

TWEED SAND BYPASSING

OVERVIEW

In July 2017:

- 24,373 m³ of sand was pumped to Snapper Rocks East.
- 4,013 m³ of sand was dredged and placed at Snapper Rocks East.
- 2,610 m³ of sand was pumped to Duranbah Beach.
- 22,154 m³ of sand was dredged and placed at Duranbah Beach.
- Wave heights ranged mostly from calm to moderate (0.33 m to 1.93 m), with a maximum significant wave height of 1.93 m on 23rd July. Wave directions varied from ENE to SE but mostly from the ESE.
- 2606 vessel crossings were recorded for the month (This is 128% of the July average).
- The estimated amount of sand moving north towards the Tweed River entrance by natural processes was in the order of 37,513 m³ (this is 59% of the July average of 63,761 m³).

1. SAND PUMPING & DREDGING

Sand Delivery July 2017

Pumped:	26,983 m ³
Dredged:	26,167 m ³
Total:	53,150 m ³

The number of days sand was pumped this month = 21

Sand Delivery January 2017 to July 2017

Pumped:	276,872 m ³
Dredged:	173,965 m ³
Total:	450,837 m ³

Stage II Sand Delivery April 2000 to July 2017

Pumped:	8,799,501 m ³
Dredged:	2,277,876 m ³ *
Total:	11,077,377 m ³ *

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

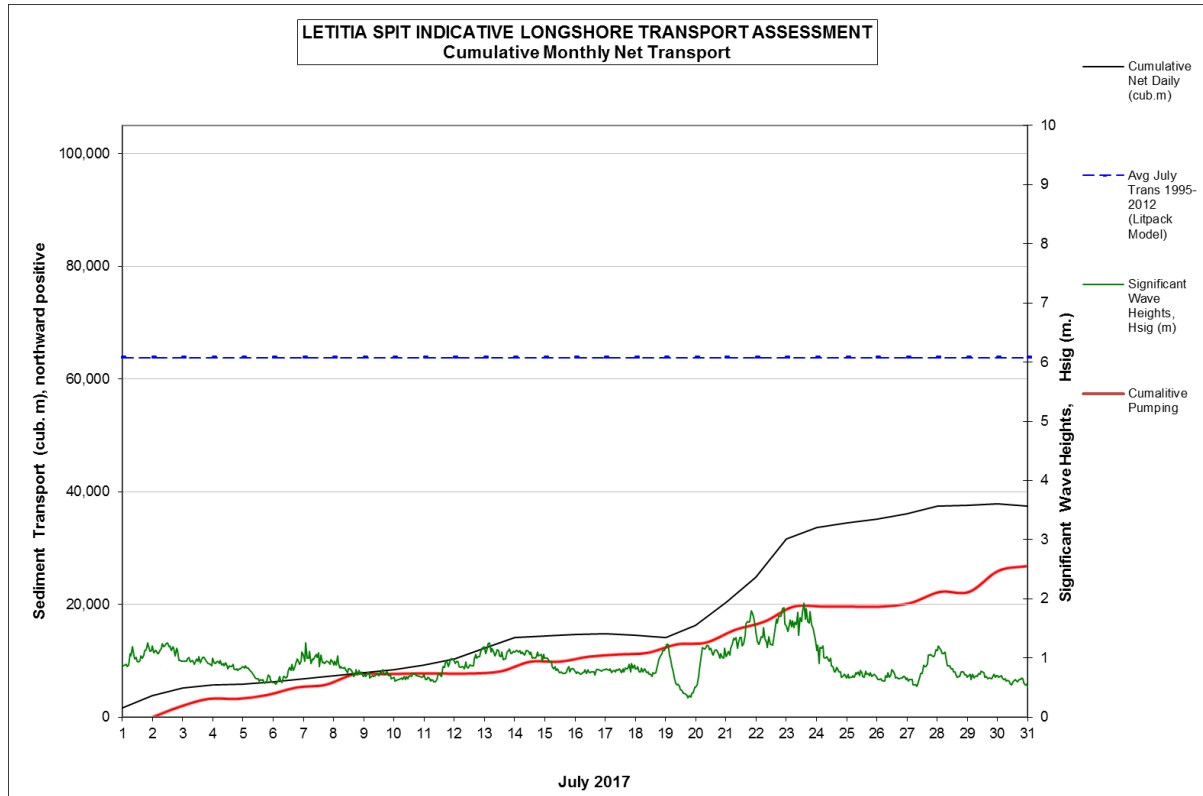
TWEED SAND BYPASSING

2. INDICATIVE LONGSHORE TRANSPORT

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

In July 2017 the estimated natural sand transport moving north towards the Tweed River entrance was calculated to be in the order of 37,513 m³.


This result is 59% of the average estimated sand transport quantity of approximately 63,761 m³ for the month of July.



