

## Noosa Oyster Reef Restoration Project

### Technical Advisory Group Meeting

#### Minutes

**Date – Thursday, 16 September 2022**

**Time – 12.30pm to 2.30pm**

**Location – Teams**

**Facilitators** – Craig Bohm (TNC), Megan Connell (TNC)

**Attendees** - Simon Walker (ESP), Uncle Fred Palin (Kabi Kabi), Rebecca Schofield (DAF), Stephen Wesche (DAF), Amy Kimber (NSC), Simon Branigan (TNC), Sophie Blond (NSC), Rebecca Britton (NSC)

**Apologies** – Gary Patten (MSQ), Eddie Game (TNC), Nikki Moore (DAF), Kim Rawlings (NSC), Gary Crozier (MSQ), Susan Codi King (MSQ)

#### Agenda

	Topic	Lead	Time	Time allocation
	Welcome to Country / Acknowledgement of Country	Kabi Kabi or Craig Bohm	12.30 pm	5 minutes
1	Introductions and agenda review	Craig Bohm	12.35 pm	5 minutes
2	Reefbuilder around the country	Simon Branigan	12.40 pm	15 minutes
3	Noosa project timeline review	Craig Bohm	12.55 pm	5 minutes
4	Summary of activities	Craig Bohm	1.00 pm	10 minutes
5	Construction	Craig Bohm	1.10 pm	10 minutes
6	Construction outreach and signage	Megan Connell	1.20 pm	10 minutes
	<b>Tea Break</b>	All	1.30 pm	15 minutes
7	Community partnership highlights	Megan Connell	1.45 pm	10 minutes
8	Reef seeding	Craig Bohm	1.55 pm	10 minutes
9	Monitoring and evaluation	Craig Bohm/Simon Walker	2.05 pm	10 minutes
10	Project next steps	Megan Connell	2.15 pm	10 minutes
11	Other business	All	2.35 pm	5 minutes
	Meeting close		2.30 pm	

## Welcome to Country

The Nature Conservancy (TNC), Noosa Shire Council (NSC) and this technical advisory group acknowledges the Kabi Kabi Nation (Gubbi Gubbi) as the traditional custodians of the places in which we work. We also honour the deep cultural, social, environmental, spiritual and economic connection the Kabi Kabi Peoples share with their lands and waters.

## Introductions and agenda review

Led by Craig Bohm

## ReefBuilder

TNC Operations Manager (Oceans), Simon Branigan, presented the TAG with an insight into Reef Builder projects around Australia.

### Reef Builder 1.0

- Partnership with the Australian Government since 2021
- Shellfish reef restoration at **13 sites** around Australia
- Providing economic relief post-COVID and 2019 bushfires

Simon Branigan

The Nature Conservancy Australia

### What we've achieved since 2021

Show participants

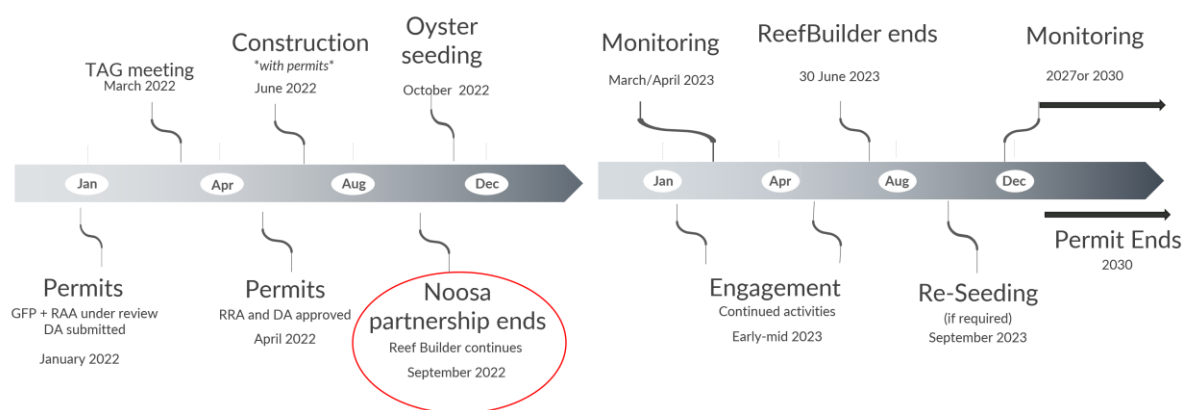
<b>22</b> Hectares of reef restored	<b>86</b> Tonnes of recycled shell used	<b>12</b> Million shellfish seeded on reefs	<b>638</b> Diving hours
<b>68</b> Volunteers involved	<b>618</b> Volunteer hours	<b>282</b> Jobs created	<b>44</b> SMEs engaged

