TWEED SAND BYPASSING

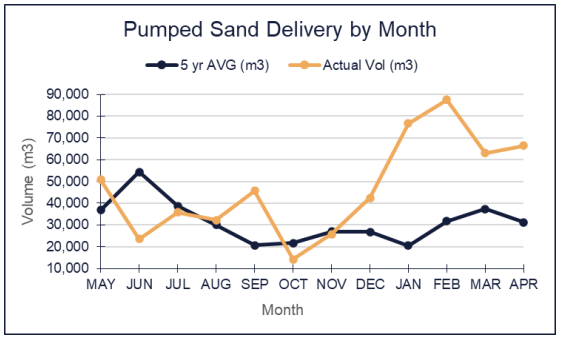
ADVISORY COMMITTEE MEETING

18 May 2022

PROJECT MONITORING AND OPERATIONAL OVERVIEW

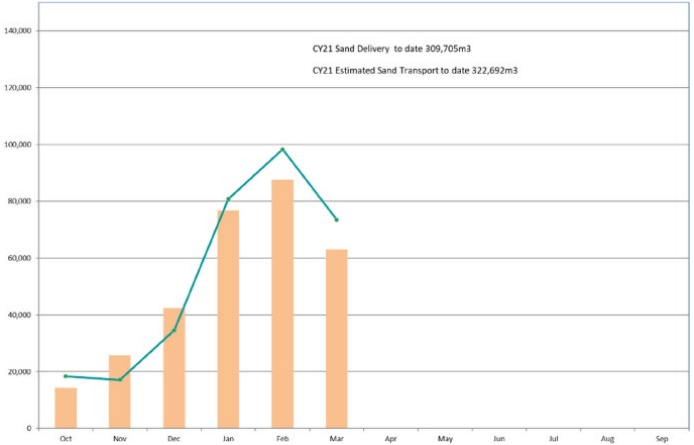
- Pumping operations 2021 and 2022
- Environmental Monitoring / beach observations
- Entrance conditions, usage and survey
- TSB projects and enhancements
- Communications

PUMPING OPERATIONS 2022



5 yr Avg Vol - May to Apr = 376,499m3
Act Vol – May '21 to Apr '22 = 563,899m3

PUMPING BY JETTY MOUNTED SYSTEM 2022				
MONTH	Vol SRE (m3)	Vol D'Bah (m3)	Total Vol (m3)	AVG (2017-2021) (m3)
JAN	76,670	0	76,670	20,473
FEB	56,018	31,502	87,520	31,642
MAR	63,092	0	63,092	37,290
APR	66,392	0	66,392	31,266
MAY			0	42,847
JUN			0	48,578
JUL			0	39,333
AUG			0	28,636
SEP			0	26,424
OCT			0	21,637
NOV			0	26,921
DEC			0	26,864
TOTAL	262,172	31,502	293,674	381,910



