

TRESBP ENVIRONMENTAL MONITORING SUMMARY

NOVEMBER 2014

OVERVIEW

In November, 2014:

- 14,325 m³ of sand was pumped to Snapper Rocks East and 1,949 m³ of sand pumped to Duranbah
- There were 3 media articles relating to the project area. Details are given in Section 3.
- Sea conditions were calm to average (significant wave heights 0.7 to 1.6 m) with no significant sea events. Wave directions varied from NNE to SE.
- 1081 vessel crossings were recorded for the month (this is about 35% less than the November) average.
- The estimated amount of sand moving north towards the Tweed River Entrance by natural processes was in the order of 10,000 m³ (this is about 30% of the November average).

1. SAND PUMPING & DREDGING

Sand Delivery November 2014

Pumped:	16,274 m ³
Dredged:	0 m ³
Total:	16,274 m ³

The number of days sand was pumped this month = 15

Sand Delivery January 2014 to November 2014

Pumped:	436,573 m ³
Dredged:	0 m ³
Total:	436,573 m ³

Stage II Sand Delivery April 2000 to November 2014

Pumped:	7,521,455 m ³
Dredged:	2,061,972 m ³ *
Total:	9,583,427 m ³ *

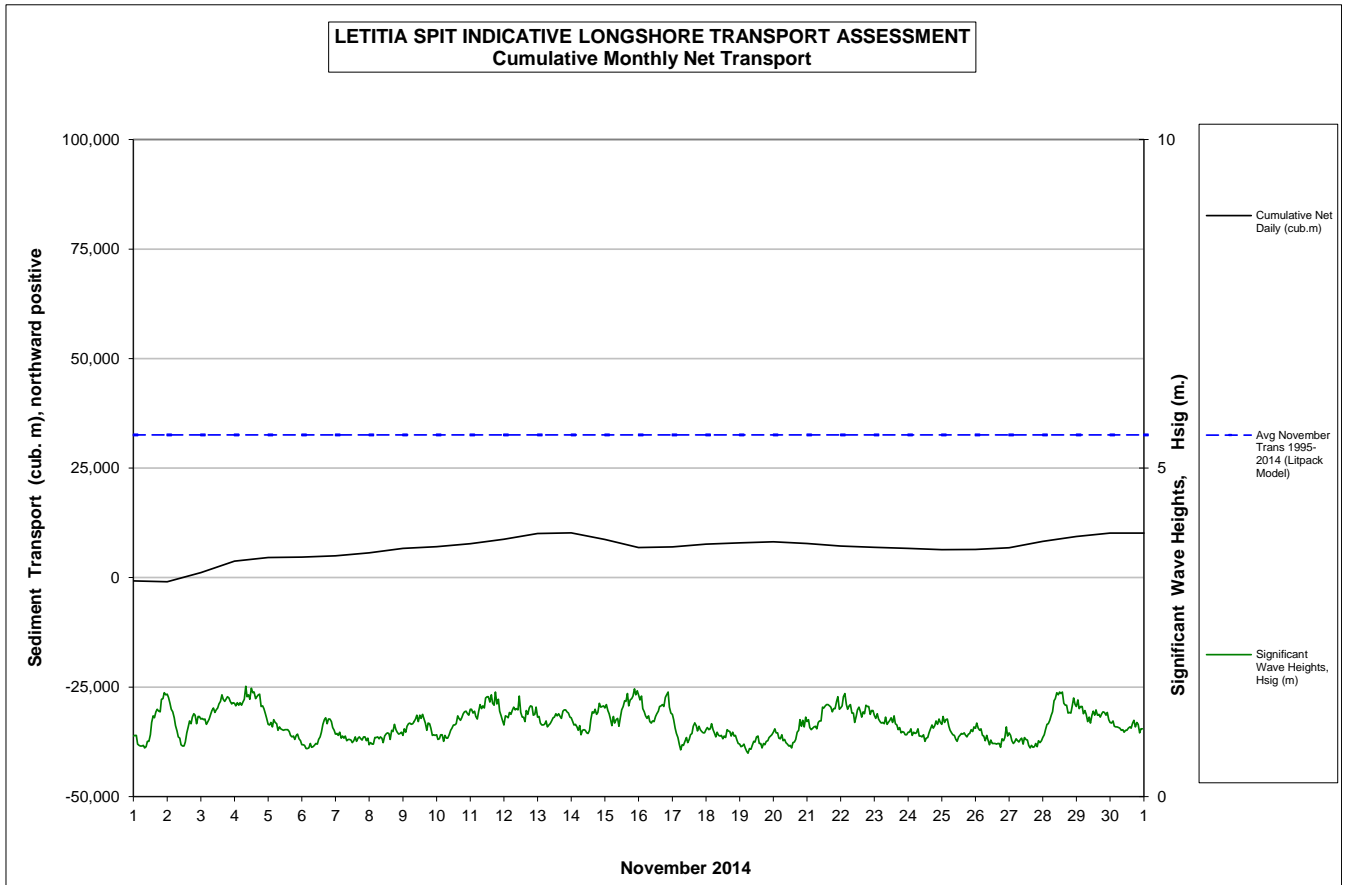
* This Includes 22,870 m³ of sand delivered by dredge to Palm Beach between June and September 2005

