Gladstone Ports Corporation

Growth, prosperity, community.

Coral Restoration Project Port of Gladstone

June 2026

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Acknowledgement of **Country**

PORT OF GLADSTONE

Gladstone Ports Corporation (GPC) acknowledges and recognises Aboriginal and Torres Strait Islanders as the First Peoples of this country.

We firstly acknowledge and pay respect to the Traditional Owners of the Gladstone region, the **Bailai, Gurang, Gooreng Gooreng** and **Taribelang Bunda** peoples, and extend acknowledgement to the **Darumbal, Turrbal, Jagera, Yugara, Butchulla** and **Kabi Kabi** peoples on whose land we work and walk.

We respect their Elders past and present and embrace reconciliation to make positive, enduring change.

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Our **Vision**

To enable $1B in added economic, financial and social impact for the people of Queensland by 2035.

Our **Purpose**

As an operator, developer and enabler, maximise the utilisation of our port facilities, land and services whilst upholding the highest standards of safety, environmental performance and integrity.

Our **Values** and **Behaviours**

No Harm

We are committed to ensuring the safety, health and wellbeing of our people and the environment.

Integrity

Our integrity is founded on trust, honesty, transparency, inclusivity, respect and reliability. We do what we say we are going to do, every time.

Accountability

We understand and accept our responsibilities. We learn from success and failure. We are empowered to take action. We hold each other to account for our actions and results.

Customer focus

We listen to our customers, understand their needs and are invested in their success. We strive to provide them with an outstanding experience every time they engage with us. We are a pleasure to work with and can be relied upon to deliver.

Passion

We are proud of our heritage, who we are, what we do and where we are headed. As custodians of our ports, our commercial success demonstrates our deep commitment to the prosperity of the Queensland community.

Humility

We are humble in our dealings with each other and our customers, partners and stakeholders. We help each other, collaborate and operate as one enterprise in the service of the Queensland community.

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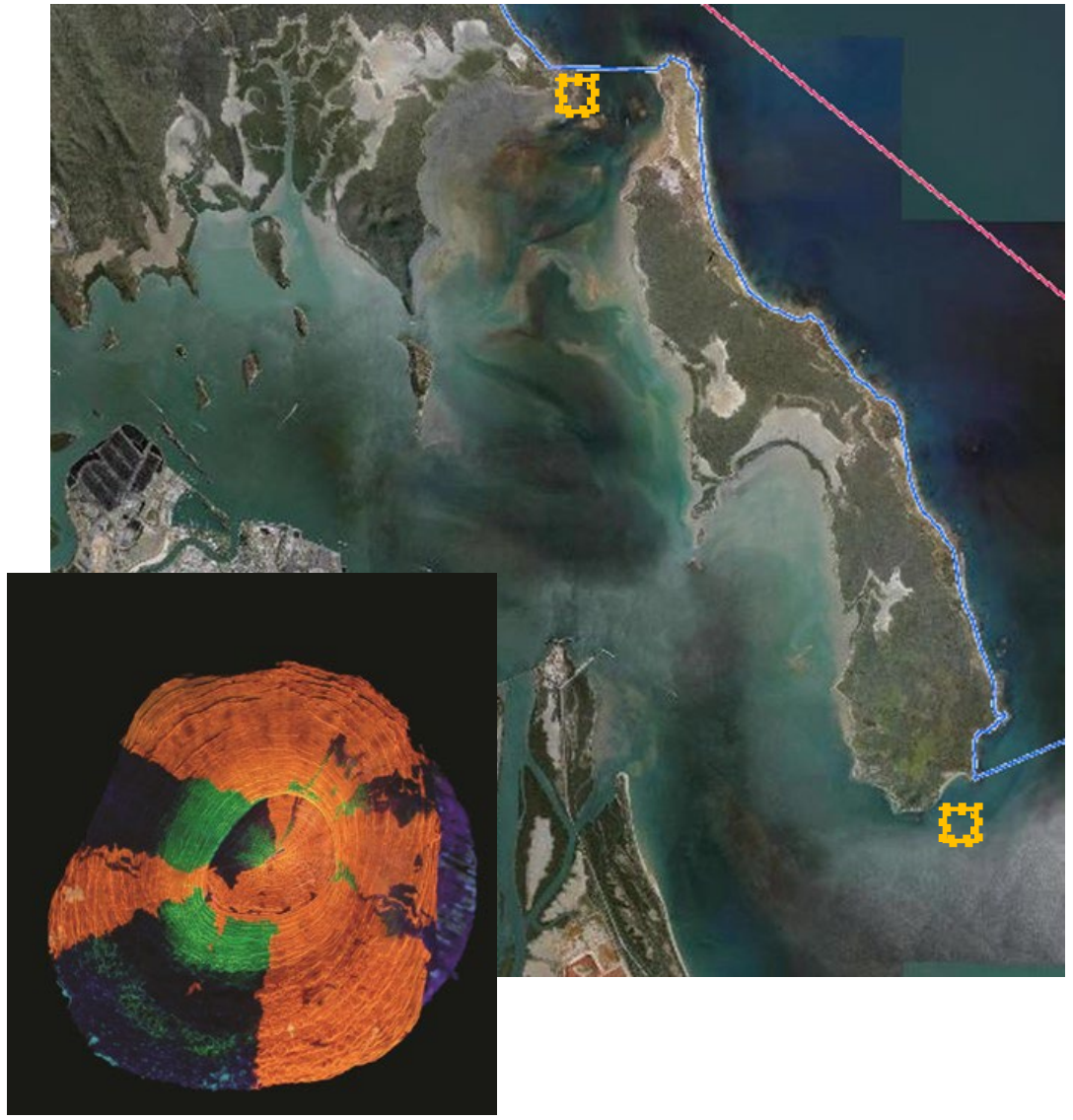
Coral Restoration Project

