

TRESBP ENVIRONMENTAL MONITORING SUMMARY

OCTOBER 2013

OVERVIEW

In October, 2013:

- 15,882 m³ of sand was pumped to the Snapper Rocks East primary outlet.
- There were no media articles relating to the project.
- Significant wave heights were mostly calm to average for the month (0.5 m to 1.5 m) with peak significant wave heights up to 2 m. Wave direction ranged from NNE to SE but was dominantly from the SE.
- 1,461 vessel crossings were recorded for the month (this is about 14% fewer than the October average).
- The estimated amount of sand moving north towards the Tweed River Entrance by natural processes was in the order of 16,000 m³ (this is about 60% of the October average of about 27,000 m³).

1. SAND PUMPING & DREDGING

Sand Delivery October 2013

Pumped:	15,882 m ³
Dredged:	0 m ³
Total:	15,882 m ³

Sand Delivery January to October 2013 (YTD)

Pumped:	277,146 m ³
Dredged:	0 m ³
Total:	277,146 m ³

Sand Delivery January to October 2012

Pumped:	377,609 m ³
Dredged:	0 m ³
Total:	377,609 m ³

Stage II Sand Delivery May 2000 to October 2013

Pumped:	7,042,144 m ³
Dredged:	2,039,104 m ³
Total:	9,081,248 m ³

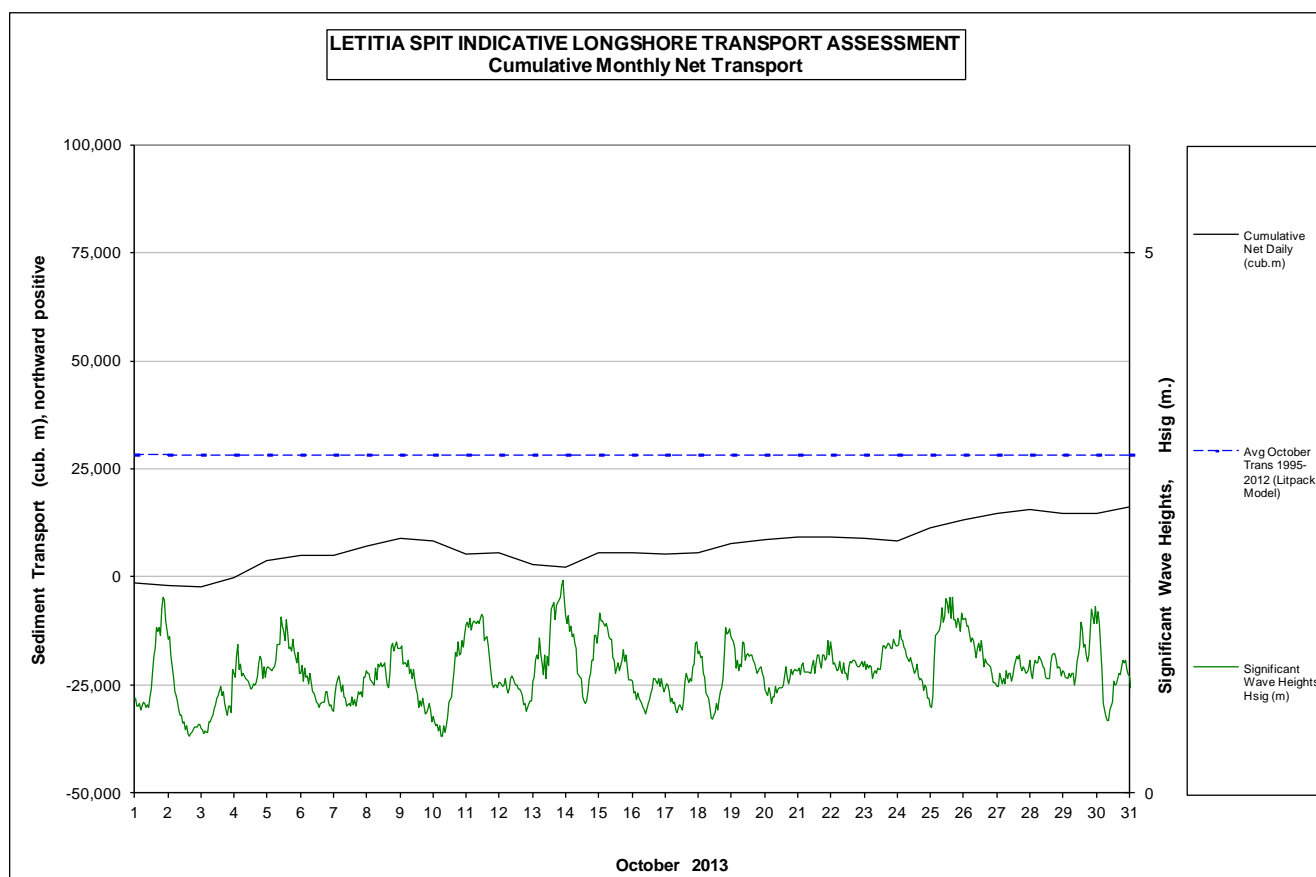


2. INDICATIVE LONGSHORE TRANSPORT

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


In October 2013 the estimated natural sand transport (moving North towards the Tweed River entrance) was calculated to be in the order of 16,000 m³.

This result is about 60% of the average estimated sand transport quantity of approximately 27,000 m³ for the month of October.



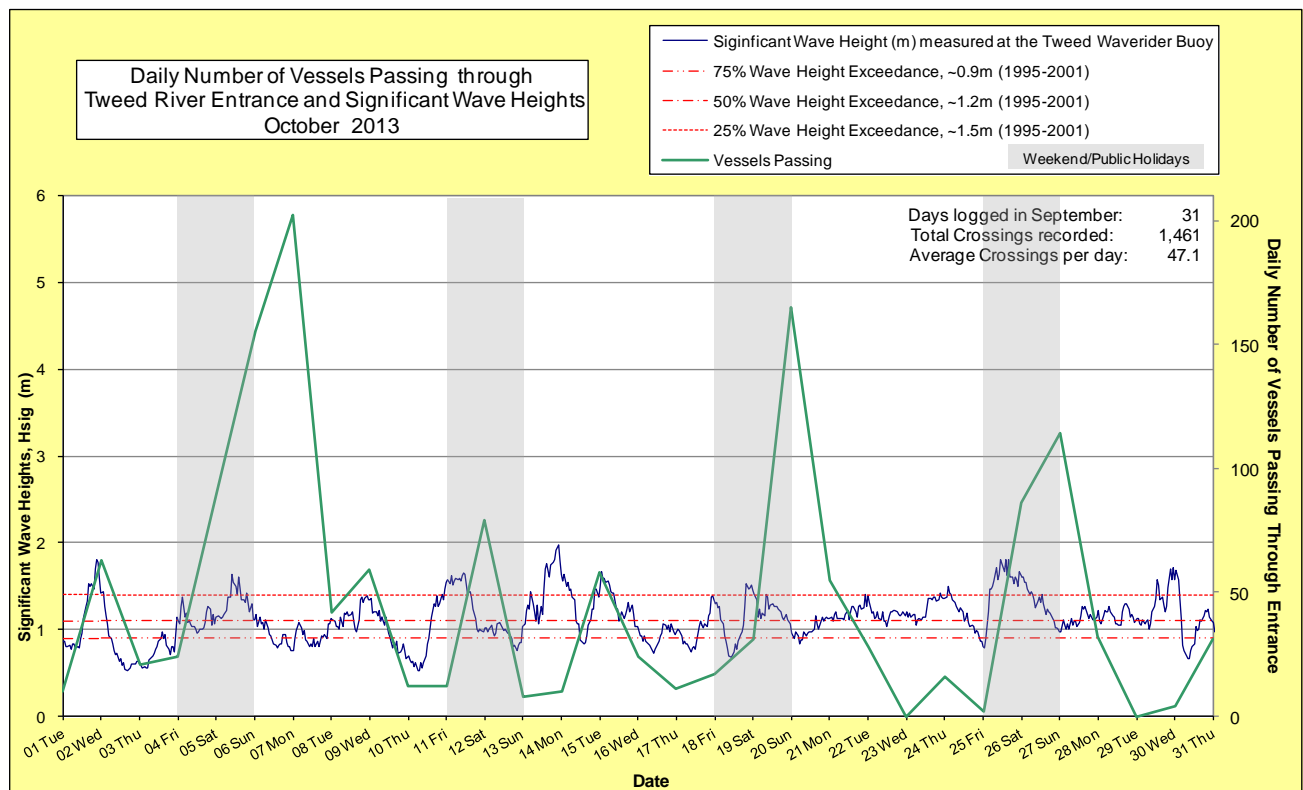
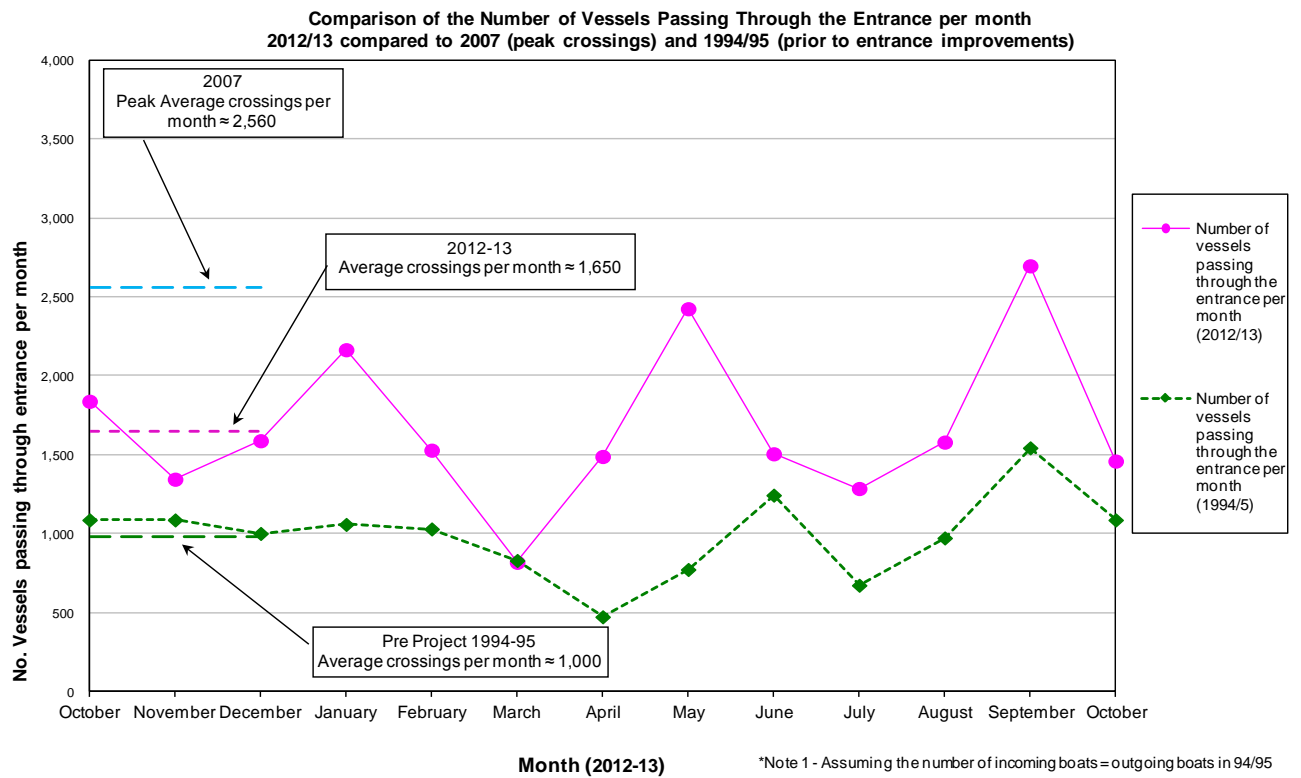
3. MEDIA COVERAGE

