

TWEED SAND BYPASSING

OVERVIEW

In November 2017:

- 48,352 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 (0.43 m to 1.76 m), with a maximum significant wave height of 1.76 m on 20th November. Wave directions varied from ENE to SE but mostly from the E.
- 1450 vessel crossings were recorded for the month (This is 34% of the November average (2002 – 2017)).
- The estimated amount of sand moving north towards the Tweed River entrance by natural processes was in the order of 52,879 m³ (this is 171% of the November average of 30,875 m³).

1. SAND PUMPING & DREDGING

Sand Delivery October 2017

Pumped:	48,352 m ³
Dredged:	0 m ³
Total:	48,352 m ³

The number of days sand was pumped this month = 28

Sand Delivery January 2017 to October 2017

Pumped:	388,521 m ³
Dredged:	216,604 m ³
Total:	605,125 m ³

Stage II Sand Delivery April 2000 to October 2017

Pumped:	8,911,150 m ³
Dredged:	2,320,514 m ³ *
Total:	11,231,664 m ³ *

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

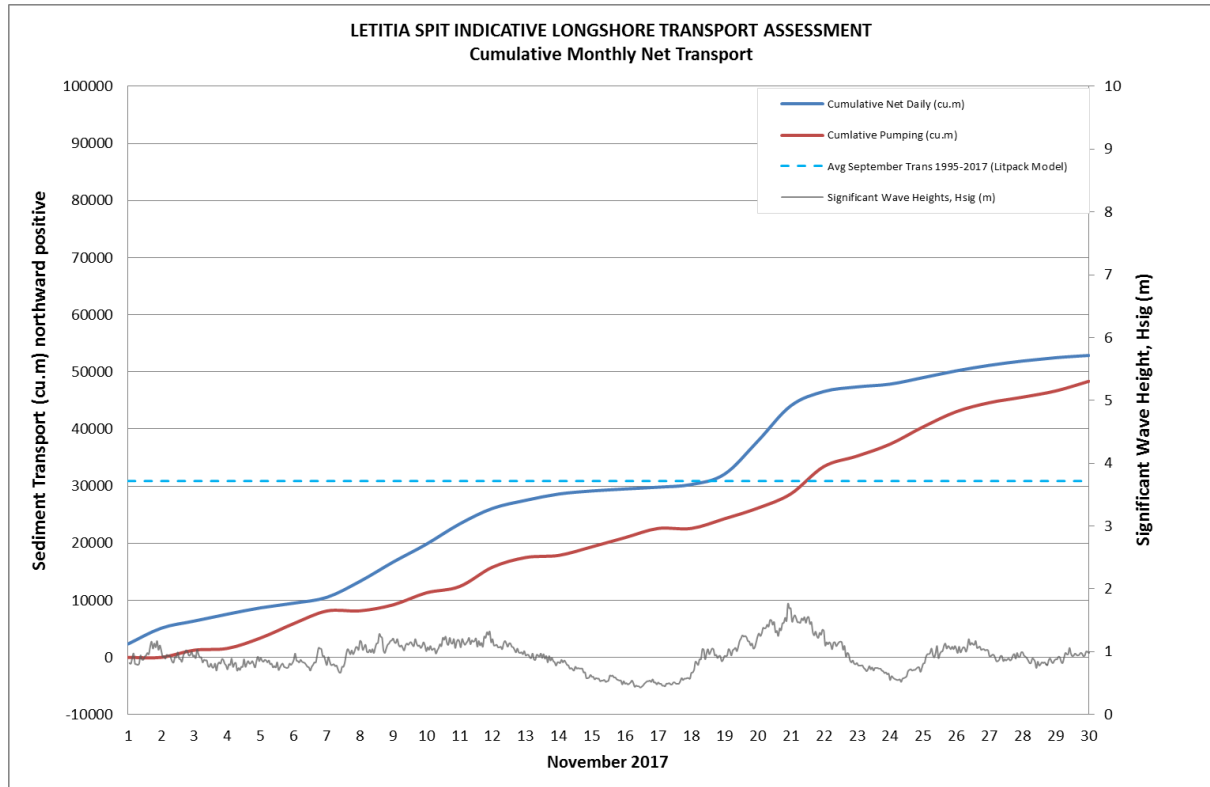
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2. INDICATIVE LONGSHORE TRANSPORT

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

In November 2017 the estimated natural sand transport moving north towards the Tweed River entrance was calculated to be in the order of 52,879 m³.