Modelled vs actual

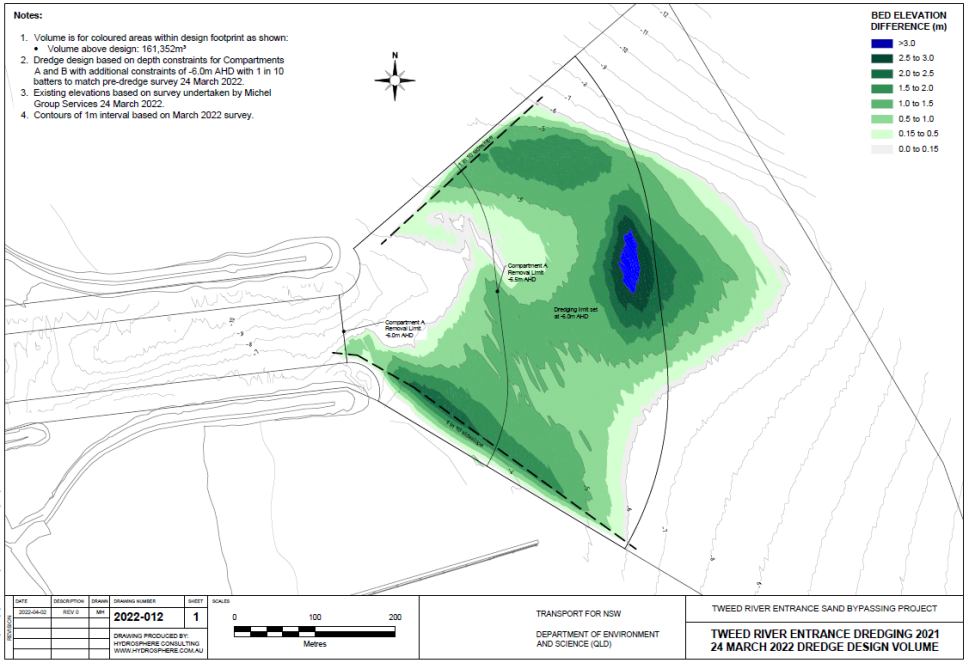
POST-DURANBAH NOURISHMENT

11th Feb post-nourishment

8th Mar post- swell and flood

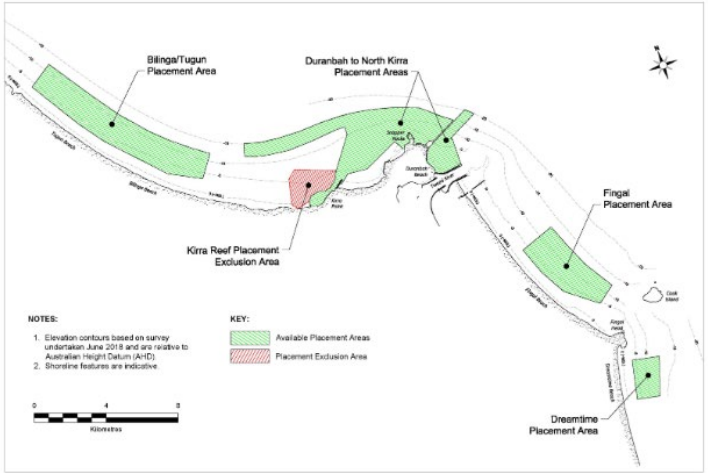
9th May following persistent swell

2022 DREDGE PLANNING AND ANALYSIS



Volume above design surface

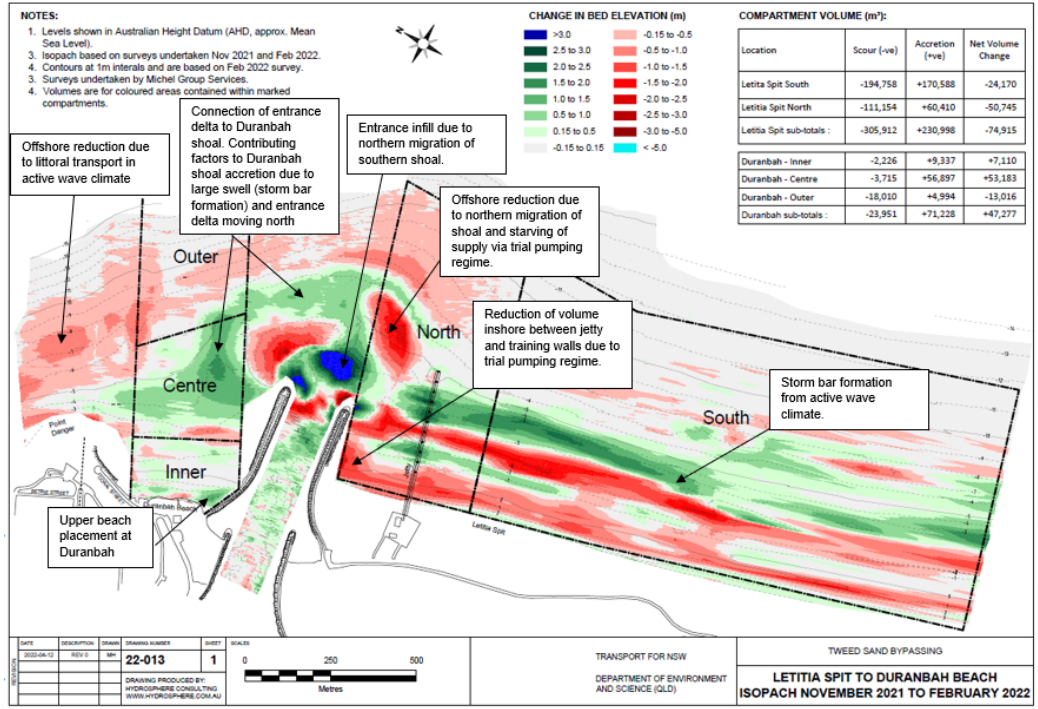
- Dredging of Tweed River Entrance planned to commence August 2022.
- Hydrographic survey will inform dredge volumes and placement designs



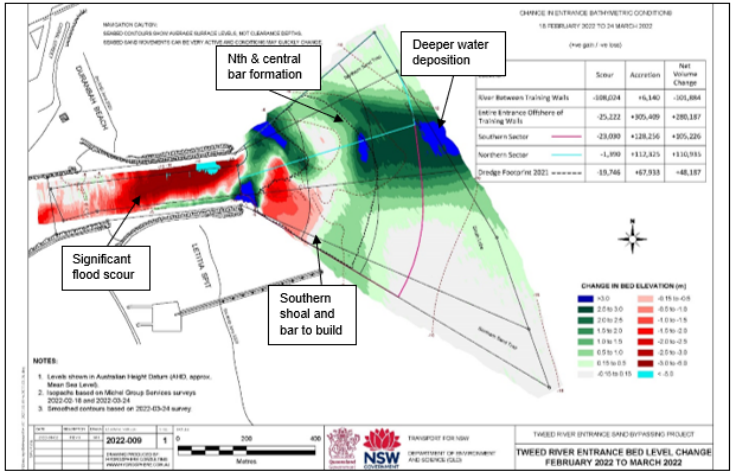
Available placement areas

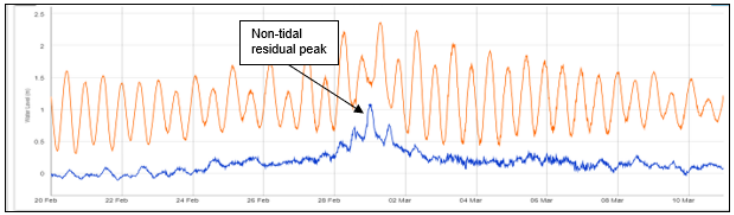
2022 DREDGE PLANNING AND ANALYSIS

Survey Date	Volume above -6m design surface	Comment	Pic
7/10/2021	71,132	Post-dredge	
9/11/2021	65,408		
8/12/2021	57,472		
18/02/2022	80,892		
24/03/2022	161,352		



2022 DREDGE PLANNING AND ANALYSIS





Major flooding in the Tweed River occurred in March 2022. Water levels measured at the water intake jetty (figure bottom left) show a non-tidal residual of over 1m at the peak of the flood.

Significant scour of the riverbed between the training walls occurred with volume analysis indicating a loss of over 100,000m^3.

Scour of the ebb tide delta had a significant impact on the entrance shoals and bar.

