

TWEED SAND BYPASSING

ENVIRONMENTAL MONITORING SUMMARY – January 2025

1. SAND PUMPING & DREDGING

- 21,665 m³ was pumped to Snapper Rocks East.
- 0 m³ of sand was dredged.

Sand Delivery January 2024

Pumped: 21,665 m³

Dredged: 0 m³

Total: 21,665 m³

The number of days sand was pumped this month = 17

The number of days sand was dredged this month = 0

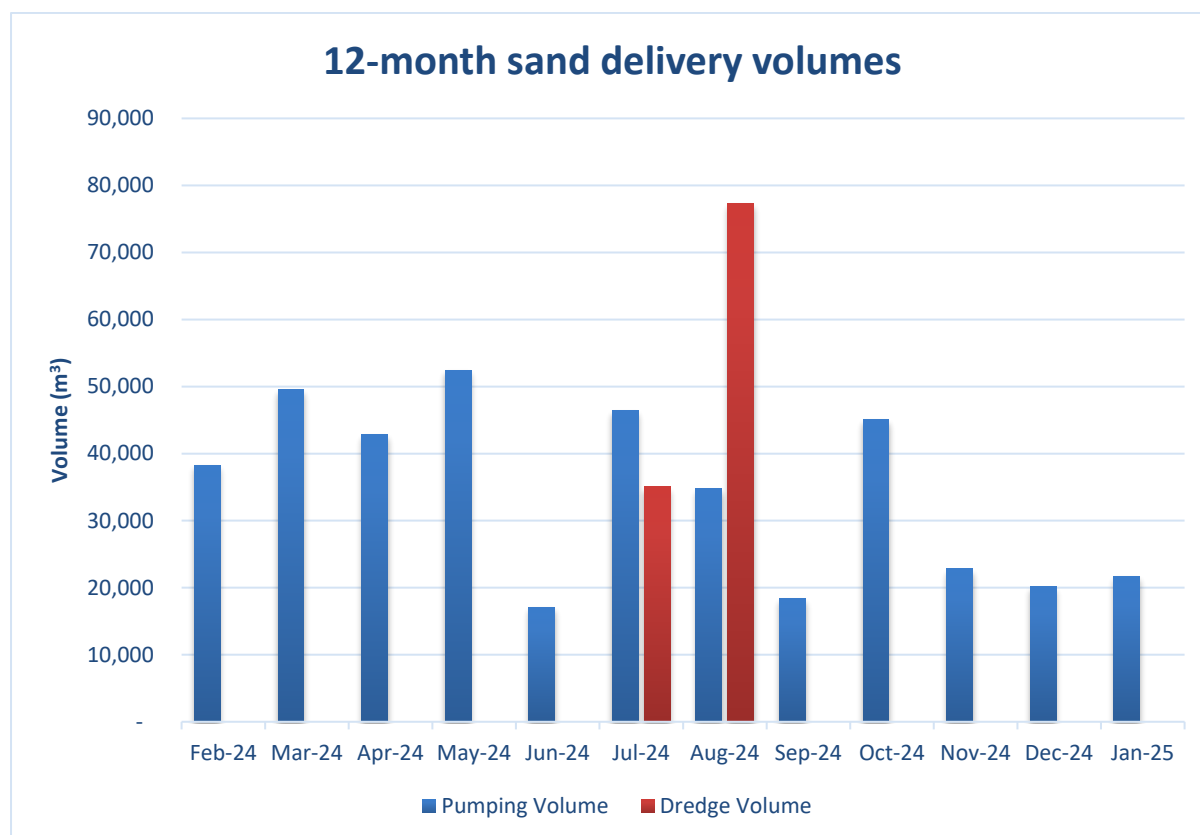
Sand Delivery May 2000 to January 2024

Pumped: 12,004,817 m³

Dredged*: 3,159,617 m³

Total*: 15,164,434 m³

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



OFFICIAL

ENVIRONMENTAL MONITORING SUMMARY – January 2025