7

Simon Branigan

## Timeline

### Noosa timeline



## Summary of activities

- Permits secured:
  - Owners Consent – to allow certain developments to occur on public land (permit secured from the Department of Resources)
  - Resource Allocation Authority (RAA) - to undertake restoration activities in the Noosa Fish Habitat Area (currently under negotiation with Department of Agriculture and Fisheries (DAF))
  - Broodstock Collection Permit - to collect and spawn adult oysters from the Noosa River
  - General Fisheries Permit - for handling and translocation of live oysters during the oyster reseedling activity (an amendment to this permit to allow release of live aquaculture product into the Noosa River has been applied for)
  - Development Approval - under the Queensland Planning Act 2016 and related acts and council bilaws
  - Roads and Footpaths Permit – for operation of the load out site
- Construction:
  - Engagement of construction contractor (M&J Marine Services)
  - Review of all regional quarries and selection of a referred quarry (Boral - Moy Pocket)
  - Establishment and management of the construction load out site
  - Submission and approval of the detailed Construction and Environmental Management Plan (to Noosa Council)
  - Completion of a detailed construction engagement plan in consultation with Noosa Council staff. The plan included:
    - Strategic communications for residents near to the load out site and the constructions sites
    - General communications to the community about the reef building process and timeframes
    - Public notices, temporary signage designs and QR code linked to online information.

- At the time of writing, 11 of the estimated 30 reef patches have been constructed (3 at Tewantin, 3 at Goat Island and 5 at Noosa Sound East restoration sites).

## Construction

▲ 3250 tonnes of igneous rock

🔪 100-500mm rock size – big!

👣 Up to 0.4 ha footprint

🏠 \$1m construction cost

⚓ 4 tonnes of shell – composite reef

🌱 2 tonnes of shell per seeding event



## Construction

▲ Local igneous rock (granite derivative)

🏠 Boral Quarries (Moy Pocket)

🌿 1 build – 4 sites – 30 reef patches

🏠 M&J Constructions

🔧 Engineering oversight + certification (ICM)

🦪 Oyster seeding to follow – Bribie Island Research Centre (DAF)







*Noosa Sound East reef patches complete*



*Tewantin reef patch (still under construction)*





*Surveying and monitoring work*

## Construction Outreach



Media release + notification in Noosa Today



Letterbox drop and conversations (Noosa Sound)



Letterbox drop near load out site



Visits to affected visitors



Council News – construction briefing



Oyster chronicle – construction overview

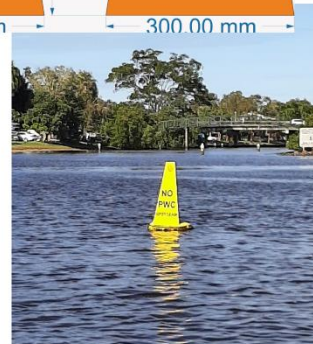
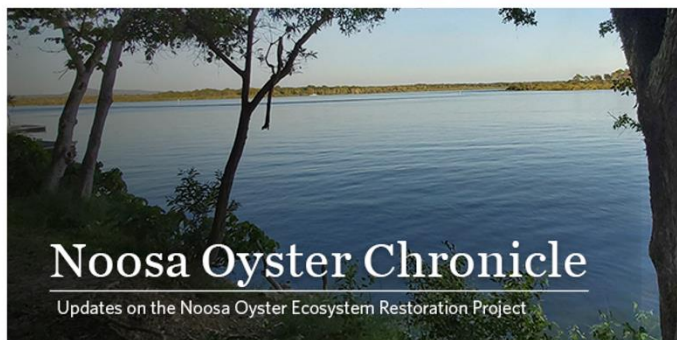
## Public Notice

Oyster ecosystem restoration works are in progress at Tewantin and Goat Island. We apologise for any inconvenience. This site is active from 27 July 2022 for up to 12 weeks.

