

TRESBP ENVIRONMENTAL MONITORING SUMMARY

DECEMBER 2012

OVERVIEW

In December, 2012:

- 30,491 m³ of sand was pumped to Snapper Rocks East.
- There were no media articles which related to the project.
- Sea conditions were calm to average for most of the month with one moderate sea event (occurring from the 12th to 16th) with peak significant wave heights reaching 2.15 m. Wave directions varied mostly from ENE to E.
- 2,165 vessel crossings were recorded for the month (this is about equal to the December 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 83% of the December average).

1. SAND PUMPING & DREDGING

Sand Delivery December 2012

Pumped:	30,491 m ³
Dredged:	0 m ³
Total:	30,491 m ³

Sand Delivery January to December 2012 (YTD)

Pumped:	436,092 m ³
Dredged:	0 m ³
Total:	436,092 m ³

Sand Delivery January to December 2011

Pumped:	518,169 m ³
Dredged:	0 m ³
Total:	518,169 m ³

Stage II Sand Delivery May 2000 to December 2012

Pumped:	6,764,999 m ³
Dredged:	2,039,904 m ³
Total:	8,804,903 m ³

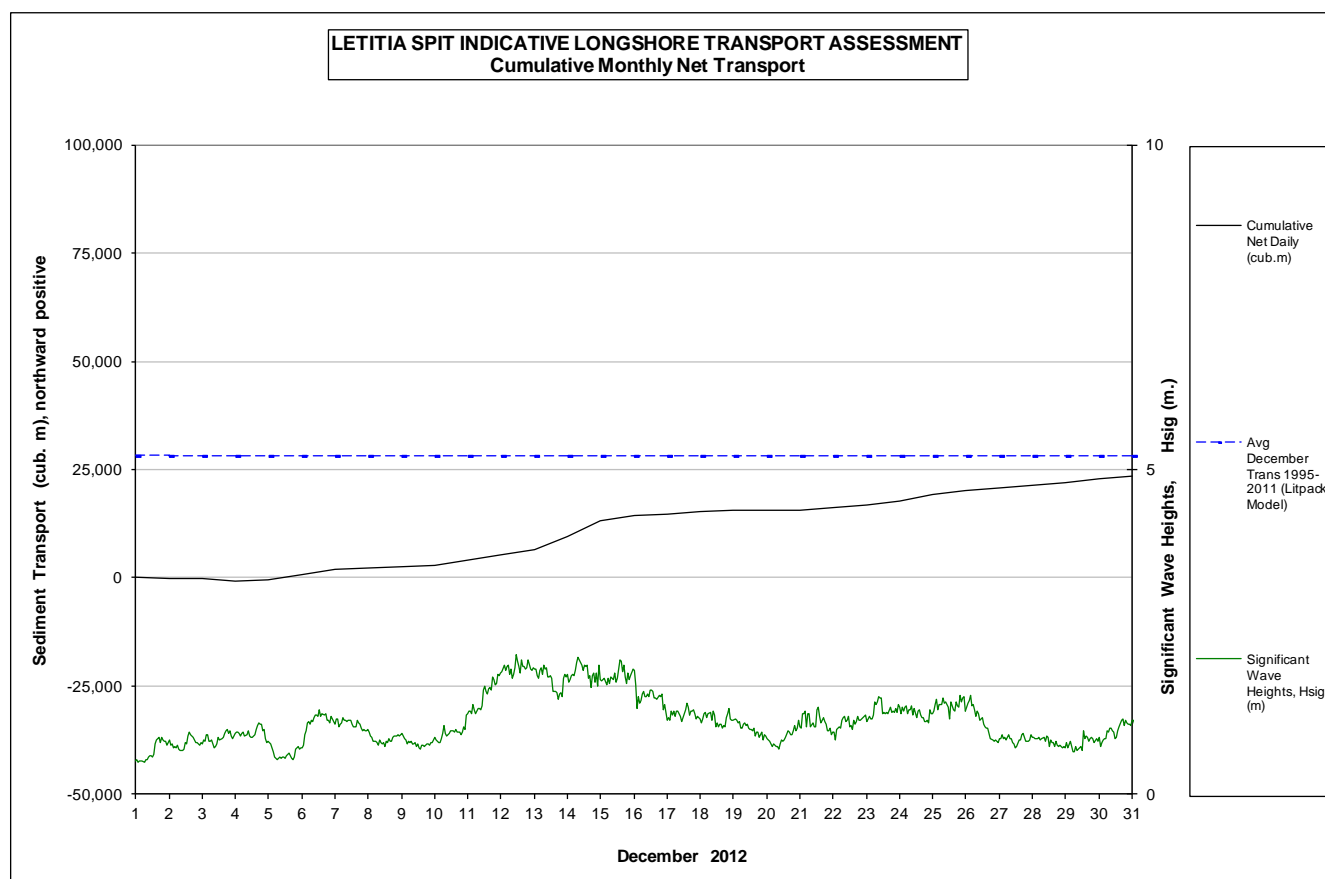


2. INDICATIVE LONGSHORE TRANSPORT

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


In December 2012 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 83% of the average estimated sand transport quantity of approximately 28,000 m³ for the month of December.



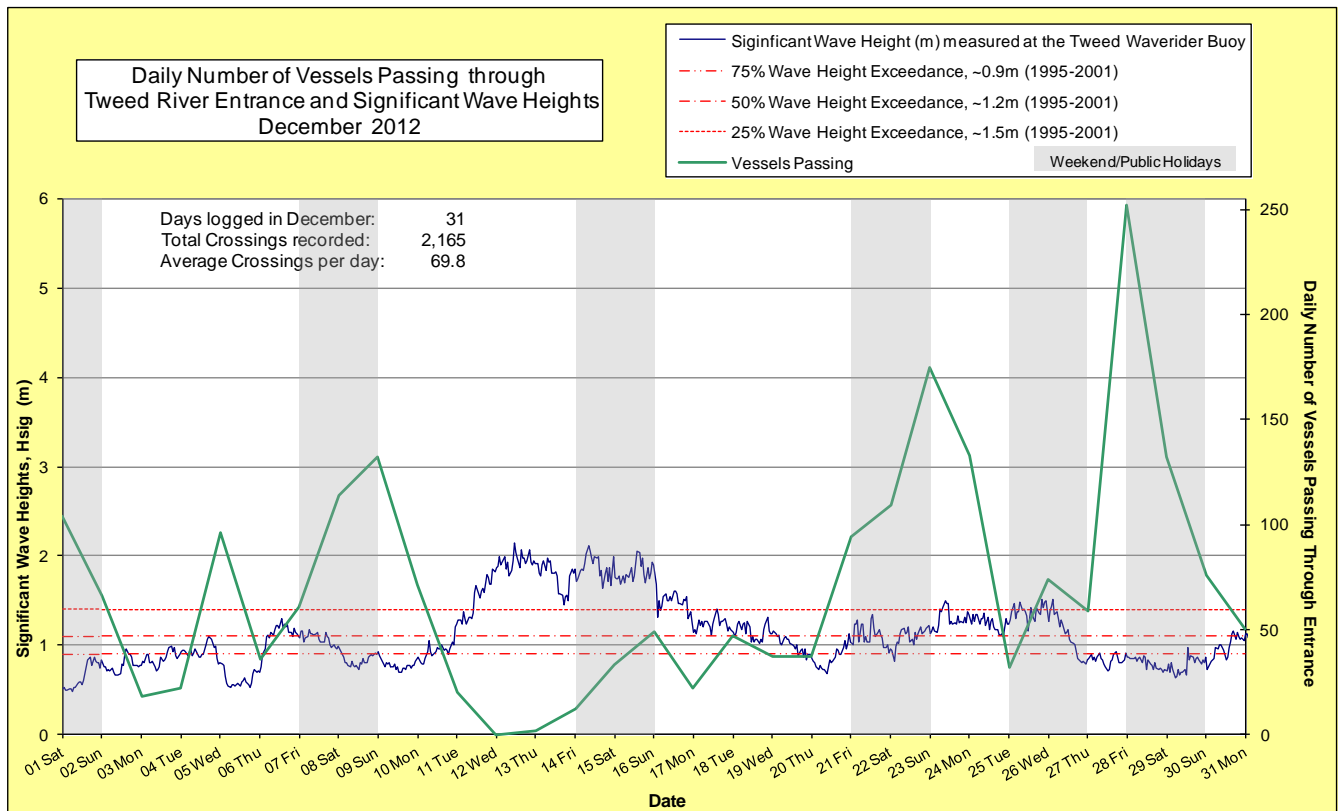
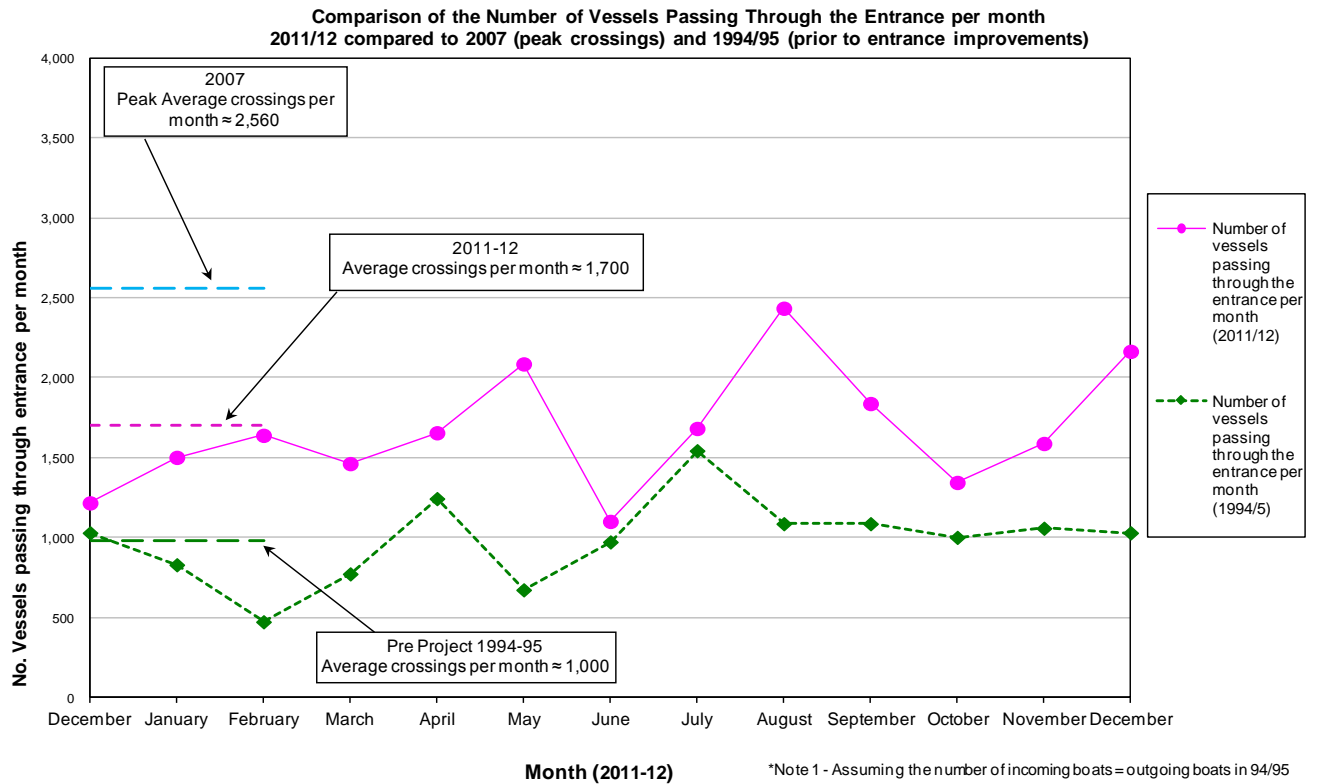
3. MEDIA COVERAGE