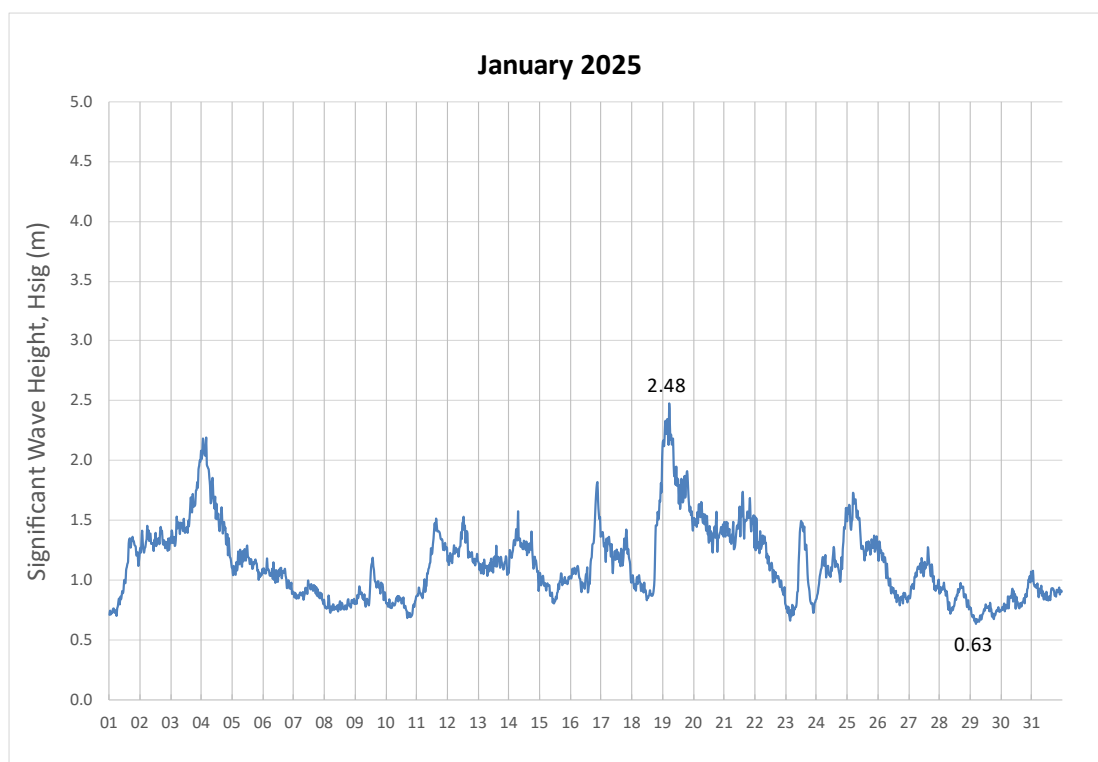
TWEED SAND BYPASSING

2. WAVE CONDITIONS

January was a reasonably low energy month with a total of 21 days where H_{sig} was observed to be <1 m. Nearshore wave direction trended in a mostly SE direction. A maximum H_{sig} was observed on the 19th at 2.48 m.

- Minimum H_{sig} : 0.63 m on 29 January 2025
- Maximum H_{sig} : 2.48 m on 19 January 2025
- Number of days where H_{sig} <1 m at some point: 21
- Number of days where H_{sig} >2 m at some point: 4

Note: H_{sig} is defined as the average of the highest 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:

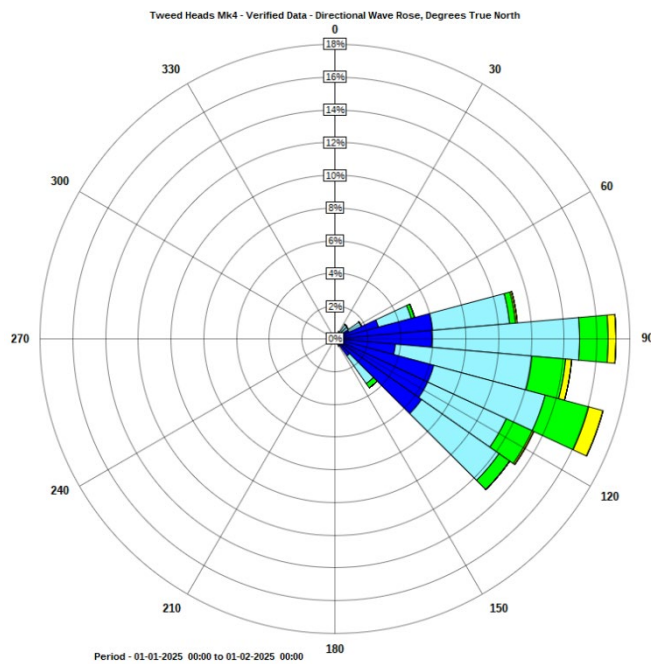
<http://www.qld.gov.au/waves>

<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>

TWEED SAND BYPASSING

NEARSHORE WAVE DIRECTION

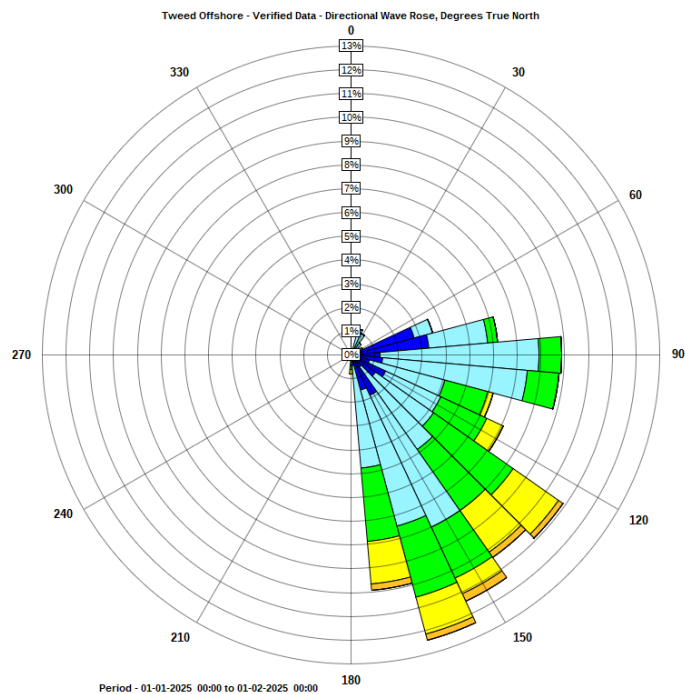


<http://www.qld.gov.au/waves>

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

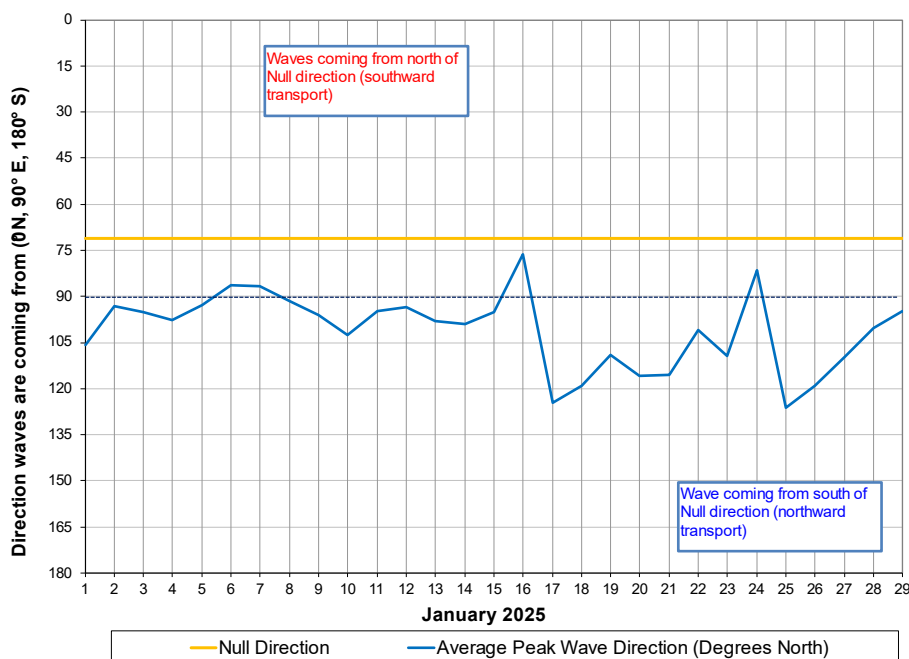
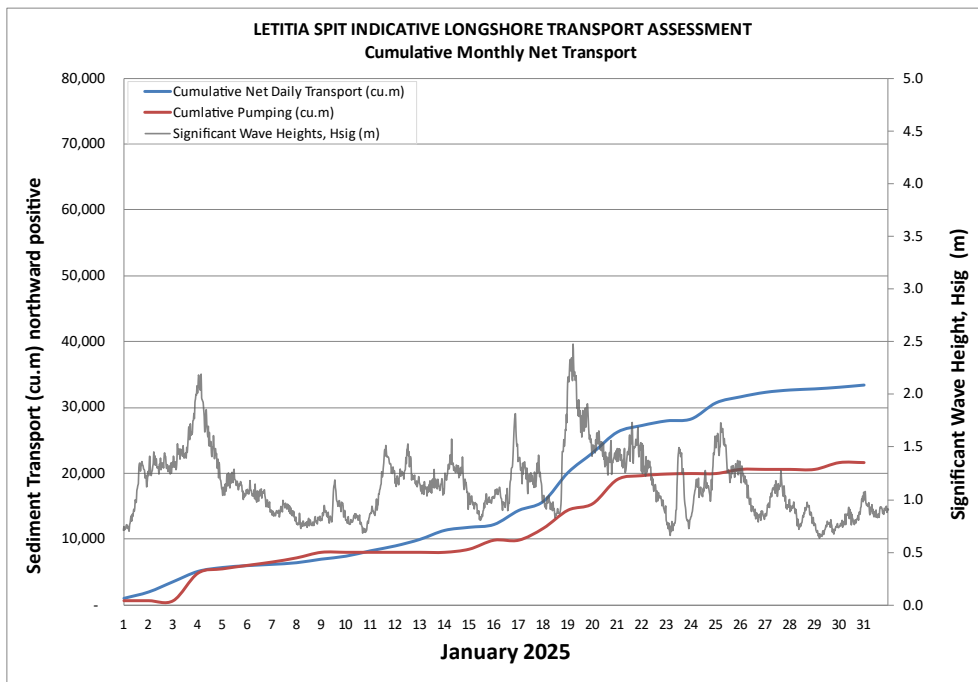
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3. INDICATIVE LONGSHORE TRANSPORT

In January 2025, the estimated natural sand transport moving north towards the Tweed River entrance was calculated to be in the order of 33,400 m³. This result is 76 per cent of the average estimated sand transport quantity of approximately 44,000 m³ for January.

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).



TWEED SAND BYPASSING

4. BEACH AND SURF AMENITY OBSERVATIONS

Stable beach widths were observed between Kirra and Duranbah excluding Rainbow Bay, where a significant reduction in beach width and upper beach scarping is being monitored.



