# TRESBP ENVIRONMENTAL MONITORING SUMMARY SEPTEMBER 2013

## OVERVIEW

In September, 2013:

- 23,780 $m^3$ of sand was pumped to the Snapper Rocks East primary outlet.
- There were no media articles relating to the project.
- Significant wave heights were calm to average for the month with peak significant wave heights to 1.9 m. Wave direction ranged from NE to SE but was dominantly from the E to ESE.
- 1,459 vessel crossings were recorded for the month (this is about 17% fewer than the September average).
- The estimated amount of sand moving north towards the Tweed River Entrance by natural processes was in the order of 18,000 $m^3$ (this is about 60% of the September average of about 29,000 $m^3$).

## 1. SAND PUMPING & DREDGING

### Sand Delivery September 2013

| | |
|---|---|
| Pumped: | 23,780 $m^3$ |
| Dredged: | 0 $m^3$ |
| Total: | 23,780 $m^3$ |

### Sand Delivery January to September 2013 (YTD)

| | |
|---|---|
| Pumped: | 261,264 $m^3$ |
| Dredged: | 0 $m^3$ |
| Total: | 261,264 $m^3$ |

### Sand Delivery January to September 2012

| | |
|---|---|
| Pumped: | 334,255 $m^3$ |
| Dredged: | 0 $m^3$ |
| Total: | 344,255 $m^3$ |

### Stage II Sand Delivery May 2000 to September 2013

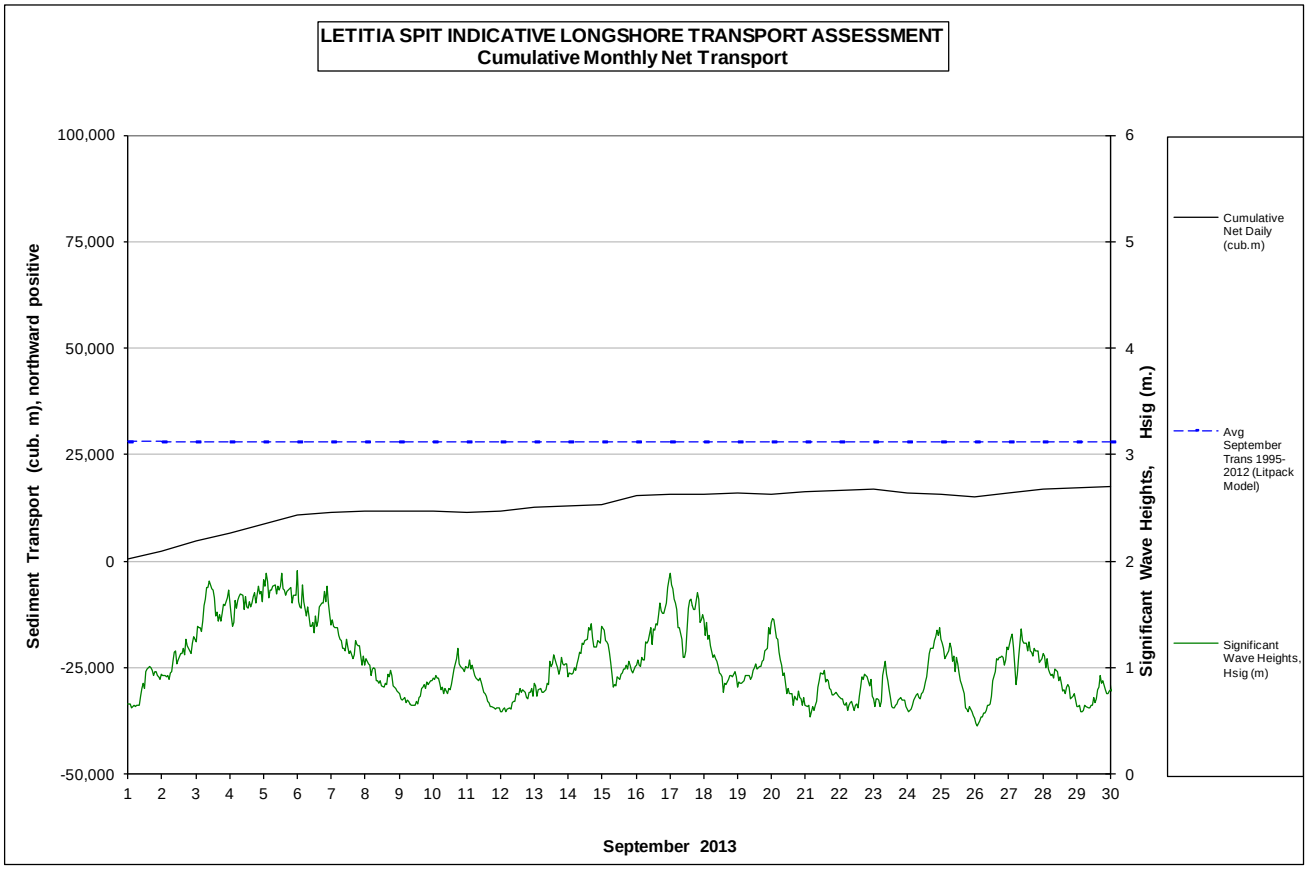
| | |
|---|---|
| Pumped: | 7,026,263 $m^3$ |
| Dredged: | 2,039,104 $m^3$ |
| Total: | 9,065,367 $m^3$ |