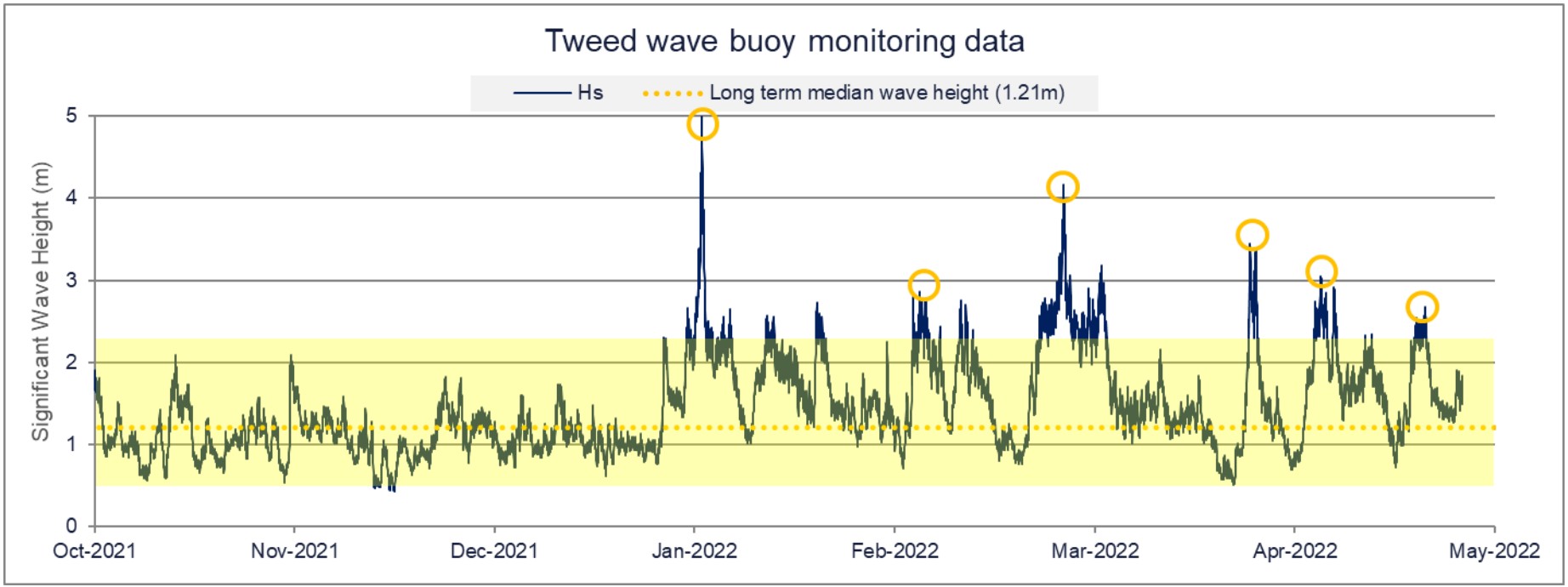
Complex entrance morphology is evident in the March hydrographic survey data and subsequent satellite imagery observations.

The bar is very shallow from the central through to northern compartments of the entrance. The southern shoal between the southern training wall and the jetty was dispersed somewhat by March wave/flood conditions.

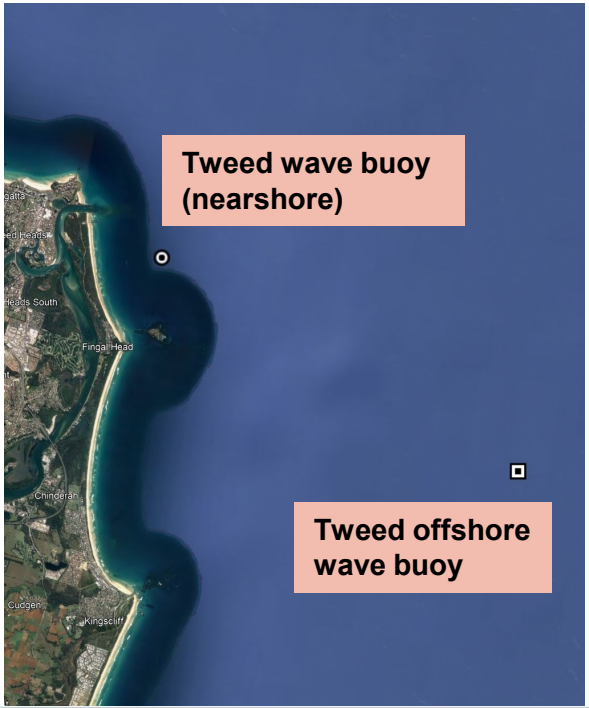
Bypassing sediments will gradually infill scoured areas of the entrance (incl. between the training walls), however if wave energy remains high then development of the bar will also continue and may present a risk to entrance navigability.

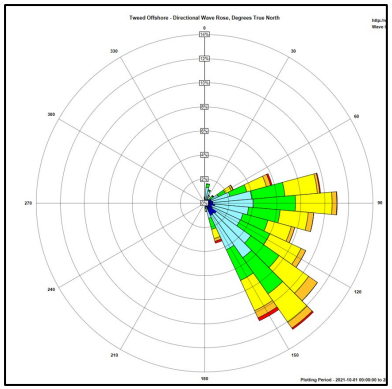
Sediment that was deposited during the flood onto the outer ebb tide delta in deeper water should not impact navigability of the entrance.