TWEED SAND BYPASSING

3. TWEED RIVER ENTRANCE USAGE

Marine Rescue NSW - Monitoring Results (Not including trawlers)

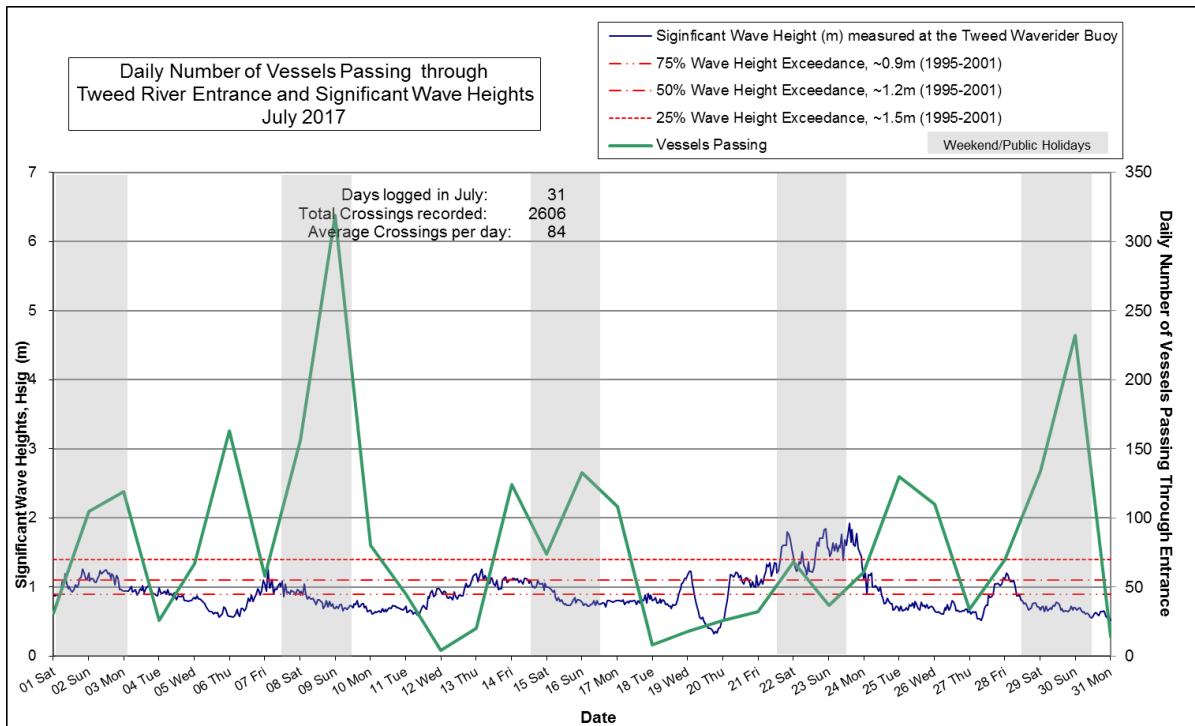
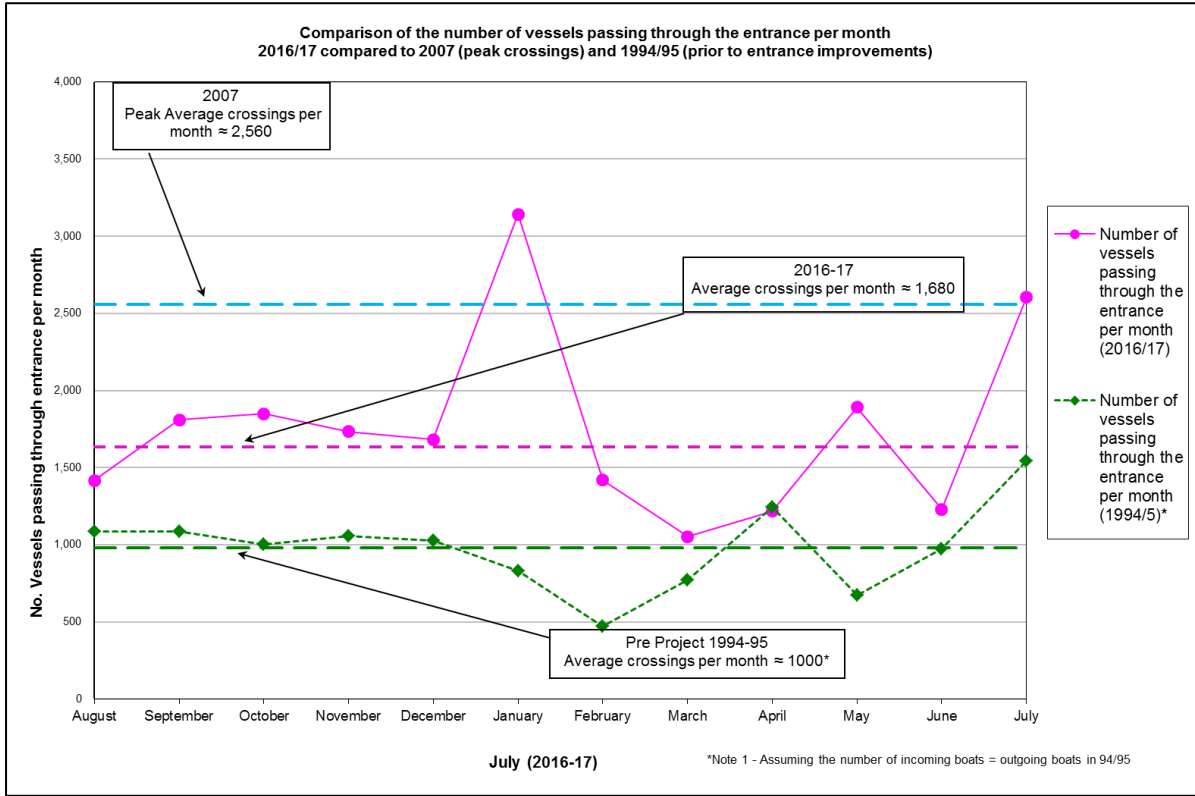
 Weekends and public holidays

