Whitsunday Regional Council

REEF GUARDIAN COUNCIL ACTION PLAN







Three year Action Plan 2023-24 to 2025-2026

Version: Year 1 - 2023-2024



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'.



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

| Action | Description | Financial/Resource Commitment | Partnerships | Responsible Department/Position | Project Status | Reef 2050 Actions |
|-------------------------------|---|----------------------------------|--------------|------------------------------------|-------------------------|-------------------|
| Whitsunday Coastal Hazard | The CHAS will assess the risk of climate change on existing | | NIL | Directorate: Community Services | Completed and now being | 1.3 |
| Adaptation Strategy (CHAS) | development and assesses risk for future planning. | | | Community Cervices | implemented. | |

| 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 and Corporate Services | Grant funding achieved – Preparing Tender documents | 1.1 |
|--|--|--|---|---|---|-----|
| Investigation and Prioritization 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 | 1.1 |
| 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 | Whitsunday Water Project | NIL | Directorate: Infrastructure Services | Continued roll out / optimisation to observed conditions | 1.1 |

| | contractors for advanced system optimisation and efficiency. | | | | | |
|--|---|---------------------------------------|----------|--|-----------|-------------|
| 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 | 1.1 |
| Sustainable Destination Accreditation | Work towards the attainment of a Sustainable Destination Accreditation | | | Directorate: Community Services, | Underway | 1.1 and 1.4 |
| Internal Climate Change and Sustainability Committee within Council | Working Group to discuss and review Climate Change and Sustainability initiatives across Council. | Within council budget | Internal | Directorate: Community Services, | Underway | 1.3 |
| Carbon and Biodiversity Offset Investigation | Review and implement the actions from the WRC carbon offset investigation project. | WRC | Internal | Directorate: Community Services, | | 1.1 |
| | | | | | | |
| Developing Councils Greenhouse Gas Reduction Plan | To develop a plan to reduce Council's greenhouse gas emissions by 20,000 tonnes/yr. by 2030 | Council | | Directorate: Community Services | Completed | 1.1 |
| Expanding Councils solar farms | Identifying council facilities and their potential to house solar panels | Council | | Directorate – Corporate services | Underway | 1.1 |
| Review of Council Nature Based Solution for coastal protection | A project to collate Council's past coastal management projects, including the nature based solutions projects into a portfolio of works. This will be used to inform the implementation of the CHAS. | Council | | Directorate: Community Services | Underway | 5.2 |

| Decarbonising | g Engage the tourism sector in | Council | Reef Trust | Directorate: | Underway | 1.1 |
|---------------|---------------------------------|---------|------------|--------------------|----------|-----|
| the Tourism | measuring their carbon | | | Community Services | | |
| Sector | footprints and decarbonization. | | | | | |

| 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 | 1.4. |

| 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 | 1.4. |
| 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 | 1.4 |
| Communities Emissions Profile | Complete an emissions profile of the Whitsundays. This will enable targeted work on the highest emitting industries/areas. | Funding required | 1.1 |
| Shoreline bench marking investigation | Urban shorelines are surveyed using LIDAR and drones to develop a 2023 urban shoreline to monitor coastal erosion. | WRC | 1.4 |
| Investigating the possible use of artificial reefs to mitigate the impacts of coastal storms on coastal erosion in urban areas. | A feasibility and cost- benefit analysis of artificial reefs off Airlie Beach and Queens Beach. Investigate co-benefits of the artificial reefs. | WRC | 1.4 |
| Implement the WRC Greenhouse Gas Reduction Plan | To Implement the actions identified in the WRC Greenhouse Gas Reduction Plan | WRC | 1.1 |
| Implement landfill gas flaring | To install the necessary pipe work and infrastructure to capture landfill gas, measure | WRC | 1.1 |

| | quantities and flare to reduce WRC greenhouse gas emissions. | | |
|---|---|----------|-------------|
| Implement Whitsunday Street tree Program | This will involve the purchase of street trees to increase shade in urban areas. | WRC | 1.2 |
| Expand WRC solar facilities | The installation of additional solar power on public facilities in a prioritised manner | WRC | 1.1 and 1.2 |
| EV strategy for Whitsunday region | To work with the State government and other stakeholders to develop a strategy to implement EV facilities across the region and how this will be funded | WRC | 1.1 and 1.2 |
| EV charging station and area at Whitsunday airport | To seek the installation of an EV charging station at the Whitsunday airport (Stage 1 – site establishment) | WRC | 1.1 and 1.2 |
| Measuring the impact of feral pig impacts on two coastal wetlands and their impact on greenhouse gas emissions (UQ partnership) | working with UQ to measure the greenhouse gas emission from feral pig activities in two coastal wetlands | External | 5.3 |

