

TWEED SAND BYPASSING

OVERVIEW

In January 2018:

- 32,027 m³ of sand was pumped to Snapper Rocks East.
- 0 m³ of sand was dredged and placed at Snapper Rocks East.
- 0 m³ of sand was pumped to Duranbah Beach.
- 0 m³ of sand was dredged and placed at Duranbah Beach.
- Wave heights ranged mostly from calm to moderate (0.49 m to 2.94 m), with a maximum significant wave height of 2.94 m on 17th January. Wave directions varied from ENE to SE but mostly from the ESE.
- 3592 vessel crossings were recorded for the month (This is 177% of the January average (2002 – 2018)).
- The estimated amount of sand moving north towards the Tweed River entrance by natural processes was in the order of 58,006 m³ (this is 130% of the January average of 44,644 m³).

1. SAND PUMPING & DREDGING

Sand Delivery January 2018

Pumped:	32,027 m ³
Dredged:	0 m ³
Total:	32,027 m ³

The number of days sand was pumped this month = 17

Sand Delivery January 2018 to December 2018

Pumped:	32,027 m ³
Dredged:	0 m ³
Total:	32,027 m ³

Stage II Sand Delivery April 2000 to January 2018

Pumped:	8,960,180 m ³
Dredged:	2,320,514 m ³ *
Total:	11,280,694 m ³ *

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

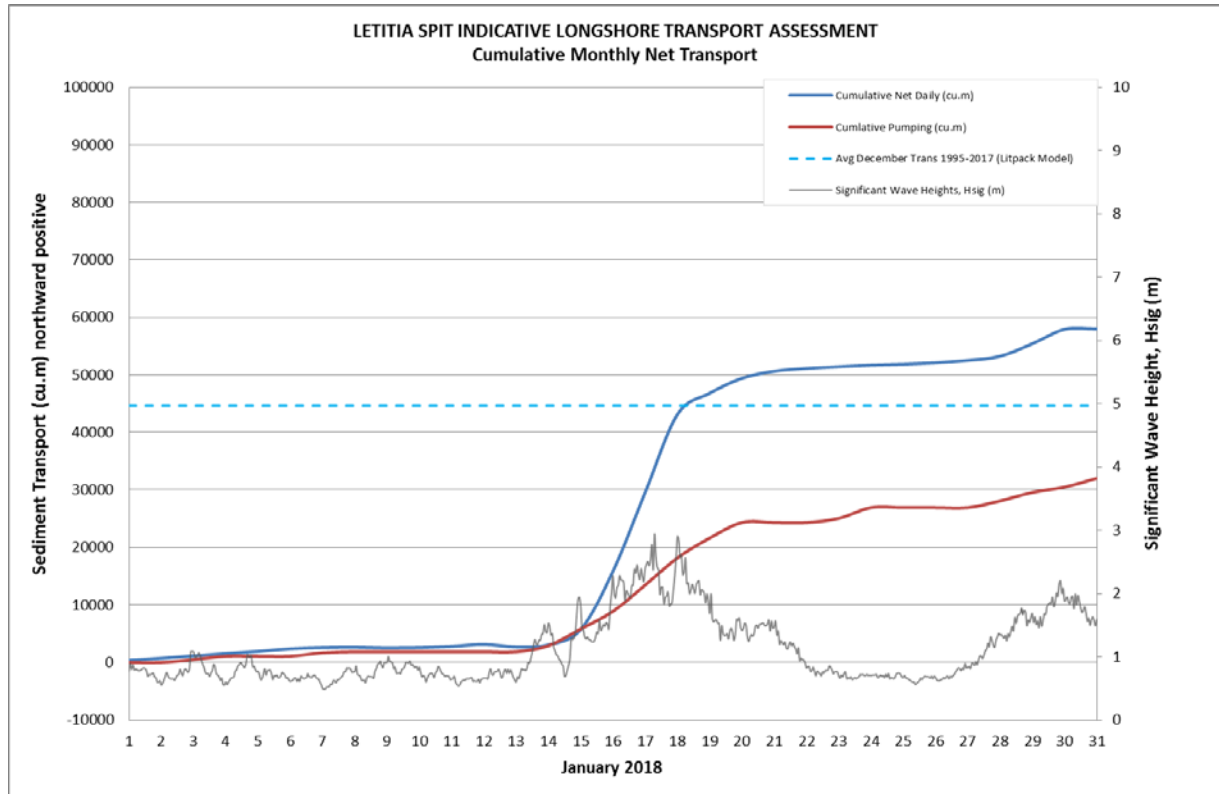
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2. INDICATIVE LONGSHORE TRANSPORT

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

In January 2018 the estimated natural sand transport moving north towards the Tweed River entrance was calculated to be in the order of 58,006 m³.