2. INDICATIVE LONGSHORE TRANSPORT

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

In November 2014 the estimated natural sand transport moving North towards the Tweed River entrance was calculated to be in the order of 10,000 m³.

This result is about 30% of the average estimated sand transport quantity of approximately 32,500 m³ for the month of November.



3. MEDIA COVERAGE

Gold Coast Bulletin published a media article on the 12th reporting that the Kirra beach was back to 1950's during this week with a huge gutter creating a natural swimming hole.

On the 22nd Gold Coast Bulletin published a media article that the 36km planned ocean work run from The Spit to Coolangatta will not go ahead due to budget constraints.

On the 28th Gold Coast Bulletin published a media article relating to Gold Coast mayor's announcement that foreshore is stable and fit for summer despite surf life savers concerns.

4. TWEED RIVER ENTRANCE CONDITIONS

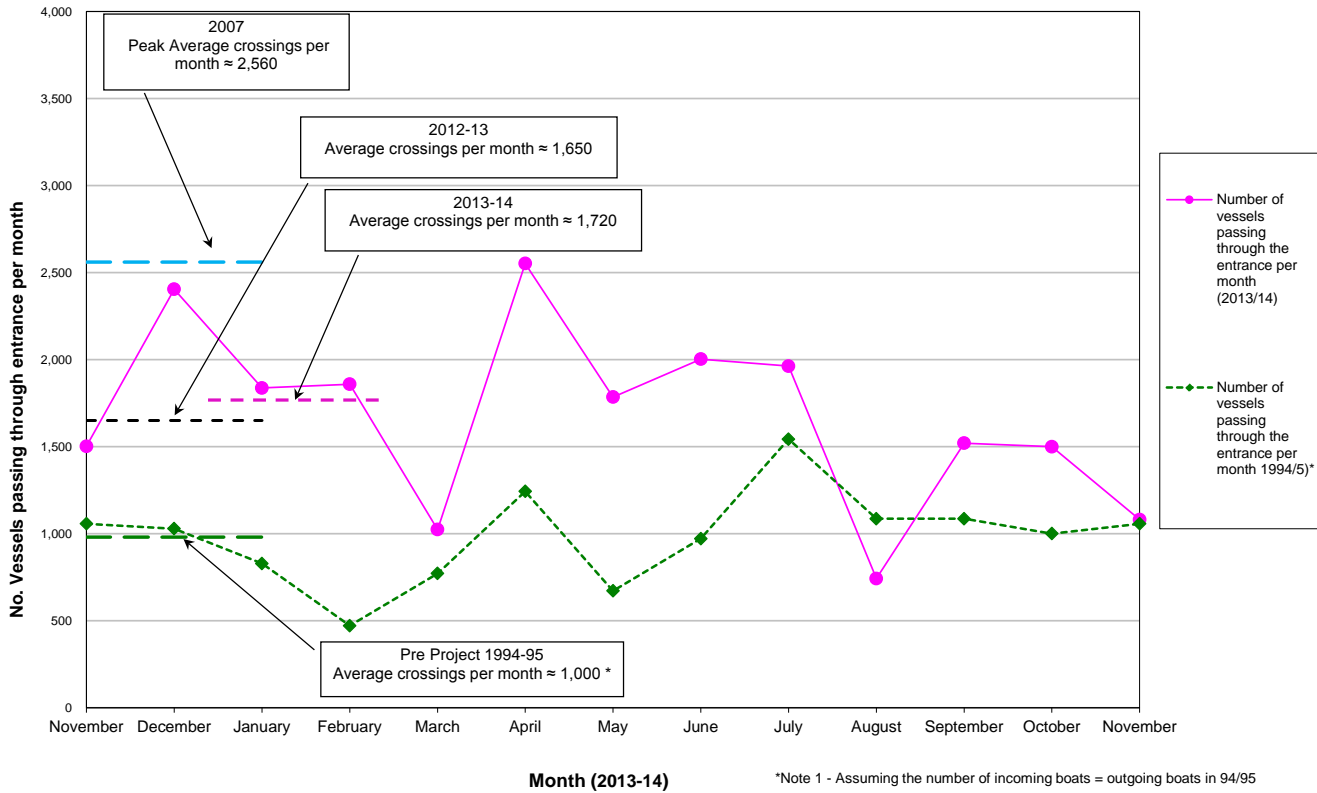
MARINE RESCUE NSW - MONITORING RESULTS

Weekends and public holidays

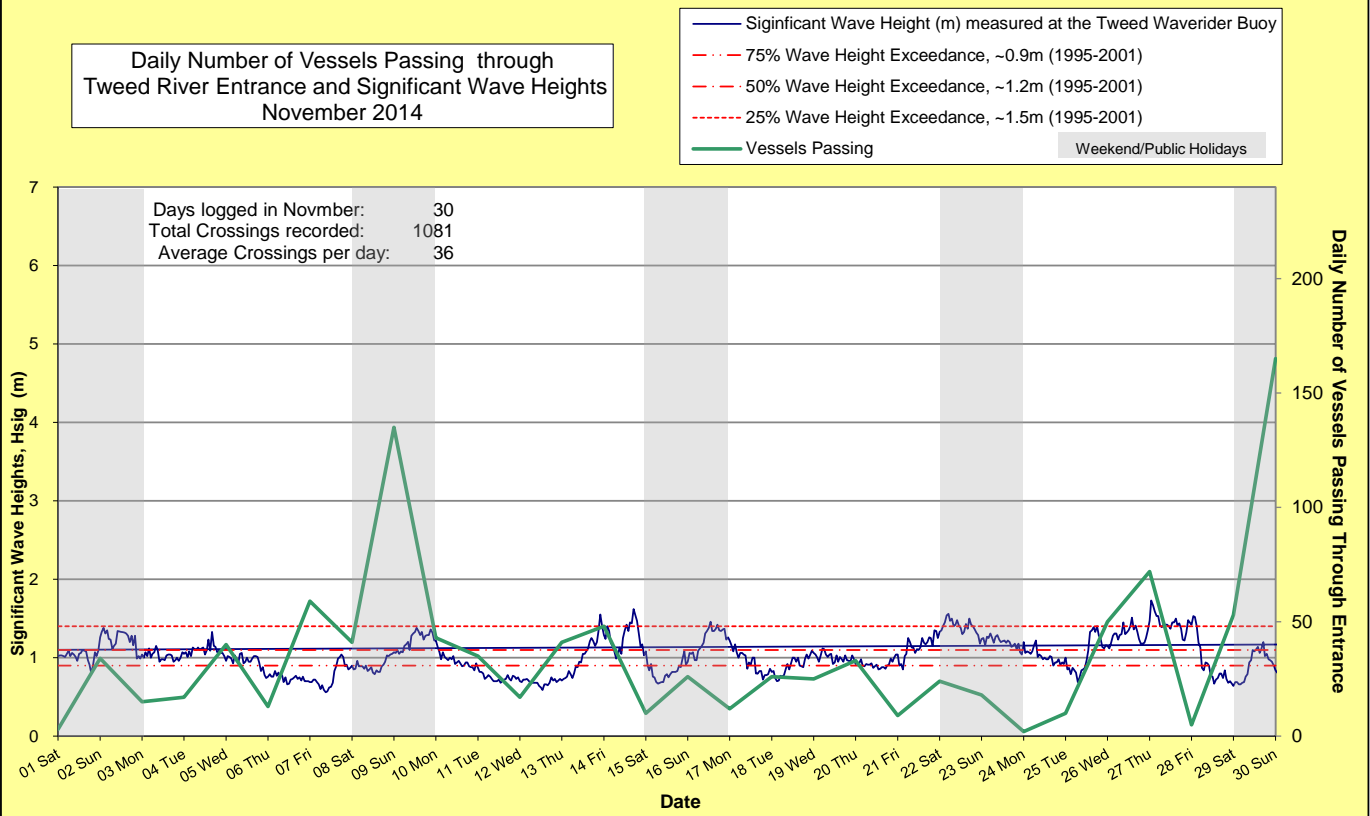
Date	Navigation Rating Impassable-----Good					Number of Boats
	Impassable (1)	Difficulty Encountered (2)	Some Difficulty Encountered (3)	Relatively Good Crossing (4)	Good Conditions (5)	
1 st						3
2 nd						34
3 rd						15
4 th						17
5 th						40
6 th						13
7 th						59
8 th						41
9 th						135
10 th						43
11 th						35
12 th						17
13 th						41
14 th						48
15 th						10
16 th						26
17 th						12
18 th						26
19 th						25
20 th						33
21 st						9
22 nd						24
23 rd						18
24 th						2
25 th						10
26 th						50
27 th						72
28 th						5
29 th						53
30 th						165
						Total
						1081

Source: Marine Rescue NSW, Point Danger

Comparison of the Number of Vessels Passing Through the Entrance per month 2013/14 compared to 2007 (peak crossings) and 1994/95 (prior to entrance improvements)



Daily Number of Vessels Passing through Tweed River Entrance and Significant Wave Heights November 2014



5. WAVE CONDITIONS

Wave Conditions over the month: Significant wave heights were calm to average (0.7 to 1.6 m) with no recorded storms. Wave directions varied from NNE to SE.

Monthly minimum significant wave height: 0.7 m on 19th November.

