

TWEED SAND BYPASSING

ENVIRONMENTAL MONITORING SUMMARY – July 2025

1. SAND PUMPING & DREDGING

- 23,076 m³ was pumped to Snapper Rocks East.
- 0 m³ of sand was dredged.

Sand Delivery July 2025

Pumped: 23,076 m³

Dredged: 0 m³

Total: 23,076 m³

The number of days sand was pumped this month = 27

The number of days sand was dredged this month = 0

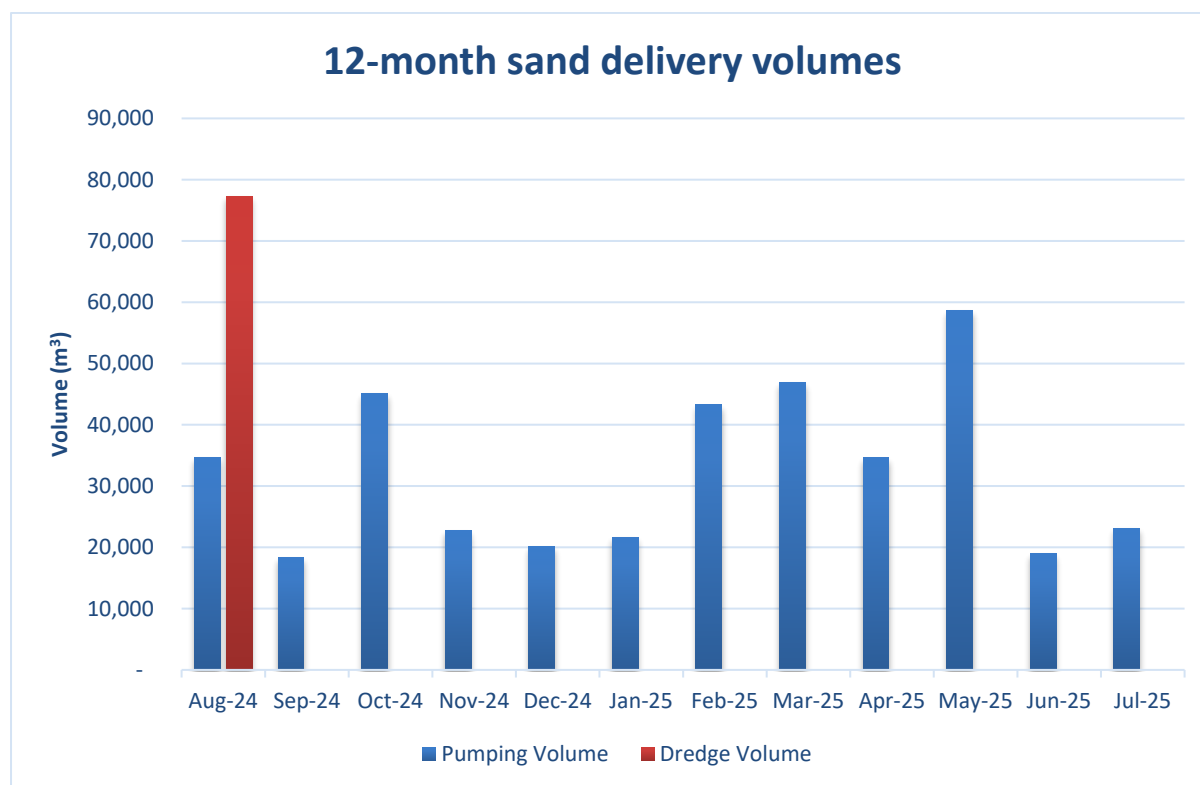
Sand Delivery May 2000 to July 2025

Pumped: 12,230,205 m³

Dredged*: 3,159,617 m³

Total*: 15,389,822 m³

* This Includes 22,870 m³ of sand delivered by dredge to Palm Beach between July 2005 and September 2005



