TWEEDSAND BYPASSING

ENVIRONMENTAL MONITORING SUMMARY – June 2024

1. SAND PUMPING & DREDGING

- 17,077 m^3 was pumped to Snapper Rocks East.
- 0 m^3 of sand was dredged.

Sand Delivery June 2024

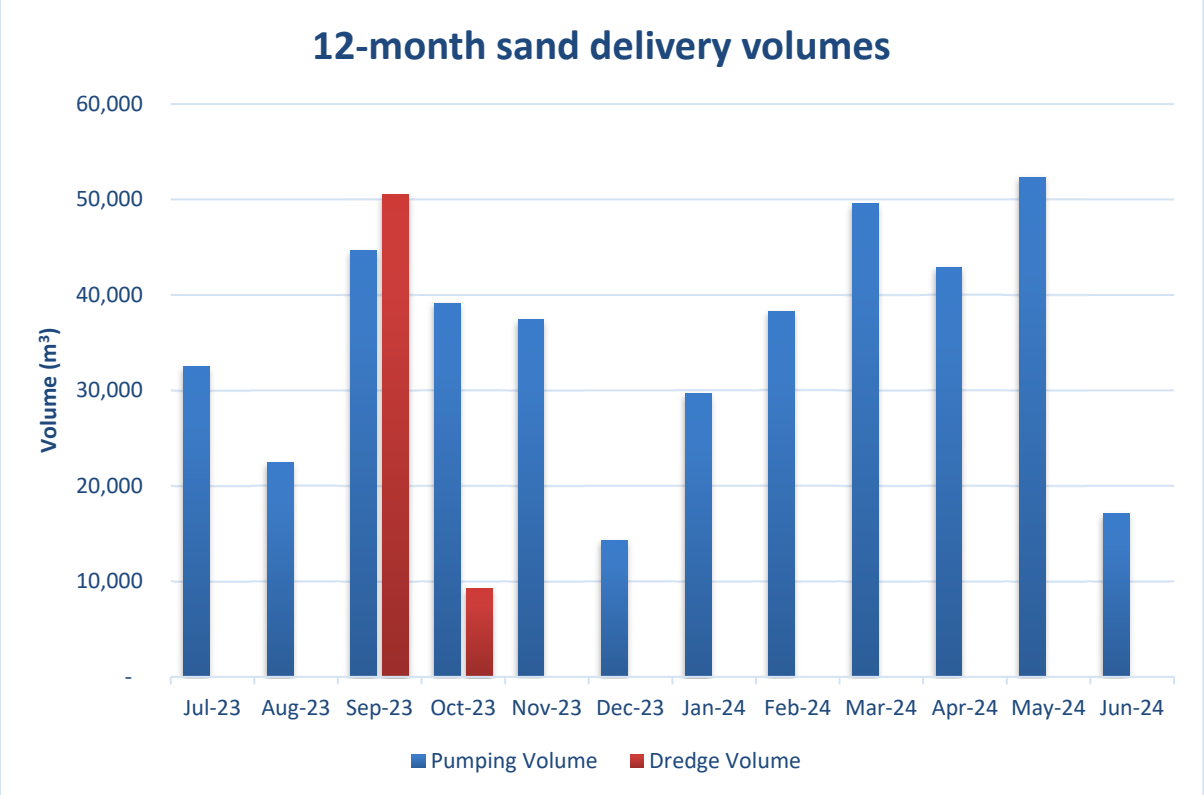
Pumped:	17,077 m^3
Dredged:	0 m^3
Total:	17,077 m^3

The number of days sand was pumped this month = 14

Sand Delivery May 2000 to June 2024

Pumped:	11,795,553 m^3
Dredged*:	3,047,294 m^3
Total*:	14,842,847 m^3

* This Includes 22,870 m^3 of sand delivered by dredge to Palm Beach between July 2005 and September 2005



2. WAVE CONDITIONS

June was a relatively calm month, with wave heights under 1 m H_{sig} for the majority of June. The minimum and maximum wave heights for June were observed a day apart on 12 and 13 June, at 0.5 m H_{sig} and 2.29 m H_{sig} respectively.

