ENVIRONMENTAL STEWARDSHIP & SUSTAINABILITY

"We believe that one of our primary roles is to help visitors understand and appreciate the marine environment. In doing so, we hope that each visitor will leave as a 'Reef Ambassador' helping to ensure that coral reefs are respected and cared for."

At Quicksilver, we're privileged to live and work in one of the most remarkable natural environments on this planet, the World Heritage Great Barrier Reef.

The Quicksilver Group is committed to sustainable environmental practices across the breadth of our operations, at sea and on land, and is supported by proactive action and leading edge science.

These information sheets provide a snapshot of some of our current and ongoing initiatives achieving real, tangible results for climate action and caring for our environment.

INFORMATION SHEETS

1. Sustainability Snapshot: Environmental Stewardship
2. Reef Biosearch
3. Reef Resilience: Nurture & Restoration Projects
4. Tourism Reef Protection Initiative
5. Preparing for the future - renewable fuel engines

QUICKSILVER GROUP
EXPERIENCE. THE GREAT BARRIER REEF.

SUSTAINABILITY SNAPSHOT
ENVIRONMENTAL STEWARDSHIP

Quicksilver is proudly recognised as a High Standard Operator by the Great Barrier Reef Marine Park Authority. We are committed to sustainable environmental practices across the breadth of our operations, at sea and on land, and this is supported by proactive action and leading edge science.

This Information sheet highlights some of our current and ongoing initiatives.

CORAL RESEARCH : NURTURE & RESTORATION PROJECTS

Collaborative partnerships and scientific research are at the heart of ensuring the health and ongoing sustainability of the world's largest living reef system. The Quicksilver Group is currently undertaking three collaborative projects, each using different techniques.

Quicksilver Cruises, Agincourt Reef 3
Commenced 2018

This project involved restoration of a small coral bommie which was impacted by cyclonic waves several years before. With an unstable substrate, natural recovery was impeded. Mesh structures were installed to grow coral fragments into colonies, initially connected to a power source. This was a collaborative project with Reef Ecologic and the first of this type conducted in the GBR.

Great Adventures, Moore Reef
Commenced 2019

This Coral Nurture program uses an innovative coral clip as a method of attaching corals to the substrate. This method allows corals to be propagated in areas of the reef which have proven to be very challenging. This is a collaborative project with University of Technology Sydney.

Great Adventures - Green Island "New York" reef site – Commenced Nov 2020

This project involved attaching coral fragments to 165 hexagonal frame "Stars", additional coral fragments attached with coral clips, as well as a trial of biodegradable cable ties. This is a multi-stakeholder project with partners including MARS Sustainable Solutions, James Cook University, GBRMPA & QPWS, Gunggandji Land and Sea Rangers.

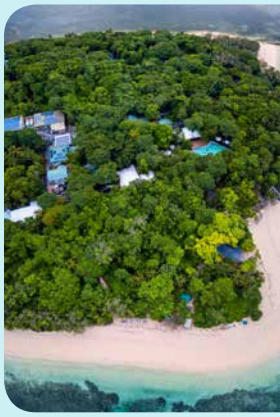
See Info Sheet 3 for more Information.

RENEWABLE & GREENER ENERGY

Supplementary solar power continues to be successfully employed across our operations. This includes Pro Dive Cairns' training centre, our Port Douglas catering and workshop facilities, Green Island Resort, Quicksilver Dive training centre, retail and office facilities, and the weather station at Quicksilver's Agincourt platform.

- **Preparing for a sustainable future with renewable fuel engines:** Our wavepiercer catamarans, Quicksilver VIII and Quicksilver V, and dive boat Poseidon (most recently in 2024), have undergone multi-million dollar engine refits to prepare for a more sustainable future with reduced emissions and are ready for renewable fuels when commecially available in Australia. With next generation Rolls Royce mtu series 2000 engines, they have clean fuel certification for HVO (Hydrotreated Vegetable Oil) and other synthetically produced diesel fuels which have demonstrated up to 90% CO2 emissions reduction.

- **Powering from the sun:** Despite Green Island being home to a significant rainforest, we've been able to achieve some impressive results. With two 45kW solar arrays, renewable energy now generates up to one quarter of the island's needs. This helps to power the Resort's tertiary sewage treatment plant, desalination plant and the island's other facilities.



