TWEEDSAND BYPASSING

OVERVIEW

In June 2017:

- 49,521 m^3 of sand was pumped to Snapper Rocks East.
- 22,897 m^3 of sand was dredged and placed at Snapper Rocks East.
- 19,083 m^3 of sand was pumped to Duranbah Beach.
- 31,547 m^3 of sand was dredged and placed at Duranbah Beach.
- Wave heights ranged from calm to minor storm (0.59 m to 3.28 m) with a maximum significant wave height of 3.28 m on 13th June. Wave directions varied from E by ENE to SE but mostly from the ESE.
- 1230 vessel crossings were recorded for the month (This is 78% of the June average).
- The estimated amount of sand moving north towards the Tweed River entrance by natural processes was in the order of 104,729 m^3 (this is 183% of the June average of 57,048 m^3).

1. SAND PUMPING & DREDGING

Sand Delivery June 2017

Pumped:	68,604 m^3
Dredged:	54,444 m^3
Total:	123,048 m^3

The number of days sand was pumped this month = 26

Sand Delivery January 2017 to June 2017

Pumped:	249,889 m^3
Dredged:	147,798 m^3
Total:	397,687 m^3

Stage II Sand Delivery April 2000 to June 2017

Pumped:	8,772,518 m^3
Dredged:	2,251,709 m^3 *
Total:	11,024,227 m^3 *

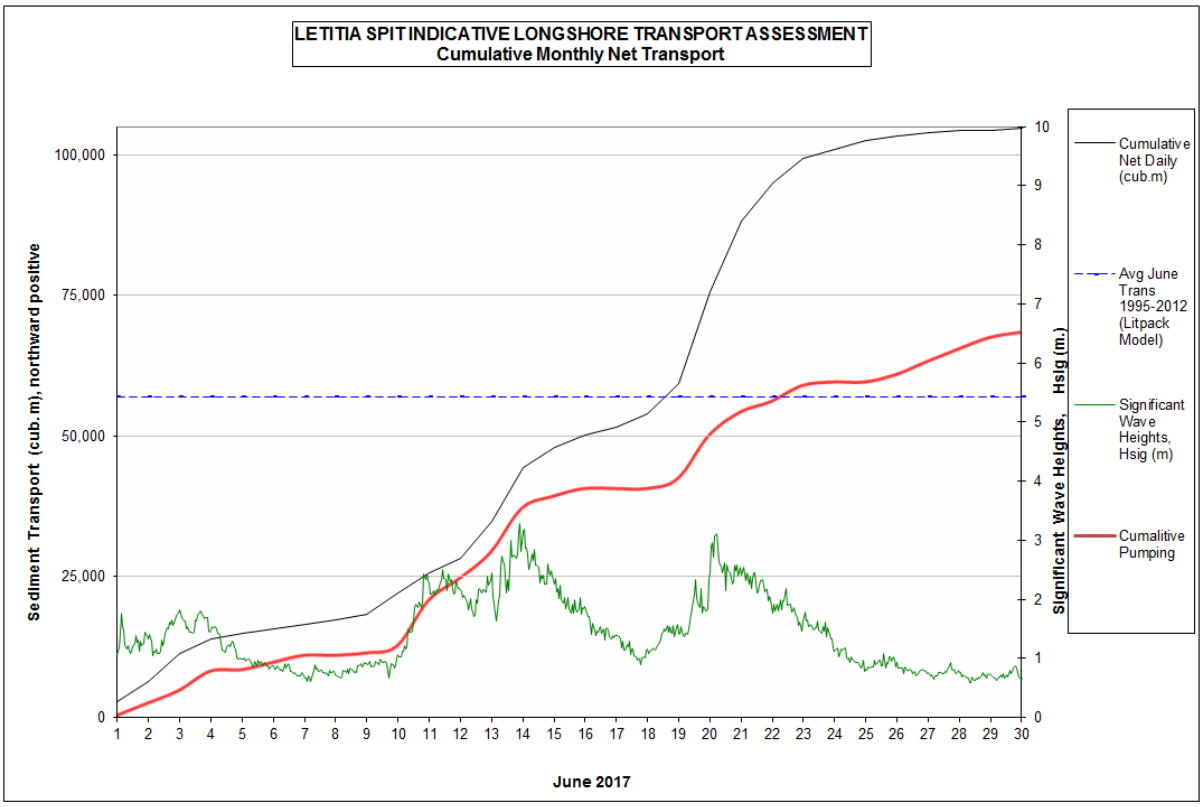
* This Includes 22,870 m^3 of sand delivered by dredge to Palm Beach between June and September 2005

