

# TWEED SAND BYPASSING

## ENVIRONMENTAL MONITORING SUMMARY – May 2025

### 1. SAND PUMPING & DREDGING

- 58,604 m<sup>3</sup> was pumped to Snapper Rocks East.
- 0 m<sup>3</sup> of sand was dredged.

#### Sand Delivery May 2025

Pumped:	58,604 m <sup>3</sup>
Dredged:	0 m <sup>3</sup>
Total:	58,604 m <sup>3</sup>

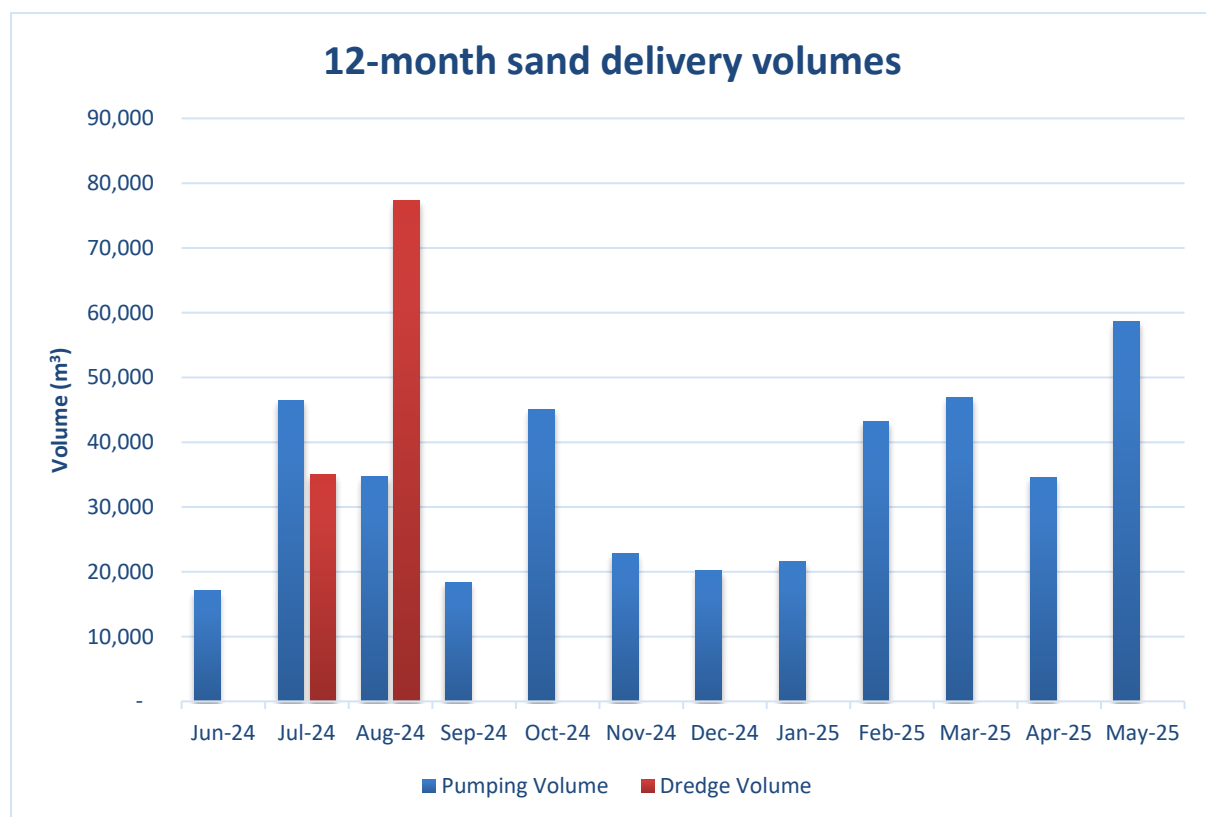
The number of days sand was pumped this month = 25

