

TRESBP ENVIRONMENTAL MONITORING SUMMARY

MARCH 2015

OVERVIEW

In March 2015:

- 7,449 m³ of sand was pumped to Snapper Rocks East and 10,008 m³ of sand pumped to Duranbah.
- There were 3 media articles relating to the project area. Detail is given in Section 3.
- Wave heights were mostly calm to average (0.7 to 1.5 m) with moderate sea events on the 6th (up to 1.8 m) and 16th to 18th (up to 1.9 m). No storms were recorded. Wave directions varied from NE to SE but mostly from the ENE to ESE.
- 1668 vessel crossings were recorded for the month (this is close to the March average).
- The estimated amount of sand moving north towards the Tweed River Entrance by natural processes was in the order of 23,000 m³ (this is about 40% of the March average).

1. SAND PUMPING & DREDGING

Sand Delivery March 2015

Pumped:	17,457 m ³
Dredged:	0 m ³
Total:	17,457 m ³

The number of days sand was pumped this month = 15

Sand Delivery January to March 2015

Pumped:	122,576 m ³
Dredged:	0 m ³
Total:	122,576 m ³

Stage II Sand Delivery April 2000 to March 2015

Pumped:	7,672,959 m ³
Dredged:	2,061,972 m ³ *
Total:	9,734,931 m ³ *

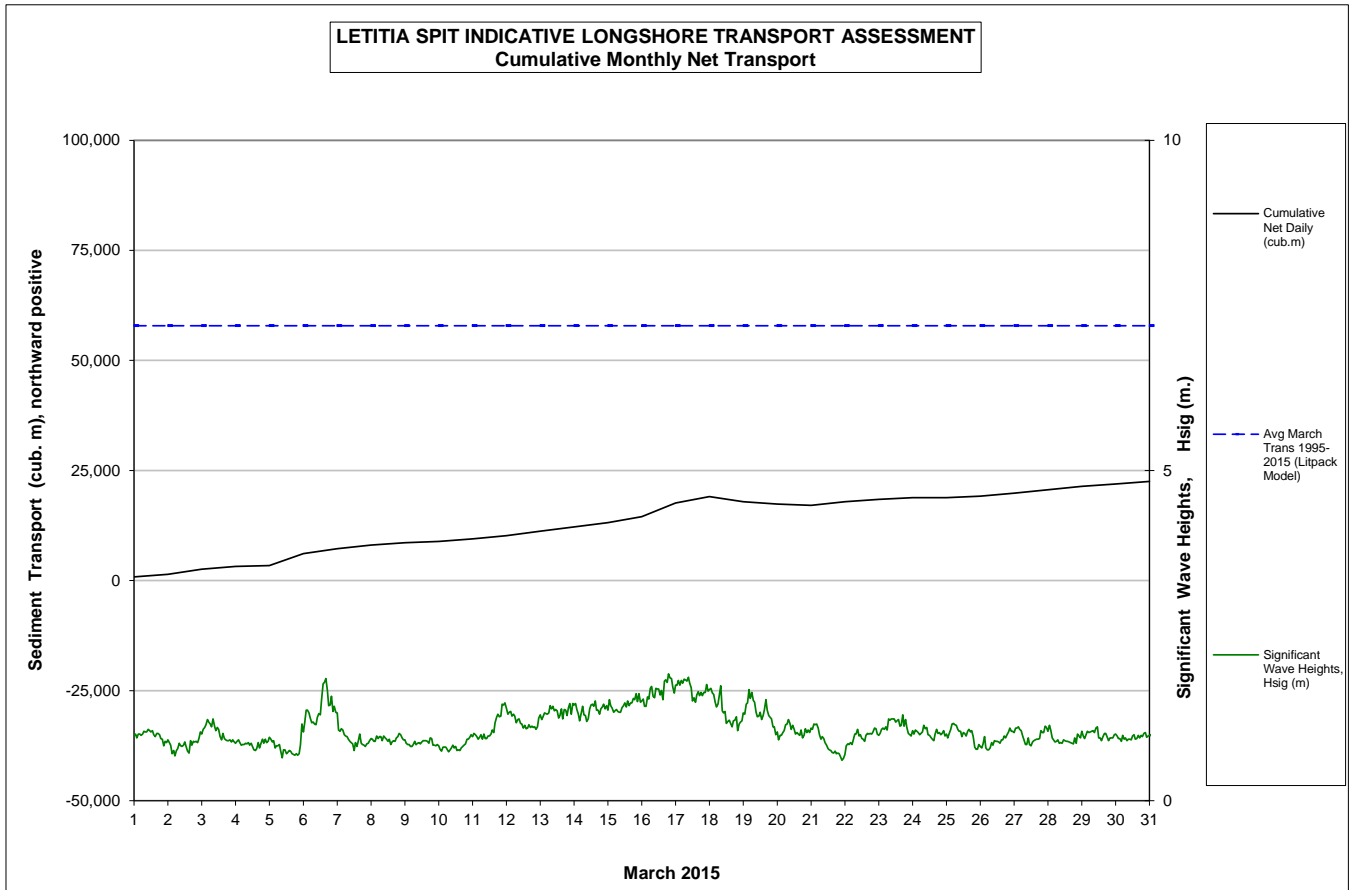
* This Includes 22,870 m³ of sand delivered by dredge to Palm Beach between June and September 2005