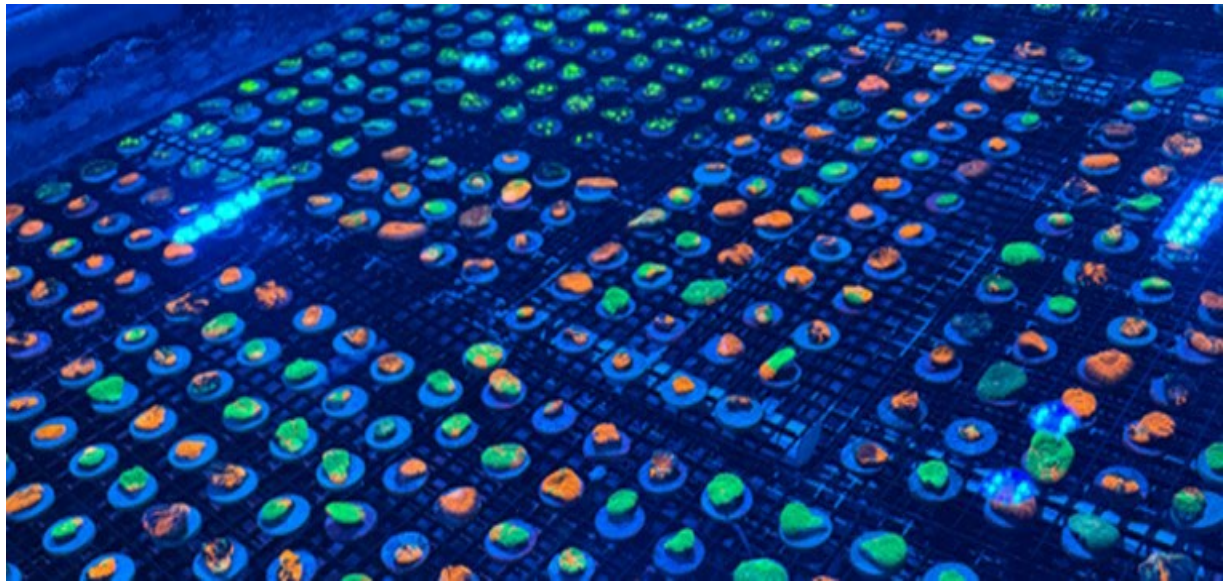
- Coral reef restoration using transplanted coral
- Optimise methods to boost coral resilience to thermal stress
- The role of macroalgae in reef restoration
- Genomic and molecular research
- Project team:
  - GPC
  - Monsoon Aquatics
  - University of Technology Sydney – Future Reefs
  - CQUniversity - CMERC



