TRESBP ENVIRONMENTAL MONITORING SUMMARY OCTOBER 2015

OVERVIEW

In October 2015:

- 22,519 m^3 of sand was pumped to Snapper Rocks East and 17,770 m^3 of sand pumped to Duranbah.

- There was one media article relating to the project area during October.

- Wave heights ranged from calm to moderate (0.5 to 1.9 m) but mostly from calm to average (0.5 to 1.5 m), with a maximum significant wave height of 1.9 m on 9th October. Wave directions varied from NNE to ESE but mostly from ENE and ESE

- 2,149 vessel crossings were recorded for the month. (This is 25% more than the October average).

- The estimated amount of sand moving north towards the Tweed River Entrance by natural processes was in the order of 28,000 m^3 (this is almost the same as the October average).

1. SAND PUMPING & DREDGING

Sand Delivery October 2015

Pumped:	40,289 m^3
Dredged:	0 m^3
Total:	40,289 m^3

The number of days sand was pumped this month = 18

Sand Delivery January to October 2015

Pumped:	468,547 m^3
Dredged:	0 m^3
Total:	468,547 m^3

Stage II Sand Delivery April 2000 to October 2015

|	
Pumped:	8,018,930 m^3
Dredged:	2,061,972 m^3 *
Total:	10,080,902 m^3 *

* This Includes 22,870 m^3 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 October 2015 the estimated natural sand transport moving North towards the Tweed River entrance was calculated to be in the order of 28,000 m^3.

This result is almost same as the average estimated sand transport quantity of approximately 27,000 m^3 for the month of October.
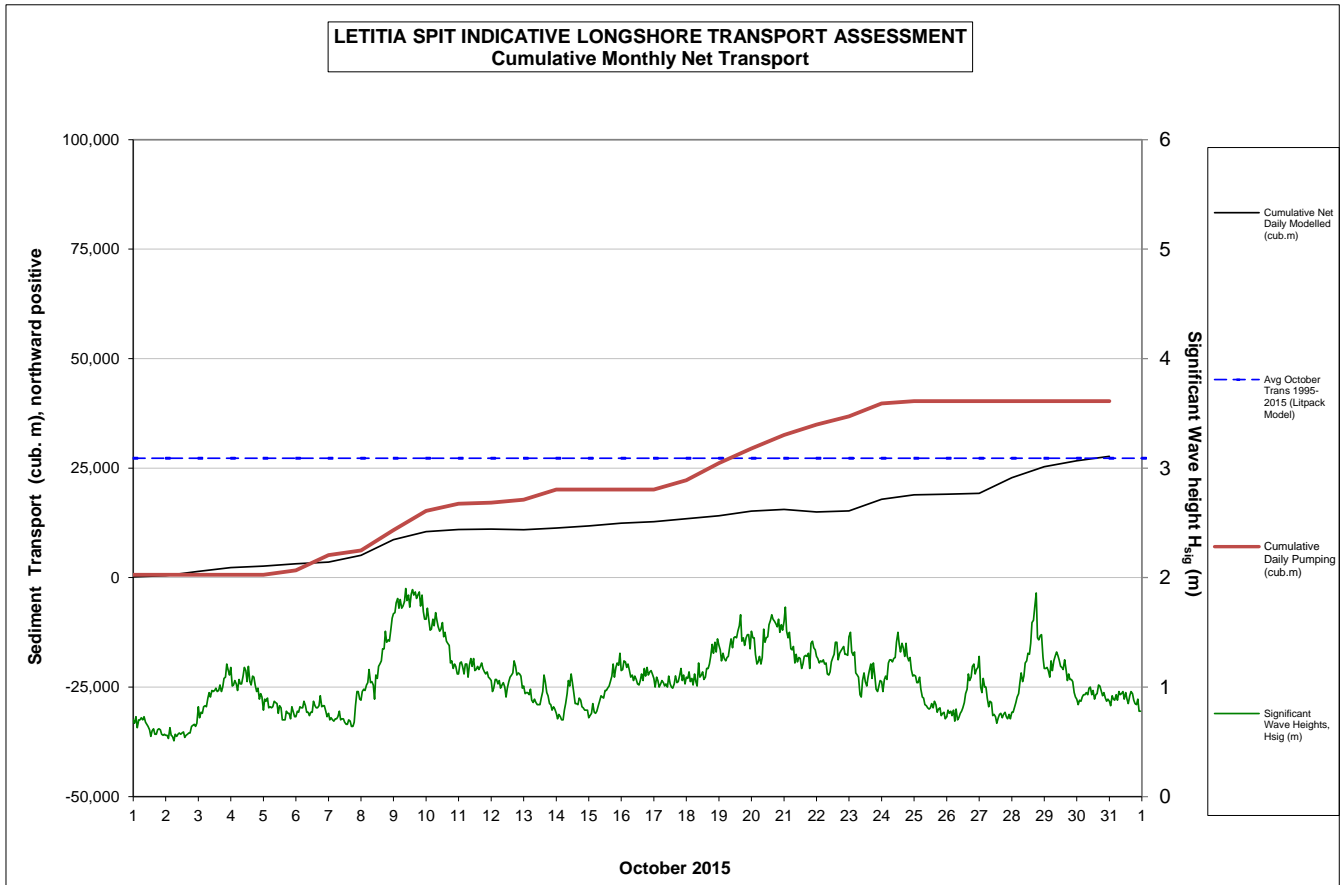
3. MEDIA COVERAGE

