

TWEED SAND BYPASSING

OVERVIEW

In March 2019:

- 26,045 m³ of sand was pumped to Snapper Rocks East.
- 0 m³ of sand was dredged and placed at Snapper Rocks East.
- Significant wave heights ranged mostly from calm to moderate (0.58 m to 2.27 m), with a maximum significant wave height of 2.27 m on 5th March. Wave directions were predominantly from the east and ESE.
- 1,759 vessel crossings were recorded for the month (This is 108% of the March average (2002 – 2019)).
- The modelled estimated amount of sand moving north towards the Tweed River entrance by natural processes was in the order of 25,000 m³ (this is 43% of the March average of 57,193 m³).

1. SAND PUMPING & DREDGING

Sand Delivery March 2019

Pumped:	26,045 m ³
Dredged:	0 m ³
Total:	26,045 m ³

The number of days sand was pumped this month = 15

Sand Delivery January 2019 to December 2019

Pumped:	99,703 m ³
Dredged:	0 m ³
Total:	99,703 m ³

Stage II Sand Delivery April 2000 to March 2019

Pumped:	9,389,103 m ³
Dredged:	2,320,514 m ³ *
Total:	11,709,617 m ³ *

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

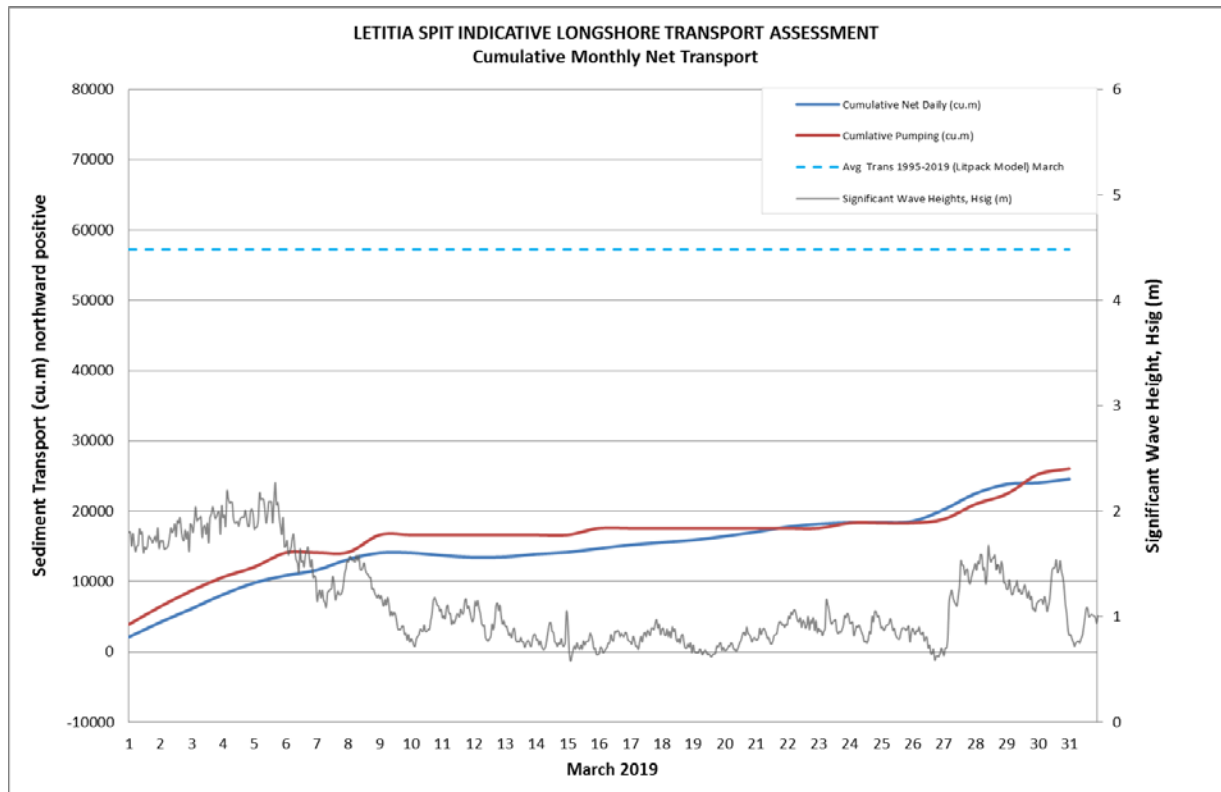
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2. INDICATIVE LONGSHORE TRANSPORT

The graph below is based on simplified sediment transport modelling and is indicative only.

