

TRESBP ENVIRONMENTAL MONITORING SUMMARY

MAY 2015

OVERVIEW

In May 2015:

- 36,371 m³ of sand was pumped to Snapper Rocks East and 5,578 m³ of sand pumped to Duranbah.
- There were 2 media articles relating to the project area. Detail is given in Section 3.
- Wave heights ranged from calm to severe (0.5 to 5.5 m) with a severe sea event on the 1st and 2nd (up to 5.5 m), and moderate sea events on the 16th (up to 2.0 m) and the 23rd (up to 2.4 m). Wave directions varied from ENE to ESE with storm waves approaching from ENE over 1st and 2nd May and then waves approaching mostly from the East to ESE for the rest of the month.
- 1458 vessel crossings were recorded for the month. (this is about 30% less than the May average).
- The estimated amount of sand moving north towards the Tweed River Entrance by natural processes was in the order of 79,000 m³ (this is about 20% more than the May average).

1. SAND PUMPING & DREDGING

Sand Delivery May 2015

Pumped:	41,949 m ³
Dredged:	0 m ³
Total:	41,949 m ³

The number of days sand was pumped this month = 22

Sand Delivery January to May 2015

Pumped:	203,861 m ³
Dredged:	0 m ³
Total:	203,861 m ³

Stage II Sand Delivery April 2000 to May 2015

Pumped:	7,754,244 m ³
Dredged:	2,061,972 m ³ *
Total:	9,816,216 m ³ *

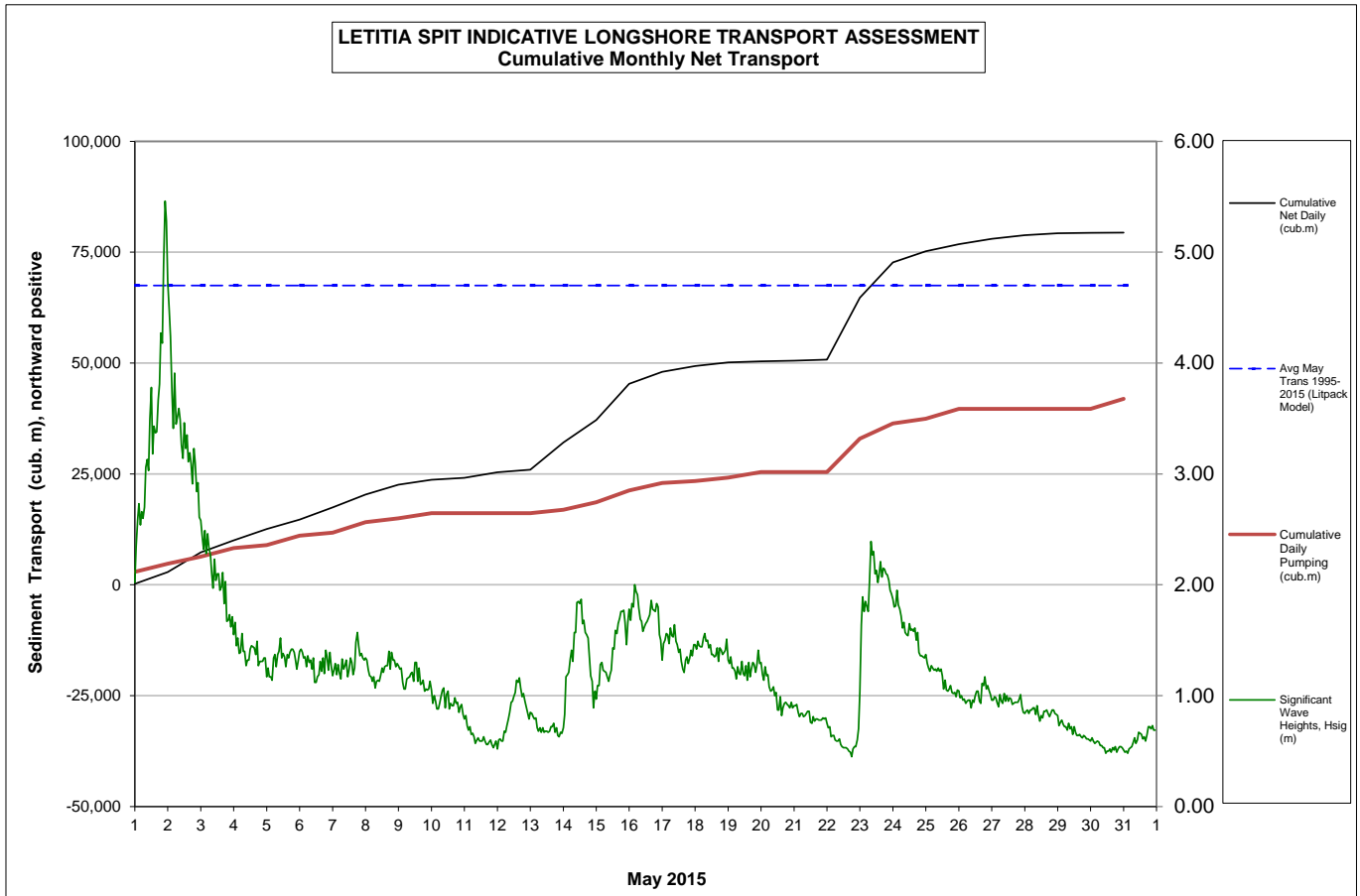
* This Includes 22,870 m³ of sand delivered by dredge to Palm Beach between June and September 2005