There were no media articles relating to the project during December.

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						104
2 nd						66
3 rd						18
4 th						22
5 th						96
6 th						36
7 th						61
8 th						114
9 th						132
10 th						71
11 th						20
12 th						0
13 th						2
14 th						12
15 th						33
16 th						49
17 th						22
18 th						47
19 th						37
20 th						37
21 st						94
22 nd						109
23 rd						175
24 th						133
25 th						32
26 th						74
27 th						59
28 th						252
29 th						132
30 th						76
31 st						50
Total						2,165

Source: Marine Rescue NSW, Point Danger



5. WAVE CONDITIONS

Dominant swell condition: Significant wave heights were calm to average for most of the month with a moderate sea event (occurring on the 12th to 16th) with peak significant wave heights to 2.15 m. Swell direction ranged from NE to SE but dominantly from the E to ENE.

Major sea events: 12th to 16th of December

Monthly minimum significant wave height: 0.5 m on 1st December.

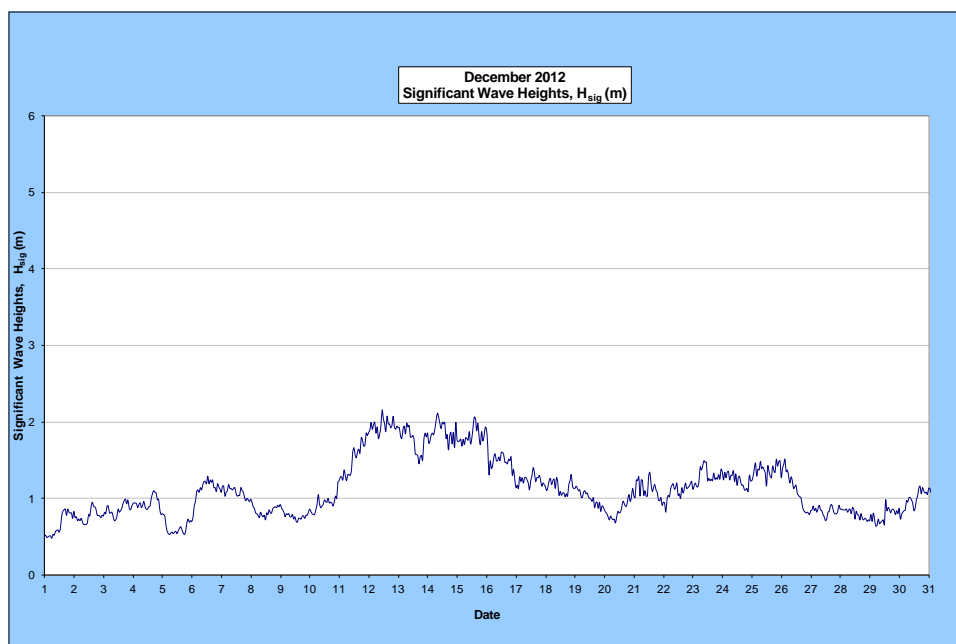
Monthly peak significant wave height: 2.15 m on 12th December.

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

Number of days on which waves were above 2.0 m: 3 days

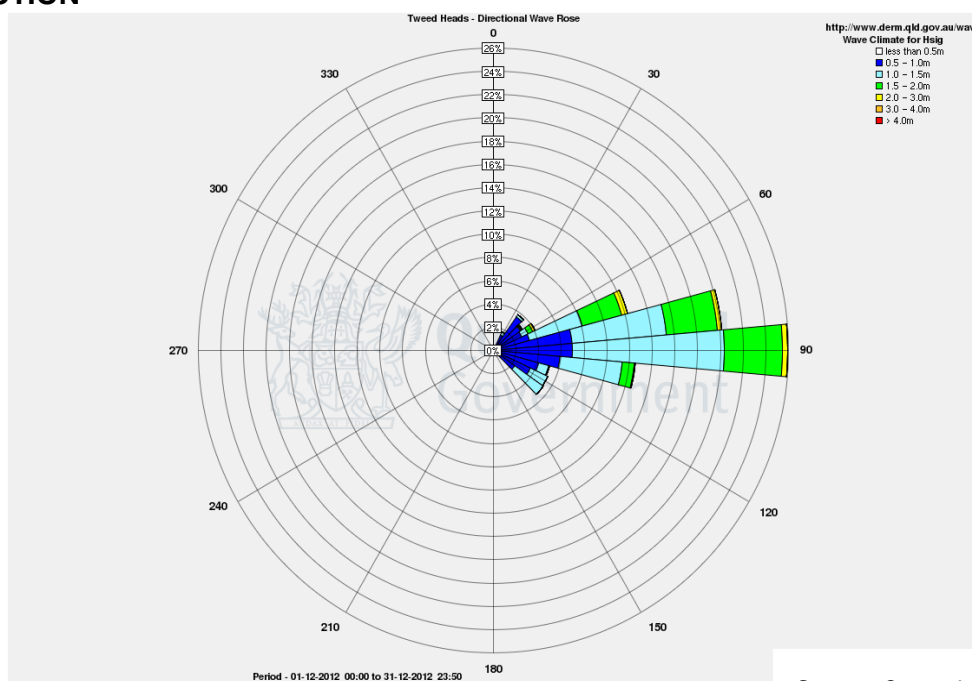
Note: Significant wave heights or H_{sig} is the average of the highest one third of recorded waves.

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



A link to data recorded by the Tweed Waverider Buoy is available at: <http://www.ehp.qld.gov.au/coastal/monitoring/waves/index.php>

WAVE DIRECTION



Source: Queensland Government

END