

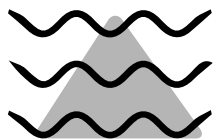


Background

Prior to the extension of the breakwater, the basin at the Coffs Harbour Regional Boat Ramp regularly experienced water level surges, making it difficult - and quite dangerous - for boats coming in to or leaving the ramp. These conditions were further affected whenever north north-easterly swells entered the harbour.

Following consultation with the community, and discussions with the Coffs Harbour Regional Boat Ramp Precinct Enhancement Committee (CHBRPEC) who share a vision to develop the boat ramp precinct, Stage One of the construction work at the Coffs Harbour Regional Boat Ramp started in July 2021. This included waterside work on the actual boat ramp, pontoons, and the extension of the breakwater. This stage is now complete and has delivered an additional two lanes to the boat ramp and two new pontoons.

The extension of the breakwater has been successful in significantly reducing impact of the water surging into the harbour and around the boat ramp, making it safer for boats entering or leaving the ramp.



Dredging 2022

Dredging will continue as required



38,000t

Approximate amount of sand dredged in '22

Sand accretion (build up) in any coastal waterway is not uncommon and movement caused by swells, tides, and breaking waves pushes sand to accumulate near the shore. Many factors such as extraordinary weather events, changes in wave movements and breakwater structures affect sand movement.

Macauleys Headland

Beach recession at 0.5m/year (approx. 3,000 m³/year)

Park Beach

Cross Shore Transport (actual rates not quantified, Typical during severe storms 70,000 and up to 300,000)

Beach recession at up to 2m/year (approx. 8,000-15,000 m³/year)

Little Muttonbird Island

South Park Beach

Cross Shore Transport (actual rates not quantified, Typical during severe storms 20,000 and up to 90,000)

Muttonbird Island

Accretion south of bedrock reef of 5,000-10,000 m³/year

South Coffs Island

Beach Accreting at 1.5m/year (2,000 m³/year)

Nearshore accretion 3,000-4,000 m³/year

Accretion in outer harbour up to 20,000 m³/year

70% estimated to enter the harbour 20,000 - 25,000

4000-4500

Boambee Beach

Beach Accreting at 2-3m/year (20,000 m³/year)

Offshore accretion of 30,000 m³/year

Korffs Islet

Rates of Infilling
1991-1999: 27,000 m³/year
2000: 48,000 m³/year
2008: 18,000 m³/year
Typical Rate = 20,000-25,000 m³/year

Transported from beach to reef

What is Transport for NSW doing to improve access to waterways across NSW?

What happened during construction at the Coffs Harbour Boat Ramp?

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Figure 2: Sand flows prior to breakwater extension

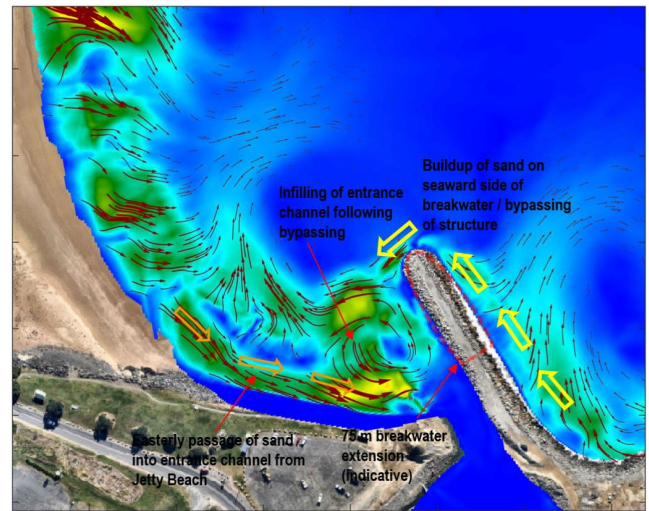


Figure 3: Sand flows after breakwater extension

These investigations found that a combination of the breakwater extension, recent extraordinary weather events, natural coastal processes, including patterns of sand movement from Jetty Beach, changed the dynamic and intensified the sand build up, particularly around the channel entrance.

Transport for NSW addressed the situation with a combination of continuous land-based excavation and three rounds of cutter suction dredging (which removes a greater quantity of sand more quickly than the excavator).

During this time, we also asked Royal Haskoning DHV to come up with both plans for ongoing management of the sand issue at the Coffs Harbour Boat Ramp.