To learn more about how this work is benefiting the Noosa River, please go to:



The work is part of the Noosa Oyster Ecosystem Restoration Project being undertaken by The Nature Conservancy and Noosa Council with support from The Thomas Foundation and Australian Government



## Signage

- 2 aids with signage per site
- Words on 3 faces:
  - Avoid Anchoring
  - Restoration Area
  - QR Code

Thanks to Noosa Council + Maritime Safety Queensland



## Partnerships

- Continuation of the Shuck Don't Chuck shell recycling project. Oysters continue to be collected from local restaurants. The project has diverted more than 10 tonnes of oyster shell from entering local landfills.

- Completion of the oyster gardening trial in partnership with the Noosa Integrated Catchment Association (NICA). Oyster gardening will now move into the grow out phase.
- Completion of the partnership with Noosa Environmental Education Hub (EEhub) to deliver the Noosa Senior Schools engagement project with local schools.
- Completion of the partnership with Noosa Biosphere Community Association (NBCA) to deliver the Junior Schools engagement project.
- Developed and distribute special project information sheets on biosecurity, rock oysters, reef design and sites and frequently asked questions and answers (Q&A sheet).
- Developed the Autumn 2022 and Winter editions of the Noosa Oyster Chronicle news circular. Direct circulation of each edition was to over 100 locally engaged stakeholders on the Noosa mailing list.
- Entered into partnership with the Bribie Island Research Centre to support oyster seeding, which will occur in late September/October 2022.
- Contracted International Coastal Management, specialist coastal engineer consultants, to oversee and certify the construction of the oyster reef patches.
- Contracted Ecological Service Professionals to undertake baseline and post construction ecological and physical reef monitoring.
- Partnered with Noosa Parks Association and Ecological Service Professionals who are undertaking baseline sediment studies in the Noosa River.
- Continued to work with Noosa Council to seek solutions to river management challenges such as the decline in seagrass.

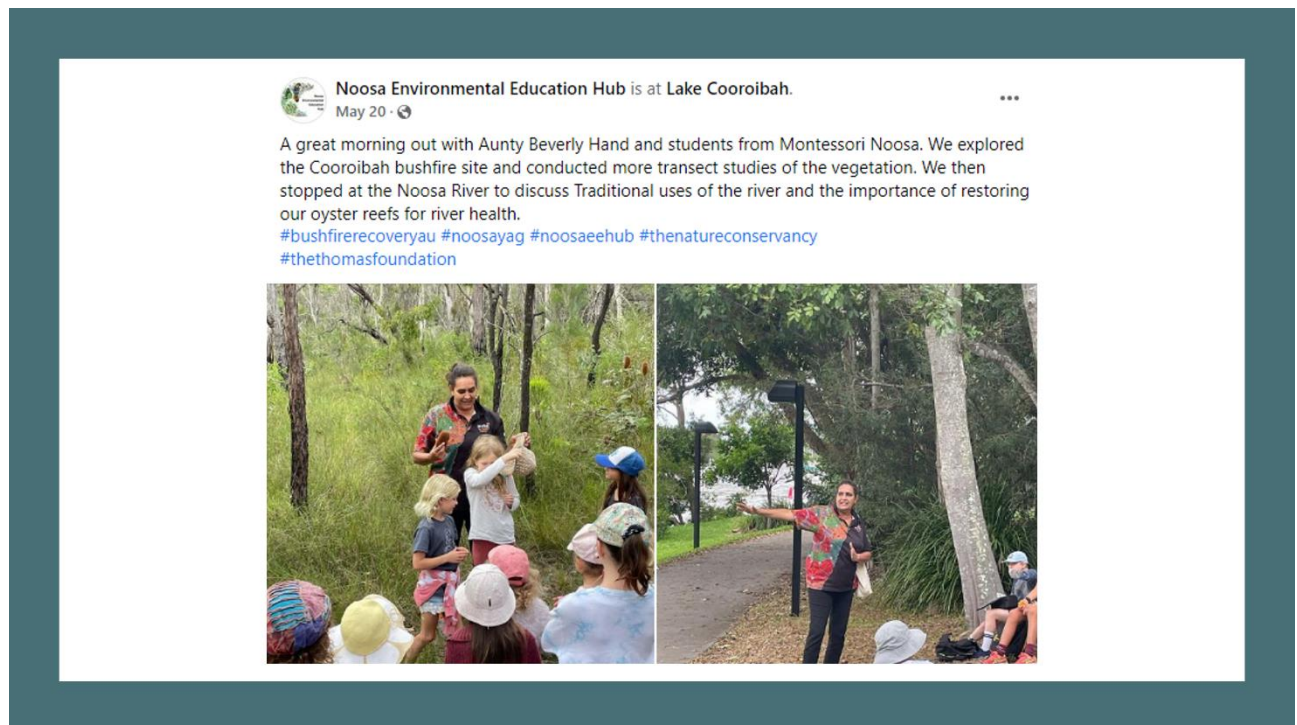
### Community partnership highlights

- Shuck Don't Chuck
- Oyster gardening
- Junior schools' program
- Senior schools' program
- Noosa River Sediment Study