The number of days sand was dredged this month = 0

#### Sand Delivery May 2000 to May 2025

Pumped:	12,188,167 m <sup>3</sup>
Dredged*:	3,159,617 m <sup>3</sup>
Total*:	15,347,784 m <sup>3</sup>

\* This Includes 22,870 m<sup>3</sup> of sand delivered by dredge to Palm Beach between July 2005 and September 2005



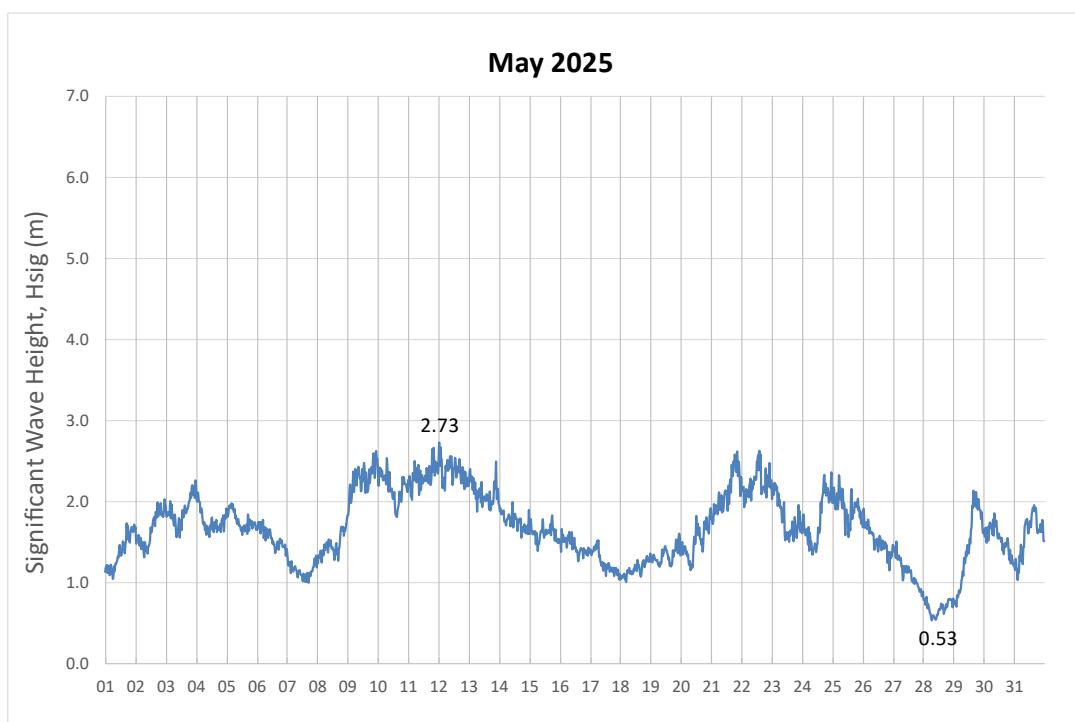
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## 2. WAVE CONDITIONS

Wave conditions were relatively consistent and energetic throughout the month of May, with only 4 days where a minimum  $H_{sig} < 1\text{m}$  was observed. Consistent directional conditions throughout the month were trending in an E direction. A maximum  $H_{sig}$  was observed on the 12th at 2.73 m.

- Minimum  $H_{sig}$ : 0.53 m on 28 May 2025
- Maximum  $H_{sig}$ : 2.73 m on 12 May 2025
- Number of days where  $H_{sig} < 1\text{ m}$  at some point: 4
- Number of days where  $H_{sig} > 2\text{ m}$  at some point: 14

**Note:**  $H_{sig}$  is defined as the average of the highest  $\frac{1}{3}$  of waves recorded over a period of approximately 30 minutes



(Source: Tweed Heads Waverider buoy; Queensland Government)