In March 2019 the estimated natural sand transport moving north towards the Tweed River entrance was calculated to be 24,588 m³.


This result is 43% of the average estimated sand transport quantity of approximately 57,193 m³ for the month of March.



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3. TWEED RIVER ENTRANCE USAGE

Marine Rescue NSW - Monitoring Results (Not including trawlers)

 Weekends

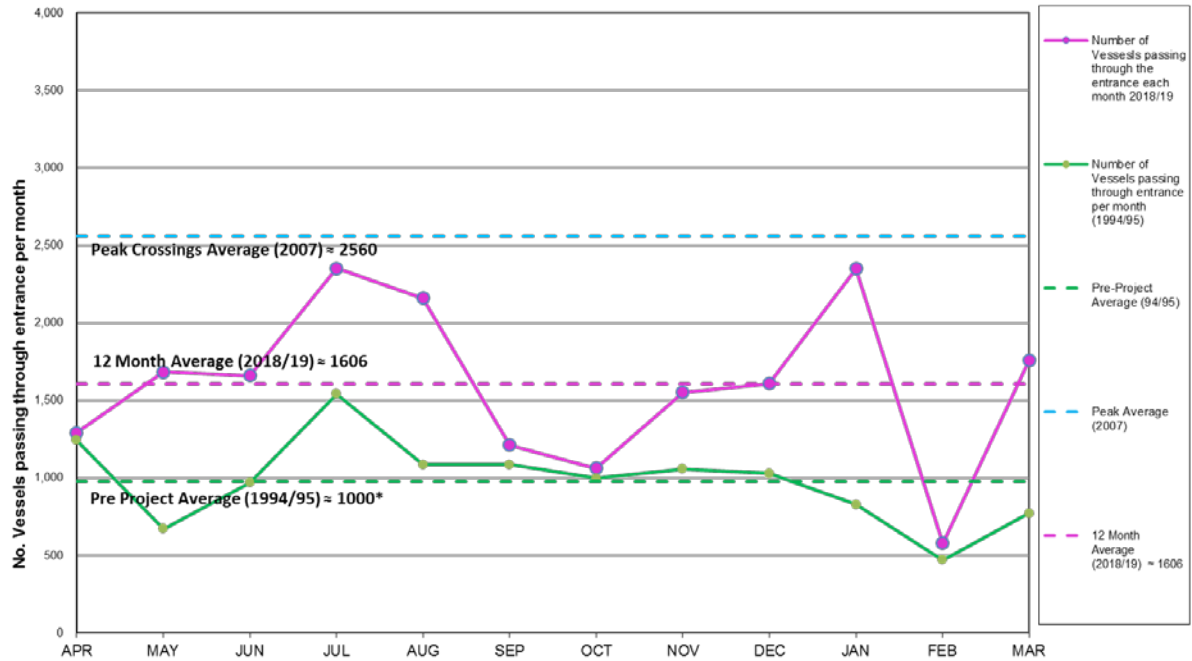
Date March 2019	Navigation Rating					Number of Crossings
	Impassable < - - - - > Good					
	Impassable	Difficulty Encountered	Some Difficulty Encountered	Relatively Good Crossing	Good Conditions	
	1	2	3	4	5	
1						5
2						6
3						8
4						0
5						2
6						38
7						13
8						4
9						165
10						167
11						11
12						27
13						29
14						68
15						90
16						67
17						200
18						67
19						72
20						87
21						59
22						107
23						198
24						101
25						11
26						55
27						2
28						0
29						41
30						7
31						52
					Total:	1759