ENVIRONMENTAL MONITORING / BEACH OBSERVATIONS

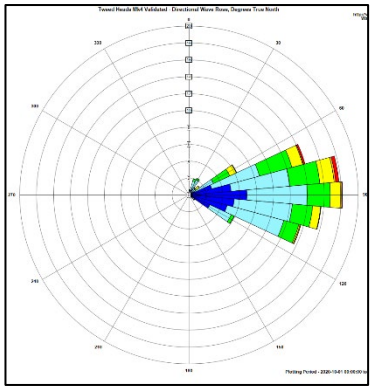


ENVIRONMENTAL MONITORING / BEACH OBSERVATIONS

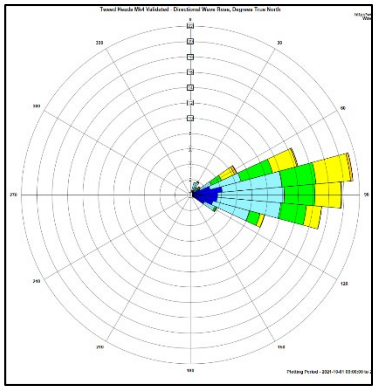




2021 Oct – 2022 Apr
Offshore



2020 Oct – 2021 Apr



2021 Oct – 2022 Apr

FINGAL

20 April 2021

27 October 2021

1 February 2022

19 April 2022

27 October 2021

1 February 2022

19 April 2022

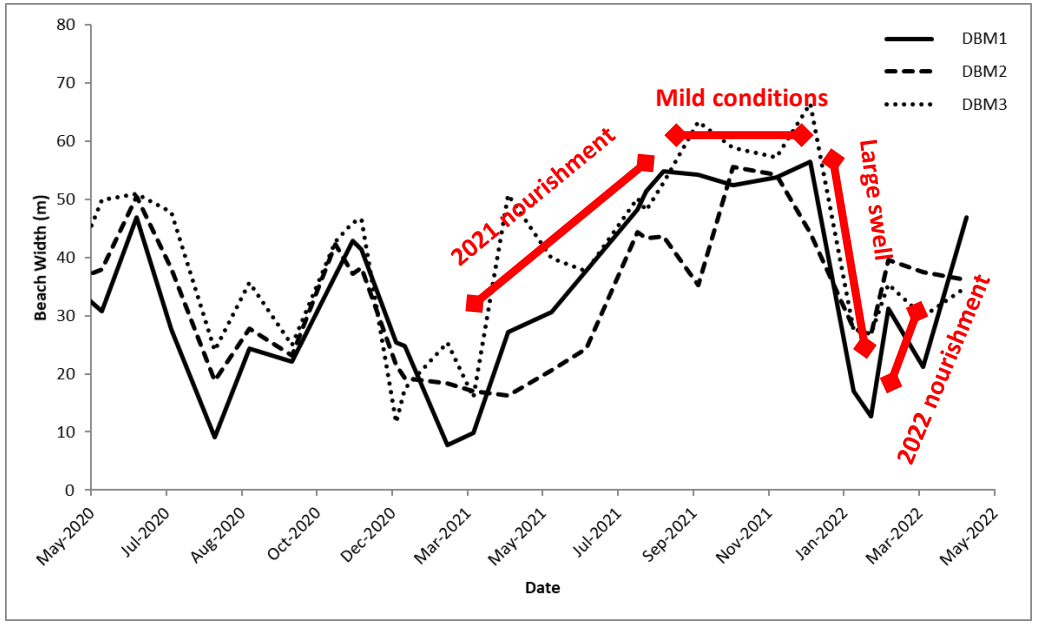
LETITIA

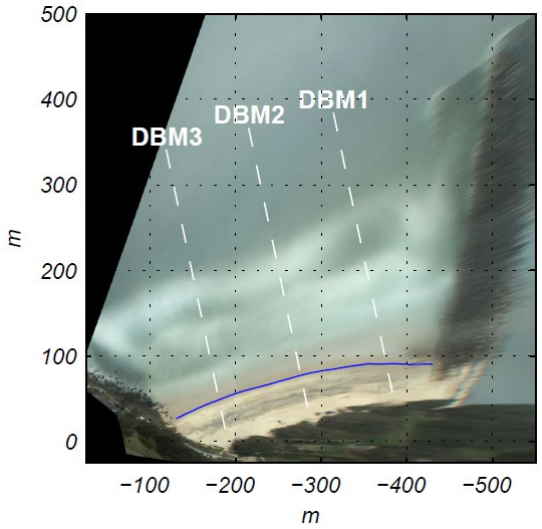
27 October 2021

1 February 2022

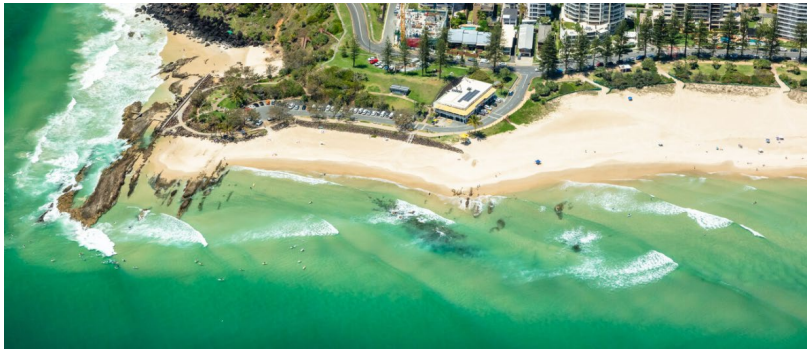
19 April 2022

DURANBAH BEACH





DURANBAH - BEACH WIDTH DATA

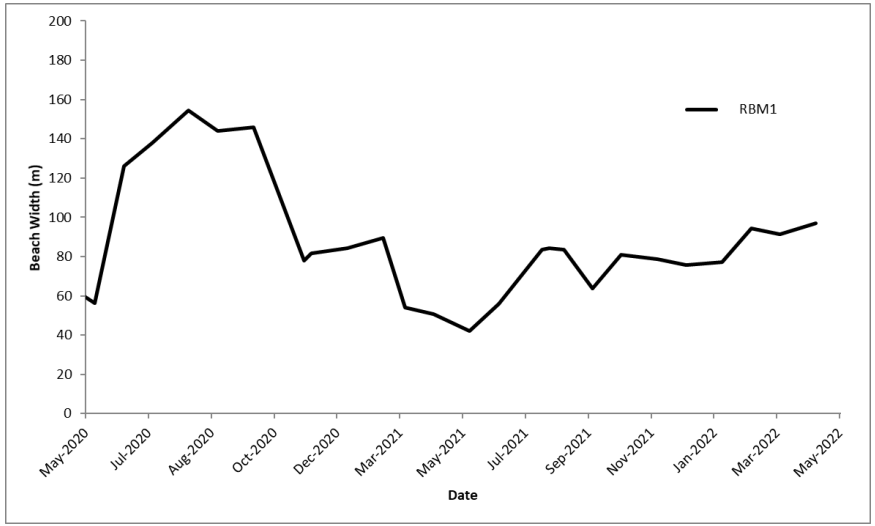


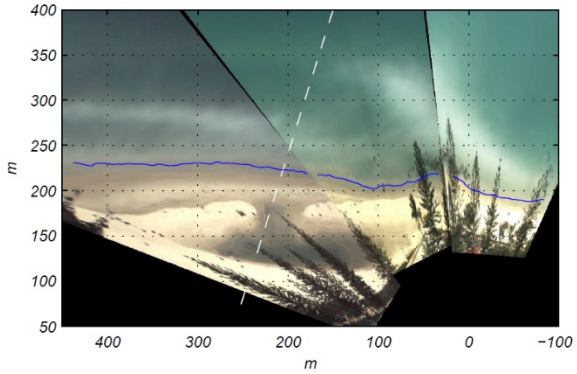
27 October 2021

SNAPPER ROCKS
RAINBOW BAY

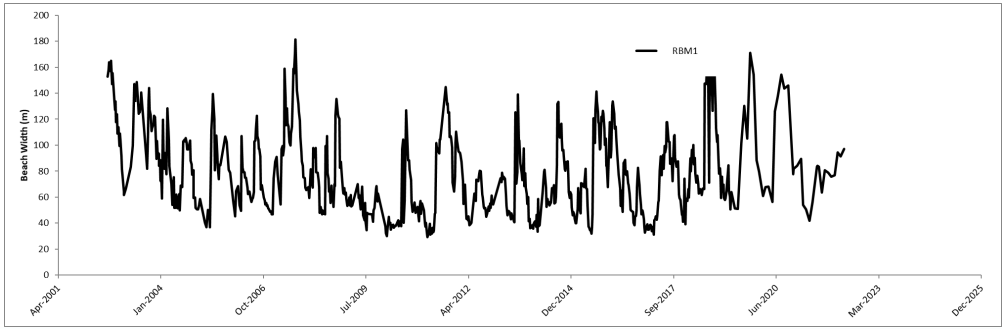
1 February 2022

19 April 2022





RAINBOW BAY - BEACH WIDTH DATA

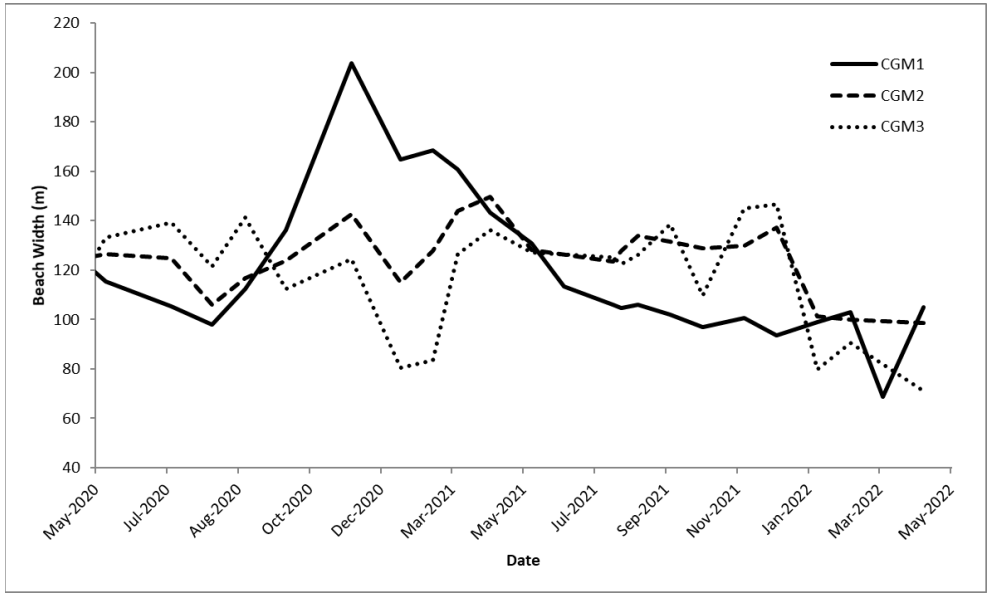


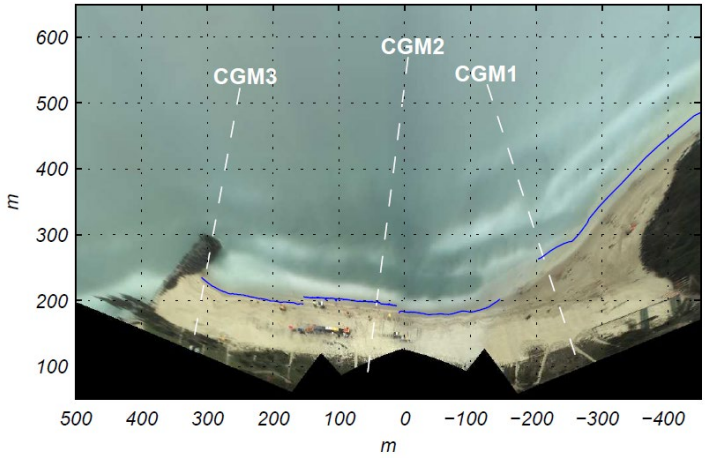
COOLANGATTA