There were no media articles directly relating to the project during October.

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						10
2 nd						63
3 rd						21
4 th						24
5 th						90
6 th						155
7 th						202
8 th						42
9 th						59
10 th						12
11 th						12
12 th						79
13 th						8
14 th						10
15 th						58
16 th						24
17 th						11
18 th						17
19 th						31
20 th						165
21 st						55
22 nd						28
23 rd						0
24 th						16
25 th						2
26 th						86
27 th						114
28 th						32
29 th						0
30 th						4
31 st						31
Total						1,461

Source: Marine Rescue NSW, Point Danger



5. WAVE CONDITIONS

Wave Conditions over the month: Significant wave heights were mostly calm to average for the month with (0.5 m to 1.5 m) peak significant wave heights up to 2 m. Wave direction ranged from NNE to SE but was dominantly from the SE.

Major sea events: Nil.

Monthly minimum significant wave height: 0.52 m on 2nd October.

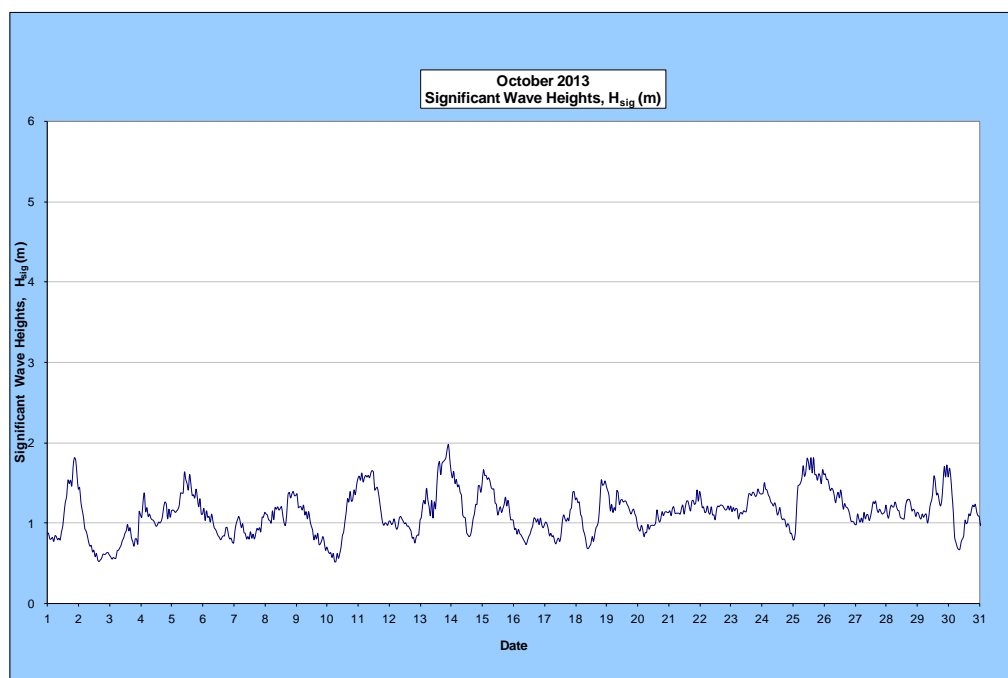
Monthly peak significant wave height: 1.97 m on 3th October.

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

Number of days on which waves were above 2.0 m: 0 days

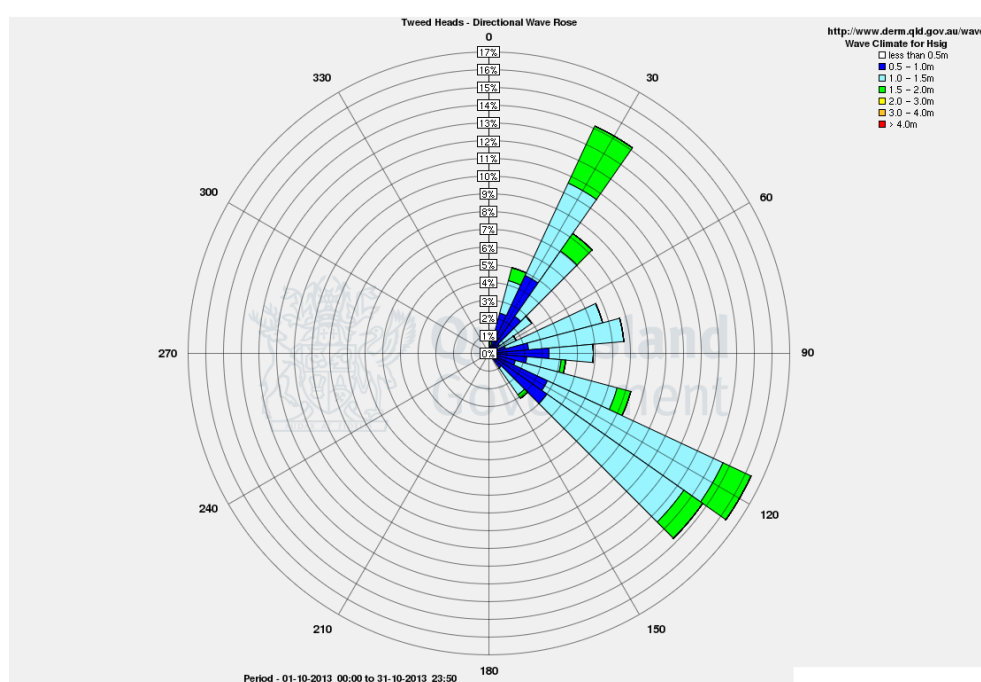
Note: Significant wave heights or H_{sig} is the average of the highest one third of recorded waves.

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



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

WAVE DIRECTION



Source: Queensland Government

END