2. INDICATIVE LONGSHORE TRANSPORT

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

In June 2017 the estimated natural sand transport moving north towards the Tweed River entrance was calculated to be in the order of 104,729 m^3.

This result is 183% of the average estimated sand transport quantity of approximately 57,048 m^3 for the month of June.



TWEEDSAND BYPASSING

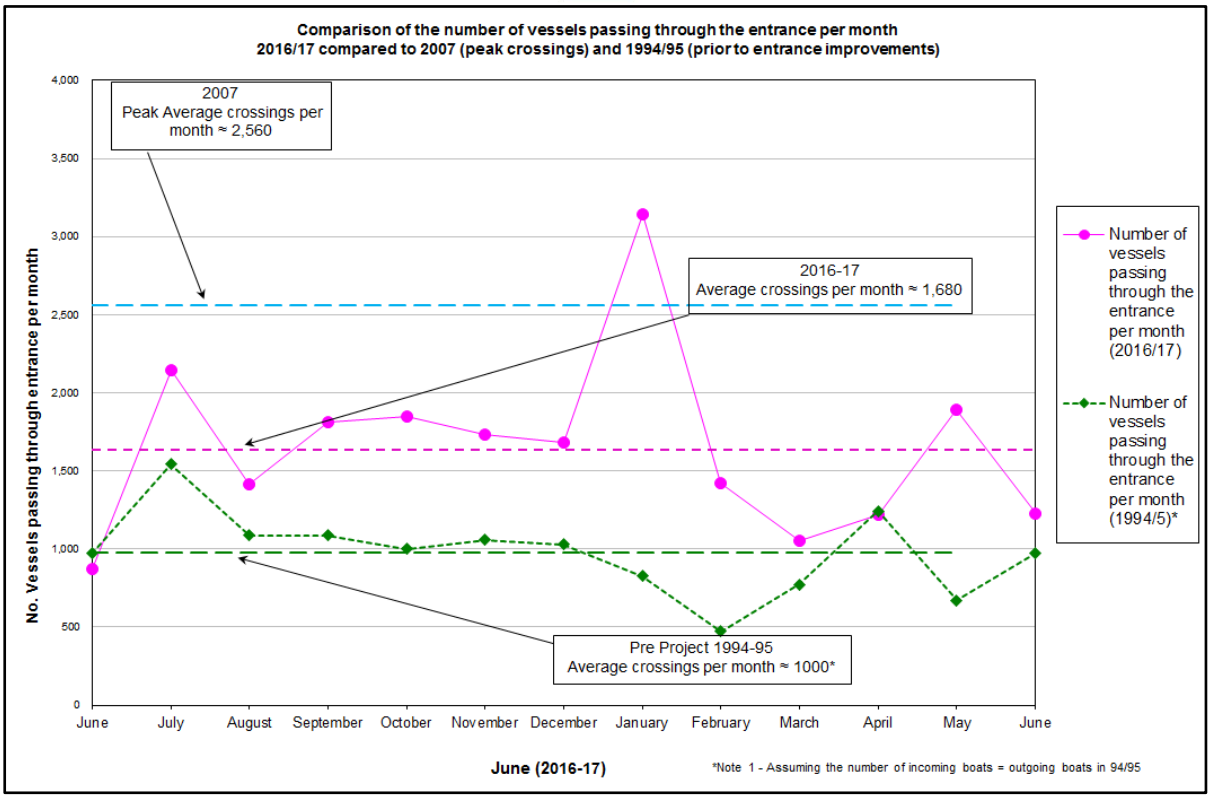
3. TWEED RIVER ENTRANCE USAGE

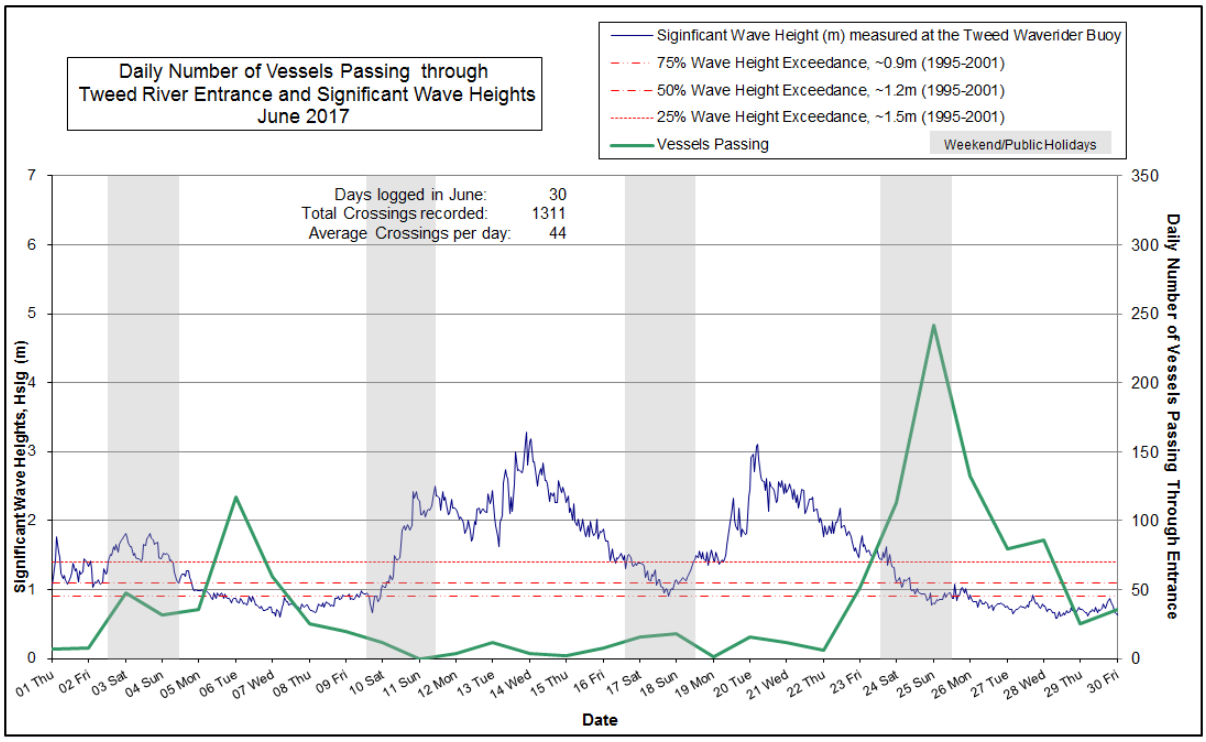
Marine Rescue NSW - Monitoring Results (Not including trawlers)

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)	
1st						7
2nd						8
3rd						48
4th						32
5th						36
6th						117
7th						60
8th						25
9th						20
10th						12
11th						0
12th						4
13th						12
14th						4
15th						2
16th						8
17th						16
18th						18
19th						1
20th						16
21st						12
22nd						6
23rd						52
24th						113
25th						242
26th						132
27th						80
28th						86
29th						25
30th						36
					Total	1230