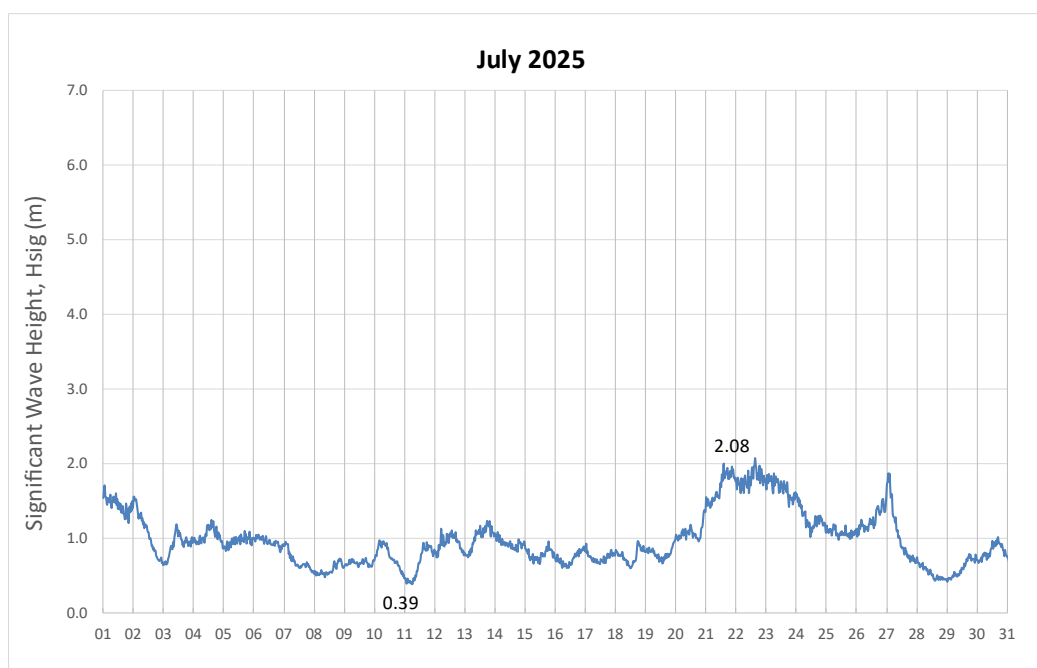
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2. WAVE CONDITIONS

Wave conditions were mild throughout the month of July, with 25 days observed to have a minimum $H_{sig} < 1$ m. Consistent nearshore directional conditions were trending in an E direction, with E SSE variability trending offshore. A maximum H_{sig} was observed on the 22nd at 2.08 m, only 2 days of the month observed with $H_{sig} > 2$ m.

- Minimum H_{sig} : 0.39 m on 11 July 2025
- Maximum H_{sig} : 2.08 m on 22 July 2025
- Number of days where $H_{sig} < 1$ m at some point: 25
- Number of days where $H_{sig} > 2$ m at some point: 2

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:

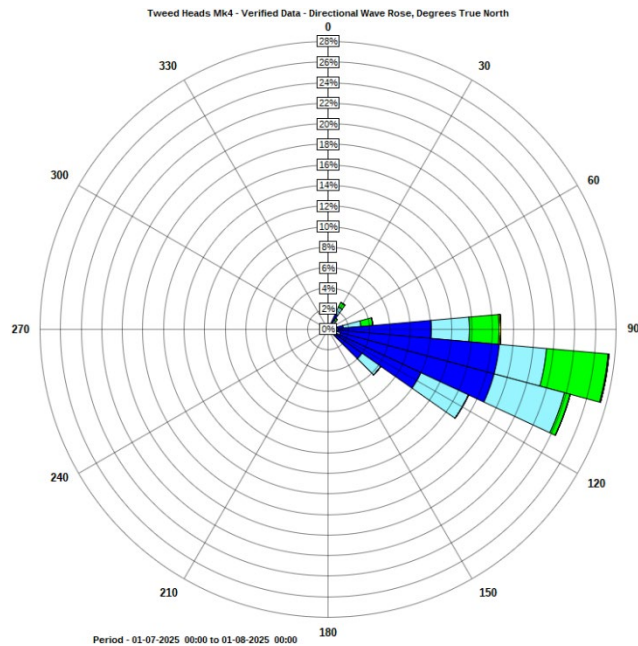
<http://www.qld.gov.au/waves>

<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

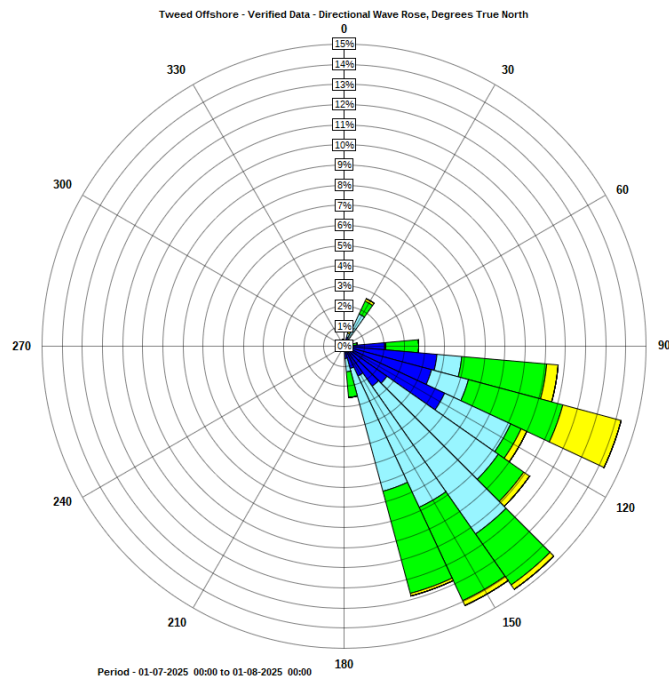


<http://www.qld.gov.au/waves>

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

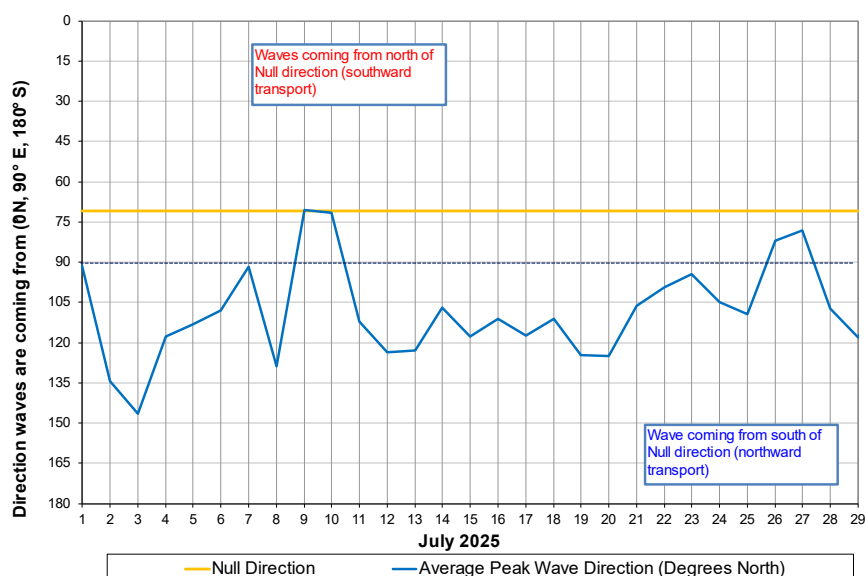
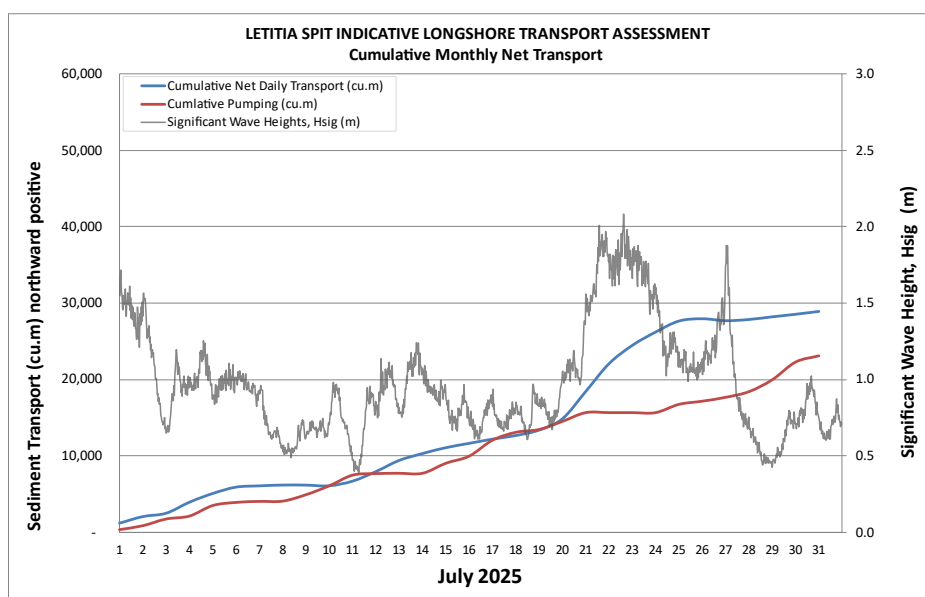
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3. INDICATIVE LONGSHORE TRANSPORT

