

Artificial Reef Workshop Report



PROJECT: Artificial Reef Site Selection
CLIENT: Westport
DATE: March 2026
VERSION: 1.3p

When will you have your next Aha! moment?

Contents

- 1 INTRODUCTION 3**
 - Project background4
- 2 KEY FINDINGS..... 7**
 - Artificial Reef Type 1: Ecological Outcomes /Fishing.....8
 - Artificial Reef Type 2: Snorkelling/Diving8
 - Artificial Reef Type 3: Recreational Fishing8
 - Artificial Reef Type 4: Coast Protection/ Snorkelling and Diving.....8
- 3 NEXT STEPS 9**
- APPENDIX 1 – WORKSHOP PARTICIPANTS 10**
- APPENDIX 2 – RAW TABLE NOTES..... 11**
 - AR 1: Ecological Outcomes/Fishing..... 11
 - AR 2: Snorkelling and Diving 13
 - AR 3: Recreational Fishing 15
 - AR 4: Coastal Protection / Snorkelling and Diving..... 17

1 Introduction

On 4 March 2026, Westport convened a stakeholder forum to help inform the development of the artificial reef program for Cockburn Sound and Owen Anchorage. The artificial reefs are purpose-built structures placed on the seabed to create, restore, or enhance marine habitat. They are designed to support marine biodiversity by providing shelter, feeding opportunities, and breeding areas for marine species. This program focuses on supporting the marine ecosystem, enhancing habitat and providing for a range of different recreational uses.

The workshop was designed to bring together key user groups with critical on-water experience and local knowledge of the study area. This workshop built on prior consultation with local community members, government agencies, and environmental organisations. This consultation found that artificial reefs have been identified as a promising initiative that may help support the long-term health of Cockburn Sound.

The Westport Artificial Reef community survey (n429) found that:

- 91% of respondents were supportive of new artificial reefs in and around Cockburn Sound
- 83% had visited existing artificial reefs in Cockburn Sound

This workshop purpose was to:

- Build a shared understanding of how artificial reefs fit into the broader Westport program
- Present the constraints mapping and five shortlisted potential sites
- Gather stakeholder insights on preferred locations, reef purpose, and design considerations
- Identify the opportunities, risks, and community priorities to inform the next stage of artificial reef planning

There were 4 types of artificial reef (AR) explored:

1. AR 1 – Ecological Outcomes / Recreational Fishing
2. AR 2 – Snorkelling and Diving
3. AR 3 – Recreational Fishing
4. AR 4 – Coastal Protection/ Snorkelling and Diving

Five potential artificial reef sites in and around Cockburn Sound and Owen Anchorage were presented at the workshop. These locations were shortlisted by Westport prior to the workshop, through a multi-criteria analysis process.

The session was facilitated by Joel Levin from Aha! Consulting and the attendance details are at Appendix 1.

Groups identified the locations they considered most suitable for each AR type and provided their rationale. The workshop also generated several additional potential locations. What follows is the thematic summary of the outputs from the workshop.

Project background

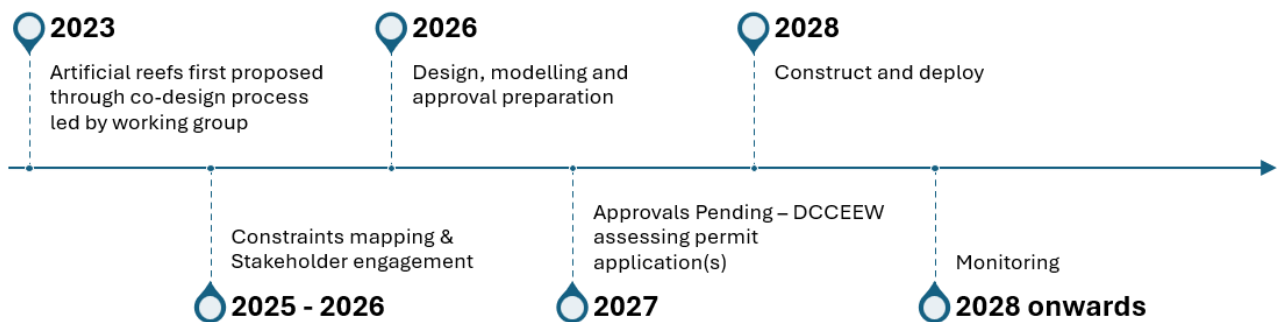
Westport provided an overview of the Artificial Reef project, the site selection process and the four reef types being considered.