- Minimum H_{sig}: 0.50 m on 12 June 2024
- Maximum H_{sig}: 2.29 m on 13 June 2024
- Number of days where H_{sig} <1 m at some point: 23
- Number of days where H_{sig} >2 m at some point: 1

Note: H_{sig} is defined as the average of the highest ⅓ of waves recorded over a period of approximately 30 minutes

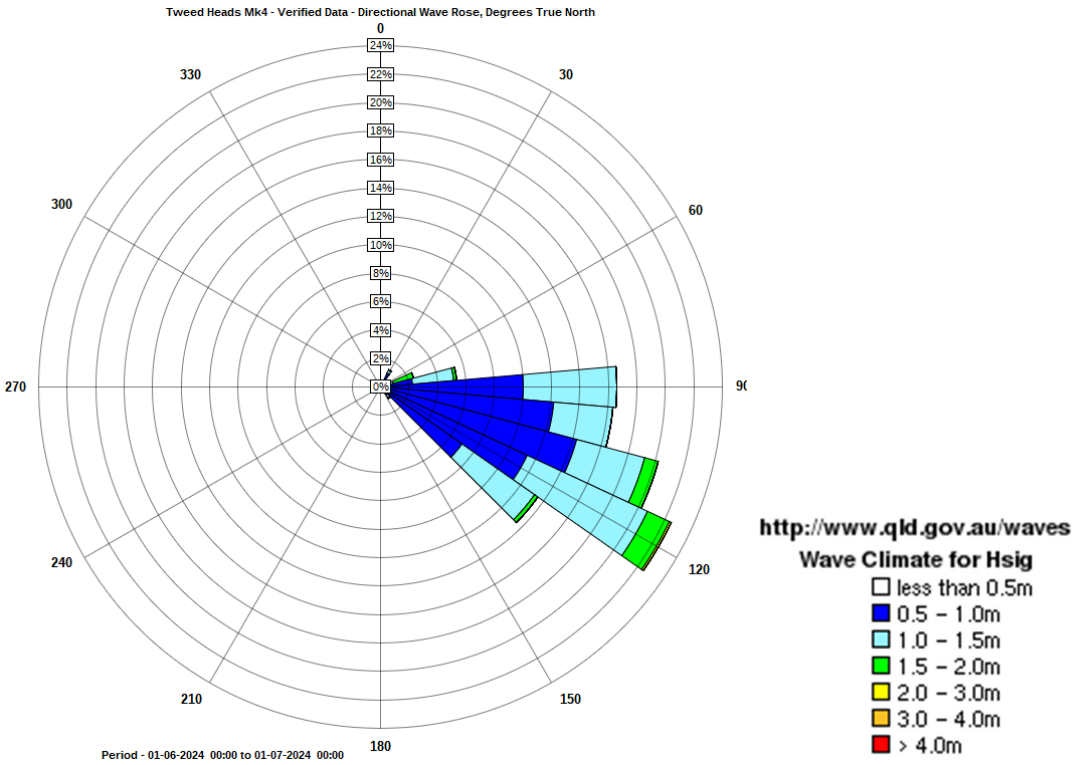
*(**Source:** Tweed Heads Waverider buoy; Queensland Government)*