Source: Marine Rescue NSW, Point Danger

* Total does not include trawlers

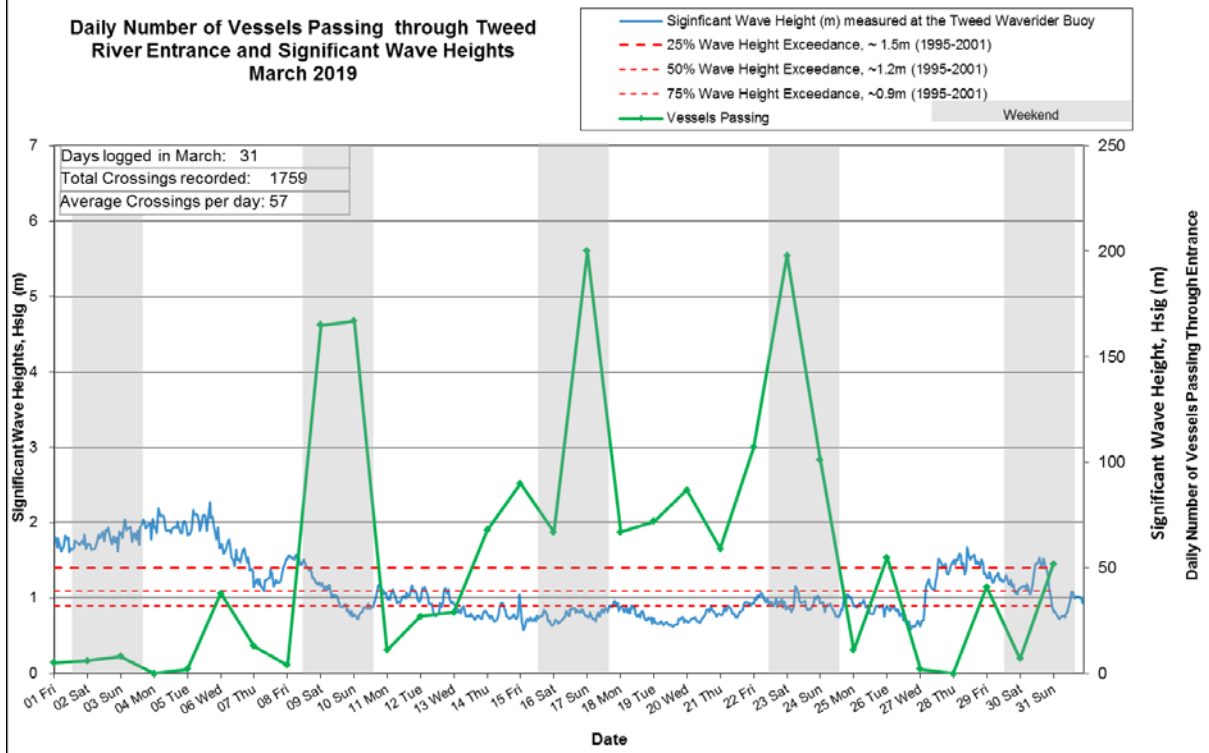
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Comparison of the number of vessels passing through the entrance per month 2018/19 compared to 2007 (peak crossings) and 1994/95 (prior to entrance improvements)



*Note 1 - Assuming the number of incoming boats = outgoing boats in 94/95

Daily Number of Vessels Passing through Tweed River Entrance and Significant Wave Heights March 2019



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4. WAVE CONDITIONS

Wave conditions over the month: Significant wave heights ranged mostly from calm to moderate (0.58 m to 2.27 m), with a peak significant wave height of 2.27 m on 5th March. Wave directions were predominantly from the east.

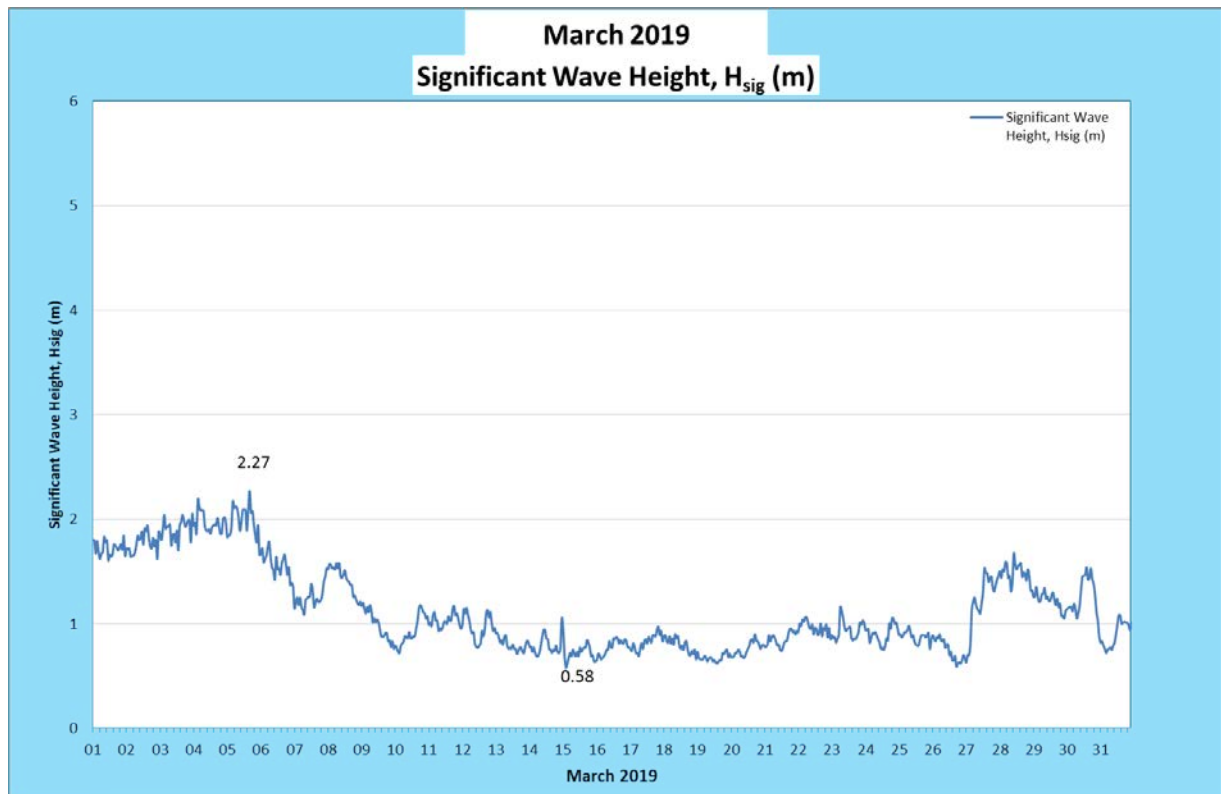
Monthly minimum significant wave height: 0.58 m on 15th March