The Artificial Reef project is part of a holistic, whole-of-ecosystem approach Westport is developing, that is focused on healthy, resilient habitats that support marine life, recreational access, and community values, contributing to the broader approach of building long-term ecosystem resilience in Cockburn Sound.

This consultation is a key component of the feasibility study, aimed at confirming the intended purpose and location for artificial reefs and gauging community support.

Timelines

With deployment planned for 2028, this workshop was held early in the Artificial Reef project, to inform required modelling and approvals.



Short listing sites

The study area covered Cockburn Sound and Owen Anchorage, and a two stage multi-criteria analysis was undertaken to assess potential sites.

The first step was to map areas that were constrained due to existing or planned future uses. This includes areas such as;

- Existing wrecks
- Marine protected areas
- State agreement areas
- Shipping lanes, anchorages
- Marine disposal sites
- Lead lines
- Existing artificial reefs
- Military exclusion zones
- Aquaculture leases
- Ports
- Contaminated sites
- Breakwaters
- Sensitive benthic habitats
- Mining tenements
- Subsea infrastructure
- Marine & harbours act areas
- Aboriginal cultural heritage

The next step was to identify areas with ecological, social and physical site consideration, identified by broader stakeholder consultation and through the WAMSI Westport Marine Science Program (WWMSP). This includes areas such as;

- AIS vessel movement data
- Seagrass restoration sites
- Recreational fishing sites
- Dolphin foraging/ nursing ground
- Sailing lines
- Key fish species distributions
- Commercial fishing effort
- Fairy Tern activity
- Water depth
- Snapper spring school density
- Water ski areas
- Little Penguin activity/ population

The above two steps delivered a long list of 11 sites, which was then refined to five shortlisted locations, using three main categories:

Ecological value:

- Existing biodiversity
- Habitat connectivity
- Support target species

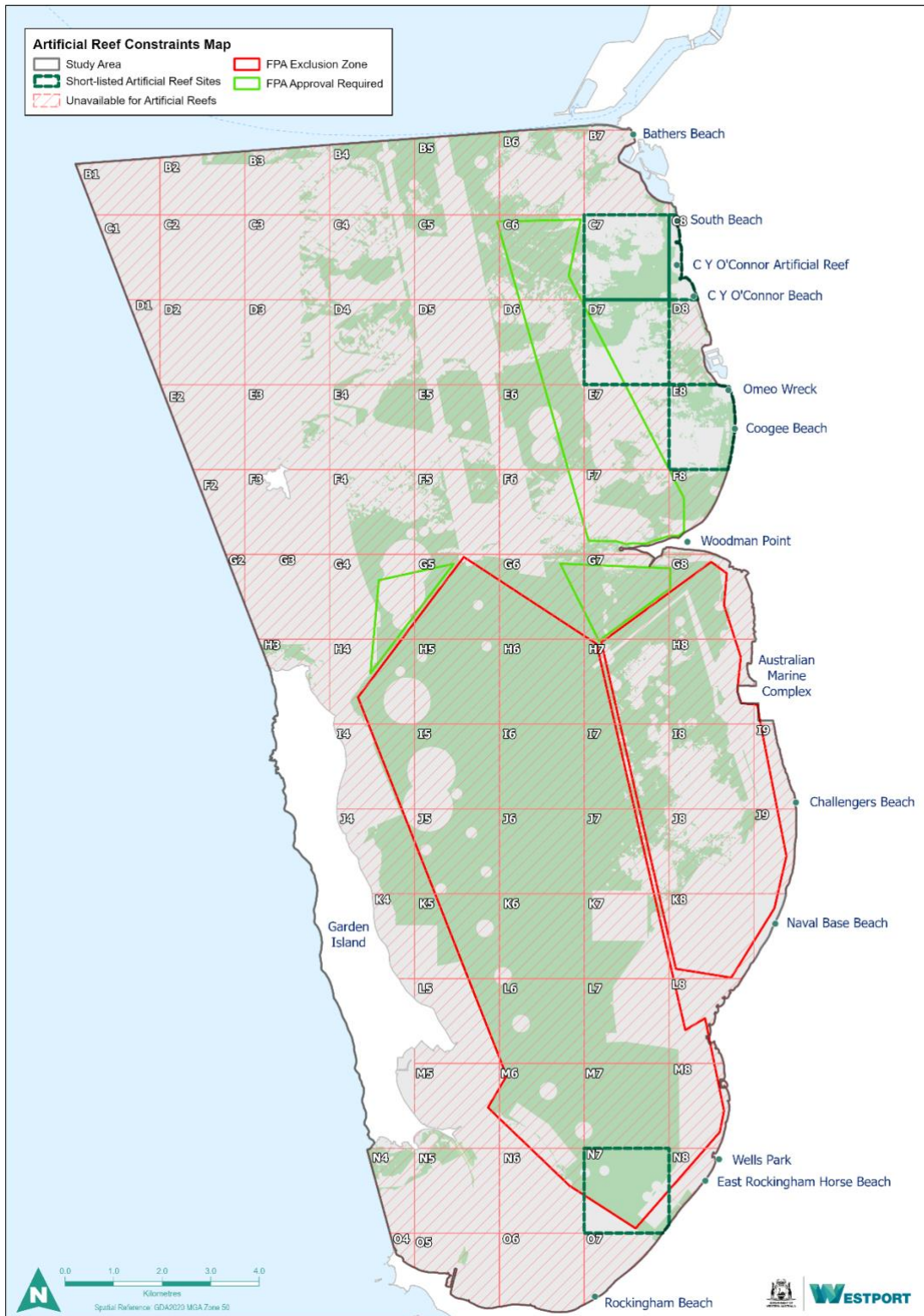
Socio-economic:

- Safety
- Community support
- Conflicting user groups

Physical suitability:

- Depth & slope
- Substrate type

The map below shows the shortlisted sights explored at the workshop;



Note: through the workshop additional locations were identified, these are referenced in the detailed notes in appendix one of this report.

2 Key Findings

During the open forum at the close of the workshop, several themes emerged that were common across discussions of all four artificial reef types.

- **The current shortlist is too limited for the fishing community**
 - For some stakeholders, particularly recreational fishers, the location options were too narrow and had not left enough room for deep-water artificial reef placement.
 - Frustration was expressed that stakeholders could not meaningfully influence site selections that would benefit fishers. The limited number of sites was seen as a hinderance in achieving the full range of outcomes sought in the Sound.
 - Westport was encouraged to consider augmentation of jetties and sites outside of Cockburn Sound.

- **The purpose of the reefs needs to be clearer and more strategic**
 - In terms of strategic goals, some stakeholders asked if the Artificial Reef project was trying to recreate what was previously in Cockburn Sound or if it was responding to what the Sound is likely to become under climate change. There was a call to design reefs based on species that are resilient to warming waters and to be explicit about target species from the outset.
 - There is also a need to build a functioning ecosystem that is resilient to future commercial and industrial changes to the Sound.
 - There were concerns from the fishing community regarding Westport's ability to offset the environmental impacts of port development on the Sound. However, it was noted that Westport's presentation on environmental modelling and working with nature approach helped ease that concern.

- **Timing and sequencing of reef installation needs consideration**
 - Westport should consider installing reefs *before* construction begins, to establish baseline habitat and demonstrate good faith.
 - The impact of dredging on turbidity and artificial reef success was part of this line of enquiry.

- **Specific design considerations emerged that are relevant across all reef types:**
 - Support for adult snapper spawning and juvenile snapper habitat.
 - Large-scale partnership opportunities with Byssal and The Nature Conservancy (TNC).
 - Understanding which benthic structures snapper associate with and replacing those potentially impacted by port infrastructure.
 - Options for reef augmentation at existing jetties and structures both inside and outside Cockburn Sound.
 - Material choice is consequential — if terrestrial limestone is used, it can take up to 100 years to season; conglomerate materials are stronger; material selection should be driven by target species.

The feedback from the workshop participants for each of the four artificial reef types is summarised below.