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

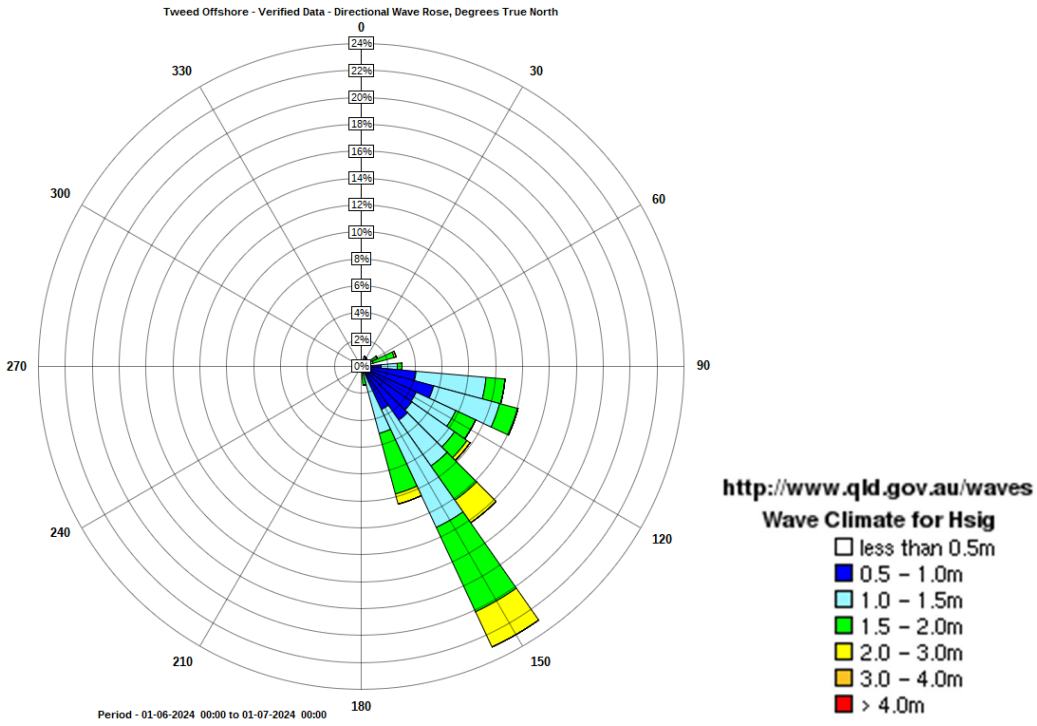
https://www.qld.gov.au/environment/coasts-waterways/beach/monitoring/waves-sites/tweed-offshore