2. INDICATIVE LONGSHORE TRANSPORT

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

In May 2015 the estimated natural sand transport moving North towards the Tweed River entrance was calculated to be in the order of 79,000 m³.

This result is about 20% more than average estimated sand transport quantity of approximately 67,000 m³ for the month of May.



3. MEDIA COVERAGE

Gold Coast Bulletin published a media article on the 16th reporting that Rainbow Bay, Greenmount and Coolangatta are among top 10 surf breaks as voted by the readers. Gold Coast Bulletin further reported that sand has been pumped from the Tweed since February 2001 to prevent erosion on Gold Coast beaches more importantly creating perfect waves.

Surfing Life May 2015 issue published an article written by Nick Carroll a leading Australian and International surf writer on his memories on Kirra surf and coastal development around Kirra since 1986 to date.

4. TWEED RIVER ENTRANCE CONDITIONS

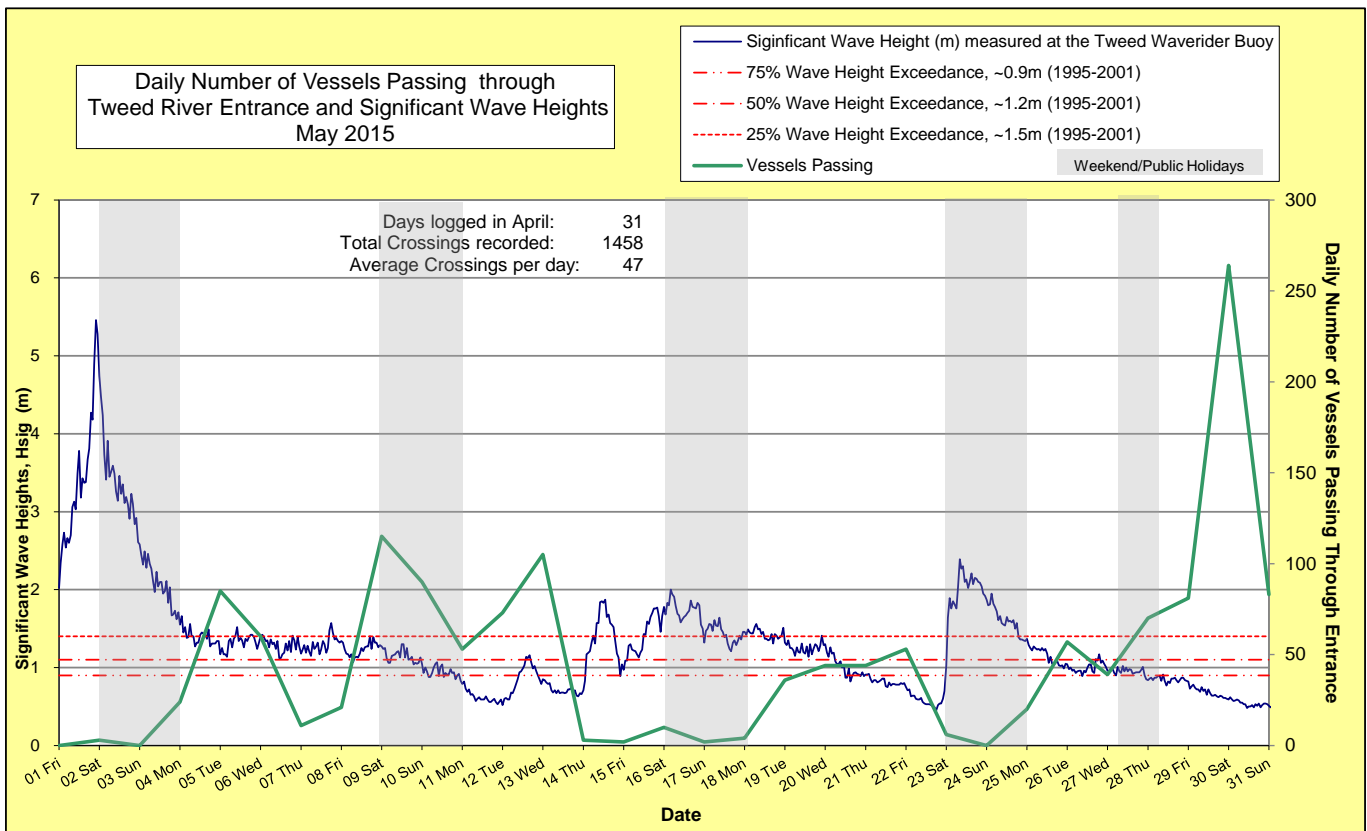