2. INDICATIVE LONGSHORE TRANSPORT

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

In March 2015 the estimated natural sand transport moving North towards the Tweed River entrance was calculated to be in the order of 23,000 m³.

This result is about 40% of the average estimated sand transport quantity of approximately 58,000 m³ for the month of March.



3. MEDIA COVERAGE


World Surf League published a media article on the 4th reporting that small waves and big high tides are stalling the Quiksilver Pro and Roxy Pro. Organizers are considering an option to relocate the event from Snapper Rocks to Duranbah to maximise the two day swell.

Gold Coast Bulletin published a media article on the 25th reporting that three months of cyclone swell have sent perfect conditions to Gold Coast surfers in search of long barrelling waves.

Australian Financial Review published a media article on the 31st reporting that within five kilometres radius of the Coolangatta beach that there is a list of surf breaks of international fame.

4. TWEED RIVER ENTRANCE CONDITIONS

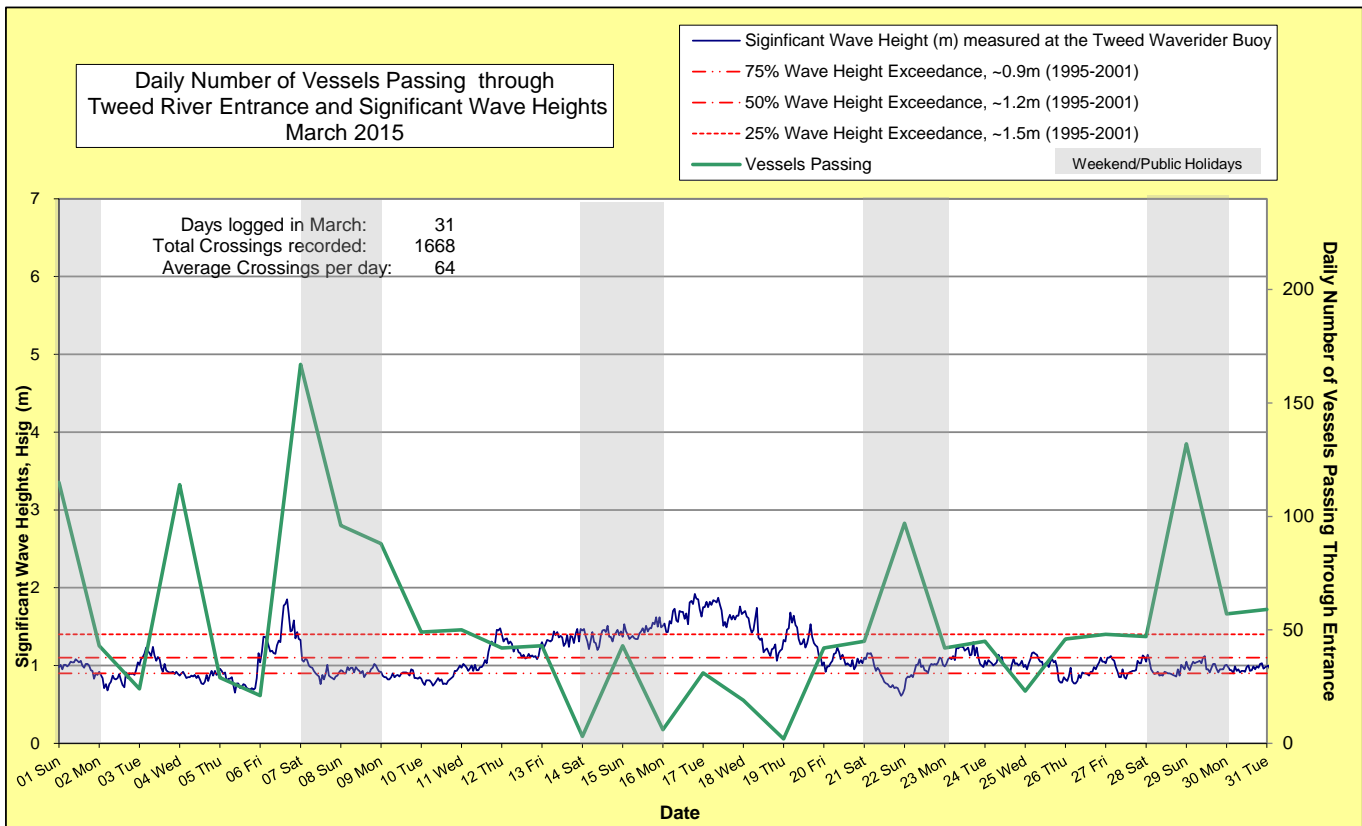
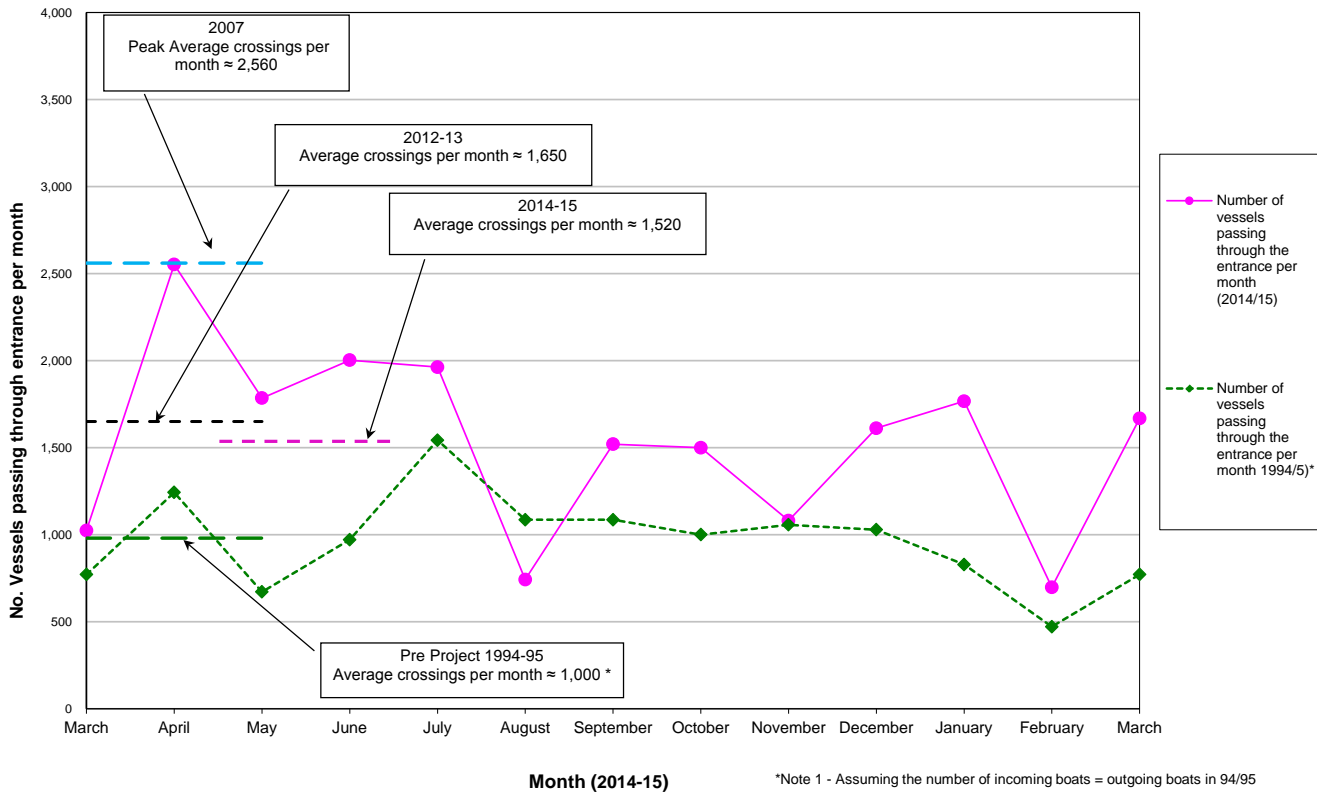
MARINE RESCUE NSW - MONITORING RESULTS

 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						115
2 nd						43
3 rd						24
4 th						114
5 th						29
6 th						21
7 th						167
8 th						96
9 th						88
10 th						49
11 th						50
12 th						42
13 th						43
14 th						3
15 th						43
16 th						6
17 th						31
18 th						19
19 th						2
20 th						42
21 st						45
22 nd						97
23 rd						42
24 th						45
25 th						23
26 th						46
27 th						48
28 th						47
29 th						132
30 th						57
31 st						59
					Total	1668

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)



5. WAVE CONDITIONS

Wave conditions over the month: Wave heights were mostly calm to average (0.7 to 1.5 m) with moderate sea events on the 6th (up to 1.8 m) and 16th to 18th (up to 1.9 m). No storms were recorded. Wave directions varied from NE to SE but mostly from the ENE to ESE.