Monthly maximum significant wave height: 2.27 m on 5th March

Number of days on which waves were below 1.0 m at some point in the day: 21 days

Number of days on which waves were above 2.0 m at some point in the day: 3 days

Note: Significant wave height (H_{sig}) is defined as the average of the highest one-third of waves recorded over a period of approximately 30 minutes

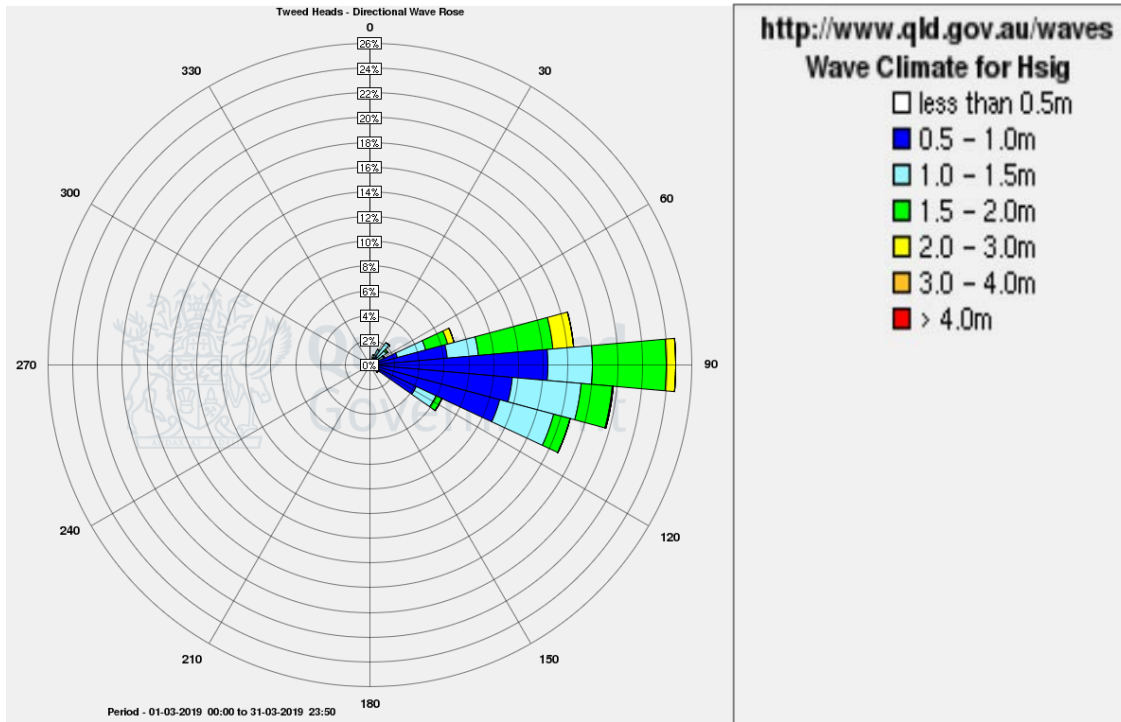


(Source: Tweed Heads Waverider Buoy; Queensland Government)

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

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WAVE DIRECTION



(Source: Tweed Heads Waverider Buoy; Queensland Government)