

TREBP ENVIRONMENTAL MONITORING SUMMARY

JANUARY 2015

OVERVIEW

In January 2015:

- 39,105 m³ of sand was pumped to Snapper Rocks East.
- There were 2 media articles relating to the project area. Detail is given in Section 3.
- Wave heights were mostly calm to average seas (0.6 to 1.5 m) with moderate sea events on the 7th (up to 1.9 m) and 12th to 13th (up to 2.1 m) and high sea events on 22nd to 24th (up to 2.7 m). There were no recorded storms. Wave directions varied mostly from ENE to ESE.
- 1767 vessel crossings were recorded for the month (this is about 10% less than the January average).
- The estimated amount of sand moving north towards the Tweed River Entrance by natural processes was in the order of 34,000 m³ (this is about 75% of the January average).

1. SAND PUMPING & DREDGING

Sand Delivery January 2015

Pumped:	39,105 m ³
Dredged:	0 m ³
Total:	39,105 m ³

The number of days sand was pumped this month = 25

Sand Delivery January 2014 to December 2014

Pumped:	465,501 m ³
Dredged:	0 m ³
Total:	465,501 m ³

Stage II Sand Delivery April 2000 to January 2015

Pumped:	7,589,488 m ³
Dredged:	2,061,972 m ³ *
Total:	9,651,460 m ³ *

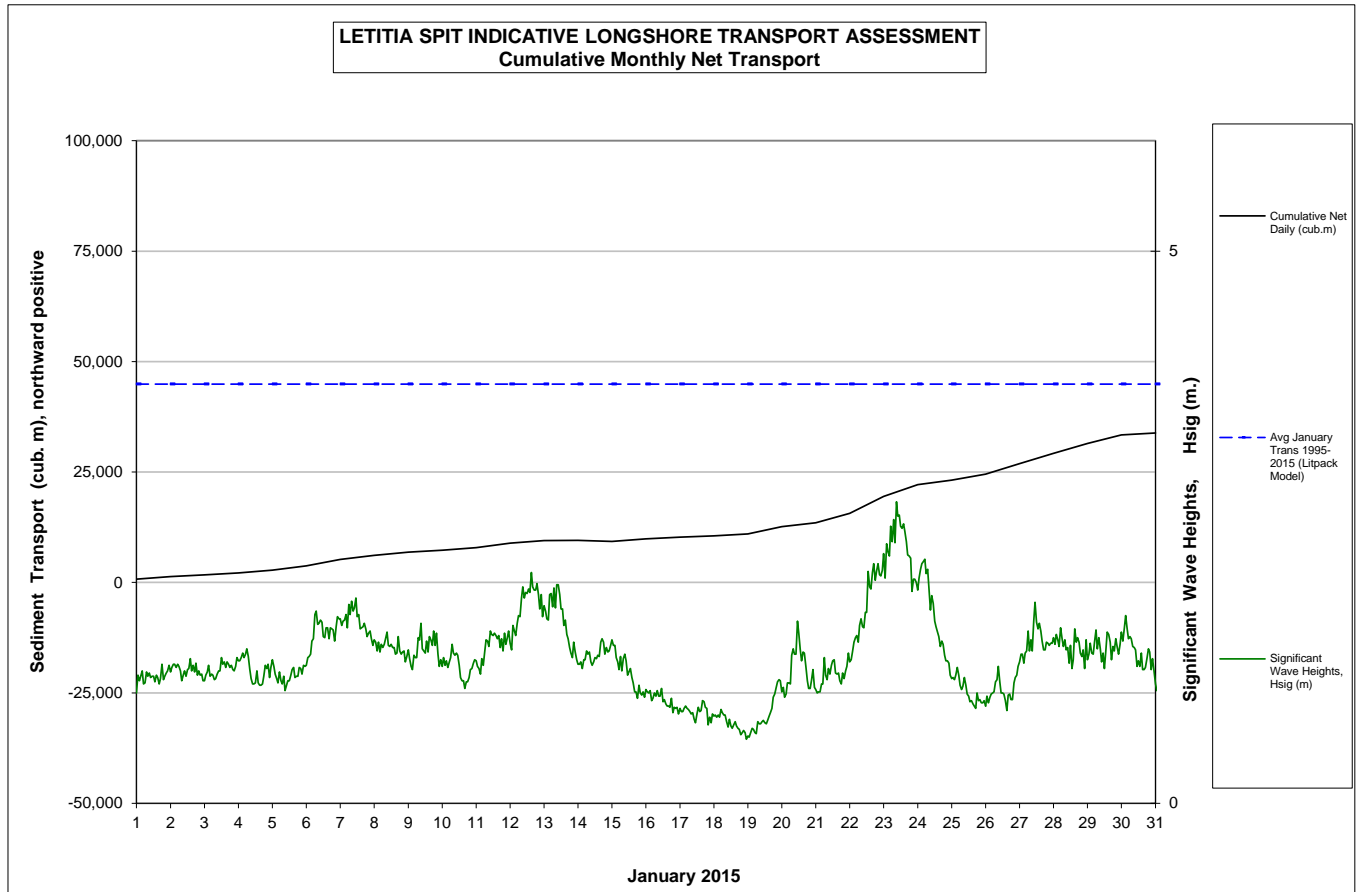
* This Includes 22,870 m³ of sand delivered by dredge to Palm Beach between June and September 2005

