

# TRESBP ENVIRONMENTAL MONITORING SUMMARY

## APRIL 2014

### OVERVIEW

In April, 2014:

- 33,742 m<sup>3</sup> of sand was pumped to Snapper Rocks East and 4,699 m<sup>3</sup> of sand was pumped to Duranbah Beach.
- There was one media article relating to soft beach sand in shallow water depths at Bilinga Beach.
- Sea conditions were calm to average for most of the month with slightly higher seas over 7<sup>th</sup> to 9<sup>th</sup>, 14<sup>th</sup> to 16<sup>th</sup> and 28<sup>th</sup> (with significant wave heights up to 1.8 to 1.9m) and moderate seas on 19<sup>th</sup> (with significant wave height up to 2.4m). Wave directions varied from East to South East but mostly from E to ESE.
- 2,552 vessel crossings were recorded for the month. (This is about 35% more than the April average)
- The estimated amount of sand moving north towards the Tweed River Entrance by natural processes was in the order of 56,000 m<sup>3</sup> (this is about 95% of the April average).

### 1. SAND PUMPING & DREDGING

#### **Sand Delivery April 2014**

Pumped:	38,441 m <sup>3</sup>
Dredged:	0 m <sup>3</sup>
Total:	38,441 m <sup>3</sup>

#### **Sand Delivery January 2014 to April 2014**

Pumped:	177,659 m <sup>3</sup>
Dredged:	0 m <sup>3</sup>
Total:	177,659 m <sup>3</sup>

#### **Stage II Sand Delivery May 2000 to April 2014**

Pumped:	7,262,541 m <sup>3</sup>
Dredged:	2,061,972 m <sup>3</sup> *
Total:	9,324,513 m <sup>3</sup> *



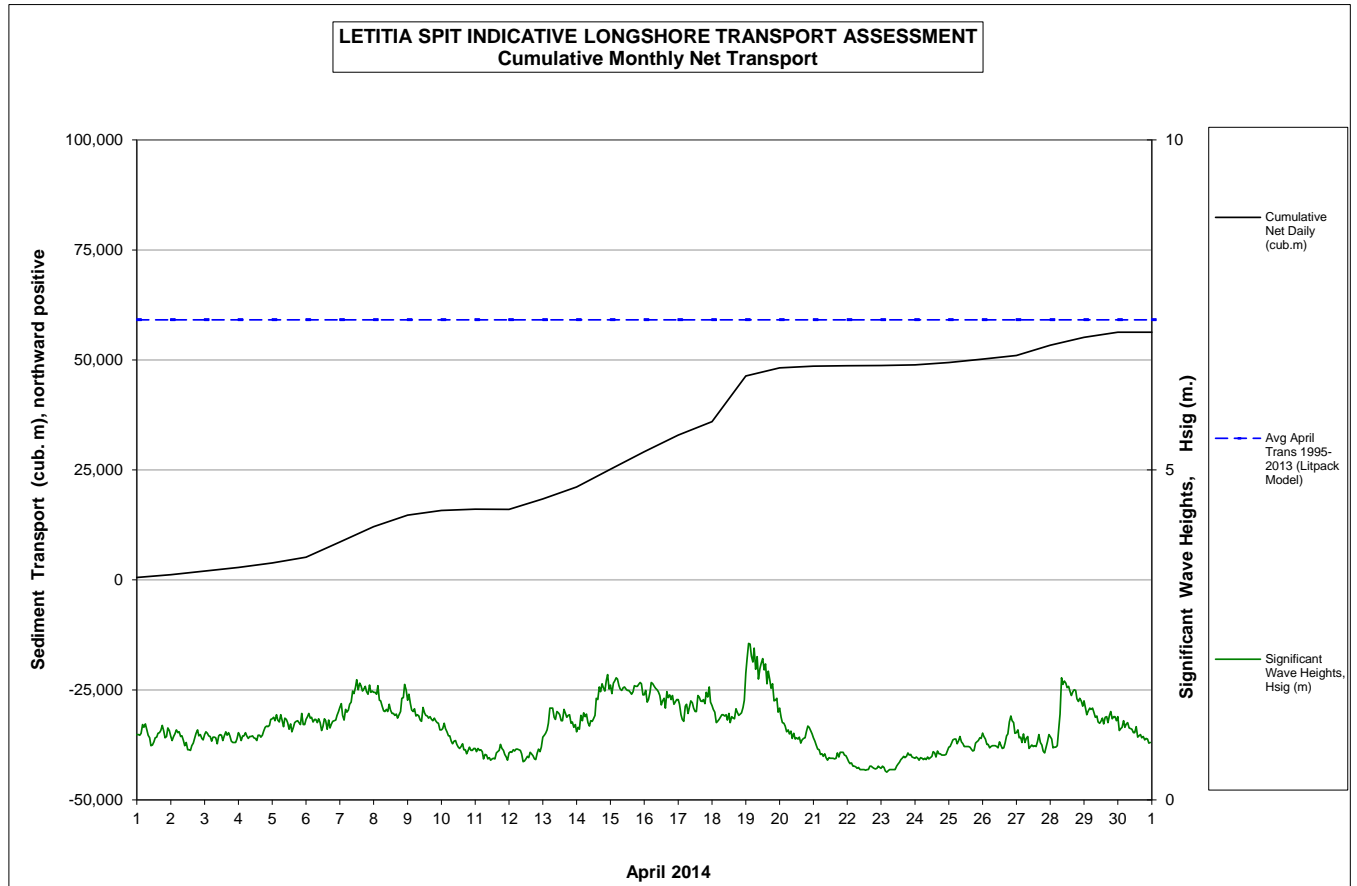
\* This Includes 22,870 m<sup>3</sup> of sand delivered by dredge to Palm Beach between June and September 2005.