This result is 130% of the average estimated sand transport quantity of approximately 44,644 m³ for the month of January.



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3. TWEED RIVER ENTRANCE USAGE

Marine Rescue NSW - Monitoring Results (Not including trawlers)

 Weekends and public holidays

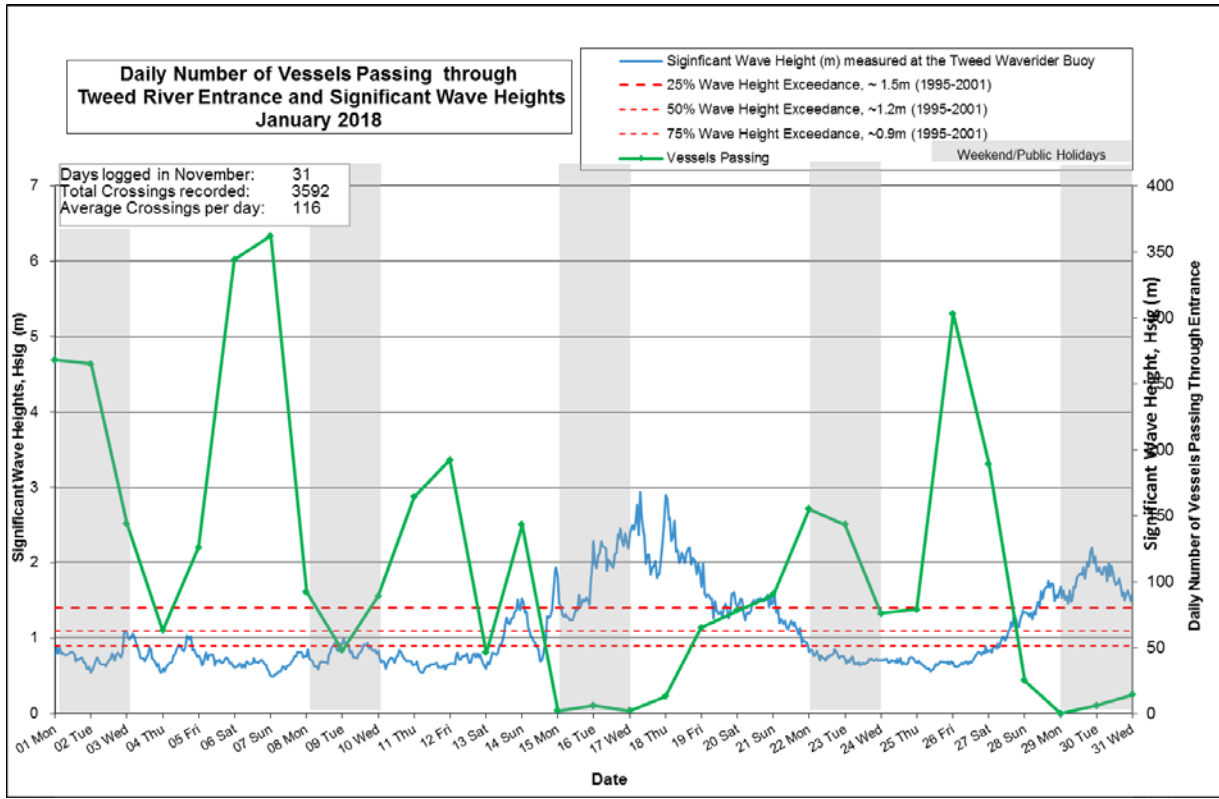
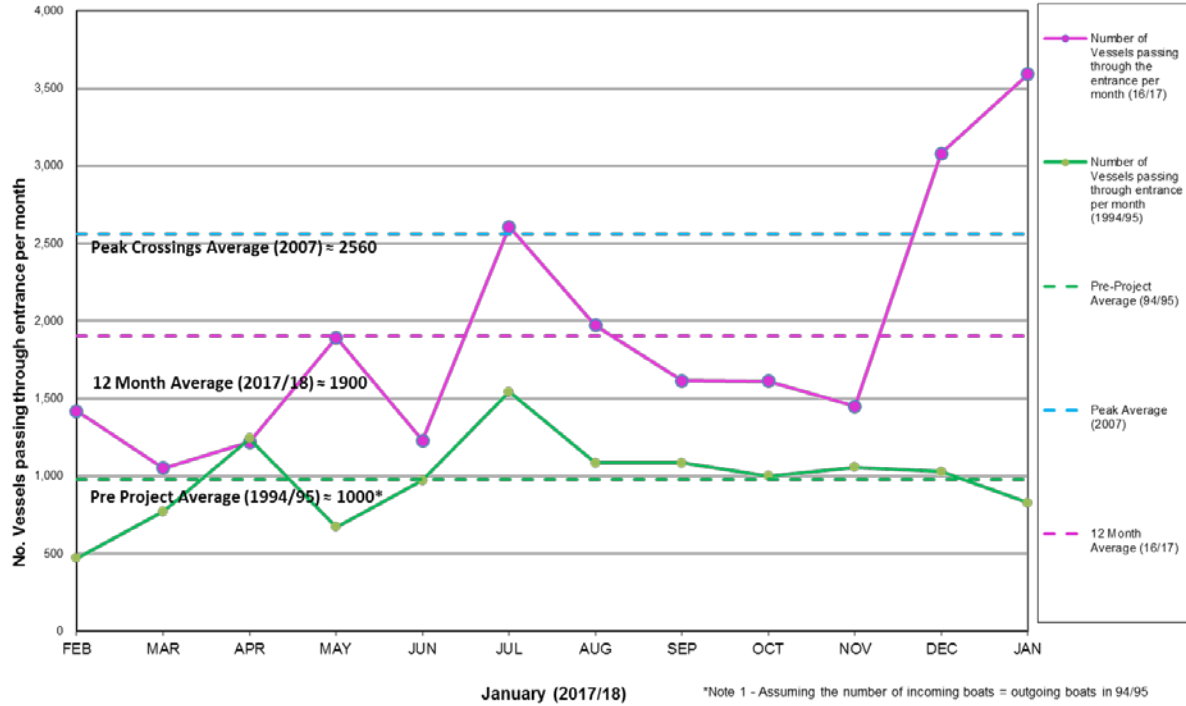
Date	Navigation Rating					Number of Crossings
	Impassable <-----> Good					
	Impassable	Difficulty Encountered	Some Difficulty Encountered	Relatively Good Crossing	Good Conditions	
	1	2	3	4	5	
1 st						268
2 nd						265
3 rd						144
4 th						63
5 th						126
6 th						344
7 th						362
8 th						92
9 th						48
10 th						89
11 th						164
12 th						192
13 th						46
14 th						143
15 th						2
16 th						6
17 th						2
18 th						13
19 th						65
20 th						78
21 st						90
22 nd						155
23 rd						143
24 th						76
25 th						79
26 th						303
27 th						189
28 th						25
29 th						0
30 th						6
31 st						14
					Total:	3592