Land Management

Reef 2050 Objective

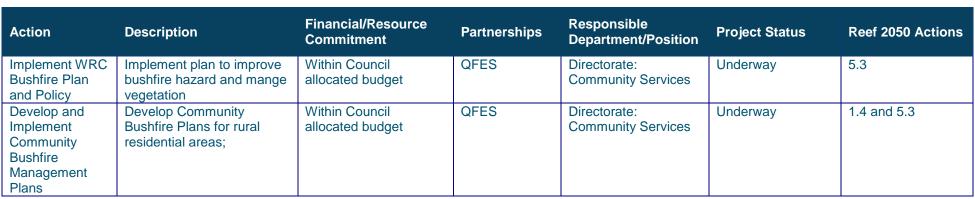
Education and on-ground actions target the source of marine debris and reduce the volume of debris entering the Great Barrier Reef.

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







| 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 | 5.3 |
|---|--|----------------------------|----------|------------------------------------|----------|-----|
| Revegetation of Twin Creek, Cannonvale | The revegetation of 2ha of riparian area along Twin Creek and Waite creeks | Grant and Council budget | Landcare | Directorate: Community Services | Underway | 5.3 |
| Whitsunday Yellow Crazy Ant Management Plan | Implement the Yellow Crazy Ant Action Plan | WRC | Nil | Directorate: Community Services | Underway | 5.1 |
| 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 | 5.3 |

| Frog Rock Foreshore Management Plan | Implement the Frog Rock foreshore Plan | Within Council Budget | Nil | Directorate: Community Services | Underway | 5.3 and 2.3 |
|---|---|-----------------------|-----|------------------------------------|----------|-------------|
| Review the Whitsunday Biosecurity Plan | The Whitsunday Biosecurity Plan is due for review. The Biosecurity Plan outlining how invasive feral animals and weeds will be managed. | Within Council Budget | Nil | Directorate: Community Services | Underway | 5.1 |
| Whitsunday Weed Washdown Strategy | Installing automatic washdown bay at Lake Proserpine to prevent the spread of weeds. | Council | | Directorate: Community Services | Underway | 5.1 |
| Cannonvale Lake Aquatic ecosystem study and Management Plan | To implement the Cannonvale Lake Management Plan | Council | | Directorate: Community Services | Underway | 5.3 |
| Matters of Local Environmental Significance | A project to identify and map MLES for possible inclusion into the Council planning scheme. This may lead to the development of an environmental offset plan where developers could contribute funds towards local MLES rehabilitation sites. | Within Council budget | | Directorate: Community Services | Underway | 5.3 |

| 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 | 5.1 |
| 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 | 5.1 |
| 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 | 5.1 |
| Whitsunday Yellow Crazy Ant (YCA) Program | The management and treatment of YCA at Shute Harbour, Hamilton island, Funnel Bay and Woodwark | | Directorate: Community Services | 5.1 |
| Develop and Implement | Work in partnership with regional NRM groups to develop and implement projects which | External funds to assist | Directorate: Community Services | 2.3 and 5.3 |

| Develop and | Work in partnership with regional NRM groups | External funds to assist | Directorate: Community | 2.3 and 5.3 |
|------------------|--|--------------------------|------------------------|-------------|
| Implement | to develop and implement projects which | | Services | |
| Rehabilitation | rehabilitate ecosystems – eg. Beach shrubs | | | |
| and Restoration | | | | |
| Projects of High | | | | |
| Priority | | | | |
| 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 | 2.3 |
| 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 | 1.1 |