## 2. INDICATIVE LONGSHORE TRANSPORT

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


In April 2014 the estimated natural sand transport (moving North towards the Tweed River entrance): was calculated to be in the order of 56,000 m<sup>3</sup>.

This result is about 95% of the average estimated sand transport quantity of approximately 59,000 m<sup>3</sup> for the month of April



## 3. MEDIA COVERAGE

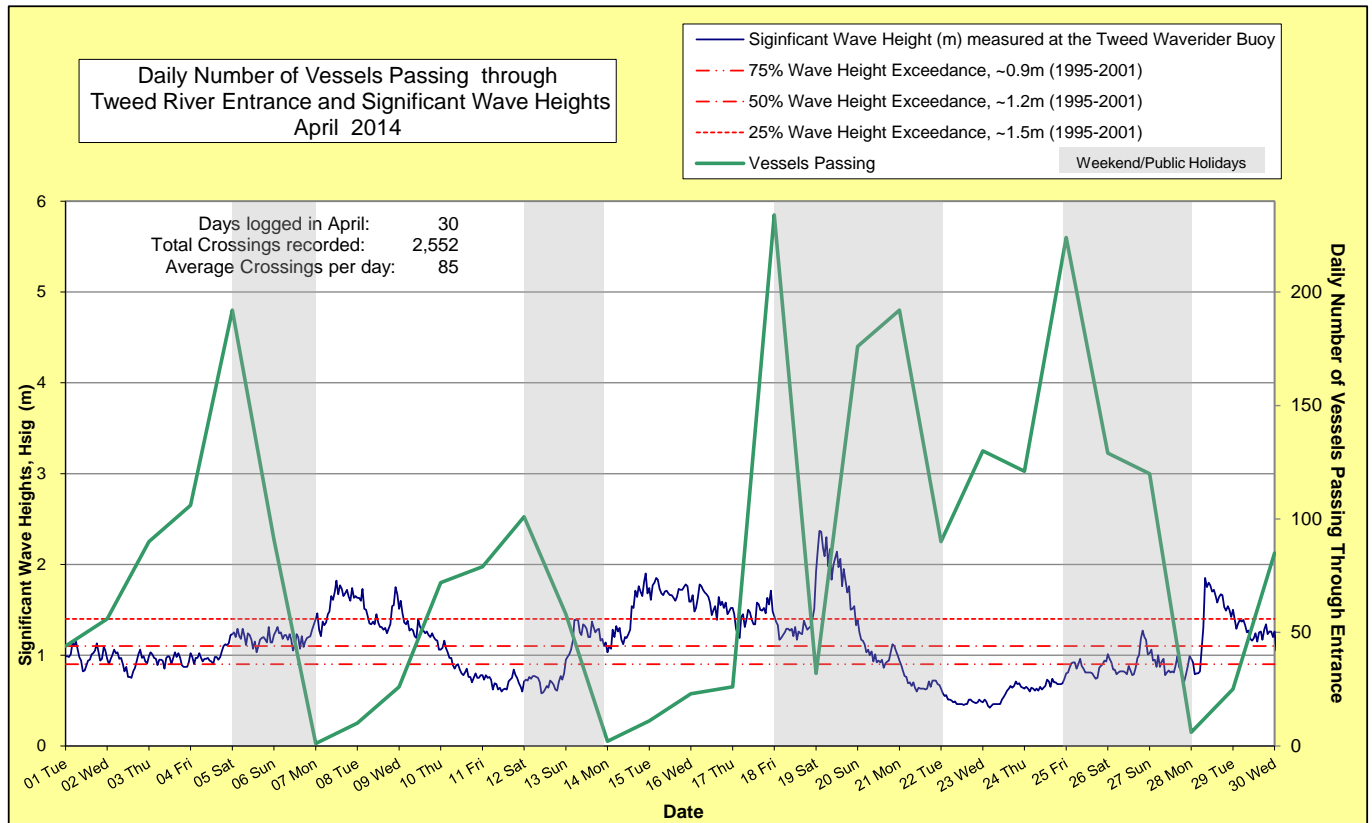
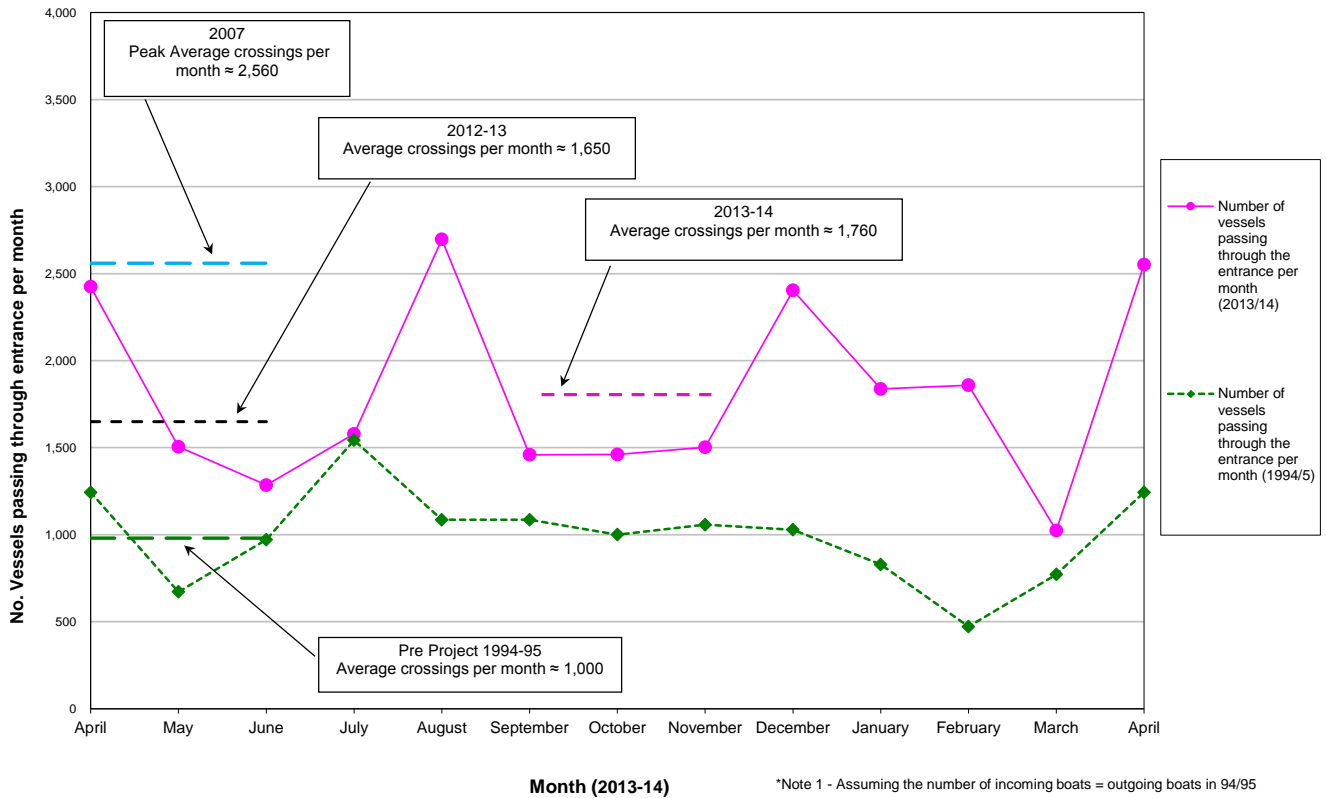
There was one media article relating to the project on 16<sup>th</sup> April (Gold Coast Sun) concerning a local resident's observation of soft beach sand in shallow water depths at Bilinga Beach.