Coolangatta 17 January 2025



Rainbow Bay 17 January 2025



Rainbow Bay 17 January 2025



Rainbow Bay 29 January 2025







Kirra 17 January 2025



Duranbah 17 January 2025

TWEED SAND BYPASSING

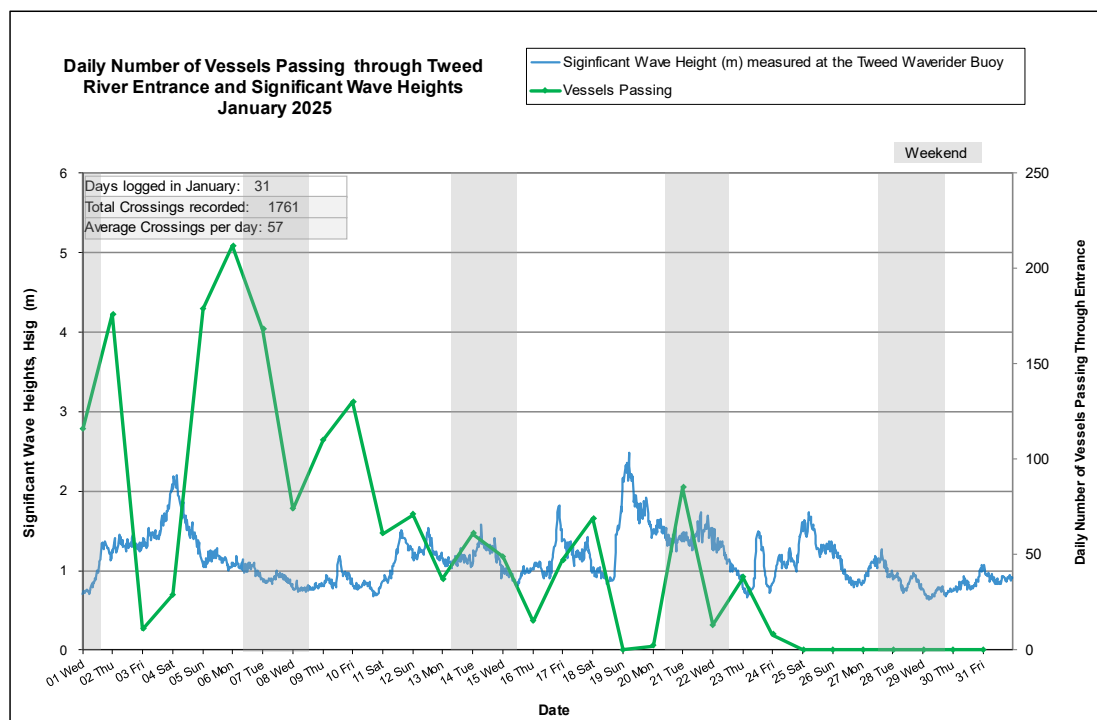
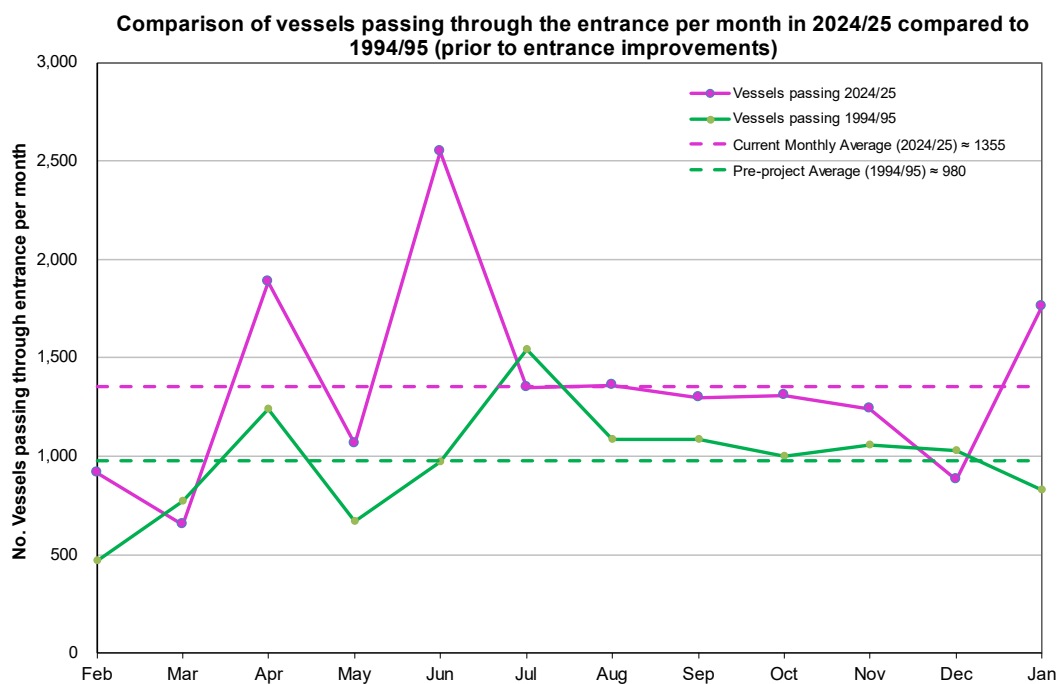
Throughout January, the surf conditions at Snapper Rocks were generally below average. In contrast, Duranbah was observed to be the preferred surf destination, a trend that has persisted over the past several months. The waves at Duranbah continued to deliver reliable and high-quality surf, making it the preferred location for surfers seeking a location with more consistent conditions.