| Expand WRC feral animal control aerial shooting Program | This will build on the WRC base feral animal control program. Seeking funding to fund additional aerial control flights around wetlands and waterways both with WRC and also adjacent Coucils. | External | 5.1 |
|--|--|---------------------------|-------------|
| Implement Whitsunday Street tree Program | This will involve the purchase of street trees to increase shade in urban areas. | Internal WRC and External | 1.1 |
| Expand the treatment and monitoring of Whitsunday YCA populations | Fund the treatment of YCA and conduct detailed infestation surveys. | External | 5.1 |
| Whitsunday Yellow Crazy Ant infestation detailed survey | To organize and fund personnel to conduct a detailed YCA survey | External | 5.1 |
| Implement the Leucaena urban management Program to improve urban coastal and waterway ecosystems | This project involves the engagement of contractors to reduce infestations along waterways and urban areas. | Internal WRC and External | 5.3 and 5.1 |
| Urban waterway revegetation and restoration program | The aim of this project is to revegetate up to 3ha over the next three years in the Cannonvale, Bowen and Collinsville urban areas. | WRC and external | 5.3 |
| Implement a weed washdown facility at Merinda, Bowen | The installation of an automatic weed washdown facility at Merinda | WRC and external | 5.3 |
| Implement a weed washdown facility at Guthalungra, Bowen | The installation of an automatic weed washdown facility at Merinda | WRC and external | 5.3 |
| Whitsunday Planning Scheme Major Amendment | Climate Change Land Management Water Management Waste Management Community | Council Budget | 1.3 and 1.4 |
| Economic and Population Study | Updating EPS and extending projections out to year 2071 | Council Budget | 1.3 and 1.4 |
| Land Supply Analysis (LSA) | Analysis of the current urban zoned land and calculates the required land release and zone mix for the life of the Planning Scheme (25 years) | Council Budget | 1.3 and 1.4 |

| Local Government Infrastructure Plan (V2) | Plans for future trunk Water and Waste infrastructure | Council Budget | 1.3 and 1.4 |
|---|--|------------------|----------------------|
| MLES Planning Scheme Amendment | Introduces Maters of Local Environmental Significance | Council Budget | 5.3, A1, 1.3 and 1.4 |
| Flood Hazard Overlay Planning Scheme Amendment | Updated flood mapping, including water and land management | Council Budget | 1.3 and 1.4 |
| Industrial and Commercial Land Supply Planning Scheme Amendment | In response to the LSA, amend the urban boundary for Commercial and Industrial land supply | Funding required | 1.3 and 1.4 |
| Housing Affordability (Package 2) Planning Scheme Amendment | In response to the LSA, amend the urban boundary for residential land, including higher density land use investigations. | Funding required | 1.3 and 1.4 |
| Local Government Infrastructure Plan (V3) | Inclusion of Stormwater Infrastructure and response to LSA and consequential land releases. | Funding required | 1.3 and 1.4 |
| Greater Airlie Beach Area Masterplan | Future Airlie Creek rainforest walk | Funding required | 5.3 and A1 |

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 | 2.1 |

| Mackay Whitsunday Healthy Rivers to Reef Partnership | The Healthy Rivers to Reef Program is a partnership project to collate water quality data and develop a water quality report card – to continue being a member | Within Council allocated budget | Nil | Directorate: Community Services | Underway | 2.1 and 3.3 |
|---|--|---|---|--|---|-------------|
| Mackay – Whitsunday Urban Stormwater Stewardship Project | Participate in the Mackay – Whitsunday Urban Stormwater Stewardship Project | Within Council allocated budget | Nil | Directorate: Community Services | Underway | 3.3. |
| 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 (100% complete) Expansion of irrigation areas extending reuse underway | 2.3 |
| 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 | Underway | 5.3 |
| Bowen Water Treatment Plant (BWTP) Intake Energy | Design and deliver optimised intake arrangement at BWTP to further reduce energy consumption and move water | Whitsunday Water (Council) Project (Stage 1 funded) | Building Better Regions Fund (Australian Government | Directorate: Infrastructure Services | Underway | 1.1 |

| Optimisation | production to times where solar generation is available. Being delivered in stages to carefully manage ratepayers cashflow. | | | | | |
|--|--|---|--|---|---|-----|
| 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 | 1.1 |
| Stormwater Management Plan | Development of stormwater guidelines to inform future network management and identification of areas in the network that require upgrade | Council budget | NIL | Directorate: Infrastructure Services | Underway | 2.3 |
| Floodplain Management Plan | Development of management Plan for the identified floodplains resulting in better disaster response and guidelines for managing floodplain | Possible grant or Council funding | Nil | | Underway | 2.3 |