Scoly frag coral **Credit:** Monsoon

Project Importance

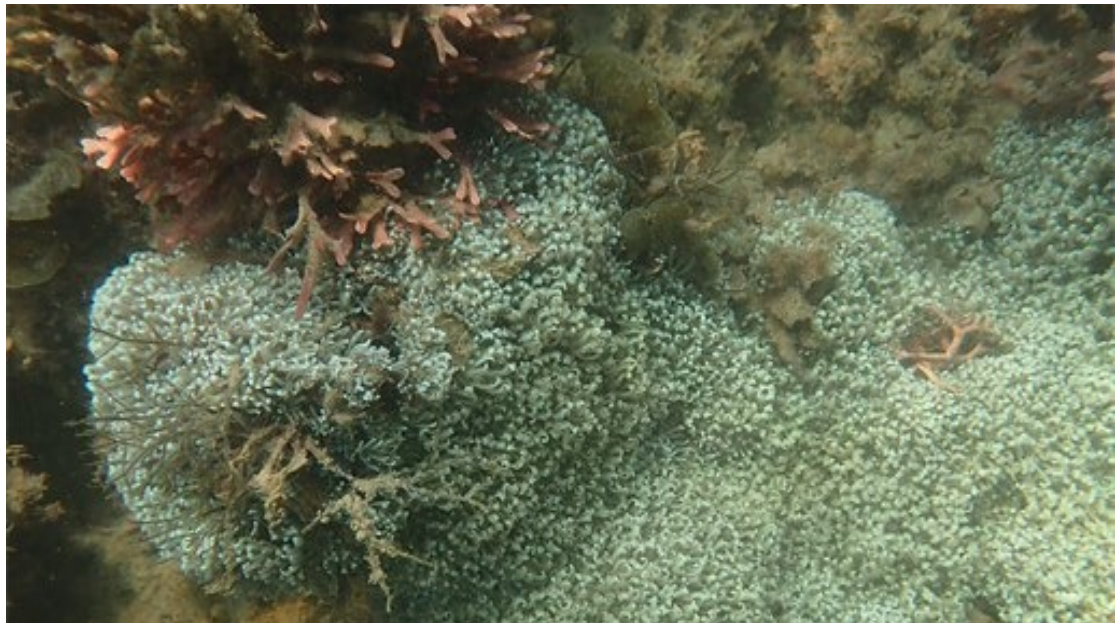
- Coral habitats remain in poor condition following severe floods in 2010-13
- Often a key sensitive receptor in port activities
- Limited solutions for enhancing natural capacities of corals to tolerate thermal stress
- Land-based coral from aquaculture facilities cannot be returned to the GBR
- Ecosystem services provided by GBR has many benefits



Coral frags in tanks at Monson Aquatics **Credit:** Monsoon

Project Methods

- Demonstrate the suitability of coral aquaculture in reef restoration
- Research focussing on:
    - Enhancing coral reef cover and biodiversity
    - The interactive role of macro-algae
- Coral focussed research at UTS and based at Monsoon Aquatics in Bundaberg
- Macroalgae focussed research at CQU and based at CMERC in Gladstone
- Three staged process:
    - Stage one and two 2025-28
    - Stage three 2028-30 (subject to funding)

