



Gladstone Ports Corporation

Growth, prosperity, community.

Coral Restoration Project

August 2025

Scoly frag coral
Source: Monsoon Aquatics

A pioneering project to optimise coral restoration in the Port of Gladstone – to enhance coral restoration through targeted propagation methods and understand macroalgal (seaweed) dynamics.

Gladstone Ports Corporation (GPC) is partnering with experts in reef restoration from CQUniversity, the University of Technology Sydney and Monsoon Aquatics to assist the resilience of the Great Barrier Reef (GBR) at key reef sites in the Port of Gladstone.

This 2025-27 Coral Restoration Project is utilising cutting-edge phenotype and genetic testing to identify and reproduce identified heat-resilient corals en masse. The first of its kind in Australia, this project aims to set the benchmark for cost-effective, scalable restoration – delivering real on-ground benefits and building long-term reef resilience through deployment of thermally-tolerant corals.

Why

The condition of coral habitats remains poor on a region-wide scale since the severe 2010-13 flooding, and also in a large part due to the ongoing vulnerability of coral reef habitats. The distribution and abundance of coral reefs has decreased by approximately 50% over the past 30 years, and it is predicted that further losses of reef-building corals will occur in future years.

Fragging scoly corals
Source: Monsoon Aquatics





Coral growing out on frame
Source: University of Technology Sydney

Timing

Year 1

Year 2

Year 3

STAGES 1 AND 2

Year 4

Year 5

Year 6

STAGE 3

Future

The Stage 3 goal is to scale up to large reef restoration sites, subject to site selection and funding.



Seaweed (*Asparagopsis taxiformis*)
Source: CQUniversity

What

This pioneering Coral Restoration Project supports the objectives of the GBR Marine Park Authority and International Coral Reef Initiative.

The project seeks to assist the resilience of the GBR by undertaking research into creating coral reef, using transplanted coral grown from a land-based coral aquaculture facility. Using best-practice methods in coral conservation, the project team will use various methods to select the best corals to grow and return to the ocean. The complex interactions between macroalgae (seaweed) and coral will also be investigated to ensure the success of any coral restoration efforts.

How

Stage 1 will optimise site and infrastructure selection by combining expert knowledge with the data obtained from the local site conditions. In Stage 2, the risk to the population genetic diversity will be addressed to ensure reared corals maintain site resilience and diversity. The project team aims to select resilient corals while maximising genetic diversity, ensuring the best chance of survival for out-planted corals and optimising cost-effectiveness. From here, the team will have the key knowledge to scale up the restoration in Stage 3.

The macroalgal (seaweed) component will identify key competitive mechanisms and restoration windows, where coral out-planting can be optimised. This will move the restoration practice towards a holistic ecosystem restoration approach.

Where

The in-water work will be conducted in the Port of Gladstone at two locations to the north and south of Facing Island within the GBR World Heritage Area.

For more information

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