Keeping the boat ramp open

Our priority is to keep the boat ramp open and maintain a safe, navigable entrance to Coffs Harbour. Transport for NSW intends to continue with land-based excavation supplemented by a floating cutter suction dredge as required to clear bulk amounts in shorter time.

A separate Addendum Review of Environmental Factors is currently in development and focuses on trucking the extracted sand to Park Beach. Transport for NSW has consulted extensively with key stakeholder groups about the option of beach nourishment in some designated areas at Park Beach.

Currently, the extracted sand is being transported by truck to a quarry at the southern end of the breakwater. This quarry can hold up to around 18,000m³ and estimated to reach capacity by April 2023.

Initially, we explored the option of trucking sand to Boambee Beach. However, this option will not be progressed after feedback from both the community and the Coffs Harbour City Council.

Trial of a sand-pumping system

We are developing a plan to trial a sand-pumping system. The trial is targeting an installation and commissioning date for all specialist equipment as early as February-March 2023.

The trial sand-pumping system will be powered by diesel equipment and will pump 150 metres to a holding area located in close proximity to the boat ramp.

The purpose of the trial is to assess the effectiveness of trapping sand that accumulates and transferring it to the holding area. The shore-based pumping equipment can be installed and removed at significantly less cost.

The trial sand-pumping system offers the following benefits:

- It is the fastest option for getting equipment to site and becoming operational
- It can be used as a semi-mobile system to clear sand

Lessons learned during the trial will be used to refine the permanent system design.

Other sand management options

Transport for NSW commissioned a study by Royal Haskoning DHV, to look at other options for sand management that could deliver a permanent solution to the build-up of sand in the vicinity of the boat ramp. The Haskoning report is currently in a peer-review process before the final version becomes available later this year or early next year.

These options need to be fully explored and costed before a decision is reached to implement any of them.

Summary and timelines of upcoming work

We are carrying out several activities regarding the sand issue. Here is summary:

- Investigations and approvals for a trial sand-pumping system are happening now
- Land-based dredging (supplemented as required by bursts of cutter suction dredging) are under way and will continue for the time being
- The trial sand-pumping system will be evaluated over 12 to 18 months
- We will make a decision, on whether to convert the trial sand-pumping system to a permanent fixture, by the end of 2023.

Progress with the trial sand-pumping system



Some terminology explained

Transport for NSW follows the general NSW Government project methodology to arrive at solutions that work and that give the taxpayer well-built, well-conceived infrastructure that makes NSW waterways great places to live, work and play. Below details some of the project activities that are required for NSW Maritime projects.

Geotechnical Investigations

Geotechnical investigations for NSW Maritime projects examine the seabed and beyond to ensure the intended build or structure has a firm base and that whatever we build on it is both environmentally and structurally sound for many decades to come. This type of work can include hydrographic surveys, core drilling and divers in the water, culminating in a report that informs our engineers on the next steps of the project or the best way to build something in that environment.

Procurement

Contractors that work for NSW Maritime must comply with the highest ethical, technical, and professional standards possible. These standards are set out in the Transport for NSW Procurement Policy (a subset of the broader NSW Government Procurement Policy).

To meet these exacting requirements, there is quite a process which can take some time. A contractor must submit management plans for environment, traffic, and a host of other processes before lifting a shovel.

The machinery used in projects (such as the jet pumps and pipelines used in the sand-pumping system) also must meet very high standards of manufacture and efficacy.

So, the government procurement process can take some time, as all tenders must go through the NSW Government tender process to even select a contractor. By reason of its thoroughness, all of this is a process that cannot be rushed.

Since the pumps, pipeline, and the contractor to operate them are all subject to this important process, we estimate that, subject to their availability, the equipment for the pumping system may arrive around February 2023.

Community Information

Transport for NSW is committed to exploring all possible solutions to improve sand build up at the Coffs Harbour Boat Ramp.

We are planning to conduct community information day over the coming months. The purpose of this day is to give members of the community an opportunity to speak directly with the project team and ask any questions about ongoing dredging, sand management options, construction etc.

Once we confirm a date we will update our project website, which you can access with the details below. If you do wish to join a newly established email mailing list to be notified of upcoming developments about the Coffs Harbour Boat Ramp, please email us at coffsboatramp@transport.nsw.gov.au.

Transport will continue to provide updates as more information becomes available.

Contact us

For up-to-date information, please visit the project website (scan the QR code) and you can call (1300 778 928) or email us at (coffsboatramp@transport.nsw.gov.au) with any specific questions you may have for the project team.