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

NEARSHORE WAVE DIRECTION



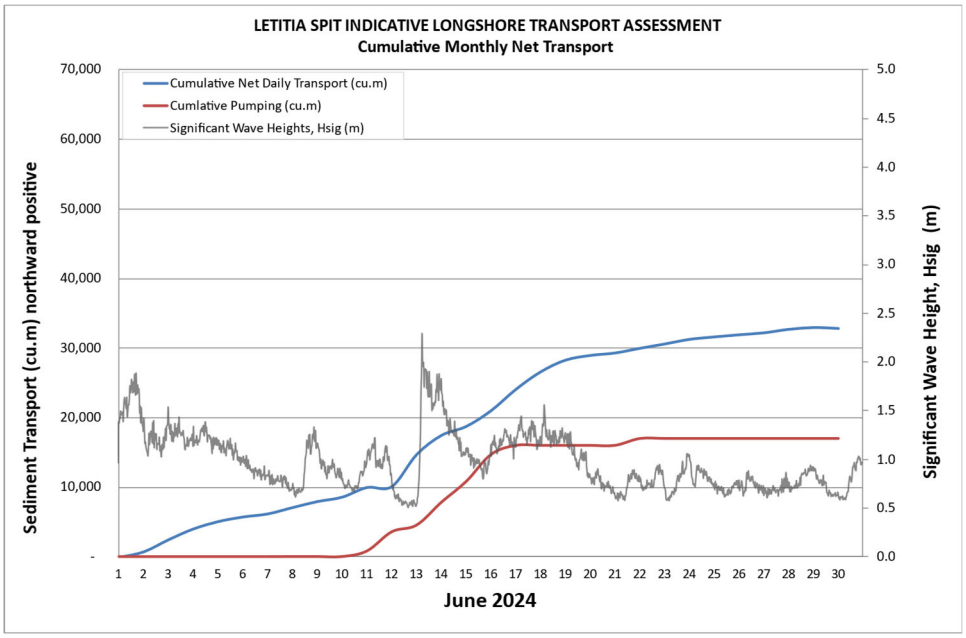
OFFSHORE WAVE DIRECTION

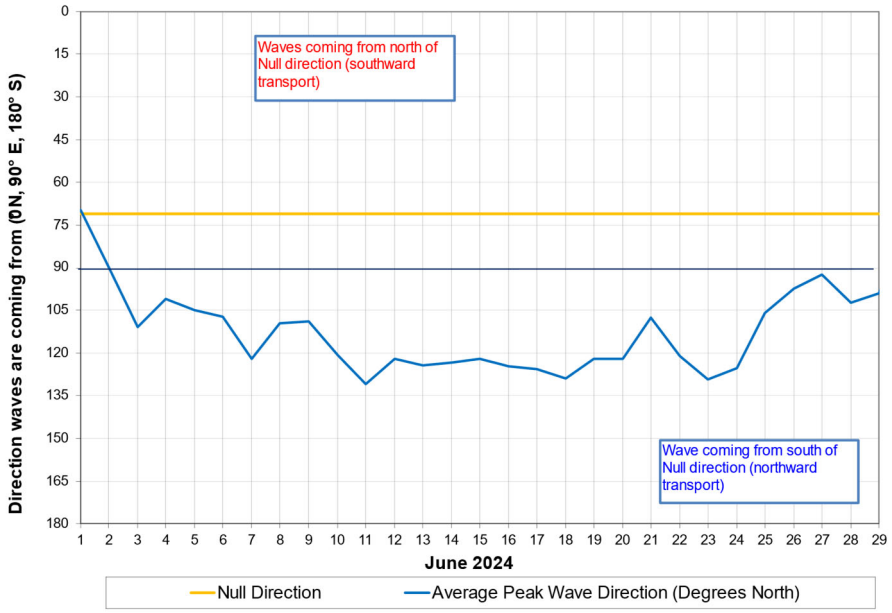


3. INDICATIVE LONGSHORE TRANSPORT

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 June 2024, the estimated natural sand transport moving north towards the Tweed River entrance was calculated to be in the order of 32,700 m^3. This result is 58 per cent of the average estimated sand transport quantity of approximately 56,300 m^3 for June.



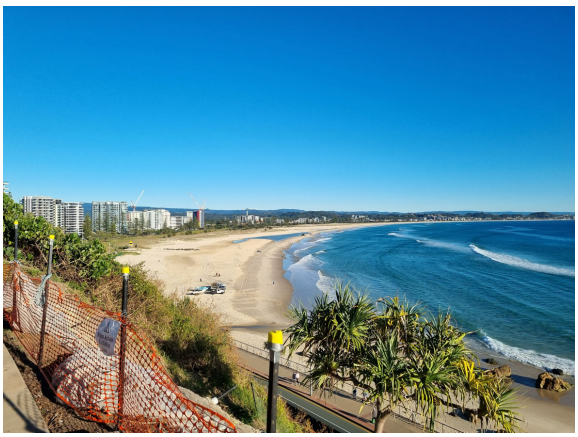


4. BEACH AND SURF AMENITY OBSERVATIONS

Periods of calmer conditions were observed in June with only one occurrence of Hsig over 2 m. This led to beach building which started to increase beach widths along the coastline.

The recent sand nourishment at Duranbah can be seen in the image below.