| | |
|--|---|
|  |  |
| <p>Duranbah 26 January 2025</p> | <p>January 26 2025</p> |
|  |  |
| <p>Snapper Rocks 5 January 2025</p> | <p>Snapper Rocks 19 January 2025</p> |

TWEED SAND BYPASSING

5. TWEED RIVER ENTRANCE USAGE


A total of 1,761 Tweed River entrance vessel crossings were recorded for the month (92 per cent of the monthly average (2002–2025)). Entrance navigability met the legislated objectives during January.



TWEED SAND BYPASSING

| Date January 2025 | Navigation Rating | | | | | Number of Crossings |
|----------------------|-------------------------------|-------------------------------|----------------------------------|--------------------------------|--------------------|------------------------|
| | Impassable < - - - - - > Good | | | | | |
| | Impassable | Difficulty Encountere d | Some Difficulty Encountere | Relatively Good Crossing | Good Conditions | |
| | 1 | 2 | 3 | 4 | 5 | |
| 1 | | | | | | 116 |
| 2 | | | | | | 176 |
| 3 | | | | | | 11 |
| 4 | | | | | | 29 |
| 5 | | | | | | 179 |
| 6 | | | | | | 212 |
| 7 | | | | | | 168 |
| 8 | | | | | | 74 |
| 9 | | | | | | 110 |
| 10 | | | | | | 130 |
| 11 | | | | | | 61 |
| 12 | | | | | | 71 |
| 13 | | | | | | 37 |
| 14 | | | | | | 61 |
| 15 | | | | | | 49 |
| 16 | | | | | | 15 |
| 17 | | | | | | 47 |
| 18 | | | | | | 69 |
| 19 | | | | | | 0 |
| 20 | | | | | | 2 |
| 21 | | | | | | 85 |
| 22 | | | | | | 13 |
| 23 | | | | | | 38 |
| 24 | | | | | | 8 |
| 25 | | | | | | 0 |
| 26 | | | | | | 0 |
| 27 | | | | | | 0 |
| 28 | | | | | | 0 |
| 29 | | | | | | 0 |
| 30 | | | | | | 0 |
| 31 | | | | | | 0 |
| | | | | | Total: | 1,761 |

Marine Rescue NSW - Monitoring Results (Not including trawlers)

 Weekends

Source: Marine Rescue NSW, Point Danger