TWEEDSAND BYPASSING

ENVIRONMENTAL MONITORING SUMMARY – July 2024

1. SAND PUMPING & DREDGING

- 46,502 m^3 was pumped to Snapper Rocks East.
- 35,025 m^3 of sand was dredged.

Sand Delivery July 2024

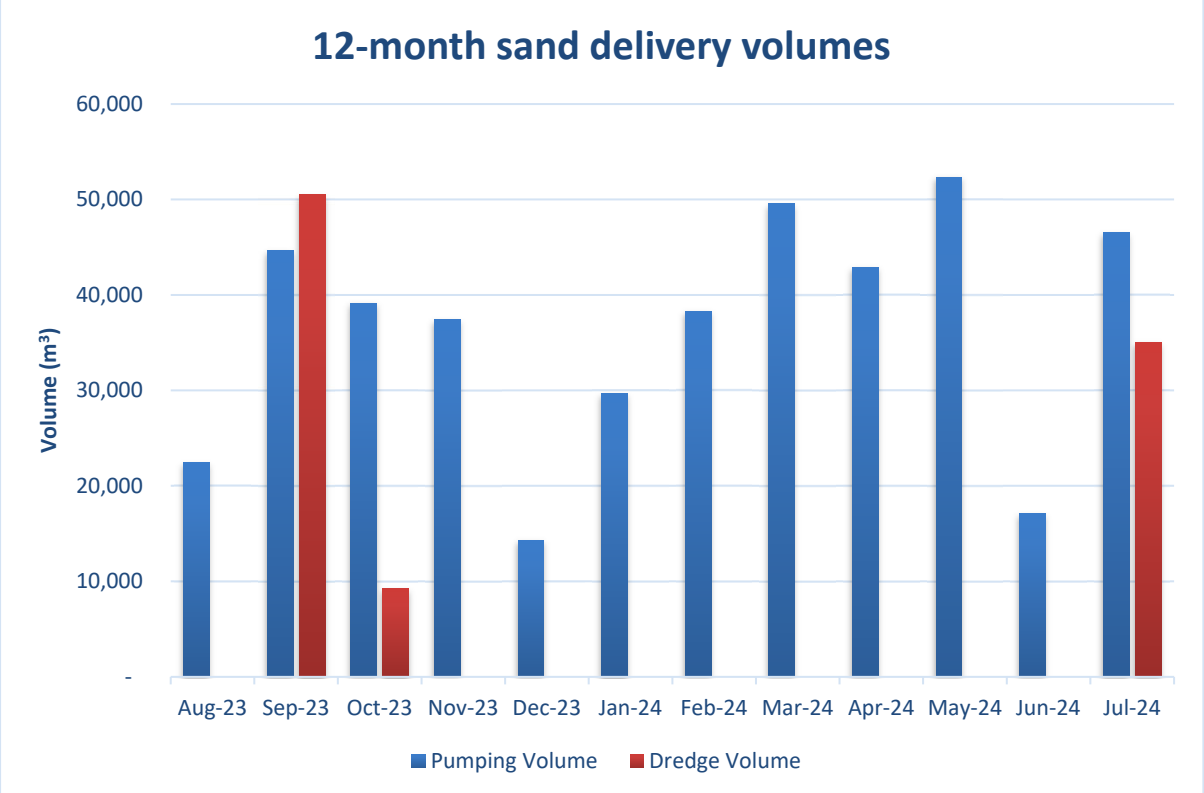
Pumped:	46,502 m^3
Dredged:	35,025 m^3
Total:	81,527 m^3

The number of days sand was pumped this month = 16

Sand Delivery May 2000 to July 2024

Pumped:	11,842,055 m^3
Dredged*:	3,082,319 m^3
Total*:	14,924,374 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

The first 2 weeks in July had energetic conditions with consistent wave heights between 1.5 m and 2.5 m Hsig. Calmer conditions of 1m Hsig or less were experienced for the remainder of the month before the maximum wave height for July was observed on the last day, reaching 2.87 m Hsig.