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						31	
2 nd						105	
3 rd						119	
4 th						26	
5 th						67	
6 th						163	
7 th						58	
8 th						156	
9 th						319	
10 th						80	
11 th						45	
12 th						4	
13 th						20	
14 th						124	
15 th						74	
16 th						133	
17 th						108	
18 th						8	
19 th						18	
20 th						26	
21 st						32	
22 nd						68	
23 rd						37	
24 th						61	
25 th						130	
26 th						110	
27 th						34	
28 th						70	
29 th						134	
30 th						232	
31 st						14	
						*Total	2606

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 (0.33 m to 1.93 m), with a maximum significant wave height of 1.93 m on 23rd July. Wave directions varied from ENE to SE but mostly from the ESE.

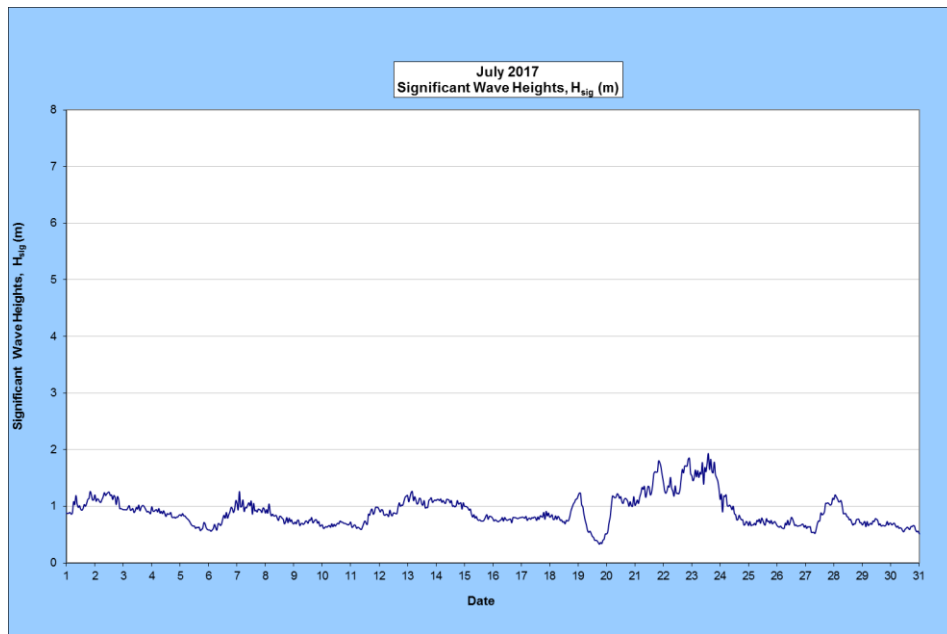
Monthly minimum significant wave height: 0.33 m on 19th July

Monthly maximum significant wave height: 1.93 m on 23rd July

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

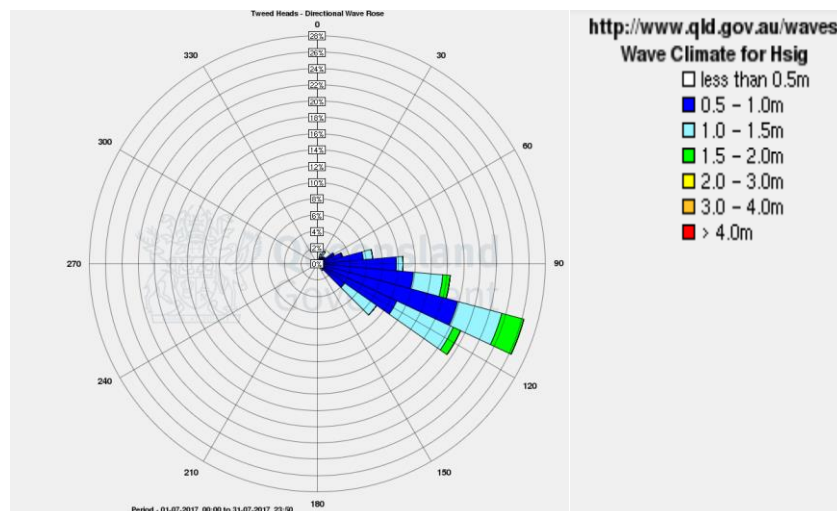
Note: Significant wave height (H_{sig}) is defined as the average of the highest one-third of waves recorded over a period of approximately 30 minutes.



(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)