Source: *Marine Rescue NSW, Point Danger*


Comparison of the number of vessels passing through the entrance per month
2016/17 compared to 2007 (peak crossings) and 1994/95 (prior to entrance improvements)
2007
Peak Average crossings per month ≈ 2,560
2016-17
Average crossings per month ≈ 1,680
Pre Project 1994-95
Average crossings per month ≈ 1000*
No. Vessels passing through entrance per month
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
June
July
August
September
October
November
December
January
February
March
April
May
June
June (2016-17)
Number of vessels passing through the entrance per month (2016/17)
Number of vessels passing through the entrance per month (1994/5)*
*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 June 2017
Siginficant Wave Height (m) measured at the Tweed Waverider Buoy
75% Wave Height Exceedance, ~0.9m (1995-2001)
50% Wave Height Exceedance, ~1.2m (1995-2001)
25% Wave Height Exceedance, ~1.5m (1995-2001)
Vessels Passing
Weekend/Public Holidays
Days logged in June: 30
Total Crossings recorded: 1311
Average Crossings per day: 44
Significant Wave Heights, Hsig (m)
Daily Number of Vessels Passing Through Entrance
Date

4. WAVE CONDITIONS

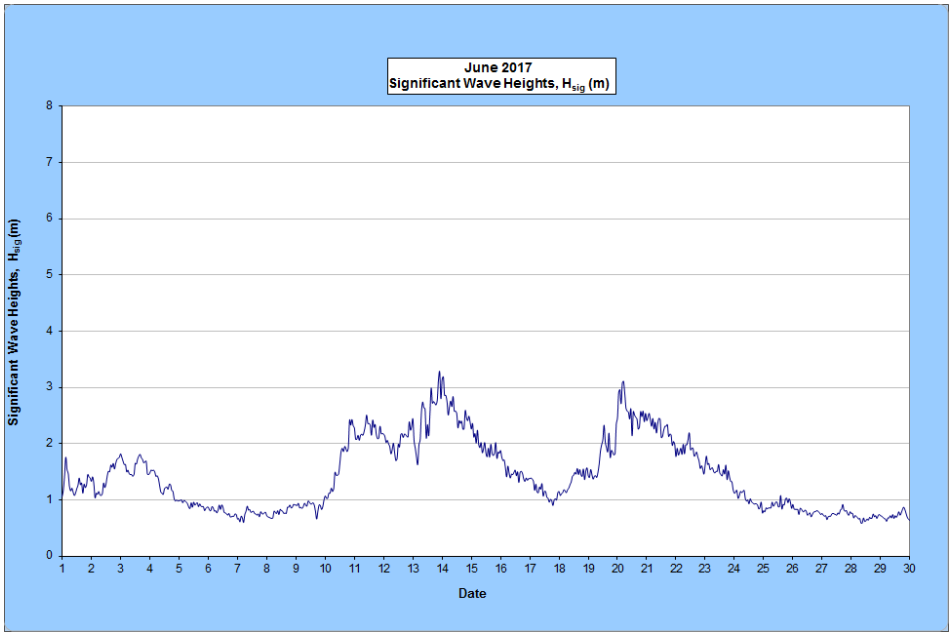
Wave conditions over the month: Wave heights ranged mostly from calm to minor storm (0.59 to 3.28 m), with a maximum significant wave height of 3.28 m on 13th June. Wave directions varied from E by ENE to SE but mostly from the ESE.

Monthly minimum significant wave height: 0.59 m on 28th June
Monthly maximum significant wave height: 3.28 m on 13th June

Number of days on which waves were below 1.0 m at some point in the day: 14 days

Number of days on which waves were above 2.0 m at some point in the day: 10 days

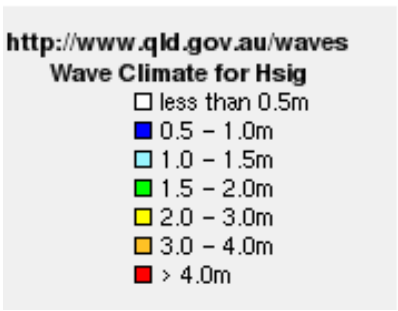
Note: Significant wave height (H_{sig}) is defined as the average of the highest one-third of waves recorded over a period of approximately 30 minutes.



(***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: *Queensland Government*