## 2. INDICATIVE LONGSHORE TRANSPORT

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

In September 2013 the estimated natural sand transport (moving North towards the Tweed River entrance): was calculated to be in the order of 18,000 $m^3$.

This result is about 60% of the average estimated sand transport quantity of approximately 29,000 $m^3$ for the month of September.




## 3. MEDIA COVERAGE

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

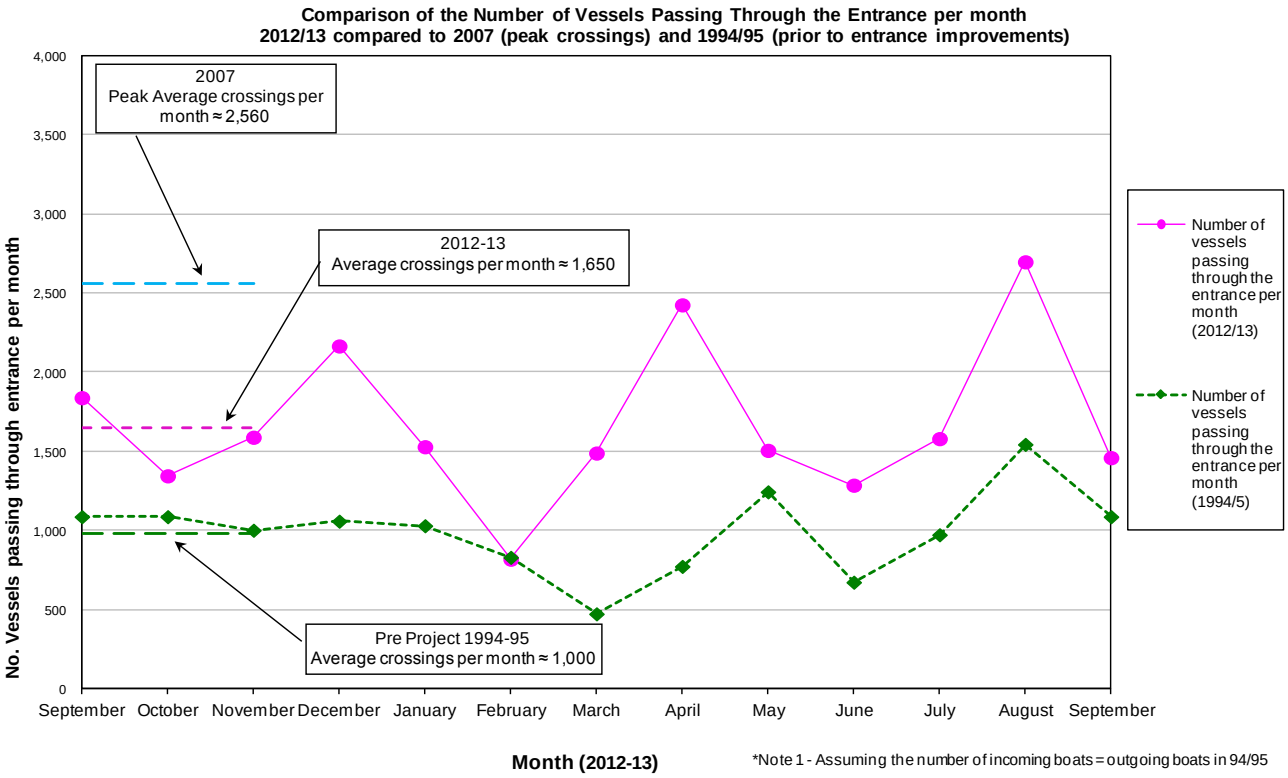
## 4. TWEED RIVER ENTRANCE CONDITIONS

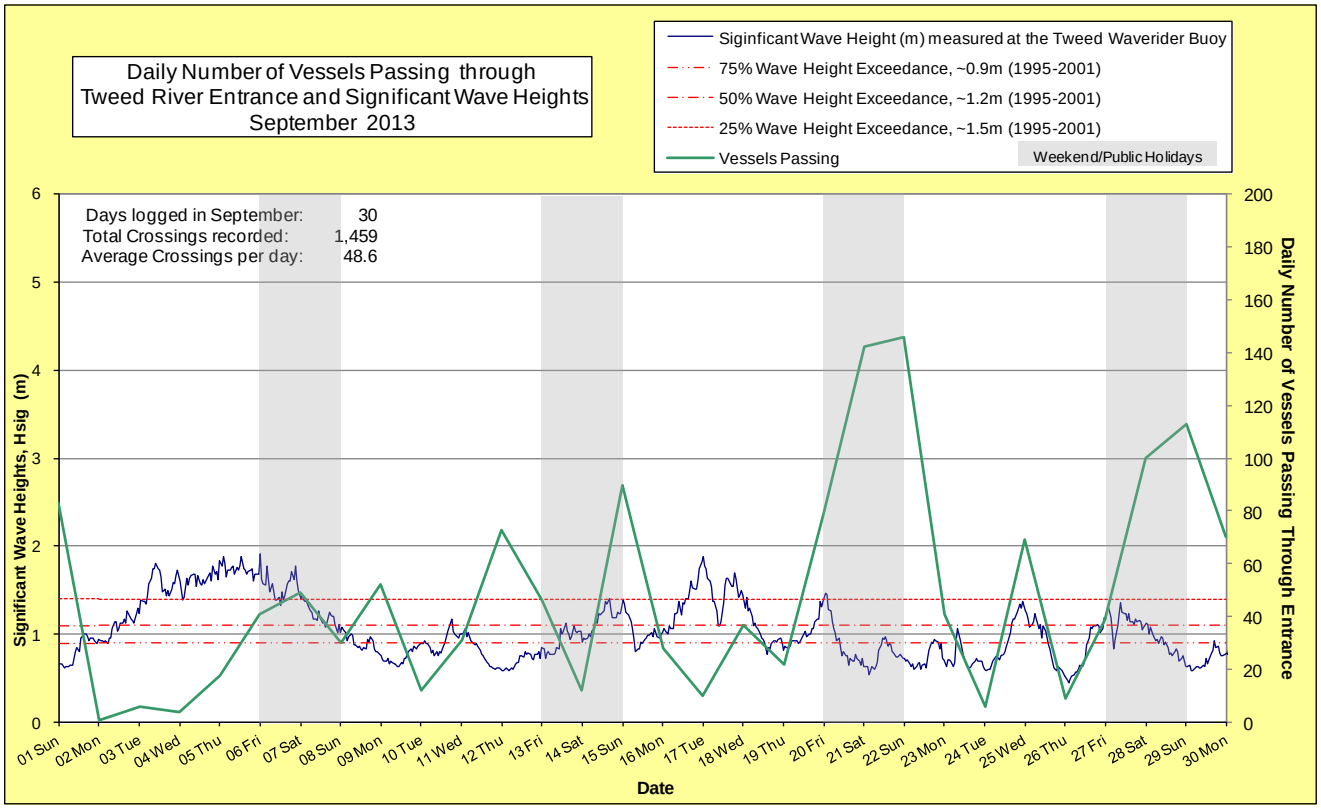
### MARINE RESCUE NSW - MONITORING RESULTS