2. INDICATIVE LONGSHORE TRANSPORT

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

In January 2015 the estimated natural sand transport moving North towards the Tweed River entrance was calculated to be in the order of 34,000 m³.

This result is about 75% of the average estimated sand transport quantity of approximately 45,000 m³ for the month of January.




3. MEDIA COVERAGE

Stab Magazine published a media article on the 27th reporting that the World's best beach-breaks No.2 is Duranbah in Australia.

Brisbane Times published a media article on the 30th reporting that Rainbow Bay Beach and North Kirra beaches are among the top 10 beaches in Queensland.

4. TWEED RIVER ENTRANCE CONDITIONS

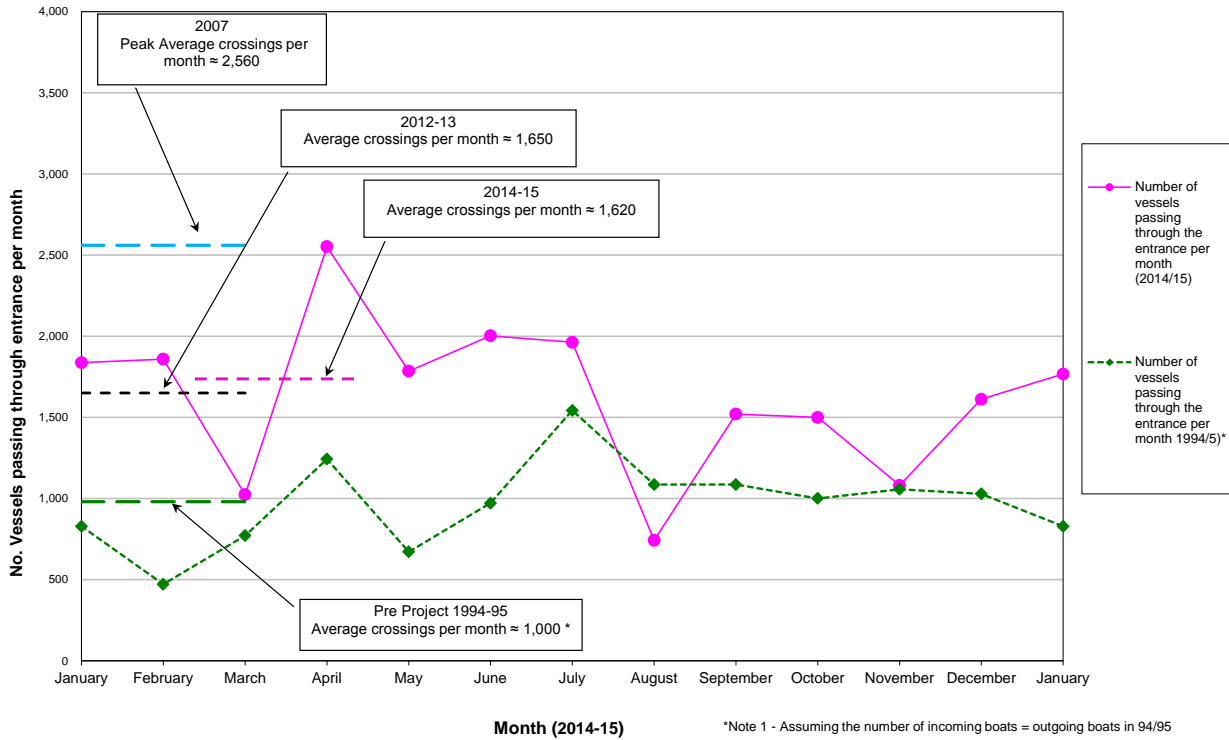
MARINE RESCUE NSW - MONITORING RESULTS

 Weekends and public holidays

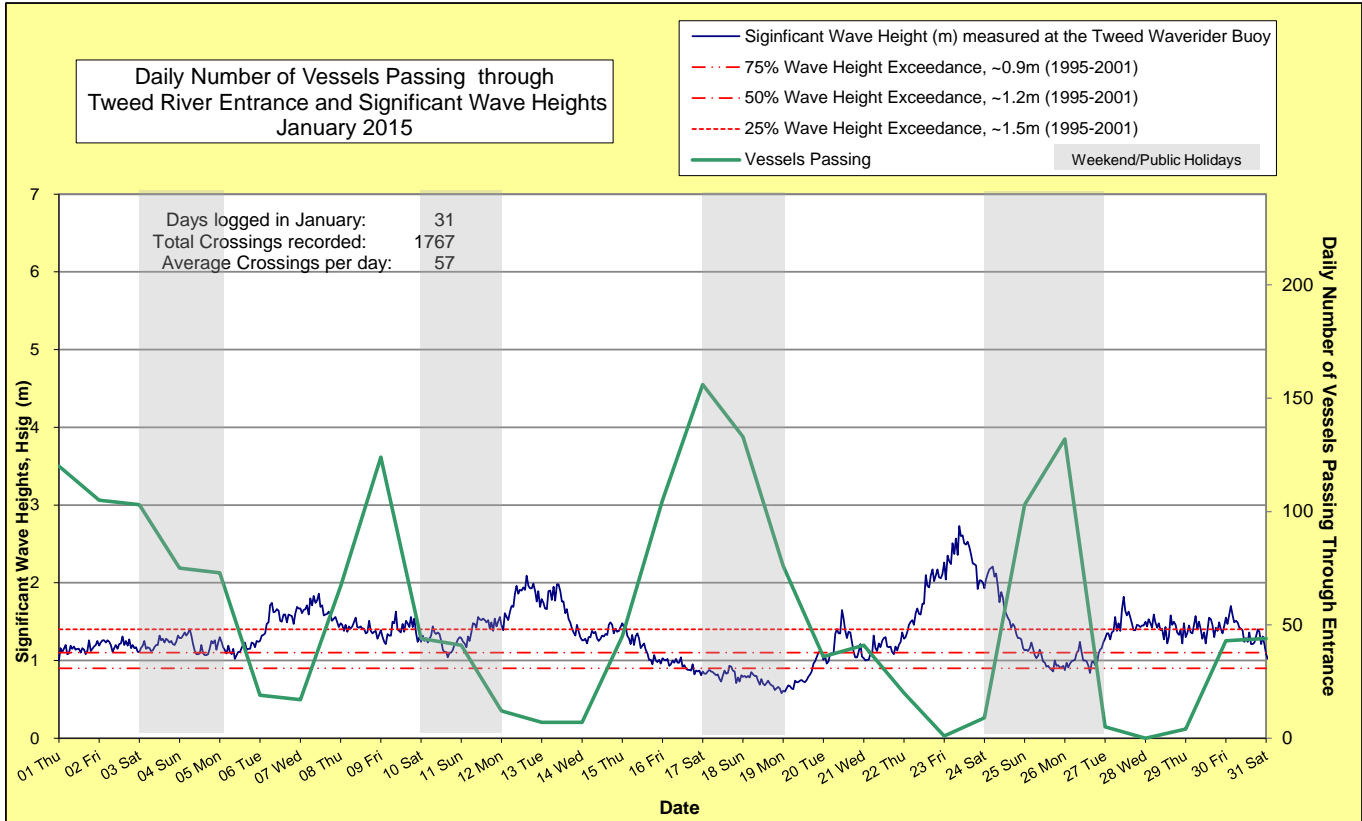
Date	Navigation Rating Impassable-----Good					Number of Boats
	Impassable (1)	Difficulty Encountered (2)	Some Difficulty Encountered (3)	Relatively Good Crossing (4)	Good Conditions (5)	
1 st						120
2 nd						105
3 rd						103
4 th						75
5 th						73
6 th						19
7 th						17
8 th						67
9 th						124
10 th						44
11 th						41
12 th						12
13 th						7
14 th						7
15 th						45
16 th						105
17 th						156
18 th						133
19 th						76
20 th						36
21 st						41
22 nd						20
23 rd						1
24 th						9
25 th						103
26 th						132
27 th						5
28 th						0
29 th						4
30 th						43
31 st						44
						Total
						1767

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 January 2015



5. WAVE CONDITIONS

Wave Conditions over the month: Wave heights were mostly calm to average seas (0.6 to 1.5 m) with moderate sea events on the 7th (up to 1.9 m), 12th to 13th (up to 2.1 m) and high sea event on 22nd to 24th (up to 2.7 m). There were no recorded storms. Wave directions varied mostly from ENE to ESE.

Monthly minimum significant wave height: 0.6 m on 18th January.