Swellnet published a media article on the 15th reporting that Tweed River Entrance Sand Bypassing Project (TRESBP) are considering changing how much sand will flow to various outflow points of the pumping system. The result would be different volume of sand and hence different wave shape at Duranbah, Snapper and other waves further down the Superbank.
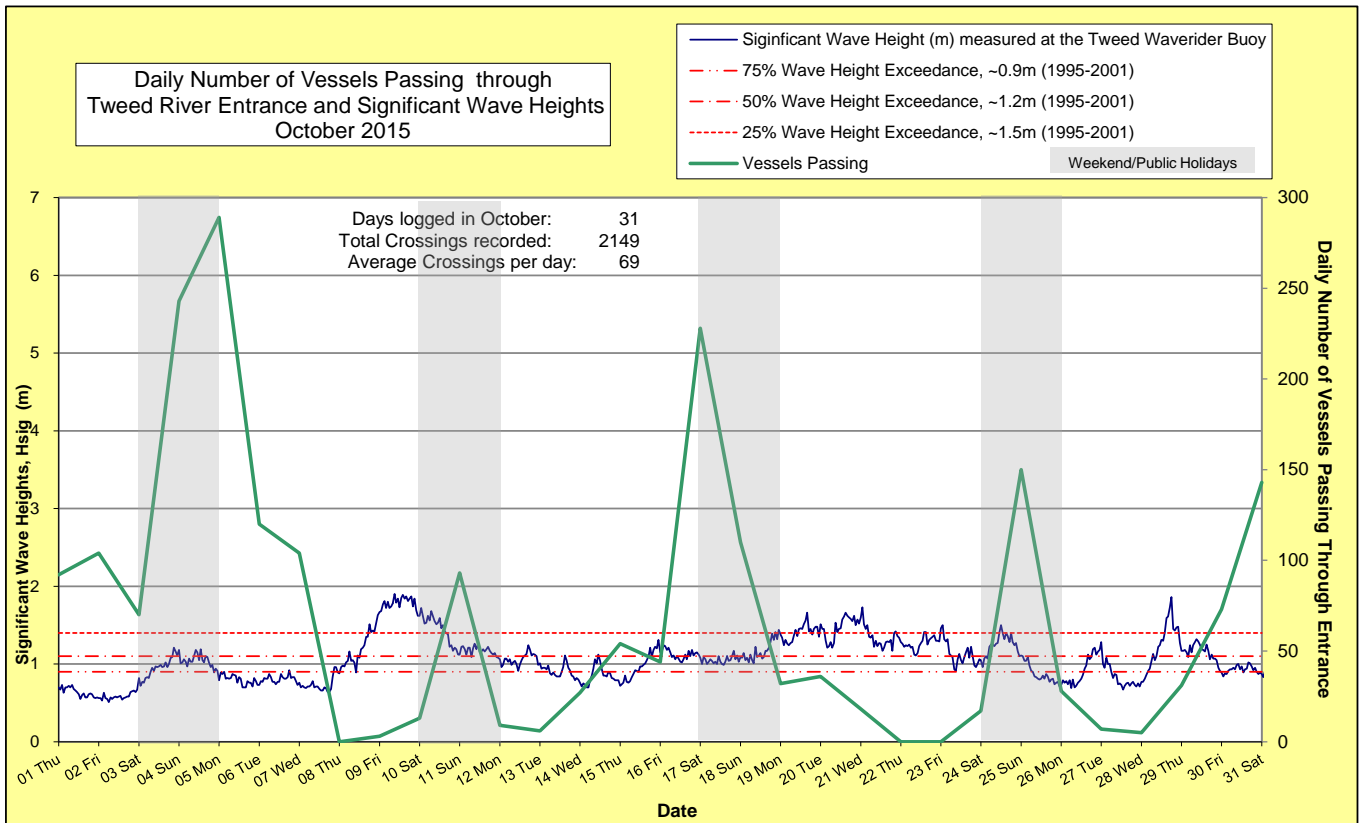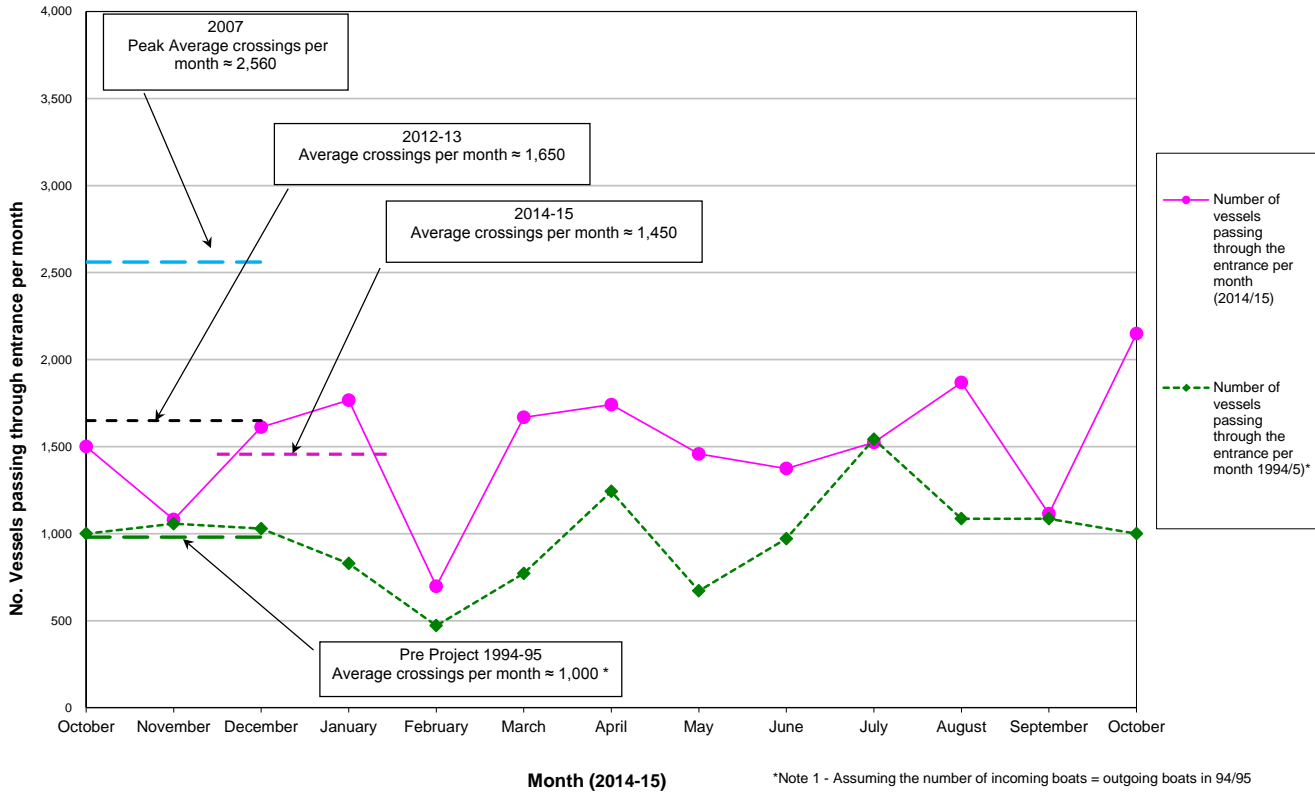
4. TWEED RIVER ENTRANCE CONDITIONS