27 October 2021

1 February 2022

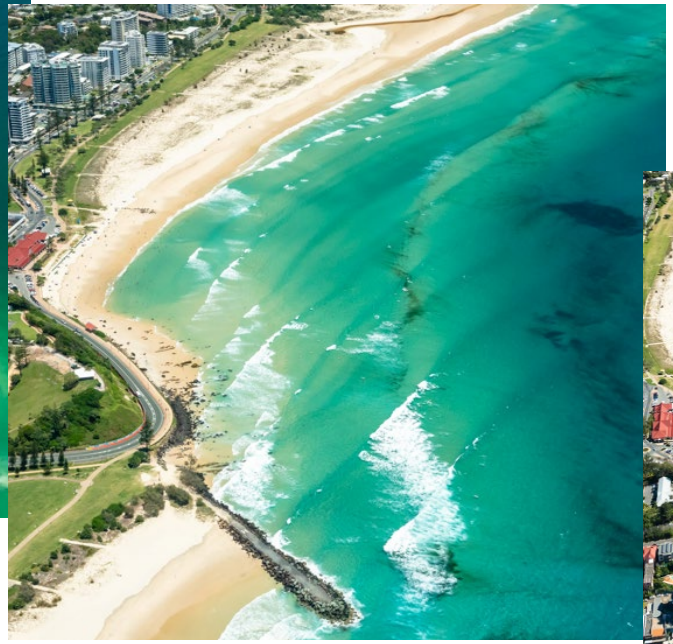
19 April 2022





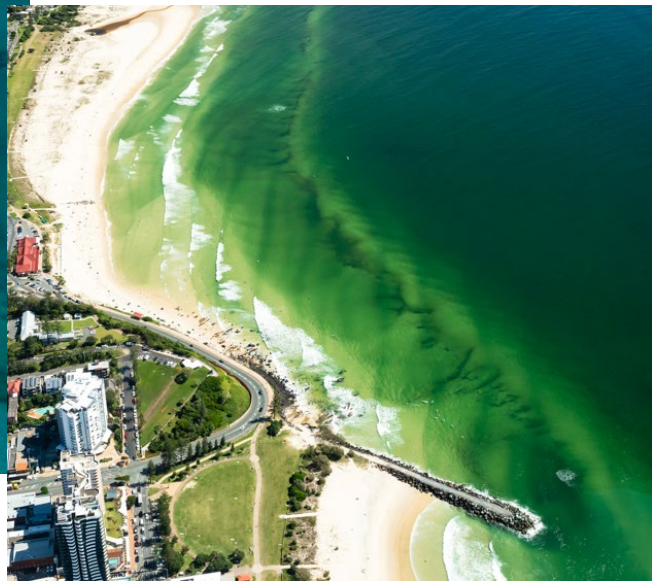
COOLANGATTA- BEACH WIDTH DATA

27 October 2021

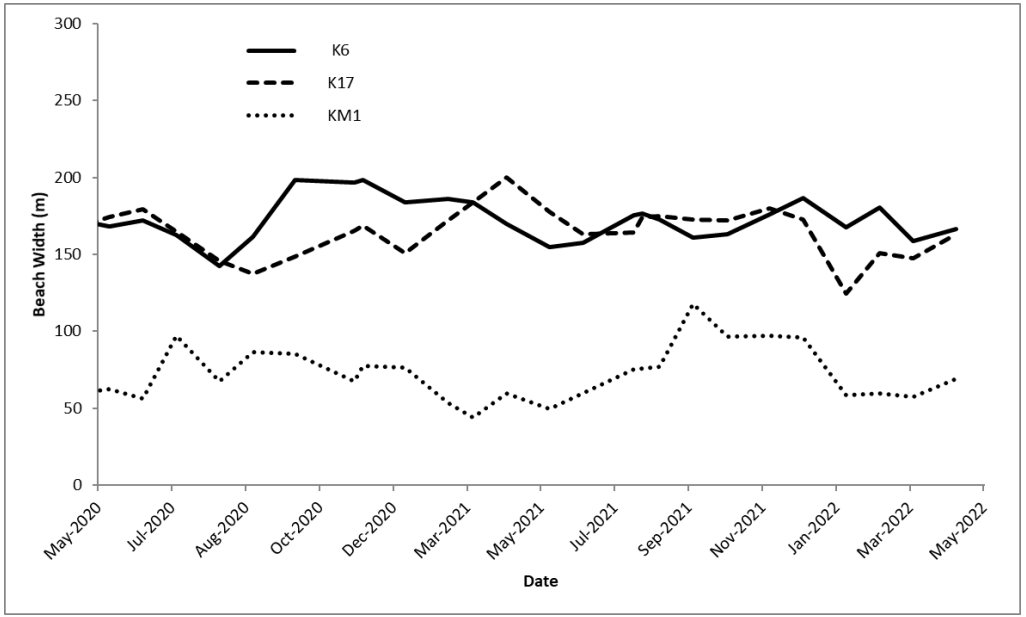


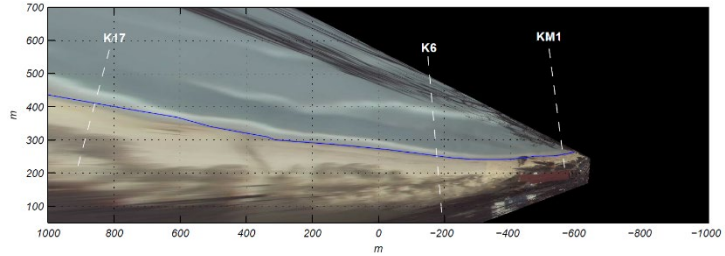
1 February 2022

19 April 2022



KIRRA





KIRRA- BEACH WIDTH DATA

27 October 2021

1 February 2022

19 April 2022

BILINGA

19 April 2022

SURF CONDITIONS

SNAPPER ROCKS TO KIRRA

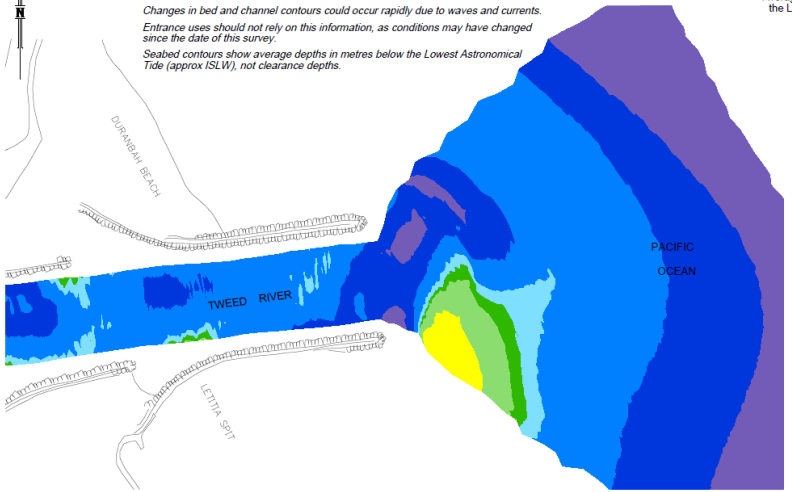

SWELL STORIES BREAKING
The Best Afternoon Of The Year
This swell was always going to have a peak moment. That moment arrived yesterday arvo.
Halfway down to Greenmount, May 3, 2022. Photo: Swilly

3 May 2022

ENTRANCE CONDITIONS, USAGE AND SURVEY

TWEED RIVER ENTRANCE AS AT 18th FEBRUARY 2022

WARNINGS: *Extreme caution should be used when navigating this entrance.*
Changes in bed and channel contours could occur rapidly due to waves and currents.