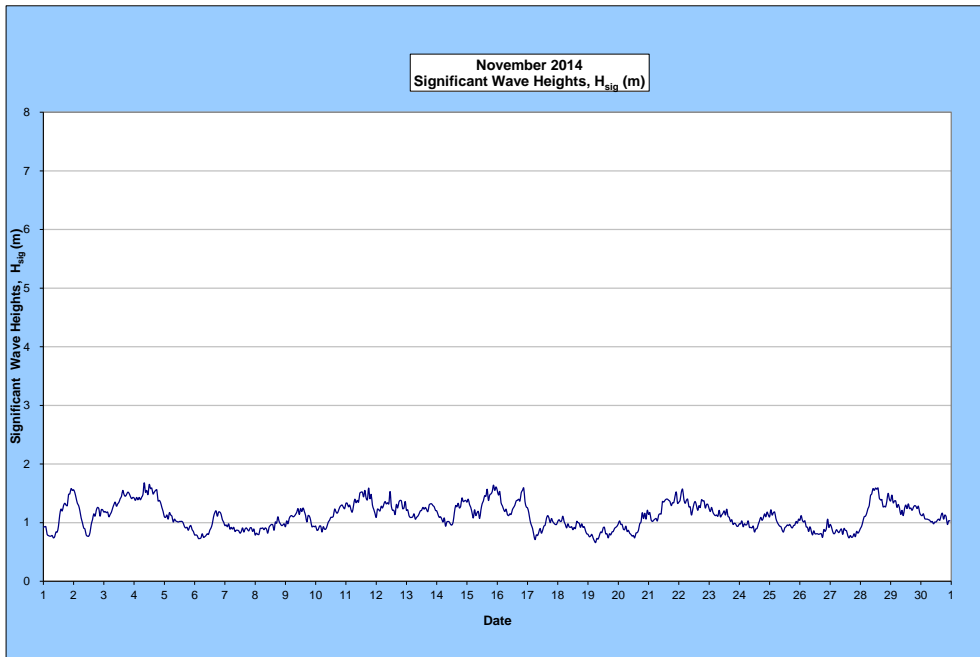
Monthly Maximum significant wave height: 1.7 m on 4th November.

Number of days on which waves were below 1.0 m: 20 days

Number of days on which waves were above 2.0 m: Nil

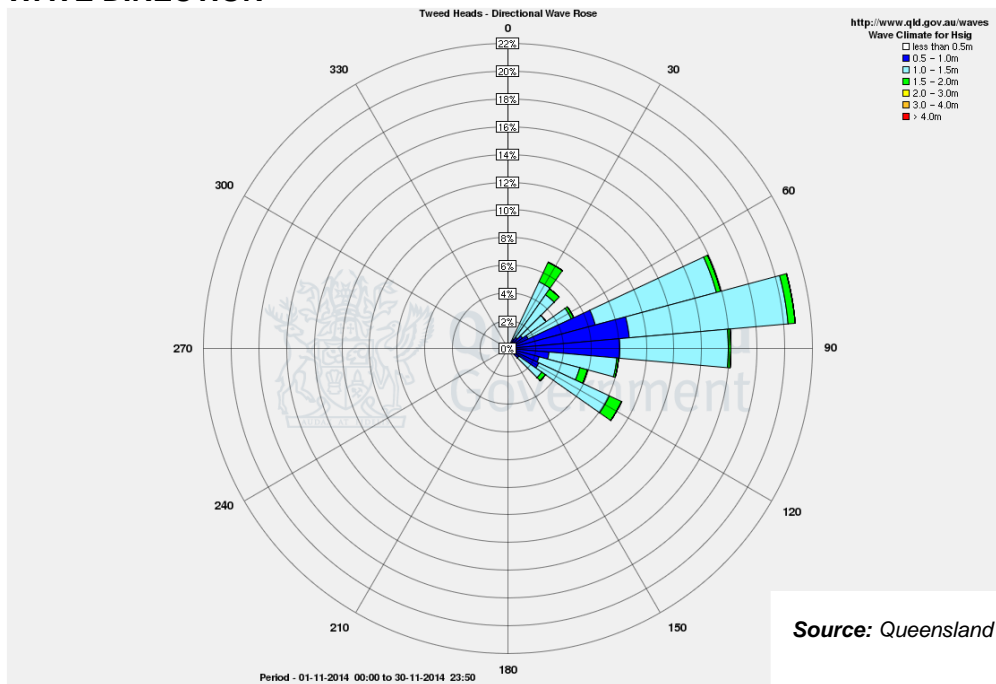
Note: Significant wave heights or H_{sig} is the average of the highest one third of recorded waves.

(Source: Tweed & Brisbane 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