Monthly minimum significant wave height: 0.6 m on 21st March.

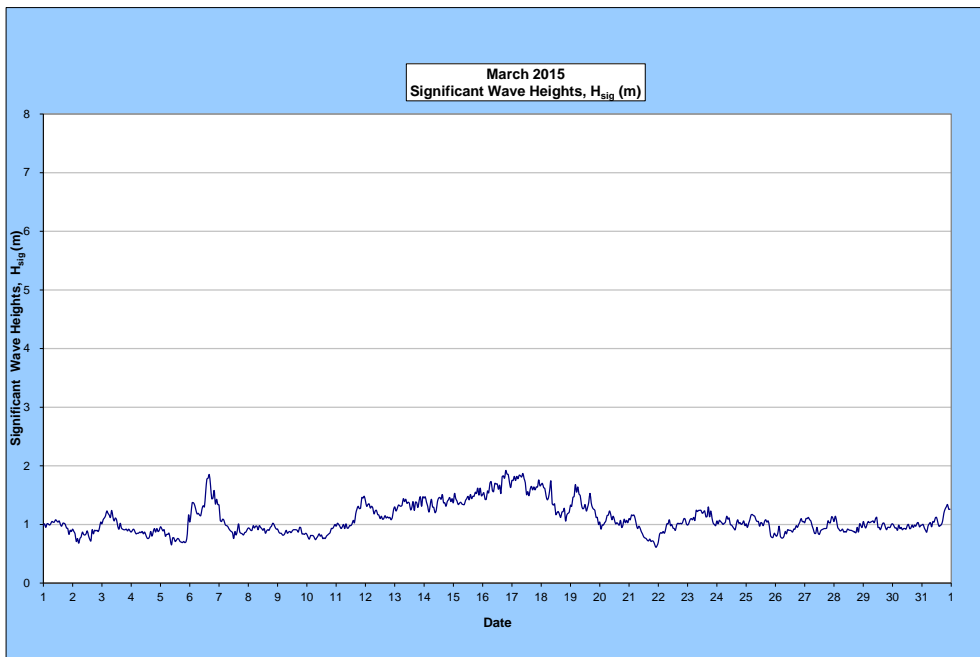
Monthly maximum significant wave height: 1.9 m on 16th March.

Number of days on which waves were below 1.0 m: 19 days

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

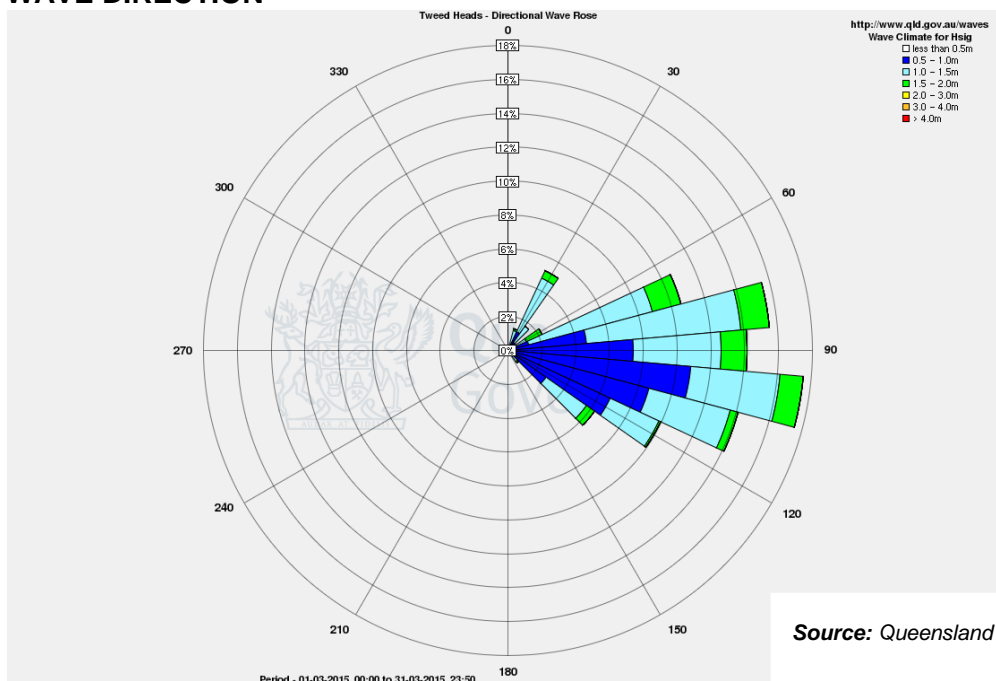
Note: Significant wave heights or H_{sig} is the average of the highest one third of recorded waves.

(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