| 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 | 2.3 |

| 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 | 1.1 |
|---|--|---|---|-----|
| 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 | 1.1 |
| 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 | 1.1 |
| 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 | 1.1 |

| 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 | 2.3 |
| Review of Council's Stormwater Quality Guideline | Review of Council's stormwater quality guideline which assist developers to comply with SPP Policy. | TBA | 2.3 |
| 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 | 1.4 |
| 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 | 1.1 |
| 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 | 1.1 |
| | | | |
| 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 | 1.1 |
| To JW Membrane Replacement | Facilitates capacity upgrade without high embodied energy works | Within Council allocated budget | 1.1 |
| 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 | 1.1 |
| 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 | 1.4 |
| 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. | 2.3 |

| Implement the WRC urban water quality monitoring Program | There are 12 monitoring sites in the Town of Whitsunday | Consider external sources and internal sources | 2.3 |
|--|--|--|-------------|
| Develop and implement a dugong and marine turtle monitoring Program for Pioneer bay using drones. | There is a lack of dugong and marine turtle monitoring in Pioneer bay. This project will aim to use drones to survey the population of dugongs and marine turtles. | WRC and external | 2.3. 5.2 |
| Installation of signage at Pioneer Bay to promote "Go Slow for those Below" marine slow zone | Signage to advertise the Pioneer bay Go Slow zone to reduce impact on dugong and marine turtles. | External | 2.3 and 5.2 |
| Installation of aerator/fountain in Mullers lagoon to improve water quality | The installation of a water foundation and/or aerator in Mullers lagoon will improve water quality and reduce the likelihood of fish kills. | External | 5.3 |
| Installation of aerator/fountain in Cannonvale lake to improve water quality | The installation of a water foundation and/or aerator in Cannonvale Lake will improve water quality and reduce the likelihood of fish kills. | External | 5.3 |
| Conduct a training workshop in Water Sensitive Urban Design to improve uptake and implementation of these concepts | To engage a consultant to run two workshops on WSUD – Airlie Beach and Bowen. | External | 5.3. |
| Ammonia/Nitrate optimisation | To make adjustments to the STP process to reduce ammonia and Nitrate levels in effluent | External | 5.3 |
| Cannonvale STP Membrane Renewal | To replace the Cannonvale STP membrane to improve water quality in effluent | External | 5.3 |
| Emerging contaminants WIM alliance study | To liaise with industry experts to maintain knowledge currency on emerging contaminants such as PFAS and micro-plastics | External and internal | 5.3 |
| Conduct development industry training on erosion and sediment control | To hold at least annual 1 day workshops on Erosion and Sediment Control | External | 5.3 |

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 | 3.9 |
| Develop new Waste Management Plan | The review of waste issues and development of the new Waste Plan | WRC | | Directorate: Infrastructure Services and Community Services | Underway | 2.1, 2.3 3.9 |

| 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 | 3.9 |
| Recycling / Resource recovery at Landfills and Supervised Waste Transfer Stations | Continue provision of resource recovery and recycling services and seek further opportunities to support a circular economy. | Within Council allocated budget | Directorate: Infrastructure Services and Whitsunday Water | 3.9 |

| 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 | 3.9 |
| Educate and Promote Recycling | Hire a Recycling Education Officer / Waste Education Officer | Within Council allocated budget | 3.9 |
| Extend Kerbside Recycling to un-serviced residential properties where possible. | The monitoring of the success of the recycling bin program to residents to develop targeted approach to development of a Waste Education Program | Within Council allocated budget | 3.9 |
| Implement Landfill gas flaring at Kelsey Creek landfill and Bowen landfill | The installation of pipework and infrastructure at Kelsey Creek landfill and Bowen landfill to harness and flare and monitor landfill gas. | WRC and external | 1.2 and 3.9 |
| Develop a Litter Management Strategy | WRC to develop a new Litter Management Strategy which will include reduce litter in stormwater and installation of strategi gross pollution traps and litter monitoring devices in stormwater system | WRC and external | 2.3 and 5.3 |
| Implement Plastic minimisation Programs with businesses | Work with external organisations to encourage the reduction and phase out of single use plastics in businesses. | WRC and external | 2.3 and 5.3 |
| Implement FOGO in a staged manner for WRC | The development of a FOGO strategy and its implementation | WRC and external | 2.3. and 1.2 and 5.3 |

