate: Community Services	Underway	CBA12

Action	Description	Financial/Resource Commitment	Responsible Department/Position	Reef 2050 Actions
Whitsunday Reef Festival	Council provides financial support to the Whitsunday Reef Festival	Within Council allocated budget	Directorate: Community Services	CBA11
Council Partnership with Whitsunday Local Marine Advisory Committee (WLMAC)	A Councillor is to be allocated to participate on the WLMAC	Within Council allocated budget	Directorate: Community Services	
Council participation to the Whitsunday Catchment Landcare Committee (WCLC)	A Councillor is to be allocated to participate on the WCLC	Within Council allocated budget	Directorate: Community Services	

Project Name	Description	Financial / Resource Requirements	Reef 2050 Actions
Collaboration and data sharing on reef water quality	Data sharing and collaboration on diffuse nutrient pollution between community groups and Whitsunday Water to inform of future offset policies.	Within Council allocated budget	WQA10