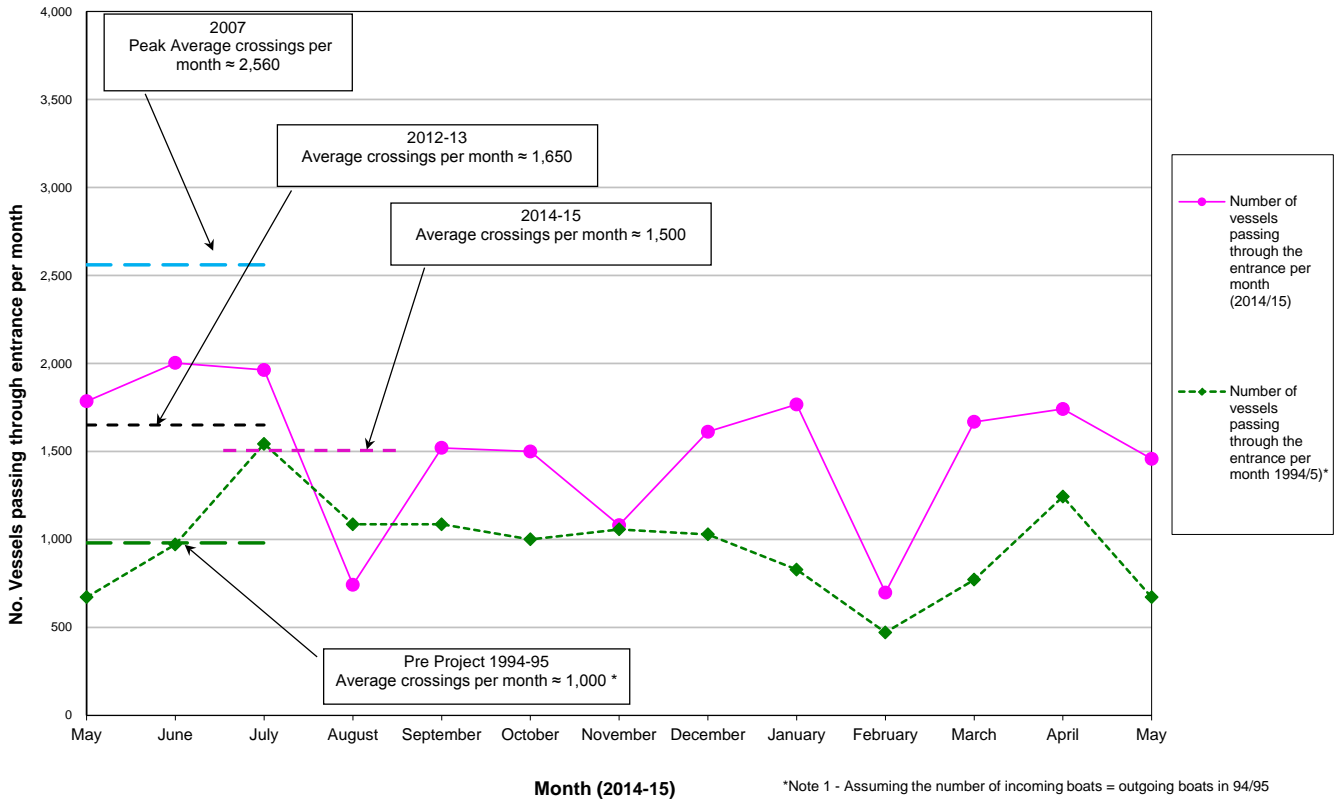
MARINE RESCUE NSW - MONITORING RESULTS

 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						0
2 nd						3
3 rd						0
4 th						24
5 th						85
6 th						60
7 th						11
8 th						21
9 th						115
10 th						90
11 th						53
12 th						73
13 th						105
14 th						3
15 th						2
16 th						10
17 th						2
18 th						4
19 th						36
20 th						44
21 st						44
22 nd						53
23 rd						6
24 th						0
25 th						20
26 th						57
27 th						39
28 th						70
29 th						81
30 th						264
31 st						83
					Total	1458

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 ranged from calm to severe (0.5 to 5.5 m) with a severe sea event on the 1st and 2nd (up to 5.5 m), and moderate sea events on the 16th (up to 2.0 m) and the 23rd (up to 2.4 m). Wave directions varied from ENE to ESE with storm waves approaching from ENE over 1st and 2nd May and then waves approaching mostly from the East to ESE for the rest of the month.