Artificial Reef Type 1: Ecological Outcomes /Fishing

- There is significant sand and sediment movement across parts of Cockburn Sound; this is the primary physical risk for ecological reef placement.
- The area around the CY O'Connor artificial reef was consistently favoured as a logical starting point, given existing reef infrastructure and opportunity for ecological outcomes.
- Cockburn Cement's current and future operations in E8 need to be confirmed before that cell can be progressed — Westport should check the licence and review Cockburn Cement seagrass restoration reports.
- Material choice and timing of deployment (season) were identified as critical design variables.

Artificial Reef Type 2: Snorkelling/Diving

- N7 was the nominated as a cell for snorkelling and diving, though there were concerns about overall suitability for this reef type given water depth
- It was considered that its proximity to Byssal, the grain jetty, and existing infrastructure makes it worth further investigation.
- Safety was raised as a concern due to multiple near-misses between boats and divers at existing dive reefs. The south of Cockburn Sound — with protection from Garden Island — was identified as safer for diving activity.
- Busselton Jetty was cited as a strong example of artificial habitat supporting biodiversity for snorkelling and diving.

Artificial Reef Type 3: Recreational Fishing

- N7 attracted the most nominations for recreational fishing, however it was also noted that the current options are too limiting and that there are not enough deep-water options.
- The fishing community's primary goal is snapper aggregation. As such, it was critical to look at habitat to shelter for snapper as shipping activity in the Sound increases.
- Safety concerns for divers were reiterated noting that the south of the Sound was protected by Garden Island and offers better diving conditions.
- Augmenting existing jetties (e.g. Ammo Jetty, Palm Beach, Rockingham) was suggested as an alternative or complement to an artificial reef.
- Future breakwaters that will form part of the new Westport container terminal were raised as a related option to explore.

Artificial Reef Type 4: Coast Protection/ Snorkelling and Diving

- The CY O'Connor area (C8) emerged as the strongest short-term candidate for coastal protection, with existing reef data, demonstrated community support, and proximity to shore.
- It was noted that any reef in this area needs a clearly defined principal purpose from the outset — fishing, diving, no-use research, or a combination.
- The E8 area near Coogee could support multiple reef structures along the coast, spreading recreational pressure rather than concentrating it.
- The general sentiment was that finding the '*least worst site*' is often the practical challenge, rather than identifying an ideal one.

3 Next Steps

- The development of this report as a summary of workshop findings for distribution to attendees.
- Westport to review site selection to see if the range of sites can be broadened.
- Progress the associated technical studies.
- Ensure stakeholders are kept up to date.

The following actions were identified or implied from the raw notes:

- Confirm Cockburn Cement licence and operational timeline for E8 before progressing that cell for any reef type.
- Review Cockburn Cement seagrass restoration reports for the C7 area.
- Check whether Cockburn Cement consent is required for reef installation in that area given prior seagrass restoration works.
- Confirm DCCEEW position on reef proximity to natural reef in G4/H4 cells.
- Investigate O5/O6 as a suitable recreational fishing location, including potential to augment Palm Beach Jetty.
- Clarify Wanliss Street Marina development plans to determine reef location feasibility in N7.
- Develop a clear statement of purpose for each proposed reef site to guide design and approval processes.
- Address the modelling gap around dredging turbidity impacts on reef function and longevity.
- Explore the question of reef installation timing relative to construction commencement.
- Arrange a separate briefing for invited stakeholder groups who were unable to attend.
- Convene a workshop with technical experts including WAMSI researchers, seagrass specialists, and reef installation practitioners (noted in pre-workshop planning)

Appendix 1 – Workshop Participants

The following list of organisations attended the workshop:

Organisation
City of Kwinana
Recfishwest
Mangles Bay Fishing Club
City of Cockburn
OzFish
Byssal
Scubanautics
Capricorn Seakayaking
Fremantle Amateur Angling Club
GIFAA
OzFish
DPIRD
The Cruising Yacht Club
Westport

The following organisations were invited but did not attend the workshop:

Organisation
Cockburn Power Boats Club
Aquaculture Council of Western Australia
Perth Wildlife Encounters
Fremantle Sailing Club
Boating WA
Dolphin Scuba
Adreno Perth
Jervoise Bay Sailing Club
City of Cockburn
City of Rockingham
Catalpa Charters

OFFICIAL

– END –

EMAIL: admin@ahaconsulting.net.au
WEBSITE: ahaconsulting.net.au
PHONE: +61 8 9443 9474