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)	
1st					▓	92
2nd					▓	104
3rd					▓	70
4th					▓	243
5th					▓	289
6th					▓	120
7th					▓	104
8th				▓		0
9th				▓		3
10th				▓		13
11th					▓	93
12th				▓		9
13th				▓		6
14th					▓	27
15th					▓	54
16th					▓	44
17th					▓	228
18th					▓	110
19th					▓	32
20th					▓	36
21st					▓	18
22nd				▓		0
23rd				▓		0
24th					▓	17
25th					▓	150
26th					▓	28
27th				▓		7
28th				▓		5
29th					▓	31
30th					▓	73
31st					▓	143
Total						**2149**

Department of Primary Industries Lands — QUEENSLAND GOVERNMENT — CITY OF GOLDCOAST.

Tweed River Entrance Sand Bypassing Project
A joint project of the NSW and Qld Governments

Comparison of the Number of Vessels Passing Through the Entrance per month
2014/15 compared to 2007 (peak crossings) and 1994/95 (prior to entrance improvements)

2007
Peak Average crossings per month ≈ 2,560

2012-13
Average crossings per month ≈ 1,650

2014-15
Average crossings per month ≈ 1,450

Pre Project 1994-95
Average crossings per month ≈ 1,000 *

Number of vessels passing through the entrance per month (2014/15)

Number of vessels passing through the entrance per month 1994/5)*

Month (2014-15)

*Note 1 - Assuming the number of incoming boats = outgoing boats in 94/95

Daily Number of Vessels Passing through
Tweed River Entrance and Significant Wave Heights
October 2015

Siginficant Wave Height (m) measured at the Tweed Waverider Buoy
75% Wave Height Exceedance, ~0.9m (1995-2001)
50% Wave Height Exceedance, ~1.2m (1995-2001)
25% Wave Height Exceedance, ~1.5m (1995-2001)
Vessels Passing
Weekend/Public Holidays

Days logged in October: 31
Total Crossings recorded: 2149
Average Crossings per day: 69

Date

5. WAVE CONDITIONS

Wave conditions over the month: Wave heights ranged from calm to moderate (0.5 to 1.9 m) but mostly from calm to average (0.5 to 1.5 m), with a maximum significant wave height of 1.9 m on 9th October. Wave directions varied from NNE to ESE but mostly from ENE and ESE.

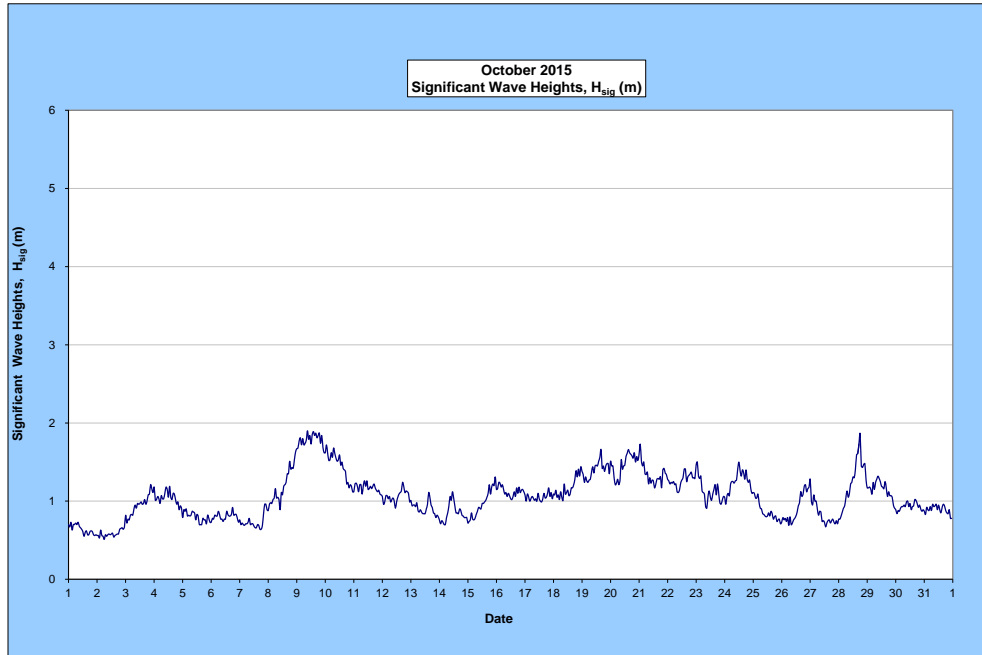Monthly minimum significant wave height: 0.5 m on 9th October
Monthly maximum significant wave height: 1.9 m on 2nd October

Number of days on which waves were below 1.0 m: 22 days

Number of days on which waves were above 2.0 m: None

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)*

October 2015
Significant Wave Heights, H_{sig} (m)

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

WAVE DIRECTION

Source: Queensland Government

Tweed Heads - Directional Wave Rose

http://www.qld.gov.au/waves
Wave Climate for Hsig

Period - 01-10-2015 00:00 to 31-10-2015 23:50