This result is 171% of the average estimated sand transport quantity of approximately 30,875 m³ for the month of November.



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3. TWEED RIVER ENTRANCE USAGE

Marine Rescue NSW - Monitoring Results (Not including trawlers)

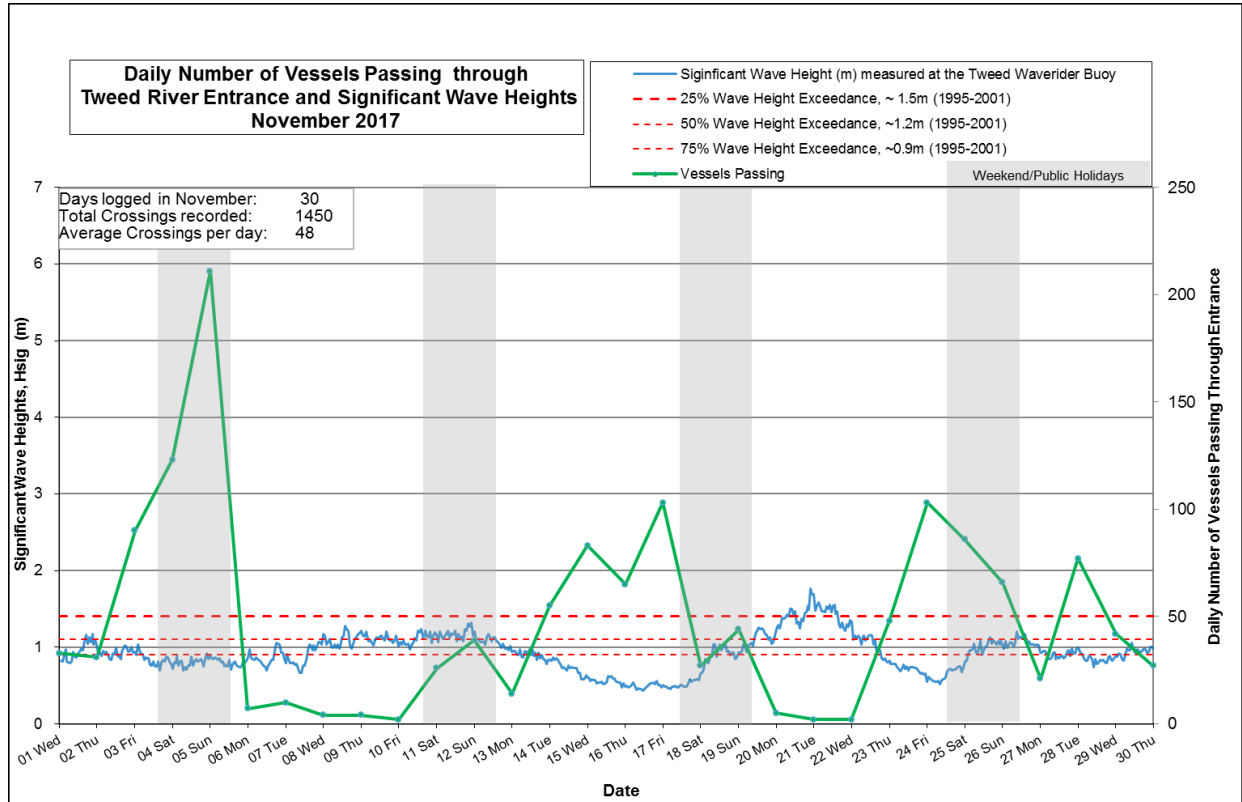
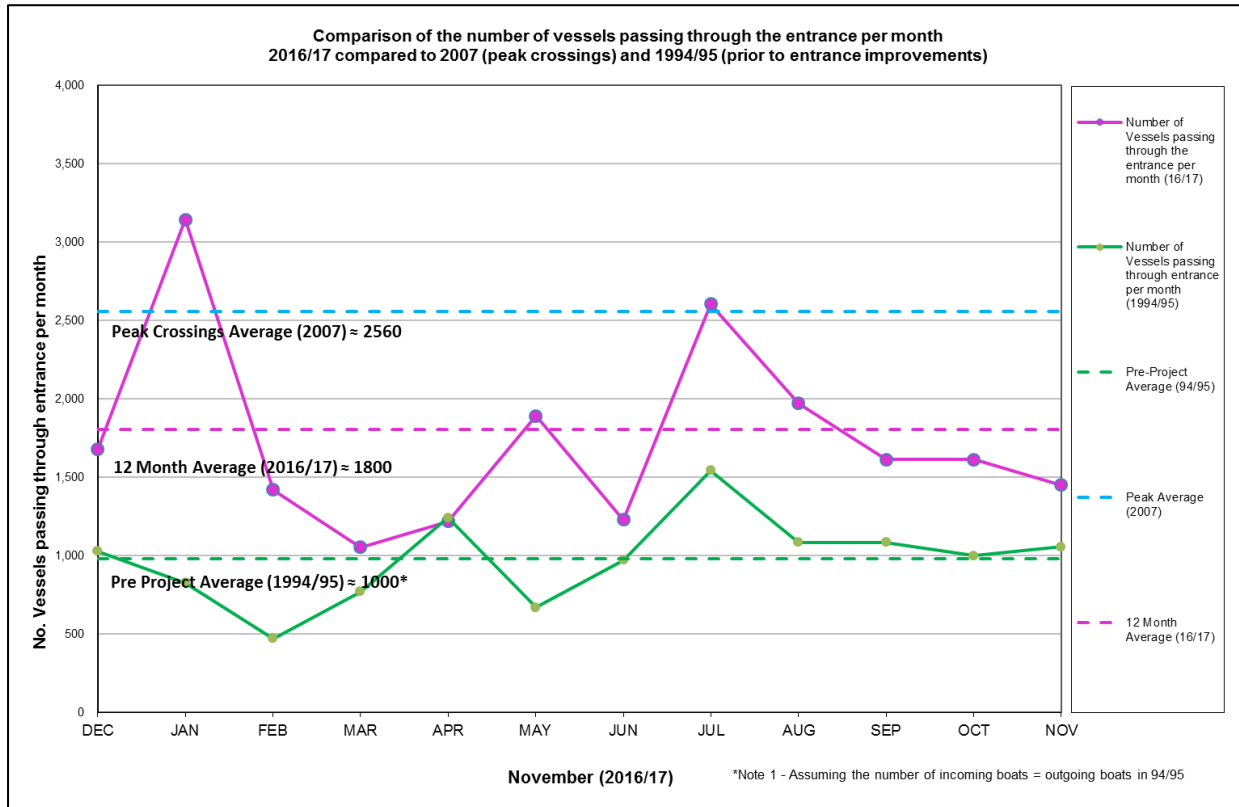
 Weekends and public holidays