Entrance uses should not rely on this information, as conditions may have changed since the date of this survey.
Seabed contours show average depths in metres below the Lowest Astronomical Tide (approx ISLW), not clearance depths.



LEGEND
Average Depths in meters below the Lowest Astronomical Tide
- Less Than 1.0m
- 1.0 to 2.0m
- 2.0 to 3.0m
- 3.0 to 3.5m
- 3.5 to 4.0m
- 4.0 to 6.0m
- 6.0 to 8.0m
- More than 8.0m

NOTES:
1. Survey information collected by Michel Group Services on 18th FEBRUARY 2022.
2. This plan prepared by Michel Group Services on 24th FEBRUARY 2022.
3. Surveys are undertaken for Tweed Sand Bypassing every three months to monitor entrance seabed levels.

NSW GOVERNMENT | Transport for NSW

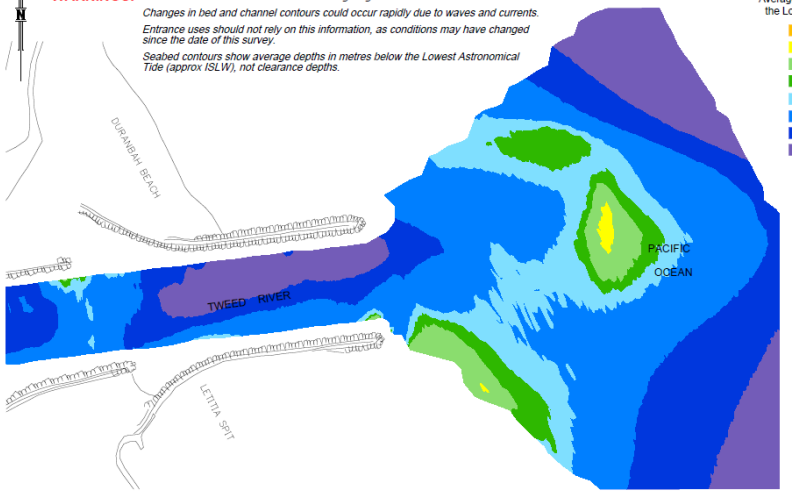
TWEED SAND BYPASSING
Tweed Sand bypassing is a joint project of the New South Wales and Queensland Governments, with the support of the Gold Coast City Council, and in conjunction with Tweed Shire Council.

Meters 0 50 100 150 200

Queensland Government

TWEED RIVER ENTRANCE AS AT 24th MARCH 2022

WARNINGS: *Extreme caution should be used when navigating this entrance.*
Changes in bed and channel contours could occur rapidly due to waves and currents.
Entrance uses should not rely on this information, as conditions may have changed since the date of this survey.
Seabed contours show average depths in metres below the Lowest Astronomical Tide (approx ISLW), not clearance depths.



LEGEND
Average Depths in meters below the Lowest Astronomical Tide
- Less Than 1.0m
- 1.0 to 2.0m
- 2.0 to 3.0m
- 3.0 to 3.5m
- 3.5 to 4.0m
- 4.0 to 6.0m
- 6.0 to 8.0m
- More than 8.0m

NOTES:
1. Survey information collected by Michel Group Services on 23rd & 24th MARCH 2022.
2. This plan prepared by Michel Group Services on 29th MARCH 2022.
3. Surveys are undertaken for Tweed Sand Bypassing every three months to monitor entrance seabed levels.