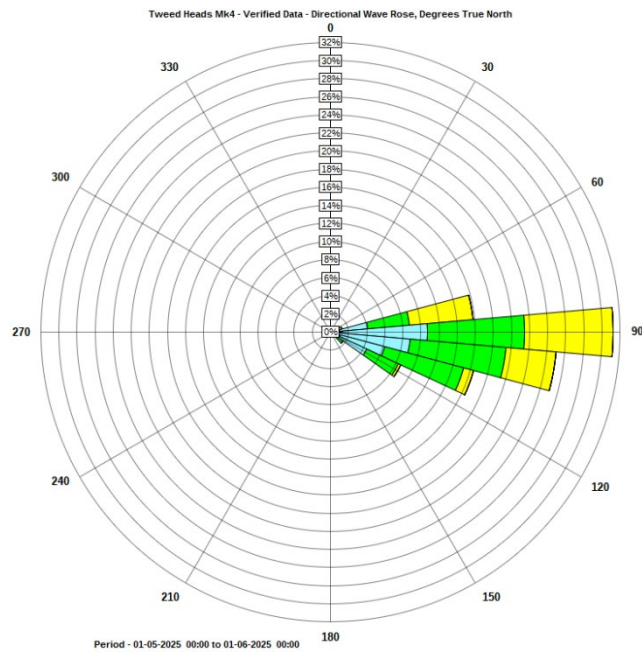
A link to data recorded by the Tweed Heads and Tweed Offshore Waverider buoys is available at:  
<http://www.qld.gov.au/waves>

<https://www.qld.gov.au/environment/coasts-waterways/beach/monitoring/waves-sites/tweed-offshore>

<https://www.qld.gov.au/environment/coasts-waterways/beach/monitoring/waves-sites/tweed-heads>

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## NEARSHORE WAVE DIRECTION

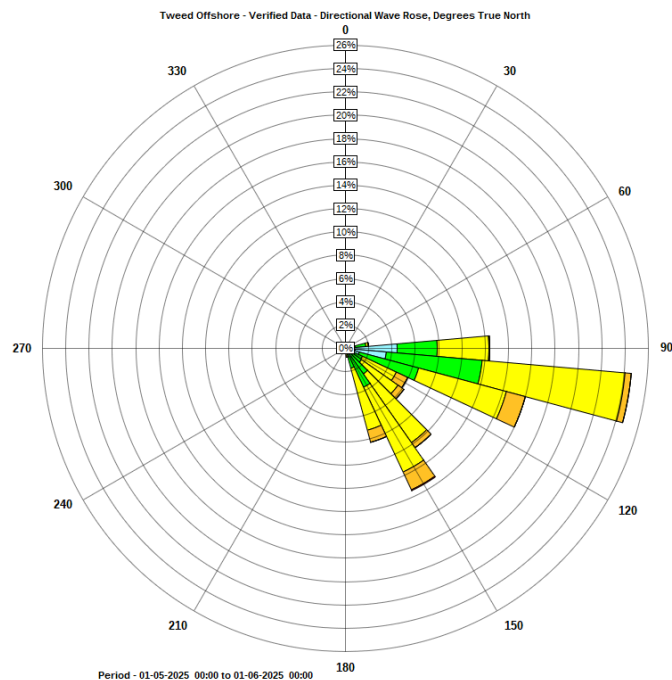


<http://www.qld.gov.au/waves>

### Wave Climate for Hsig

- less than 0.5m
- 0.5 - 1.0m
- 1.0 - 1.5m
- 1.5 - 2.0m
- 2.0 - 3.0m
- 3.0 - 4.0m
- > 4.0m