- **Quicksilver's new coaches,** progressively rolled out since 2016, are among the cleanest and most fuel efficient available. By European Emission Standards, they are (EEV) enhanced environmentally friendly vehicles and exceed current standards in Australia.
- **Emissions reduction:** Our vessels are operated as efficiently as possible including route and trim optimisation, advanced hull coatings and weekly scrubs to minimise marine growth and drag; these strategies are recognised by the Australian government Department of Infrastructure and Transport for energy efficiency and decarbonisation. Our entire fleet undergoes annual refits which not only ensures they are in the best condition for our customers, but also peak mechanical condition for efficient operations and reduced emissions.

SUSTAINABILITY SNAPSHOT
ENVIRONMENTAL STEWARDSHIP

PROTECTING & MONITORING OUR REEF SITES

Education, research, monitoring and intervention. Caring for our "patches" and reef environment is our daily charter.

- The company's Reef Biosearch team of 20 marine biologists is focused on education, research and monitoring within our daily operations.

- Since 1986, Reef Biosearch has the longest logbook of marine observations on the Reef. This gives an excellent understanding of site specific changes and impacts and was instrumental to the development of GBRMPA's Eye on the Reef. We participate in recognised programs such as Eye on the Reef where staff record observations, enabling findings to become part of regional and international information networks.
- Our team of divers are trained to conduct Crown of Thorns Starfish eradication. When high densities of COTS eat coral faster than it can grow, intervention is needed. We have Marine Park permits to run our own eradication programs.
- We observe extensive and strict practices to protect and nurture the Reef's health - from physical impacts of reef structures, water quality, through to visitor education including a "No Touch" marine fauna and flora policy. For sun protection, we provide lycra suits and use marine-friendly sunscreens (free from oxybenzone chemicals). The use of chemicals is strictly managed, detailing what types of chemicals and how much can be used, how they are stored and are disposed of.
- Structurally, our permanently moored reef platforms (pontoons) have mooring blocks and chains positioned on sand to reduce impacts while positioning of the structures avoids shading of the corals. These sites are intensely managed and staff regularly inspect and monitor to ensure our sites remain in pristine condition; we are able to be proactive in addressing any areas of concern and collect valuable data on the cycles which affect our environment. **A recent survey conducted with GBRMPA revealed remarkable coral diversity at Quicksilver's Agincourt Reef platform - with over 100 different species of corals documented, this represents around one-quarter of all hard corals found on the Great Barrier Reef**.

REDUCE, REUSE, RECYCLE

Reducing landfill and the potential for plastics to pollute our oceans is a core action across our operations. By working together, the sum of all actions is achieving some impressive results. **Here's a few examples...**

- **Phasing out plastic consumables:** We've phased out plastic consumables wherever possible including elimination of single-use plastics like straws and plastic retail bags. A biodegradeable paper straw is available on request and paper or cloth bags or are now provided.

  Onboard and at Green Island, we provide water fountains (for drink container refill) and even icecream scoops are served with a biodegradable wooden spoon. The Resort has replaced single-use plastic packaging on complimentary guest toiletries with eco-friendly refillable dispensers.
- **Recycling and upcycling:** Some examples include recycling oils from our vessels and coach fleet, and cooking oils from our catering facilities to be converted to biodiesel fuel. From our Port Douglas base, we use an oil separator to process the liquid pumped from the bilges of our vessels, allowing the oil to be separated from water and collected for recycling. From our land offices, we contribute to innovative companies such as Close the Loop, who are repurposing soft plastics like used printer cartridges into an asphalt additive for road surfacing, and Upparel, who recycle old uniforms into packaging, signage, homewares and much more.
- **Food Rescue:** In 2018 we successfully piloted a food rescue program with OzHarvest with excess quality food from our Cairns daily cruises donated to support many charities in our region.

- **Ethical purchasing** choices include minimally packaged goods and reusable products, recycled paper napkins, printing brochures with certified sustainable forestry products, through to building materials such as recycled tyres for poolside paving at Pro Dive Cairns training centre. Our merchandise department collaborates with accredited companies whose sustainability goals mirror our own. This includes the creation of our **'Q' brand** for garments made of responsibly sourced organic fibres and products made from recycled plastics and other discarded sea waste, even resulting in a range of ladies and men's swimwear and hats.
- From Green Island Resort, partially used guest soap bars are collected for **"Soap Aid"** for reprocessing into fresh, hygienic soap bars for distribution to disadvantaged communities in Australia and overseas.