- Minimum H_{sig}: 0.39 m on 21 July 2024
- Maximum H_{sig}: 2.87 m on 31 July 2024
- Number of days where H_{sig} <1 m at some point: 17
- Number of days where H_{sig} >2 m at some point: 10

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

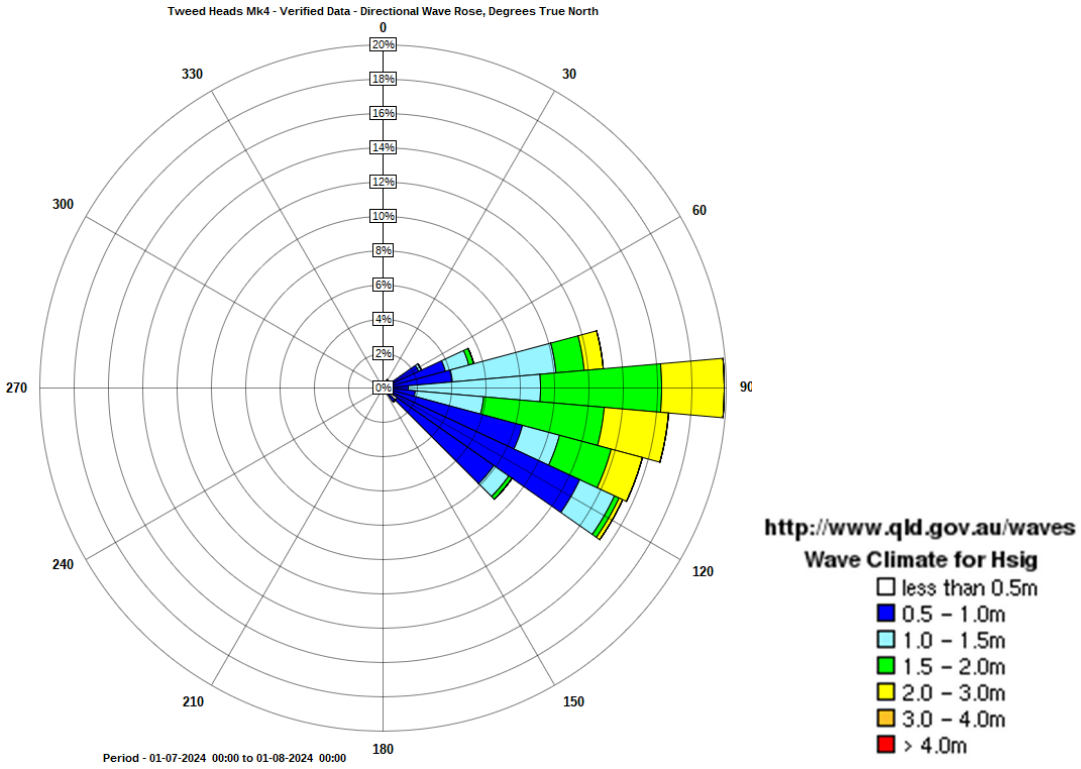
*(**Source:** Tweed Heads Waverider buoy; Queensland Government)*

