

TWEED SAND BYPASSING

OVERVIEW

In September 2017:

- 20,168 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 (0.31 m to 1.37 m), with a maximum significant wave height of 1.37 m on 1st September. Wave directions varied from NNE to SE but mostly from the ESE.
- 1614 vessel crossings were recorded for the month (This is 95% of the September average (2002 – 2017)).
- The estimated amount of sand moving north towards the Tweed River entrance by natural processes was in the order of 19,137 m³ (this is 69% of the August average of 27,682 m³).

1. SAND PUMPING & DREDGING

Sand Delivery September 2017

Pumped:	20,168 m ³
Dredged:	0 m ³
Total:	20,168 m ³

The number of days sand was pumped this month = 14

Sand Delivery January 2017 to September 2017

Pumped:	326,495 m ³
Dredged:	216,604 m ³
Total:	543,099 m ³

Stage II Sand Delivery April 2000 to September 2017

Pumped:	8,849,124 m ³
Dredged:	2,320,514 m ³ *
Total:	11,169,638 m ³ *

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

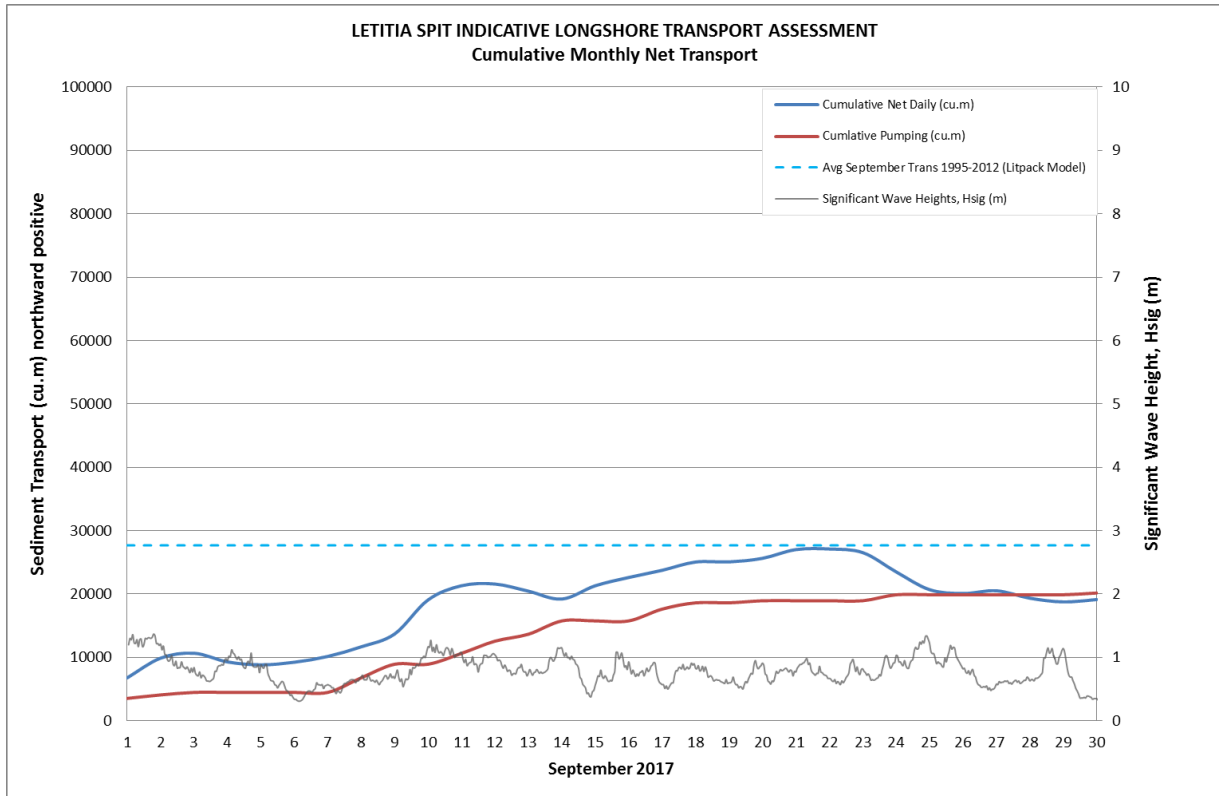
TWEED SAND BYPASSING

2. INDICATIVE LONGSHORE TRANSPORT

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

In September 2017 the estimated natural sand transport moving north towards the Tweed River entrance was calculated to be in the order of 19,137 m³.