SUSTAINABILITY SNAPSHOT
ENVIRONMENTAL STEWARDSHIP

INNOVATIVE WASTE MANAGEMENT SYSTEMS

With a combination of innovative solutions, the award-winning eco Green Island Resort is home to some of Australia's most advanced waste management practices.

- **Turning food waste into fertiliser** - The Food Digester recycling machine installed in 2019 is the first of its kind at an Australian island resort. Waste volume is reduced by 90% by converting food waste into a nutrient-rich organic fertiliser with its end-use for local farmlands and the Resort's herb garden. Another byproduct is sterile water, which by being diverted to the Resort's treatment facility, "closes the loop". The Food Digester is a real win-win for the environment with not only waste averted from landfill, but reduced transport and methane emissions from decomposing organic matter.

- The Resort's **waste management compound** also includes a compacter and baler to enable recycling and waste reduction for cans, cardboard and plastics for delivery to recycling agents. As the disposal of any solid waste on Green Island is prohibited with all waste taken back to the mainland, the combination of these systems significantly reduces waste volume and averting landfill, and consequently carbon emissions from transport.
- The Resort's state-of-the-art tertiary **sewage treatment plant** is one of the most sophisticated of its type in Australia, processing around 30 million litres of treated wastewater annually for reuse on the island with the high quality treated effluent being used primarily for toilet flushing and air conditoner chiller towers. The plant must meet stringent environmental and water quality standards to ensure the protection of both the marine and island environments.

ENVIRONMENTAL ACCREDITATIONS

ECO CERTIFIED advanced ecotourism
CLIMATE ACTION CERTIFIED business
GLOBAL SUSTAINABLE TOURISM COUNCIL

Quicksilver was one of Australia's first ecotourism innovators, credited with helping to pave the way for responsible and sustainable tourism. Our long-term approach to conservation and sustainability began in an era before the term "ecotourism" was ever spawned. Quicksilver participated in Ecotourism Australia's pilot accreditation scheme in 1996 in the development of this significant program. Certified since 1997, Quicksilver is recognised in Ecotourism Australia's Hall of Fame, as is Great Adventures and Green Island Resort with over 20 years of continual accreditation.

- All products have **Advanced Ecotourism** status, the highest eco certification attainable in Australia. This is regularly audited and we also have regular compliance visits by officers of both the Great Barrier Reef Marine Park Authority and Queensland Parks Wildlife Service.
- We've held **Climate Action accreditation** since 2008. What this means is that the company has proactively undertaken adaptations and emissions reduction, and is auditing and measuring our carbon footprint.
- Quicksilver Group is also a **Global Tourism Sustainable Council** (GSTC) Approved tourism operator. This independent body establishes and manages global standards for sustainability in travel and tourism. The GSTC approval is assessed through Ecotourism Australia.
- The company's full range of Great Barrier Reef products are recognised as **High Standard Operations** by GBRMPA. Through independent certification, Quicksilver Group is recognised for high standards which enhance environmental protection, reef resilience and tourism sustainability. As a result, our various operations have been granted long term operational permits.

Some cool facts....

Solar energy now supplies one quarter of ALL Green Island needs - pretty impressive on a rainforest covered island!

Quicksilver's Coral Restoration Research Project was the first of its kind on the Great Barrier Reef.

Innovative waste management practices on Green Island are turning food waste into organic fertiliser!

Single use plastics like bags and drinking straws are history - phased out across our operations. Onboard vessels and Green Island, there's water fountains for drink container refill.

Quicksilver's merchandise 'Q' brand uses responsibly sourced organic fibres and products made from recycled plastics and other discarded sea waste.

Reef Biosearch (est 1986) has the longest ongoing logbook of marine observations on the Reef and evolved into GBRMPA's Eye on the Reef program.

REEF BIOSEARCH

Reef Biosearch, the pioneering environmental division of the Quicksilver Group, was founded in March 1986 – in an era before the term "ecotourism" was even spawned.