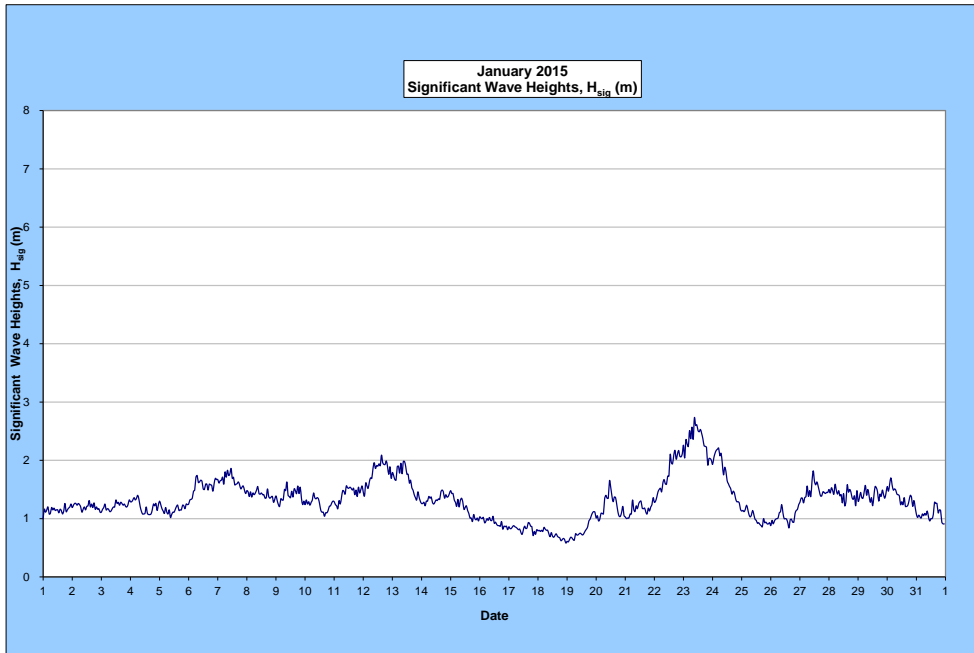
Monthly Maximum significant wave height: 2.7 m on 23th January.

Number of days on which waves were below 1.0 m: 9 days

Number of days on which waves were above 2.0 m: 4 days

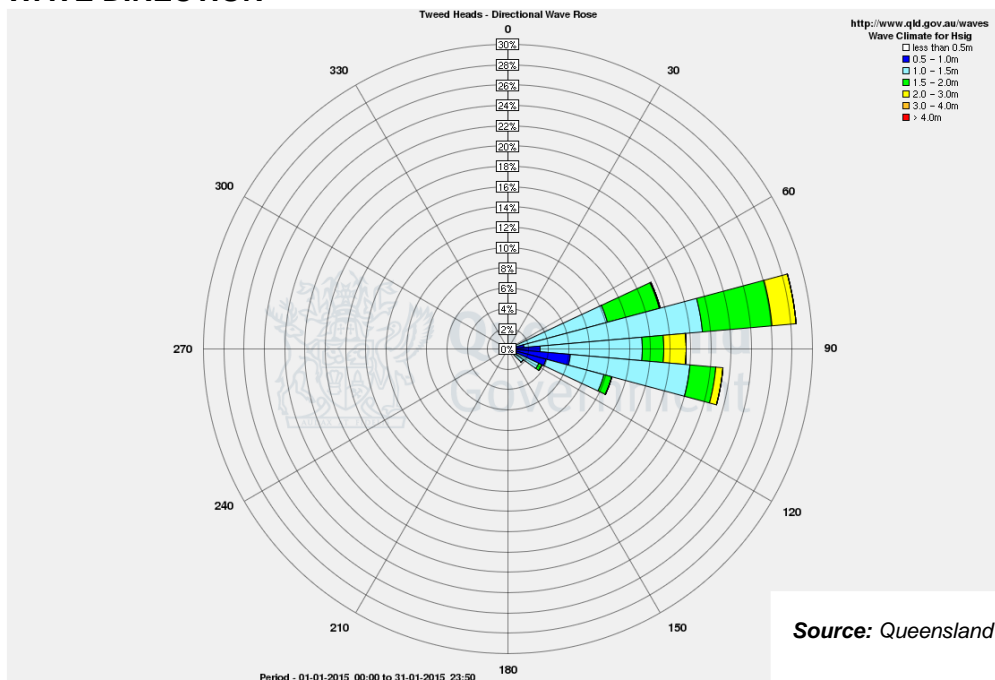
Note: Significant wave heights or H_{sig} is the average of the highest one third of recorded waves.

(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