This result is 69% of the average estimated sand transport quantity of approximately 27,682 m³ for the month of September.



TWEED SAND BYPASSING

3. TWEED RIVER ENTRANCE USAGE

Marine Rescue NSW - Monitoring Results (Not including trawlers)

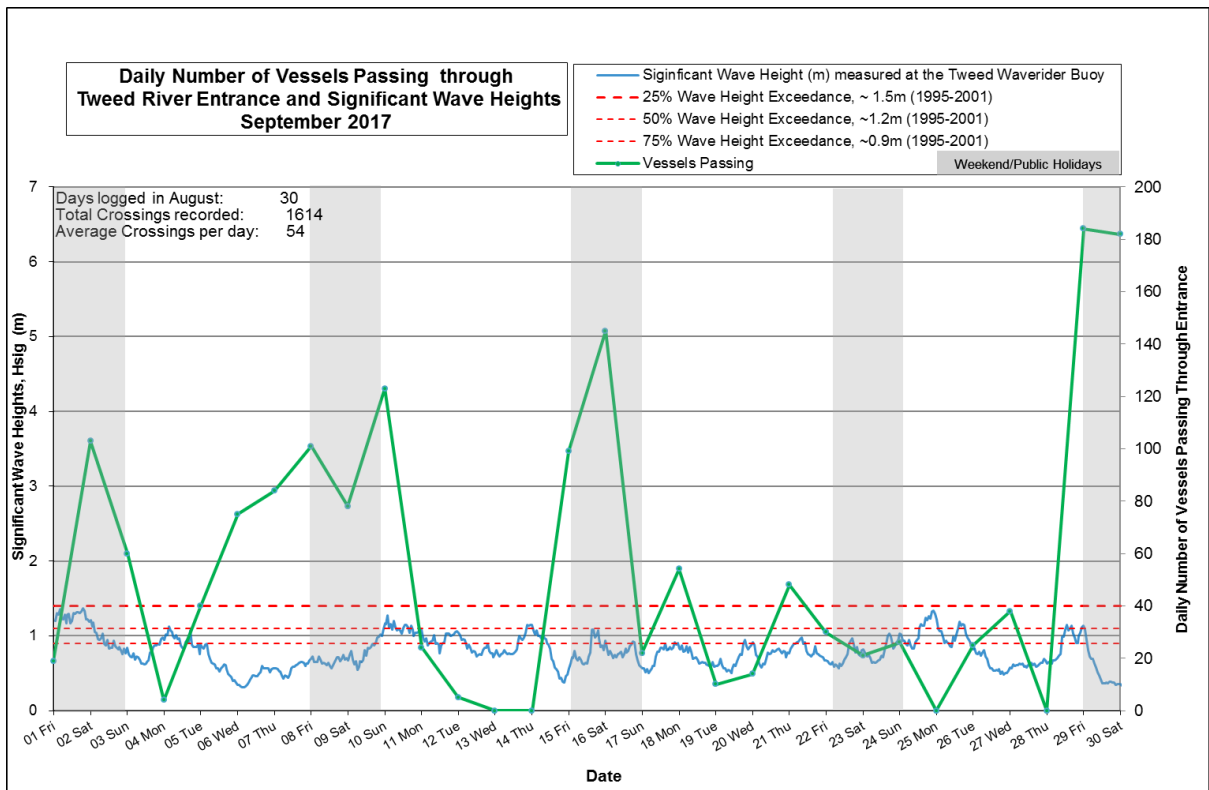
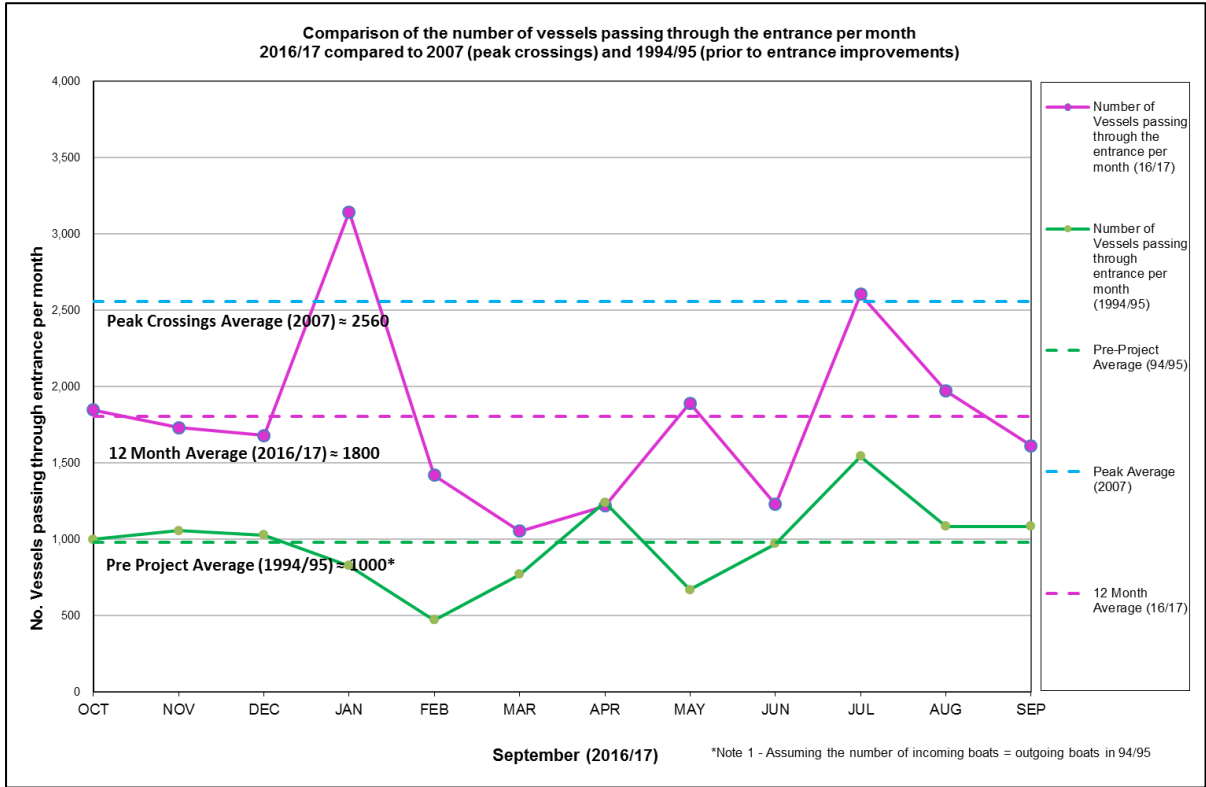
 Weekends and public holidays