Monthly minimum significant wave height: 0.5 m on 22nd May.

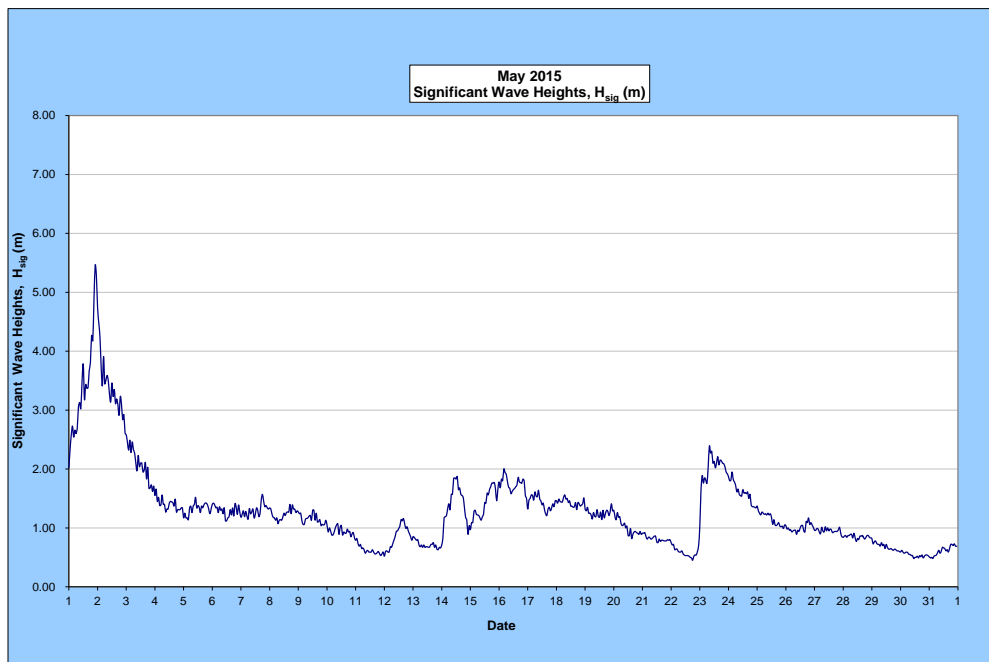
Monthly maximum significant wave height: 5.5 m on 1st May.

Number of days on which waves were below 1.0 m: 15 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.

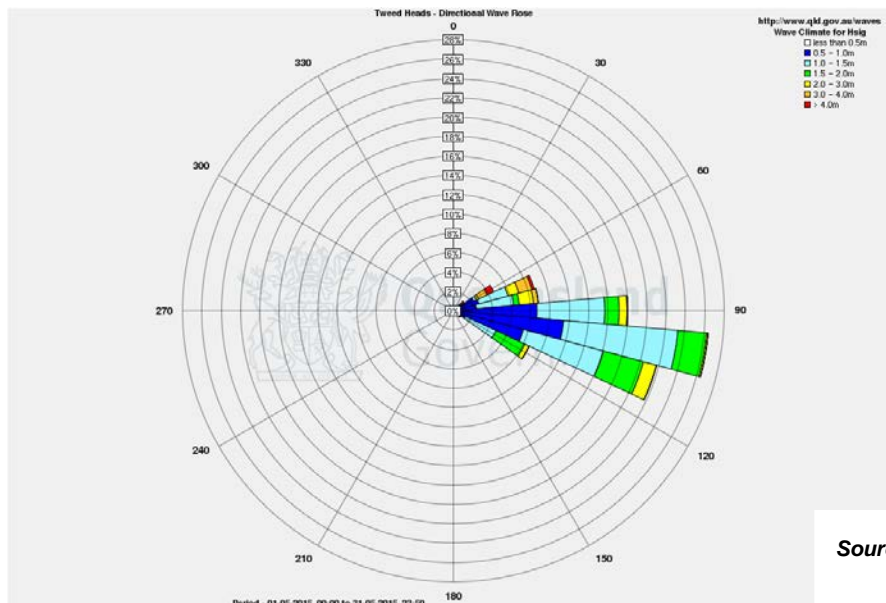
(Source: Tweed & Brisbane Wave Buoy; Queensland Government)



A

link to data recorded by the Tweed Waverider Buoy is available at: <http://www.qld.gov.au/waves>

WAVE DIRECTION



Source: Queensland Government