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

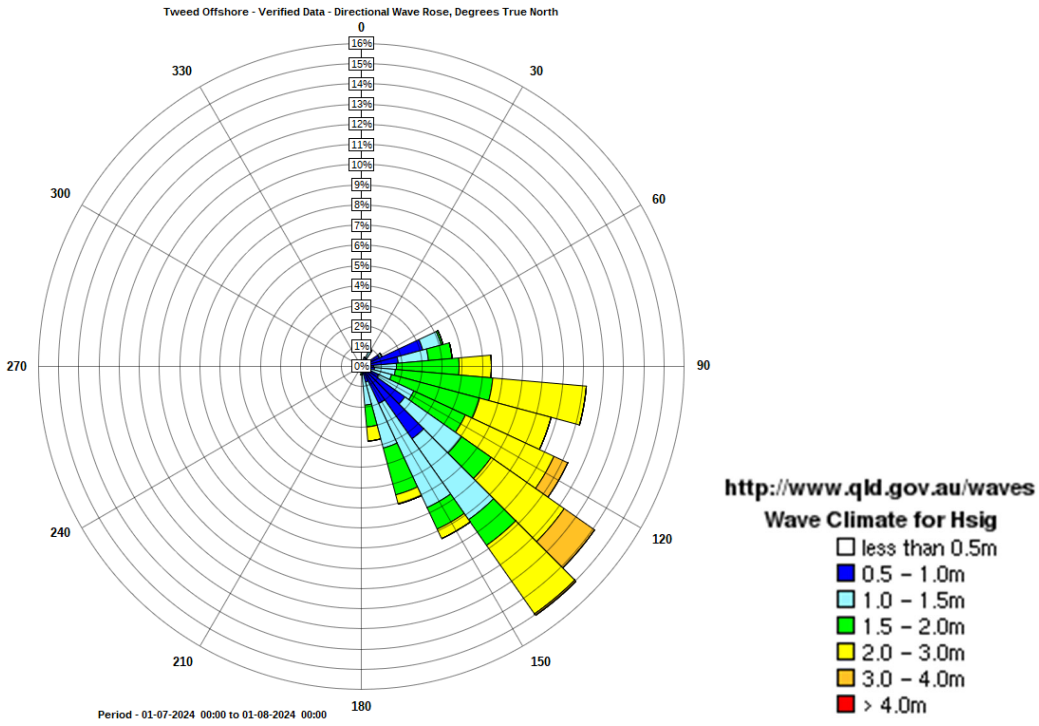
https://www.qld.gov.au/environment/coasts-waterways/beach/monitoring/waves-sites/tweed-offshore