Rainbow Bay 17 June ***south aspect***



Kirra 17 June

Greenmount 17 June

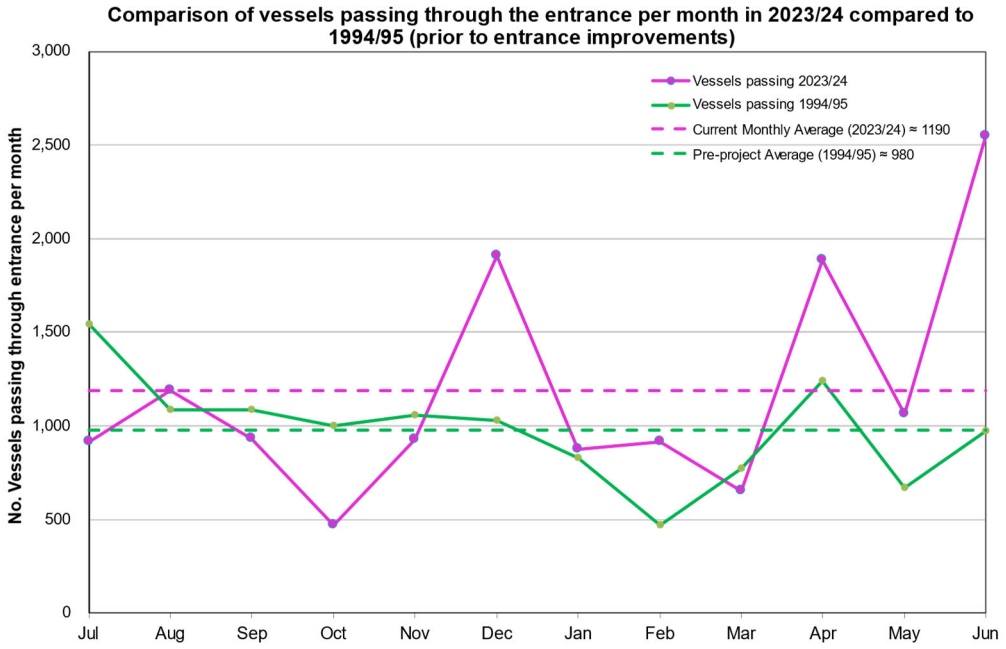
Duranbah 03 June

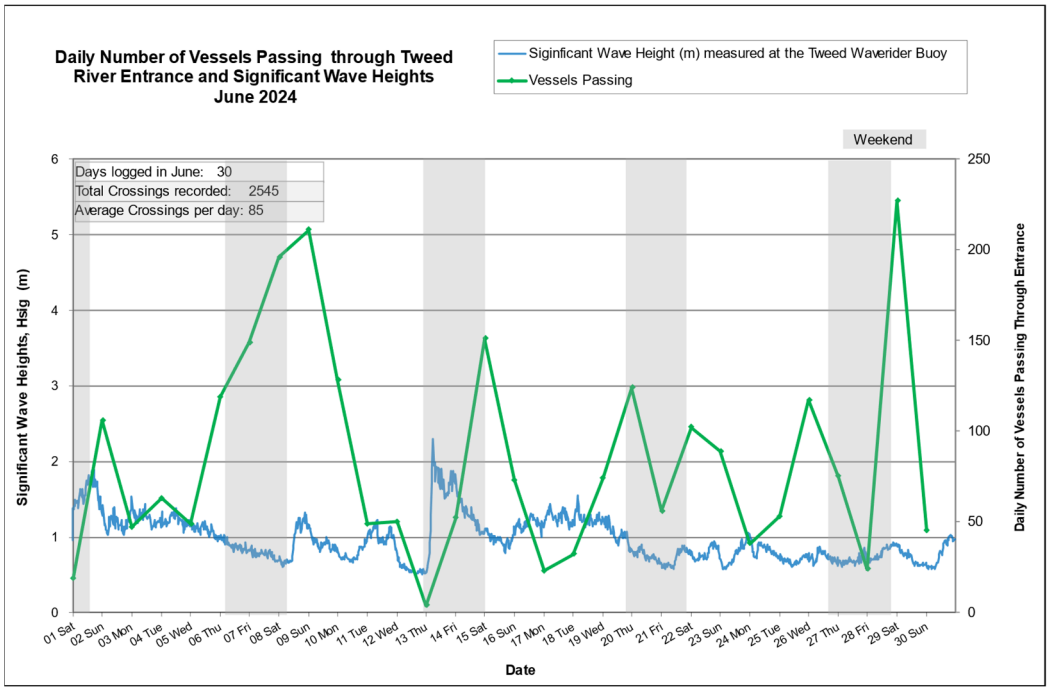
Conditions in June produced relatively small surf. The surf at Snapper Rocks was small in size, meaning Duranbah was the most popular break over this period, producing clean, small to medium waves.

	
Duranbah 14 June	**Duranbah 18 June**

5. TWEED RIVER ENTRANCE USAGE

A total of 2,545 Tweed River entrance vessel crossings were recorded for the month (151 per cent of the June average (2002–2024)). Entrance met the navigability objectives as defined in the legislation during June.





Date June 2024	Navigation Rating Impassable < - - - - - > Good					Number of Crossings
	Impassable	Difficulty Encountered	Some Difficulty Encountered	Relatively Good Crossing	Good Conditions	
	1	2	3	4	5	
1						19
2						106
3						47
4						63
5						49
6						119
7						149
8						196
9						211
10						128
11						49
12						50
13						4
14						52
15						151
16						73
17						23
18						32
19						74
20						124
21						56
22						102
23						89
24						38
25						53
26						117
27						75
28						24
29						227
30						45
						2,545

Marine Rescue NSW - Monitoring Results (Not including trawlers)

Weekends

Source: *Marine Rescue NSW, Point Danger*