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 | | | | | | 83 |
| 2nd | | | | | | 1 |
| 3rd | | | | | | 6 |
| 4th | | | | | | 4 |
| 5th | | | | | | 18 |
| 6th | | | | | | 41 |
| 7th | | | | | | 49 |
| 8th | | | | | | 30 |
| 9th | | | | | | 52 |
| 10th | | | | | | 12 |
| 11th | | | | | | 31 |
| 12th | | | | | | 73 |
| 13th | | | | | | 46 |
| 14th | | | | | | 12 |
| 15th | | | | | | 90 |
| 16th | | | | | | 28 |
| 17th | | | | | | 10 |
| 18th | | | | | | 37 |
| 19th | | | | | | 22 |
| 20th | | | | | | 79 |
| 21st | | | | | | 142 |
| 22nd | | | | | | 146 |
| 23rd | | | | | | 41 |
| 24th | | | | | | 6 |
| 25th | | | | | | 69 |
| 26th | | | | | | 9 |
| 27th | | | | | | 39 |
| 28th | | | | | | 100 |
| 29th | | | | | | 113 |
| 30th | | | | | | 70 |
| | | | | | **Total** | **1,459** |

***Source:*** *Marine Rescue NSW, Point Danger*


Comparison of the Number of Vessels Passing Through the Entrance per month
2012/13 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
Pre Project 1994-95
Average crossings per month ≈ 1,000
No. Vessels passing through entrance per month
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
September October November December January February March April May June July August September
Month (2012-13)
Number of vessels passing through the entrance per month (2012/13)
Number of vessels passing through the entrance per month (1994/5)
*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
September 2013
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 September: 30
Total Crossings recorded: 1,459
Average Crossings per day: 48.6
Significant Wave Heights, Hsig (m)
Daily Number of Vessels Passing Through Entrance
01 Sun 02 Mon 03 Tue 04 Wed 05 Thu 06 Fri 07 Sat 08 Sun 09 Mon 10 Tue 11 Wed 12 Thu 13 Fri 14 Sat 15 Sun 16 Mon 17 Tue 18 Wed 19 Thu 20 Fri 21 Sat 22 Sun 23 Mon 24 Tue 25 Wed 26 Thu 27 Fri 28 Sat 29 Sun 30 Mon
Date