ABOUT REEF BIOSEARCH

Reef Biosearch's aim from day one has been to combine tourism, education and research, while highlighting our commitment to sustainability. In the early days, this was by way of providing an educational slideshow to passengers and chatting to them about the reef. All these years later our guiding philosophy remains the same; environmental awareness and conservation starts with education.

Today, the Reef Biosearch team of over 20 university educated marine biologists, and Master Reef Guides, spans the company's Port Douglas and Cairns based tourism operations. While Reef Biosearch focuses on research, conservation and education initiatives as core operational objectives, the team are dedicated to turning the ocean into an engaging classroom, educating guests about this magnificent watery wonderland. Education is also a powerful conservation tool and we hope that each and every visitor leaves us as ambassadors for reef protection.

PIONEERING REEF STEWARDSHIP

Reef Biosearch has the longest database of marine observations on the Great Barrier Reef, ongoing since 1986. This information allows scientists to observe trends and changes in the marine environment and also allows us to manage site usage to preserve our environment.

Significantly, this database evolved into the Great Barrier Reef Marine Park Authority's (GBRMPA) Eye on the Reef monitoring program and has proven to now be one of the most important site stewardship actions for many operators throughout the Marine Park.

EYE ON THE REEF
A Great Barrier Reef Marine Park Authority Initiative

REEF BIOSEARCH
INTERPRETATION, EDUCATION & PRESERVATION
GREAT BARRIER REEF · AUSTRALIA

MASTER REEF GUIDE
GREAT BARRIER REEF

RESEARCH, MONITORING, CONSERVATION

With daily access to the company's extensive range of reef sites, the Reef Biosearch teams have the unique opportunity to conduct research programs and environmental initiatives.

Reef Biosearch conducts frequent important monitoring participating in recognised programs (such as Eye on the Reef, Photopoint and Reef Health Impact Surveys, Coral Watch, Seagrass Watch and Whale sighting networks) and are involved in a number of collaborative research partnerships. This includes coral restoration and nurturing projects (see Info Sheet 3) and the ongoing GBRMPA Tourism Reef Protection Initiative (see Info Sheet 4).

Reef Biosearch also acts as an environmental watchdog, ensuring best practices and sustainability.

EDUCATION & INTERPRETATION

Catering for visitors of all ages to the Great Barrier Reef who want to learn more about what they are seeing, Reef Biosearch marine biologists are part of the crew onboard most of the Quicksilver Group's cruises operating from Cairns and Port Douglas.

From informative presentations onboard to personalised guided snorkel tours and interpretation, guests can see the reef with informed eyes and gain a deeper understanding of the reef's biodiversity and ecological importance.

Scan the QR code or visit
www.ReefBiosearch.com.au to learn more.

Marine biologist guided snorkel tours

Ongoing site stewardship & monitoring

Interpretation

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INFO SHEET 3

REEF RESILIENCE
NURTURE + RESTORATION PROJECTS

Collaborative partnerships and scientific research are at the heart of ensuring the health and ongoing sustainability of the world's largest reef system.

The Quicksilver Group is currently undertaking three collaborative reef research and resilience projects, each using different techniques, at three of our key reef sites. These projects are conducted under special Great Barrier Reef Marine Park Authority (GBRMPA) permits. Ultimately they are aimed at helping to preserve the significant ecological, social and economic value of the Great Barrier Reef.

The knowledge gained from these projects and the type of techniques suited to different areas, will aid scientific understanding and the long term management of not only the Great Barrier Reef, but reefs world-wide.

Our marine biologists and master reef guides also provide the opportunity for guests to learn more about these projects during their reef experiences.

Quicksilver Cruises, Agincourt Reef 3

Commenced 2018

This project involved restoration of a small coral bommie which was impacted by cyclonic waves. With an unstable substrate, natural recovery was impeded. Mesh structures were installed to grow coral fragments into colonies, initially connected to a power source. Collaborative project with Reef Ecologic and the first of this type conducted in the GBR.