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 2017/18 compared to 2007 (peak crossings) and 1994/95 (prior to entrance improvements)



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4. WAVE CONDITIONS

Wave conditions over the month: Wave heights ranged mostly from calm to moderate (0.49 m to 2.94 m), with a maximum significant wave height of 2.94 m on 17th January. Wave directions varied from ENE to SE but mostly from the ESE.

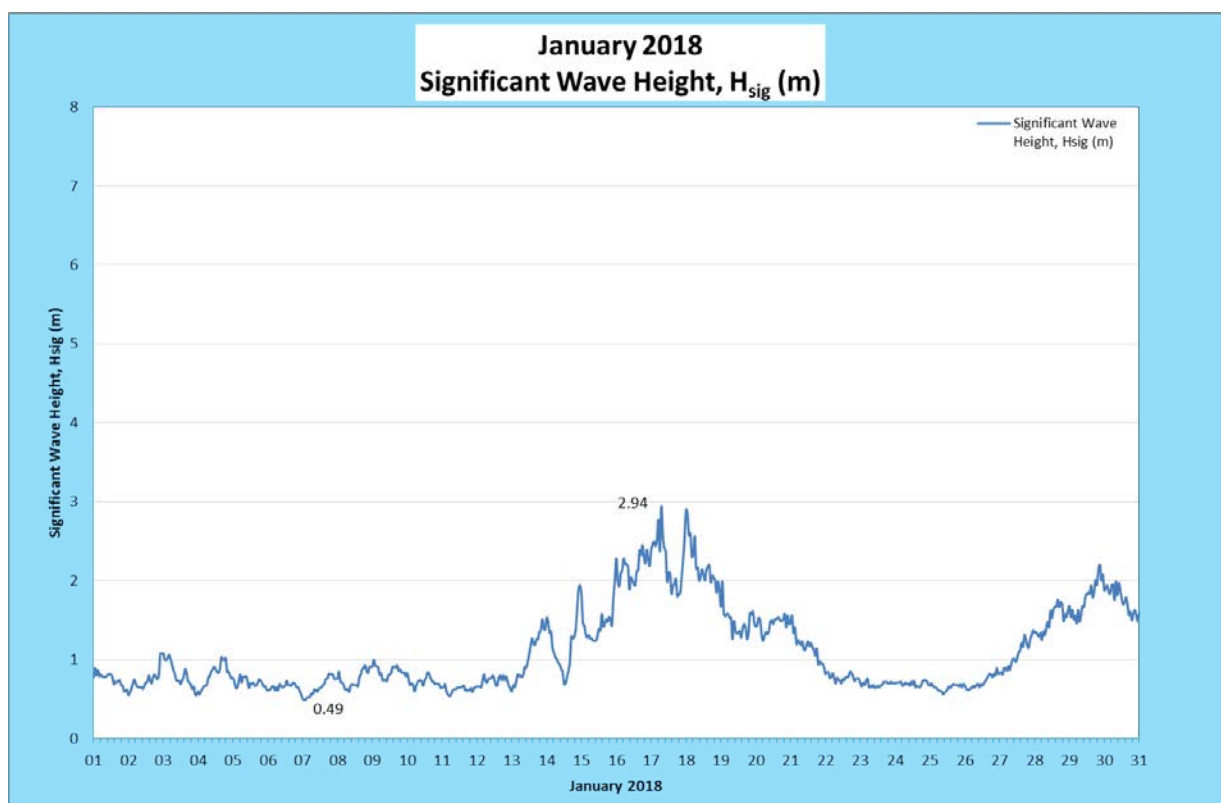
Monthly minimum significant wave height: 0.49 m on 7th January

Monthly maximum significant wave height: 2.94 m on 17th January

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: 6 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

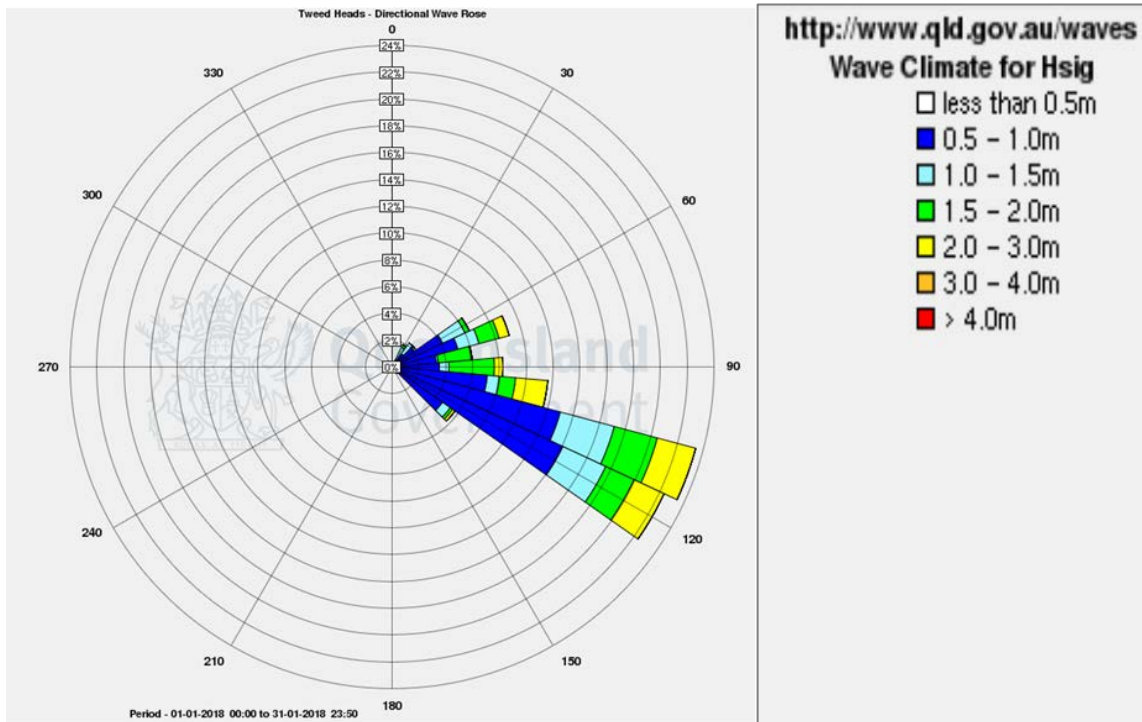


(Source: Tweed Heads Waverider Buoy; Queensland Government)

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)