Oyster gardening



Senior schools project





*Junior schools project*

### Noosa Sediment Accumulation Study A Community-Science Collaboration

**Noosa Estuary & Lakes:**  
Our place is unique. The ecological balance is tenuous, and needs our support if we want to continue to access a healthy river system. The NOOSA RIVER is the lifeblood of our community. It's a place to play, eat, work & live... It's ours, it has SUBSTANTIAL VALUE to the local economy and worth investing in, to ensure our unique River and Lakes are resilient and around into the future.

**The Problem...**  
Recent scientific studies have highlighted the problem of EXCESS FINE SEDIMENT in the estuary. Too much fine sediment can smother important estuarine habitats such as seagrass and oyster beds downstream, which are essential places for baby prawns, fish & their food. The breakdown of nutrients bound to the fine sediment and changes in the benthic community can also result in a lack of oxygen at the bottom, creating a dead zone. The figure below shows areas where fine sediments are currently found in the estuary and lakes.

Knowing how much fine sediment is in the system and where it accumulates, helps target restoration campaigns that contribute to protecting or enhancing these unique and valuable estuarine ecosystems.

**What are we doing?**  
We are engaging with our community and working with scientists to find out how big this problem is.  
We are measuring accumulation of sediment by deploying devices into the estuary and lakes. These devices collect sediment and we will be checking them and collecting them every 2-3 months.  
Our science collaborators will use this information and help us calculate and map how much sediment is accumulating throughout the estuary.  
We will use this information to target the most effective management and restoration responses in the areas that matter most to rebuild a resilient riverine ecosystem.

**How can you help?**  
JOIN US ON THE WATER for some science in action. Your work will directly contribute to understanding how our estuary works, the pressures it faces now and inform restoration and protection measures to support a resilient ecosystem into the future.  
If this sounds great, and you would like to be involved, contact: Bryn Welsh at NPA.  
email: [office@noosaparks.org.au](mailto:office@noosaparks.org.au) OR visit us as the Information Centre