Great Adventures, Moore Reef

Commenced 2019

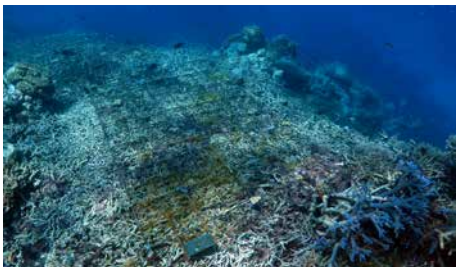
This **Coral Nurture Program** uses an innovative coral clip as a method of attaching corals to the substrate. "Fragments of opportunity" or coral grown in a nursery are planted directly at the coral colony. This method allows corals to be propagated in areas of the reef which have proven to be very challenging. Collaborative project with University of Technology Sydney.

Patented coral clip

Great Adventures, Green Island "New York" site

Commenced 2020

This project involved attaching coral fragments to 165 hexagonal frame "Stars", additional coral fragments attached with coral clips, as well as a trial of biodegradable cable ties. Multi-stakeholder project with partners including MARS Sustainable Solutions, James Cook University, GBRMPA & QPWS, Gunggandji Land and Sea Rangers.



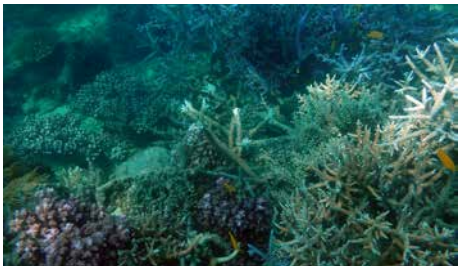
2018: Agincourt Reef 3 Site at installation

2024: We have two healthy Coral Nurseries at Moore Reef

2020: Installing the Reef Stars at Green Island

2024: Agincourt Reef 3 Site restoration

Successful outplant, coral clip has been overgrown



2024: "New York" site progress

TOURISM REEF PROTECTION INITIATIVE

The Quicksilver Group's environment teams are busy undertaking important monitoring and conservation work as part of the Great Barrier Reef Marine Park Authority's Tourism Reef Protection Initiative (TRPI).

BACKGROUND

Following the success of the initial TRPI program conducted throughout 20-2021, a new $15 million initiative followed with dual aims; conservation and protection of high value tourism sites along the length of the World Heritage Marine Park, and the support of the reef tourism industry's post pandemic recovery. Administered and funded by the Great Barrier Reef Marine Park Authority, the program has now been extended for ongoing programs.

MONITORING & SITE INTERVENTION

From high frequency reef health surveys and monitoring, to coral predator control, and more, the Tourism Reef Protection Initiative allows us to play an increased role in the management and preserving this wonderful place we call home.

Eye on the Reef Weekly monitoring data, which is generated by trained staff conducting a timed swim over a known area and noting key species, is collected at key sites.

As well as this monitoring, Reef Health Impact Surveys and Photo Point Enhancement surveys, permitted site intervention such as crown of thorns starfish (COTS) and drupella removal (known coral predators) where required, and coral nurturing projects are being conducted.

The Quicksilver Group has dedicated divers who conduct COTS eradication. When densities of COTS eat coral faster than it can grow, intervention is needed. We have permits to run our own eradication programs while RRRC (Reef & Rainforest Research Centre) manages a reef-wide program.

Through Stewardship plans of our key sites, the information gathered will inform GBRMPA about what is happening at our sites locally, and when the data from other operators involved in the initiative is added, a reef-wide perspective allows any changes to be identified.

Survey buddies

ACHIEVEMENTS

In the 2024 program over a period of 18 months, with our experienced Reef Biosearch marine biologists and dive teams leading the charge, Quicksilver's efforts have been outstanding and have been concentrated on our extensive network of reef sites spanning from the Agincourt Reefs north of Port Douglas to Moore Reef east of Cairns.

- We made 606 site visits dedicated to stewardship initiatives
- Conducted over 900 Eye on the Reef surveys
- Recorded over 18,000 photo point survey images
- Removed over 85,000 Drupella (coral predators)

See the GBRMPA report snapshot on page 2.

The ongoing continuation of the program will help to ensure a sustainable future alongside a thriving Great Barrier Reef.

Scan the QR code and check out the video story highlights to learn more about our achievements and GBRMPA's Tourism Reef Protection Initiative.