Date	Navigation Rating Impassable-----Good					Number of Crossings	
	Impassable -1	Difficulty Encountered -2	Some Difficulty Encountered -3	Relatively Good Crossing -4	Good Conditions -5		
1 st						19	
2 nd						103	
3 rd						60	
4 th						4	
5 th						40	
6 th						75	
7 th						84	
8 th						101	
9 th						78	
10 th						123	
11 th						24	
12 th						5	
13 th						0	
14 th						0	
15 th						99	
16 th						145	
17 th						22	
18 th						54	
19 th						10	
20 th						14	
21 st						48	
22 nd						30	
23 rd						21	
24 th						26	
25 th						0	
26 th						25	
27 th						38	
28 th						0	
29 th						184	
30 th						182	
						*Total	1614

Source: Marine Rescue NSW, Point Danger

* Total does not include trawlers

TWEED SAND BYPASSING



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4. WAVE CONDITIONS

Wave conditions over the month: Wave heights ranged mostly from calm to moderate (0.31 m to 1.37 m), with a maximum significant wave height of 1.37 m on 1st September. Wave directions varied from NNE to SE but mostly from the ESE.

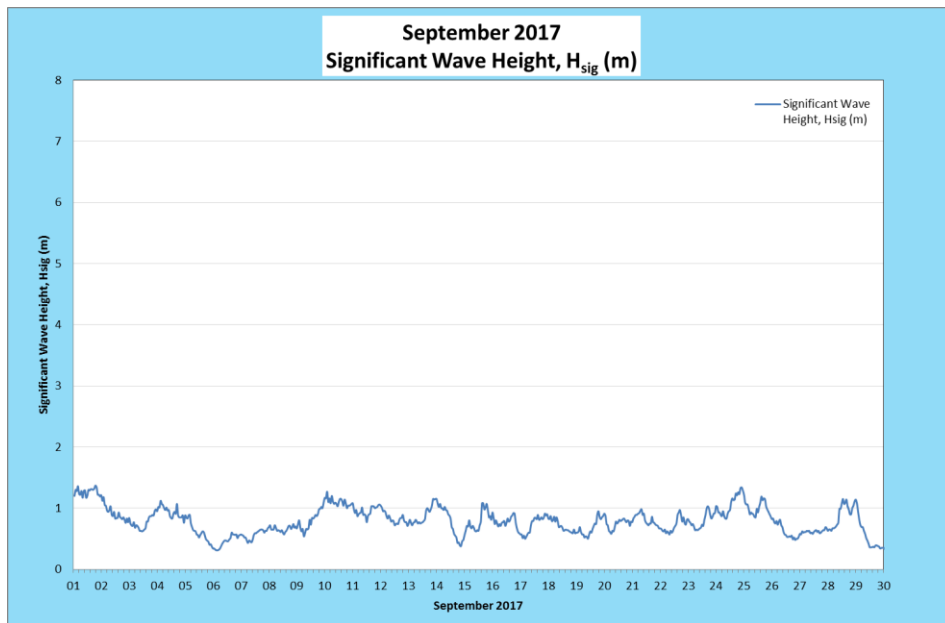
Monthly minimum significant wave height: 0.31 m on 6th September

Monthly maximum significant wave height: 1.37 m on 1st September

Number of days on which waves were below 1.0 m at some point in the day: 28 days

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

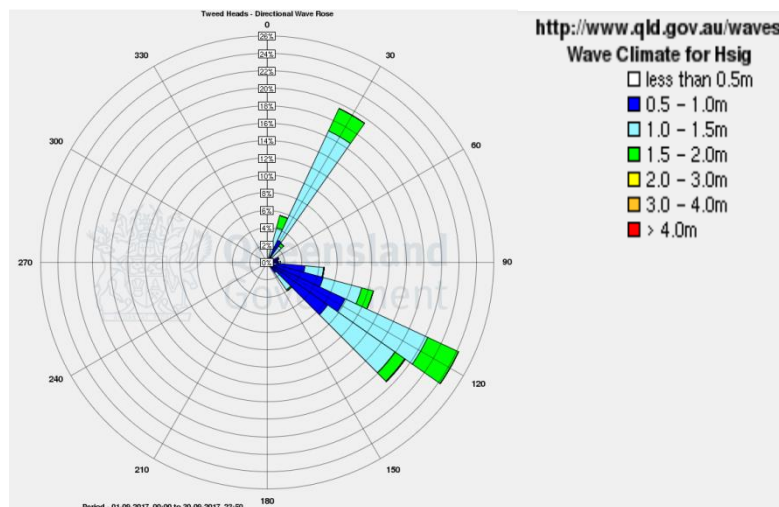
Note: Significant wave height (H_{sig}) is defined as the average of the highest one-third of waves recorded over a period of approximately 30 minutes.



(Source: Tweed Wave 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 Wave Buoy; Queensland Government)