NSW GOVERNMENT | Transport for NSW

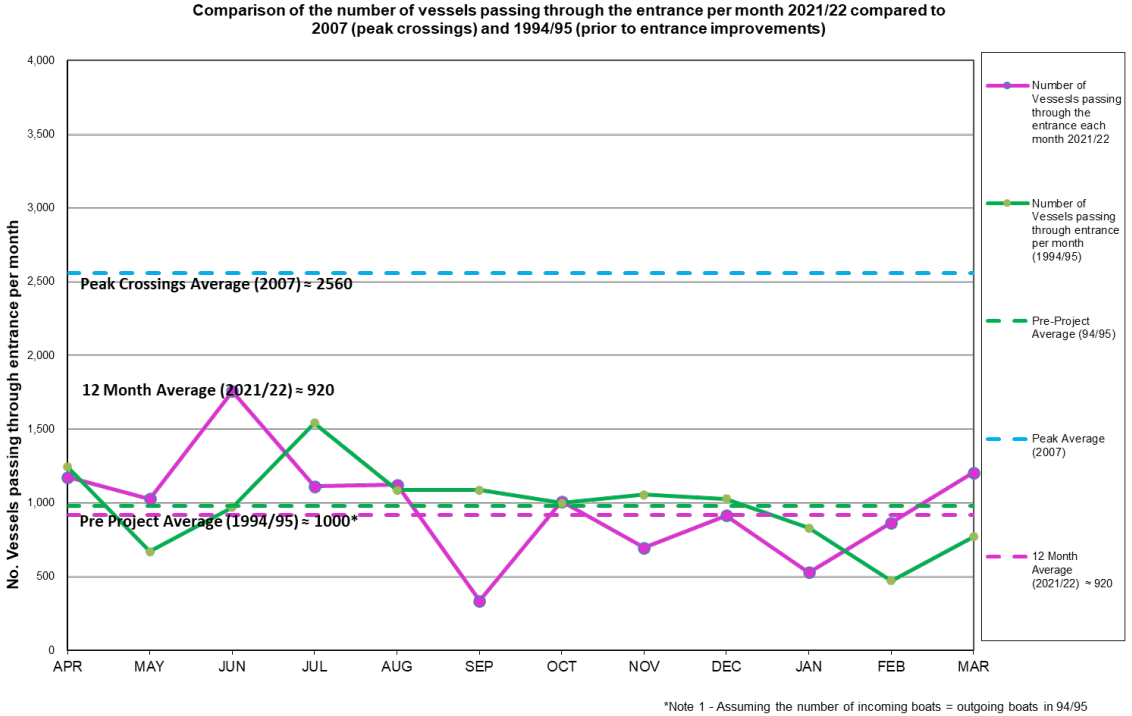
TWEED SAND BYPASSING
Tweed Sand bypassing is a joint project of the New South Wales and Queensland Governments, with the support of the Gold Coast City Council, and in conjunction with Tweed Shire Council.

Meters 0 50 100 150 200

Queensland Government

ENTRANCE USAGE

- Generally vessel passing numbers have been variable and highly dependant on conditions.
- On average over the past 12 months numbers have been approximately equal to the pre-project average.



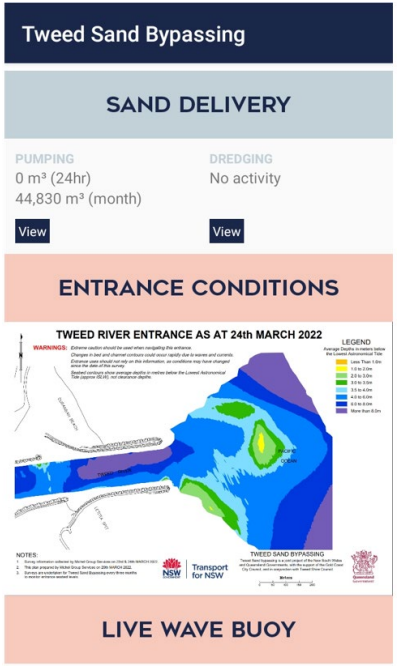
*Note 1 - Assuming the number of incoming boats = outgoing boats in 94/95

PROJECTS AND ENHANCEMENTS

• TSB Transition →	Creation of Strategies, Plans and Procedures. Information sharing and handover.
• Letitia Coastal Processes Study →	Report received. Letitia is showing trends of equilibrium.
• Kirra pipeline detailed design →	Detailed design and cost estimate received. Reviewing design with City of Gold Coast.
• Valve Pit 2 safety upgrade →	Works have commenced on installation of GRP floor to improve safety when working in pit (Duranbah park).
• Asset condition assessment →	Comprehensive condition assessment underway.
• Climate change study →	Will inform future strategy and ensure preparedness for impacts associated with climate change. Project has commenced.
• Identification of Legal tasks for Transition →	Review of legal instruments to determine necessary actions prior to end of Concession Agreement.

COMMUNICATIONS AND ENGAGEMENT

- New AC members representing the local NSW community:
  - Mr. John Ede
  - Mr. Gary Fisher
- TSB Instagram to be used for upcoming dredging.
- TSB app continues to be updated with sand delivery volumes and entrance survey maps.
- TSB Project video has been updated. Available for viewing on TSB website.
- Activation space at Snapper Rocks Challenger Series event in May 2022. Short clip of TSB video played by WSL throughout event.
- Filming at Jetty to appear in Surfing Australia TV series "Rivals"
- Work underway on presentation to focus groups within community.



TWEED SAND BYPASSING

THANK YOU

- TSB is a joint coastal management initiative of the New South Wales and Queensland State Governments
- Please provide any feedback to the TSB Project Office email tresbp.projectoffice.group@transport.nsw.gov.au