Reporting contributes to regional and international databases

Drupella snail removal

High frequency site monitoring

Australian Government
Great Barrier Reef Marine Park Authority

Reef Authority

Tourism Reef Protection Initiative

QUICKSILVER GROUP ARE PROUD TO BE STEWARDS OF THE GREAT BARRIER REEF

Here are just some of our achievements during the Australian Government's Tourism Reef Protection Initiative.

918
surveys conducted

Conducting Eye on the Reef surveys

These surveys paint a picture of the current condition of the reef and monitor for any impacts affecting reef health. This provides an early warning system for Marine Park managers

18,236
images in database

Administering photo surveys for the ReefCloud database

The ReefCloud system is an artificial intelligence database that analyses Reef. We are proudly contributing photo surveys to this database. Run by the Australian Institute of Marine Science

Protecting coral from predators

Crown-of-thorns starfish and Drupella snail outbreaks can cause devastation across reefs if left unchecked. Our team have been specially trained to manage populations of these coral eating predators on our sites to protect it for the future.

85,049
predators removed

Site Stewardship Activities

Reef Health monitoring is conducted weekly at our Primary Sites. A detailed Site Stewardship Plan is being developed to identify the diversity and health of a specific area of the reef in collaboration with the Reef Authority.

606
site visits

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Ask us what we have been up to or scan here to see us in action.

Initiative Achievement
December 2022-June 2024

PREPARING FOR THE FUTURE
SUSTAINABLE FUEL ENGINES

Quicksilver continues to invest in next generation renewable fuel engines

Quicksilver's wavepiercing catamarans and dive boats are destined to deliver a more sustainable future with reduced emissions and ready for renewable fuels following multi-million dollar engine refits.

During 2024, the 39 metre Quicksilver V was repowered with two next generation Rolls Royce mtu series 2000 (16V2000M72), commercial marine engines, mtu BlueVision new generation Automation and new ZF marine gearboxes.

Following this, 24 metre dive and snorkel catamaran, Poseidon, was also repowered with two Rolls-Royce mtu 8V2000 series.

These major projects were a collaboration with Quicksilver's Engineering Team, Penske Australia and local marine contractors.

The Rolls-Royce mtu 2000 series commercial marine engines have received a clean fuel certification for HVO (Hydrotreated Vegetable Oil) and other EN15940 fuels (synthetically produced diesel fuels) which have demonstrated up to 90% CO2 emissions reduction.

Operating in the World Heritage Great Barrier Reef Marine Park, we are acutely aware of our footprint. This is a significant investment and the advances in these fuel-efficient engines will ensure a more sustainable future as we continue to deliver the best practice that we strive for, further minimising emissions across our operations.

While HVO (Hydrotreated Vegetable Oil) fuels are not yet commercially available in Australia, the new engine technology is already achieving notable reduction in fuel consumption by 10%. When the HVO fuel becomes available our fleet will be ready to lead the way with these environmentally-friendly, sustainable fuels. Replacing conventional diesel fuel can be transitioned without any adjustments to these engines.

In addition to new engines and gearboxes, modifications to Quicksilver V's wheelhouse included installation of an advanced monitoring control system with touch screen panels and access to real time data from the entire propulsion plant.

The vessel performed even better than projected during commissioning sea trials achieving a top speed of 30.2 knots. With onboard comforts, Quicksilver V will economically cruise around 24 knots on her 90 minute journey to the spectacular Agincourt Reef, adjacent to Australia's Continental Shelf.

Quicksilver has previously invested in retrofitting four Rolls-Royce mtu 16V2000M72 commercial marine engines into the company's flagship 45 metre Quicksilver VIII.

ABOUT HVO FUEL

Waste vegetable and animal fats and used vegetable oils can be used for HVO, which are converted into hydrocarbons by means of a catalytic reaction with the addition of hydrogen. Through this process, the fats and vegetable oils are adapted in their properties to diesel fuel and can supplement it as an admixture or replace it completely. The benefits of HVO are clean combustion with reductions in particulate emissions of up to 80%, nitrogen oxide emissions by an average of 8%, and CO2 emissions by up to 90% compared to fossil diesel.

Quicksilver V repower: With the old engines removed via an opening cut into the aluminum hulls, the new engines are craned into position.

Poseidon dive & snorkel catamaran new generation engines being installed.