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

NEARSHORE WAVE DIRECTION



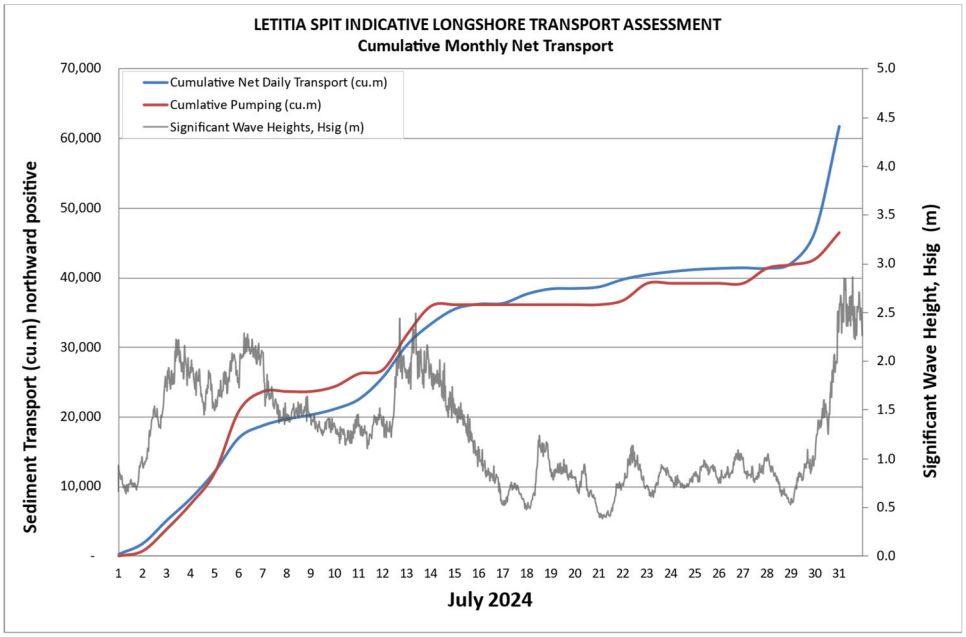
OFFSHORE WAVE DIRECTION

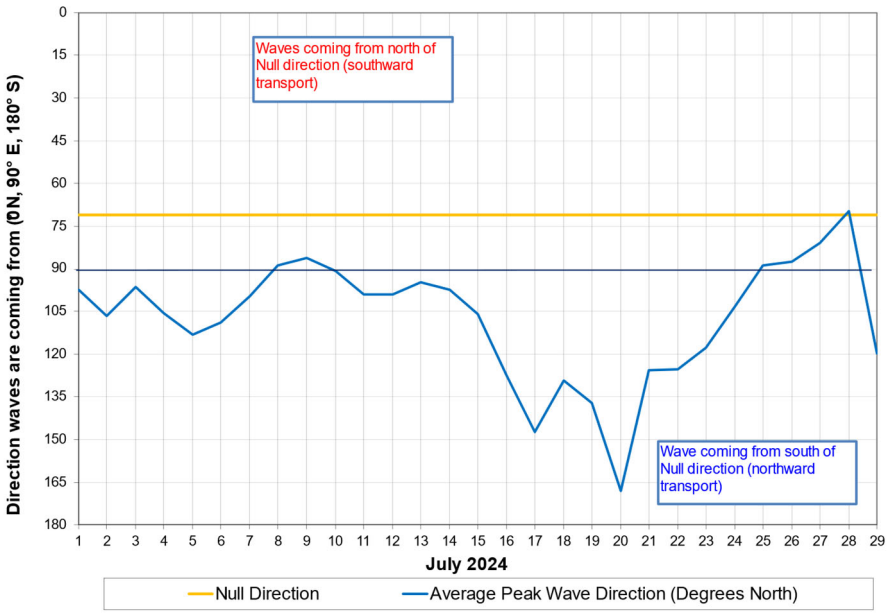


3. INDICATIVE LONGSHORE TRANSPORT

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 July 2024, the estimated natural sand transport moving north towards the Tweed River entrance was calculated to be in the order of 61,800 m^3. This result is 101 per cent of the average estimated sand transport quantity of approximately 60,900 m^3 for July.





4. BEACH AND SURF AMENITY OBSERVATIONS

Beaches are overall in good condition. Active conditions in early July resulted in some scarping of the nourishment at Duranbah that was completed in May. Rainbow Bay is experiencing its observed seasonal widening that occurs through the winter months.

Duranbah 10 May (pre-nourishment)