| Plastic trickle tape and pipe raw materials study. | The support the development of a business to recycle cropping irrigation tape | External | 3.9 |
|--|--|-----------------------|-----|
| Landfill groundwater monitoring bores | To continue to monitor landfill bores and maintain them where necessary | External | 5.3 |
| Phytocapping Landfills | To commence the process of installing vegetation as a phytocap on the Kelsey Creek and Bowen landfills | External and internal | 5.3 |

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



Current Projects

| 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 (Renew). | Within Council allocated budget | Whitsunday Catchment Landcare | Directorate: Community Services | Underway | A2, 3.3. |
| Development and implementation of Indigenous Land Use Agreements (ILUAs). | ILUA's and Cultural Heritage requirements will be adhered to | Within Council allocated budget | Various traditional Owner groups | Directorate: Community Services | Underway | B2 |

Ongoing Activities

| 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 | 1.4, 3.3. A1 |
| Council Partnership with Whitsunday Local Marine Advisory Committee (WLMAC) | A Councilor is to be allocated to participate on the WLMAC | Within Council allocated budget | Directorate: Community Services | A1, A2, B2, 1.4 |
| Council participation to the Whitsunday Catchment Landcare Committee (WCLC) | A Councilor is to be allocated to participate on the WCLC | Within Council allocated budget | Directorate: Community Services | A1, A2, B2, 1.4 |

| 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 | A1, A2, B2, 1.4 |
| Construction of an improved coastal midden enclosure and interpretation at the Whitsunday foreshore reserve, Bowen | A coastal midden is located on the public foreshore at Whitsunday Paradise. The existing enclosure is in poor condition and there is no interpretative signage. This project will improve the enclosure and signage and make it a feature of the foreshore and a place where the Juru people can visit. | External | B2 |

APPENDIX 1: List of possible projects to implement via Reef Guardian Council Commonwealth grant

| No. | Project | 2023-24 | 2024-25 | 2025-26 | Reef Plan 2050 Action |
|-----|---|---------|----------|-----------|-----------------------|
| 1 | Feral Animal aerial shooting Program | V | V | $\sqrt{}$ | 5.1 |
| 2 | Whitsunday Yellow Crazy Ant Eradication Program | | | | 5.1 |
| 3 | Erosion and Sediment Control training (Council and Community) | | | | B2 |
| 4 | Merinda Weed Washdown Facility | | | | 5.1 |
| 5 | Urban waterway riparian restoration project (2ha) | | | | 5.3 |
| 6 | Whitsunday Yellow Crazy Ant infestation detailed survey | | | | 5.1 |
| 7 | Conduct a dugong and marine turtle population monitoring survey Program for Pioneer Bay using drones. | | | | 3.3 |
| 8 | Kelsey Creek landfill gas flaring | | | | |
| 9 | Whitsunday urban water quality monitoring – sample analysis in lab | | | | 2.1. |
| 10 | EV charging station and area at Whitsunday airport – stage 1 (site establishment) | | | | 1.1 |
| 11 | The removal of Leucaena in environmentally sensitive urban areas | | | | 5.1 |
| 12 | Installation of aerator/fountain in Mullers lagoon to improve water quality | | | | 5.3 |
| 13 | Installation of aerator/fountain in Cannonvale lake to improve water quality | | | | 5.3 |
| 14 | Installation of signage at Pioneer Bay to promote "Go Slow for those Below" marine slow zone | | | | B3 and 3.3. |
| 15 | Conduct a training workshop in Water Sensitive Urban Design to improve uptake and implementation of these concepts | | √ | | B2 |
| 16 | Measuring the impact of feral pig impacts on two coastal wetlands and their impact on greenhouse gas emissions (UQ partnership) | | | √ | 5.3 |
| 17 | Construction of an improved coastal midden enclosure and interpretation at the Whitsunday foreshore reserve, Bowen | | | 1 | B2 |
| · | | | | | |