Noosa Parks Association Inc.  
Established 1962

**ESP**  
Ecological Service Professionals

## • Sediment Accumulation Study

### Noosa Parks Association and Ecological Service Professionals

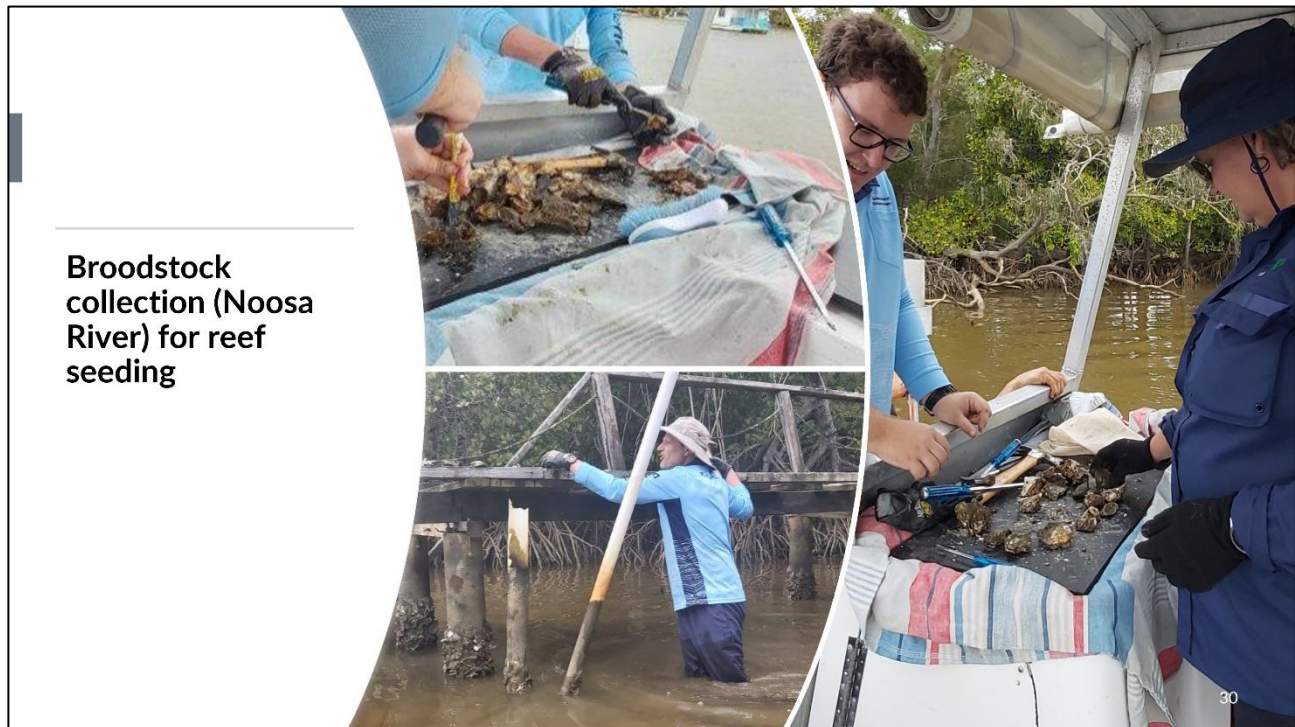






## Reef seeding

Bribie Island Research Centre (BIRC) is working in partnership with TNC to collect oyster brood stock, from the Noosa River to spawn oysters and settle the spat onto the project's desiccated, and cleaned, oyster shell. 2 tonnes of shell will be used to seed reefs in September/October 2022, with a second seeding event planned from Spring 2023.



## Monitoring and evaluation

Baseline and post construction monitoring is undertaken at 4 restoration sites (Tewantin, Goat Island, Noosa Sound East and West sites) plus at related controls and reference sites.

Apply the Before, After, Control, Impact (BACI) methodology to monitoring is used.

Monitor applying the agreed methods and against prescribed ecological indicators outlined in the project Monitoring and Evaluation Plan.

Ecological Service Professionals (ESP) is contracted to TNC to undertake the baseline and post construction monitoring.

Ecological monitoring measures include:

- Shellfish
- Other macro-invertebrates
- Fish assemblages
- Marine plants (visual observations of condition and spatial variations only)

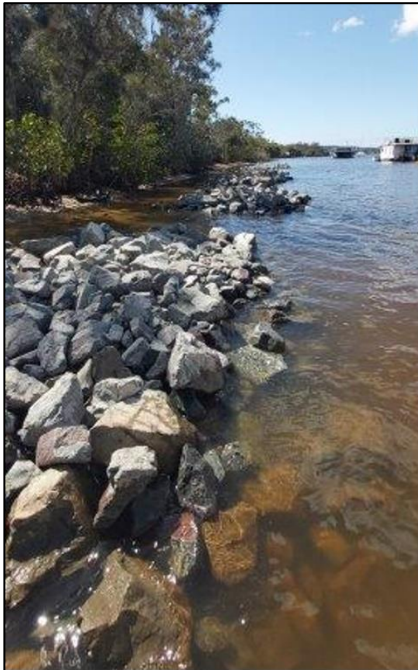
Shoreline erosion detection surveys augment the ecological monitoring and are undertaken by ESP annually adjacent to and 100m upstream and 100m downstream of each restoration site

Baseline monitoring occurred prior to construction

Post construction monitoring will occur in Autumn 2023



Pre-seeding monitoring will occur in Sprint 2023

Annual monitoring will occur again in Autumn 2024



**Baseline monitoring**

- Ecological baselines
- Erosion/accretion baselines

### Next steps.

- Partnership report to Noosa Shire Council
- Construction reporting to agencies (in line with permit requirements)
- Reef seeding in partnership with Bribie Island Research Centre
- Oyster gardening in partnership with Noosa Integrated Catchment Association
- Post-construction ecological and erosion monitoring by ESP
- Continuation of Noosa River Sediment Study by Noosa Parks Association
- Continuation of Shuck don't Chuck with Noosa restaurants and Resource Recovery Australia
- Continuation of community outreach actions – targeted oyster reef products and actions to build local ownership of and stewardship for the reefs
- Periodic reef and signage inspections by TNC
- Periodic reporting against permit conditions to authorities

Meeting ended 2.40pm.