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 July 2025, the estimated natural sand transport moving north towards the Tweed River entrance was calculated to be in the order of 29,000 m³. This result is 48 per cent of the average estimated sand transport quantity of approximately 60,000 m³ for July.



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4. BEACH AND SURF AMENITY OBSERVATIONS

Stable beaches have been observed over the month of July, expected during the seasonal mild conditions. Observations show some beach building at Rainbow Bay, which aligns with historical trends for this time of year.



Coolangatta 15 July 2025



Rainbow Bay 15 July 2025



Kirra 15 July 2025



Duranbah 15 July 2025

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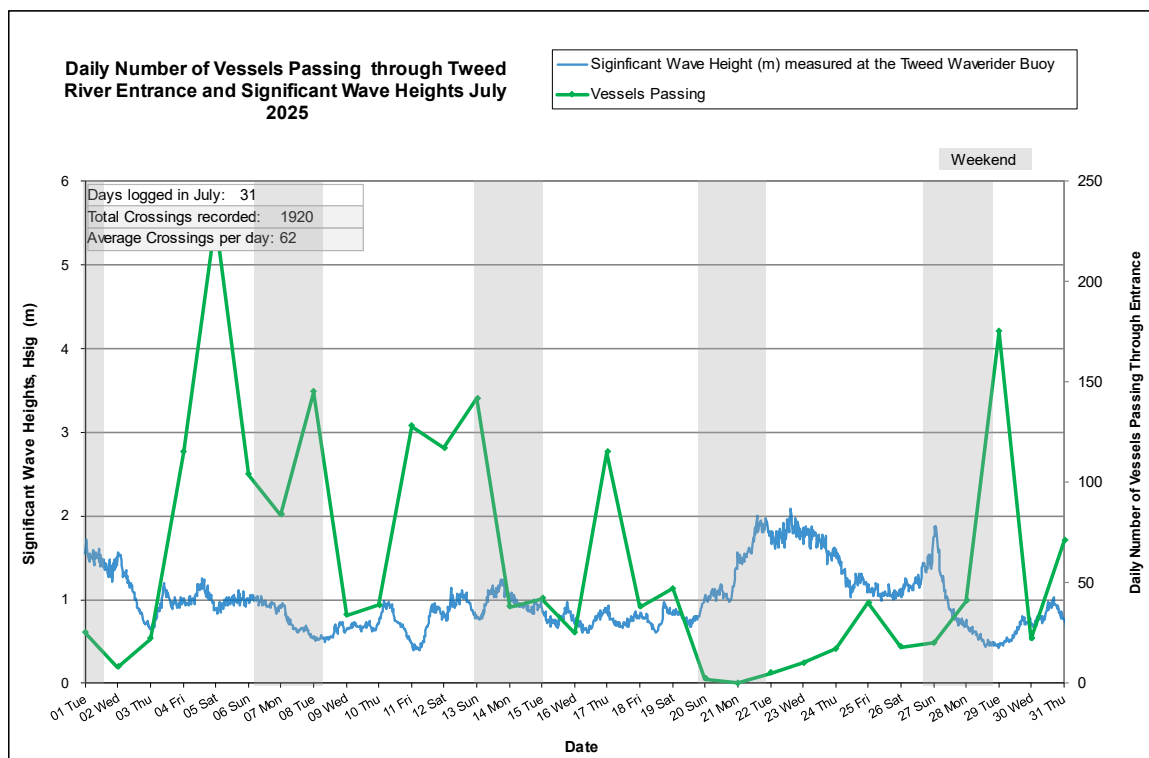
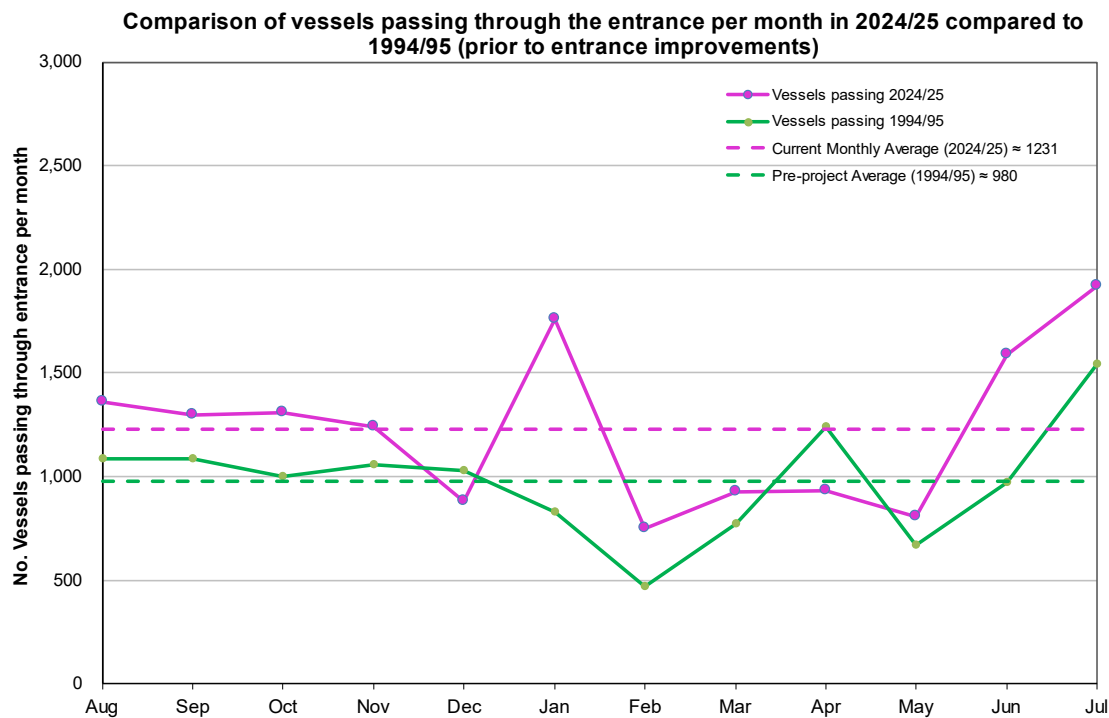
The configuration of the Duranbah shoals are still promoting favourable and consistent surf conditions (including left and right hand variability) under a range of different metocean states.

	
Duranbah 21 July 2025	Duranbah 21 July 2025
	
Duranbah 24 July 2025	Duranbah 24 July 2025
	
Duranbah 24 July 2025	Duranbah 24 July 2025

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5. TWEED RIVER ENTRANCE USAGE

A total of 1652 Tweed River entrance vessel crossings were recorded for the month (90 per cent of the monthly average (2002–2025)).



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Date	July 2025	Navigation Rating					Number of Crossings
		Impassable <-----> Good					
		Impassable	Difficulty Encountere d	Some Difficulty Encountere 3	Relatively Good Crossing 4	Good Conditions	
		1	2	3	4	5	
1							25
2							8
3							22
4							115
5							231
6							104
7							84
8							145
9							34
10							39
11							128
12							117
13							142
14							38
15							42
16							25
17							115
18							38
19							47
20							2
21							0
22							5
23							10
24							17
25							40
26							18
27							20
28							41
29							175
30							22
31							71
						Total:	1,920

Marine Rescue NSW - Monitoring Results (Not including trawlers)

 Weekends

Source: Marine Rescue NSW, Point Danger