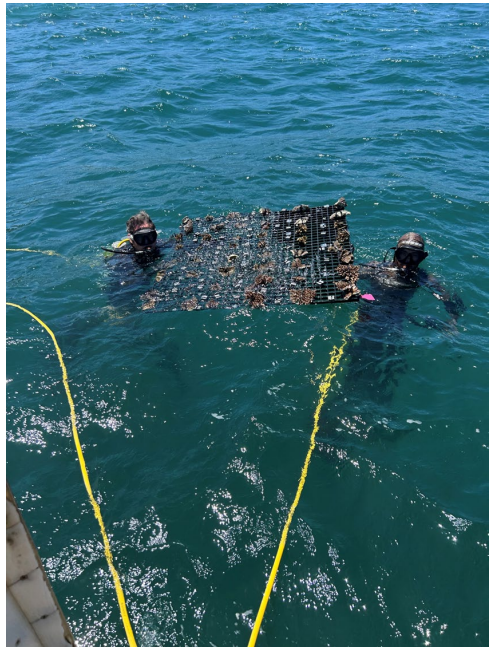


Calcified seaweeds (*Amphiroa and Padina spp*.) interacting with inshore soft corals.
Credit: CQU, Dr. Najeen A. Rula and Dr. Emma Theobald.

Stage One – Design and Installation

TASK	ACTIVITIES	STATUS
1	Finalise site selection	●
2	Design racks to suit PoG environment	●
3	Undertake marine plant surveys	●
4	Undertake approval application process	●
5	Recruit and onboard students	●
6	Identify locations of donor sites and harvest potential donors	●
7	Install environmental sensors at key sites	■
8	Collection of parent colonies, on water fragging and attach to racks	●
9	Monitor and assess the success	◆

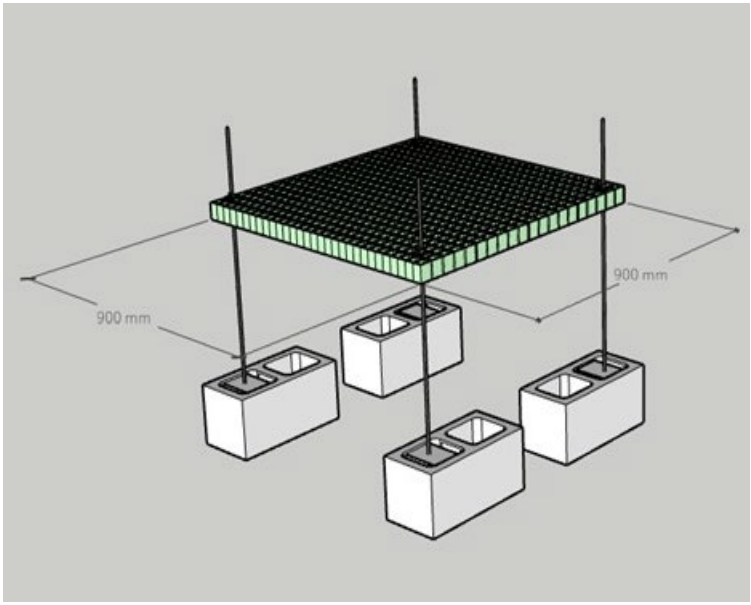
● Complete ◆ In Progress/Ongoing ■ Planned



Frame installation by Monsoon divers
Credit: GPC, Dr Megan Ellis

Stage One – Design and Installation

Frame designs from other coral projects
Credit: UTS



Frame design from this project **Credit**: Monsoon

Stage One – Design and Installation

Frame installation with PhD candidates and Monsoon divers **Credit**: GPC, Dr Megan Ellis

Stage Two – Research

TASK	ACTIVITIES	STATUS
1	Collect samples for molecular analysis	◆
2	Collect, propagate, and raise selected coral	◆
3	Assess population structure for key coral taxa	◆
4	Phenotype a sub-sect of colonies	■
5	Four installations: onsite installation	■
6	Monitor and assess the success	◆
7	Monitor and assess the influence and/or control of macro-algae growth	◆

● Complete ◆ In Progress/Ongoing ■ Planned

Coral frags in tanks **Credit:** Monsoon

Stage Three – Potential Future Scale Up

TASK	ACTIVITIES	STATUS
1	Based on the trials, establish large-scale reef restoration	
2	Assess growth and survival, species diversity and colonisation & use	
3	Track key coral traits to evaluate broader metrics of success	
4	Employ identified measures for algal control	
5	Track any disease or predation outbreaks	
6	Track return-on-effort of activities	
7	Optimise tracking of corals	
8	Spawn corals ex-situ to plant F1 generation back on the reef (fully tracked)	

Complete In Progress/Ongoing Planned

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