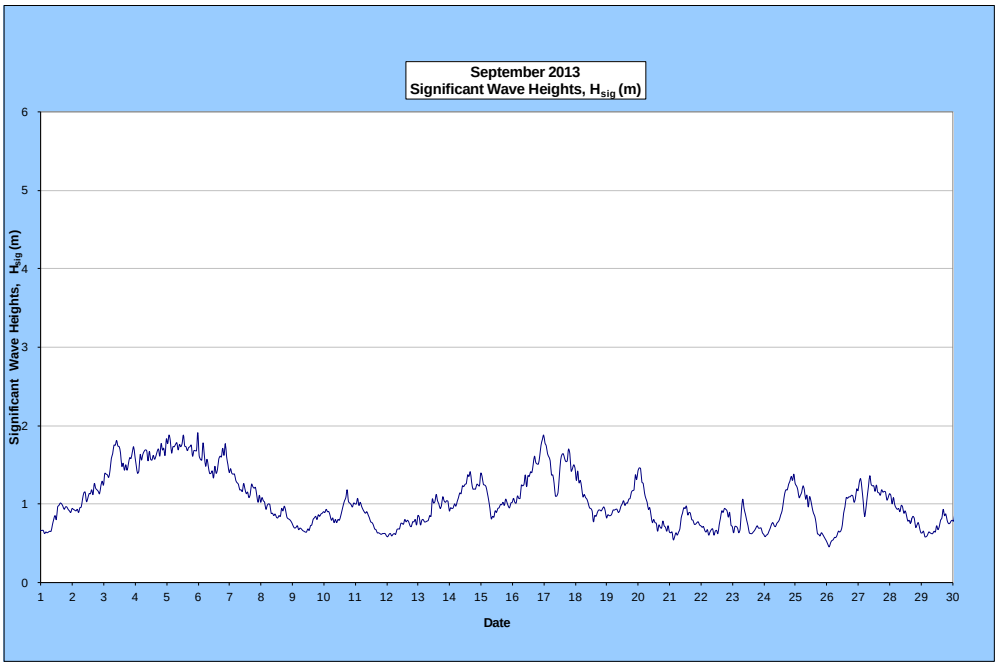
## 5. WAVE CONDITIONS

Wave Conditions over the month: Significant wave heights were calm to average for the month with peak significant wave heights to 1.9 m. Wave direction ranged from NE to SE but was dominantly from E to ESE.

Major sea events: Nil.
Monthly minimum significant wave height: 0.45 m on 26th September.
Monthly peak significant wave height: 1.91 m on 6th September.
Number of days on which waves were below 1.0 m: 16 days
Number of days on which waves were above 2.0 m: 0 day

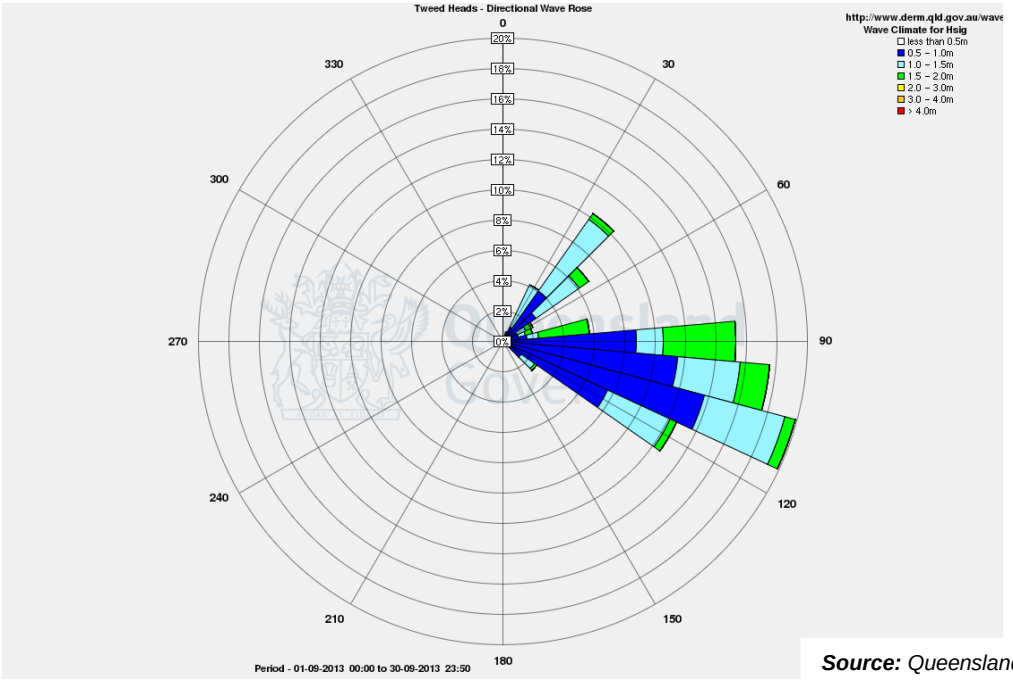
**Note:** Significant wave heights or $H_{sig}$ is the average of the highest one third of recorded waves.

*(**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**