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						33
2 nd						31
3 rd						90
4 th						123
5 th						211
6 th						7
7 th						10
8 th						4
9 th						4
10 th						2
11 th						26
12 th						39
13 th						14
14 th						55
15 th						83
16 th						65
17 th						103
18 th						27
19 th						44
20 th						5
21 st						2
22 nd						2
23 rd						48
24 th						103
25 th						86
26 th						66
27 th						21
28 th						77
29 th						42
30 th						27
					Total:	1450

Source: Marine Rescue NSW, Point Danger

* Total does not include trawlers

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4. WAVE CONDITIONS

Wave conditions over the month: Wave heights ranged mostly from calm to moderate (0.43 m to 1.76 m), with a maximum significant wave height of 1.76 m on 20th November. Wave directions varied from ENE to SE but mostly from the E.

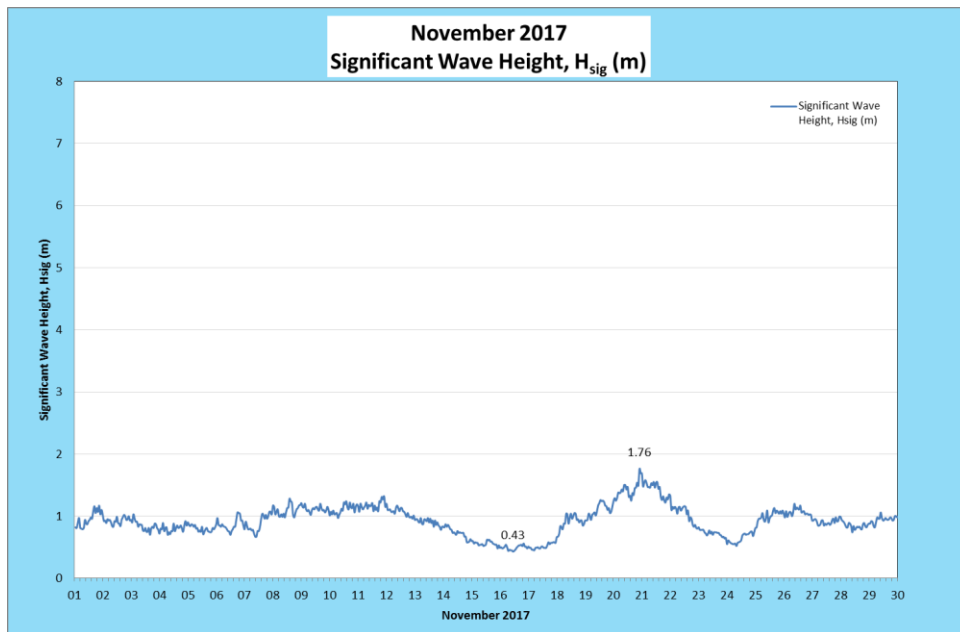
Monthly minimum significant wave height: 0.43 m on 16th November

Monthly maximum significant wave height: 1.76 m on 20th November

Number of days on which waves were below 1.0 m at some point in the day: 26 days

Number of days on which waves were above 2.0 m at some point in the day: 0 days

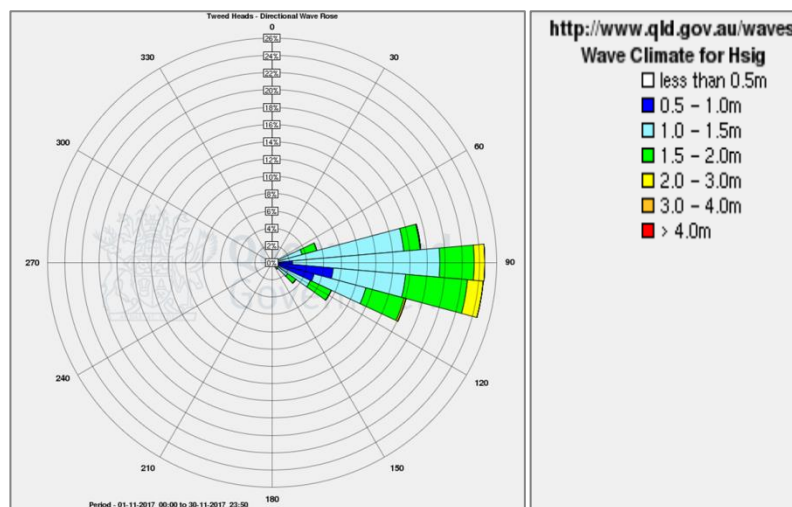
Note: Significant wave height (H_{sig}) is defined as the average of the highest one-third of waves recorded over a period of approximately 30 minutes



(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>

WAVE DIRECTION



(Source: Tweed Heads Waverider Buoy; Queensland Government)