## OFFSHORE WAVE DIRECTION



OFFICIAL

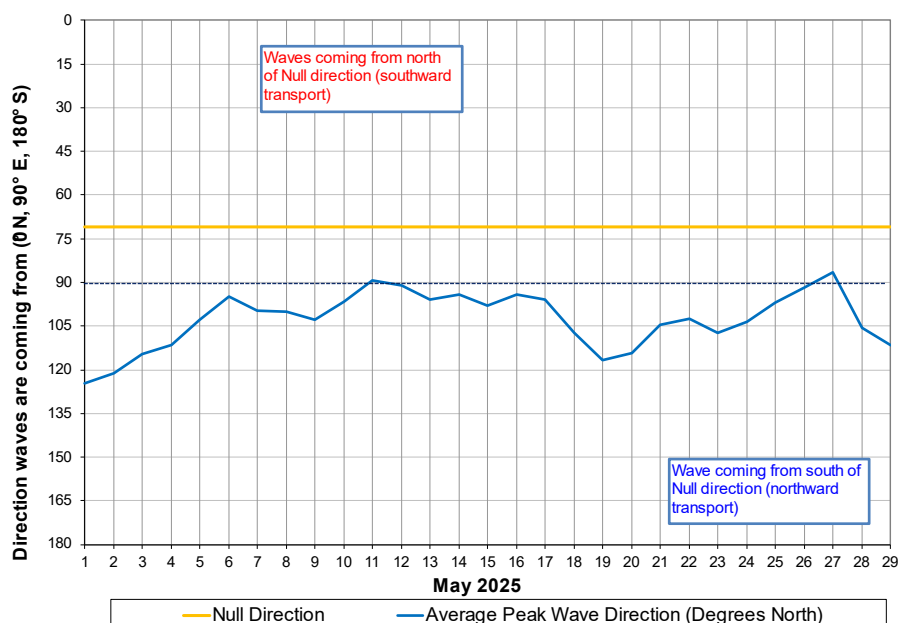
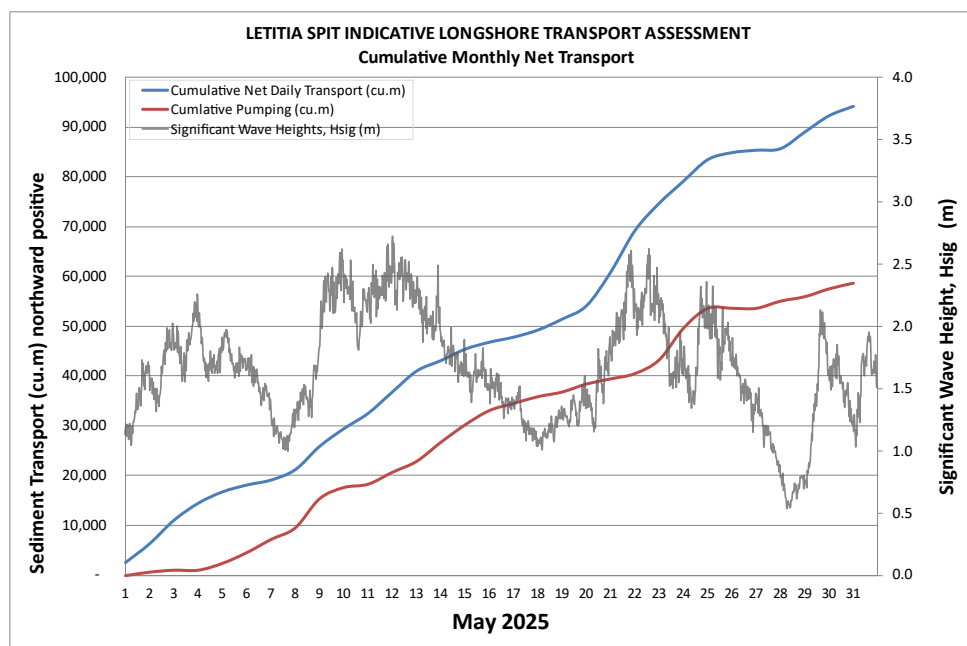
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## 3. INDICATIVE LONGSHORE TRANSPORT

The first graph below is based on simplified sediment transport modelling and is indicative only. The second graph indicates the wave direction in relation to the shoreline null direction (a wave direction coming from south of this line generally results in northward transport of sand).