Duranbah 26 July

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

Rainbow Bay 15 July ***south aspect***

Greenmount 15 July

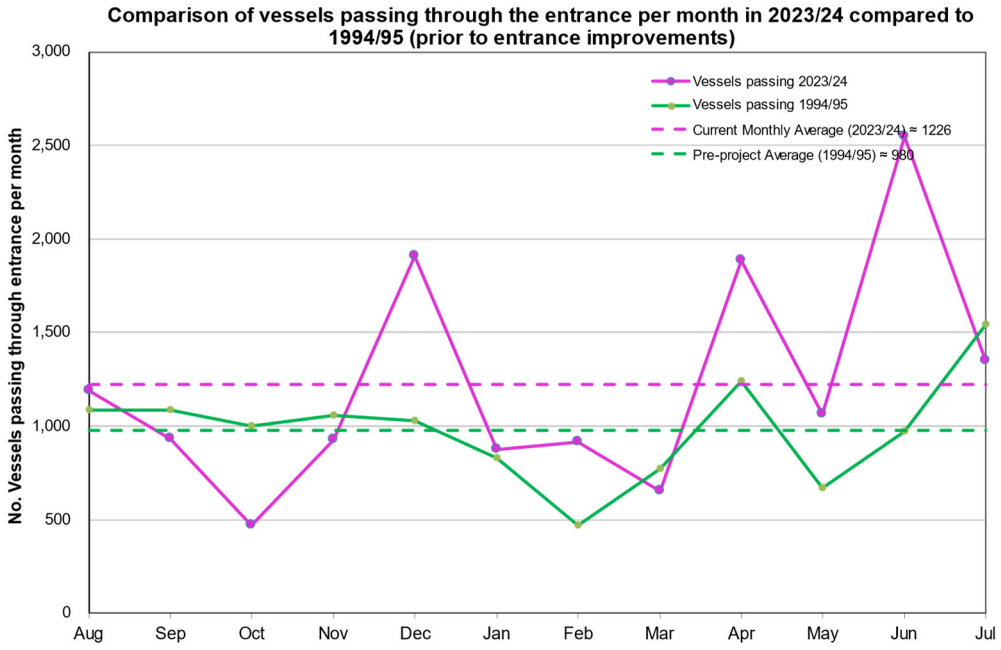
Kirra Point 17 July

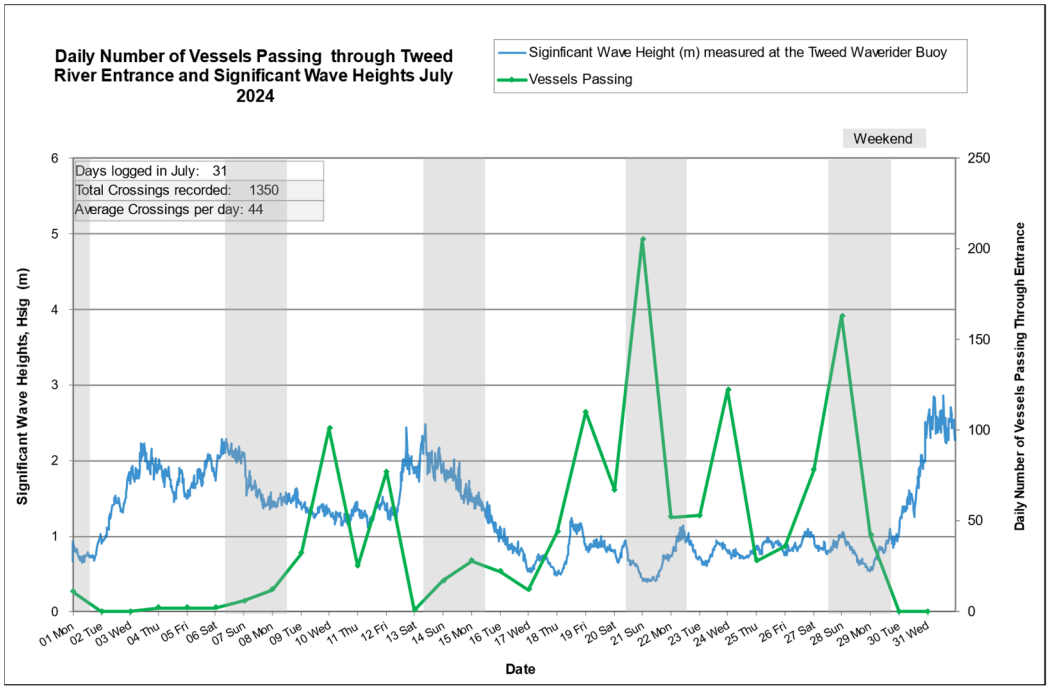
Snapper was observed to be the favourable surf location in July with tubes and long walls extending through to Rainbow Bay.

	
Snapper Rocks 07 July	**Snapper Rocks 08 July**
	
Snapper Rocks 13 July	**Snapper Rocks 31 July**

5. TWEED RIVER ENTRANCE USAGE

A total of 1,350 Tweed River entrance vessel crossings were recorded for the month (73 per cent of the July average (2002–2024)). Entrance met the navigability objectives as defined in the legislation during July.





Date July 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						11
2						0
3						0
4						2
5						2
6						2
7						6
8						12
9						32
10						101
11						25
12						77
13						1
14						17
15						28
16						22
17						12
18						44
19						110
20						67
21						205
22						52
23						53
24						122
25						28
26						36
27						78
28						163
29						42
30						0
31						0
					Total:	1,350

Marine Rescue NSW - Monitoring Results (Not including trawlers)

Weekends

Source: *Marine Rescue NSW, Point Danger*