In May 2025, the estimated natural sand transport moving north towards the Tweed River entrance was calculated to be in the order of 94,000 m<sup>3</sup>. This result is 133 per cent of the average estimated sand transport quantity of approximately 64,000 m<sup>3</sup> for May.



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## **4. BEACH AND SURF AMENITY OBSERVATIONS**

Beaches have been observed to show some signs of beach building post Ex-Tropical Cyclone Alfred, which made landfall on 9 March 2025 and as expected as part of seasonal observations. Rainbow Bay, in particular, has continued to see sand volumes increase.



**Coolangatta 13 May 2025**



**Rainbow Bay 13 May 2025**



**Kirra 13 May 2025**









**Duranbah 13 May 2025**



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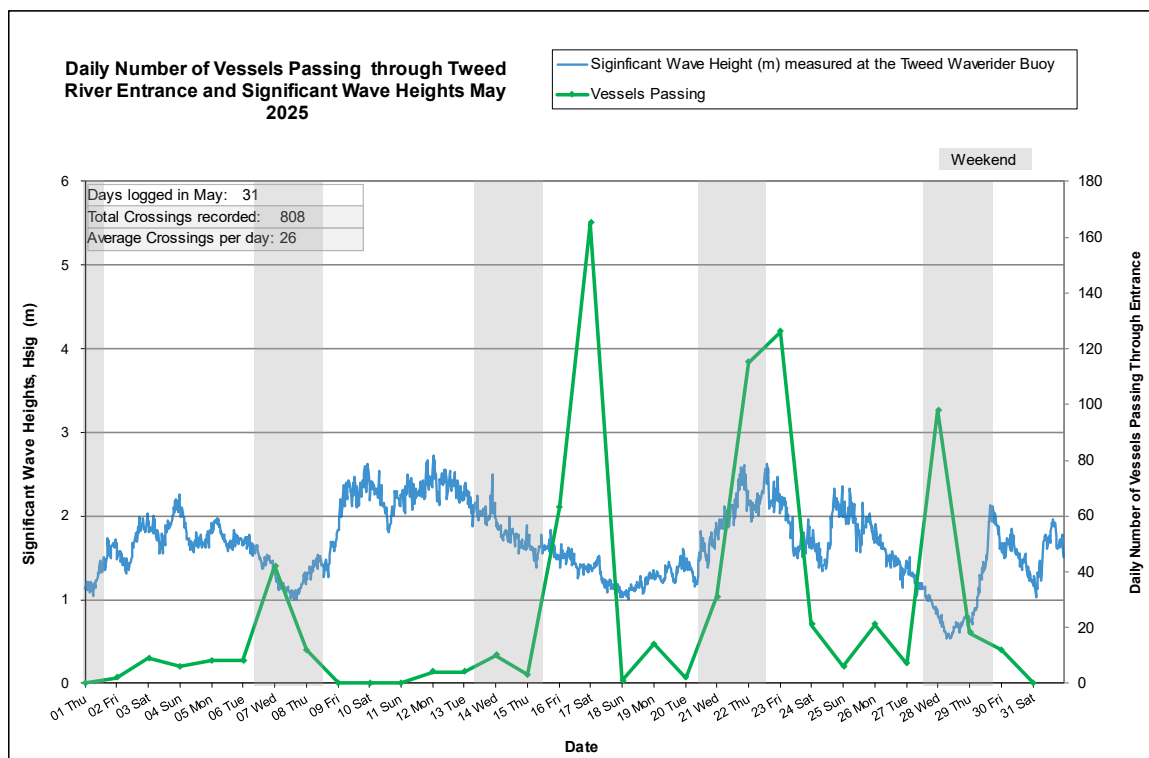
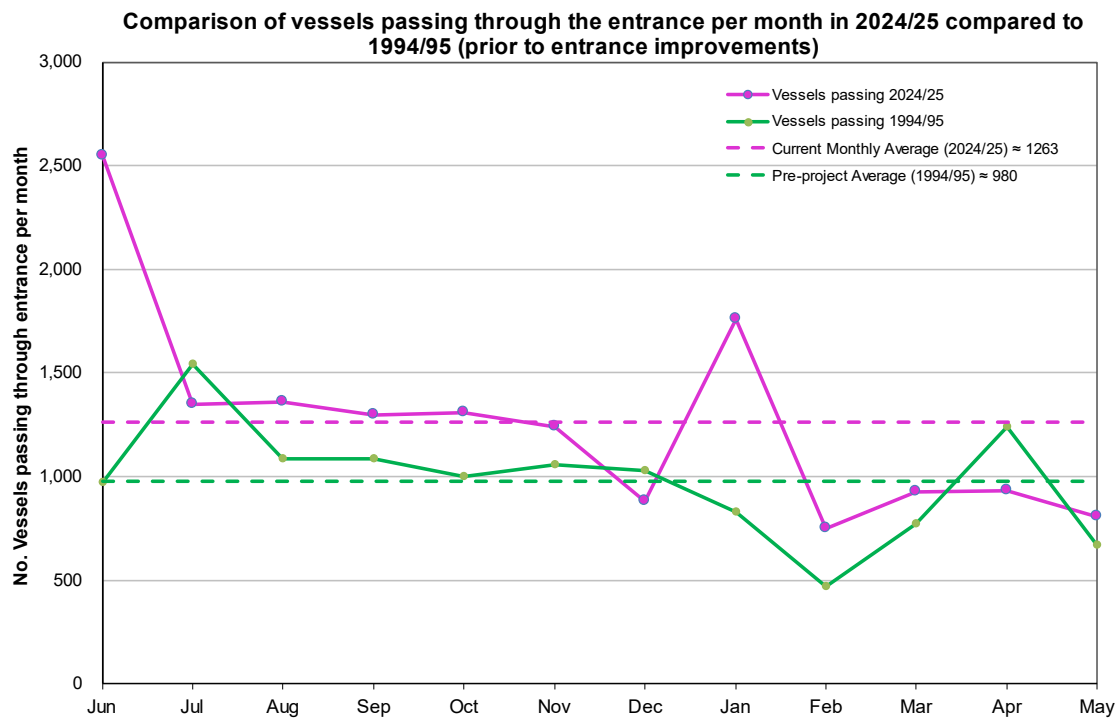
Duranbah has continued to be observed as the most consistent and favoured surf break over Snapper, Kirra and Coolangatta through the month of May. However, surf amenity at Snapper has improved over the month of May as sand builds along the bank. An increase in numbers of Surfers has been observed.

	
<b>Duranbah 3 May 2025</b>	<b>Duranbah 4 May 2025</b>
	
<b>Duranbah 8 May 2025</b>	<b>Duranbah 18 May 2025</b>
	
<b>Snapper 14 May 2025</b>	<b>Snapper 14 May 2025</b>

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## 5. TWEED RIVER ENTRANCE USAGE

A total of 808 Tweed River entrance vessel crossings were recorded for the month (47 per cent of the monthly average (2002–2025)).



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Date May 2025	Navigation Rating					Number of Crossings
	Impassable < - - - - - > Good					
	Impassable	Difficulty Encountere d	Some Difficulty Encountere d	Relatively Good Crossing	Good Conditions	
	1	2	3	4	5	
1						0
2						2
3						9
4						6
5						8
6						8
7						42
8						12
9						0
10						0
11						0
12						4
13						4
14						10
15						3
16						63
17						165
18						1
19						14
20						2
21						31
22						115
23						126
24						21
25						6
26						21
27						7
28						98
29						18
30						12
31						0
					Total:	808

Marine Rescue NSW - Monitoring Results (Not including trawlers)

 Weekends

**Source:** Marine Rescue NSW, Point Danger