**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 <sup>st</sup>						44
2 <sup>nd</sup>						56
3 <sup>rd</sup>						90
4 <sup>th</sup>						106
5 <sup>th</sup>						192
6 <sup>th</sup>						91
7 <sup>th</sup>						1
8 <sup>th</sup>						10
9 <sup>th</sup>						26
10 <sup>th</sup>						72
11 <sup>th</sup>						79
12 <sup>th</sup>						101
13 <sup>th</sup>						58
14 <sup>th</sup>						2
15 <sup>th</sup>						11
16 <sup>th</sup>						23
17 <sup>th</sup>						26
18 <sup>th</sup>						234
19 <sup>th</sup>						32
20 <sup>th</sup>						176
21 <sup>st</sup>						192
22 <sup>nd</sup>						90
23 <sup>rd</sup>						130
24 <sup>th</sup>						121
25 <sup>th</sup>						224
26 <sup>th</sup>						129
27 <sup>th</sup>						120
28 <sup>th</sup>						6
29 <sup>th</sup>						25
30 <sup>th</sup>						85
						<b>Total</b>
						<b>2,552</b>

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: Significant wave heights were mostly calm to average throughout with slightly higher seas occurring over 7<sup>th</sup> to 9<sup>th</sup>, 14<sup>th</sup> to 16<sup>th</sup> and 28<sup>th</sup> (with significant wave heights up to 1.8 to 1.9m) and major seas on the 19<sup>th</sup> (with significant wave height up to 2.4m) . Wave direction ranged mostly from East to ESE.

Major sea events: 19<sup>th</sup> April

Monthly minimum significant wave height: 0.4 m on 23<sup>th</sup> April.

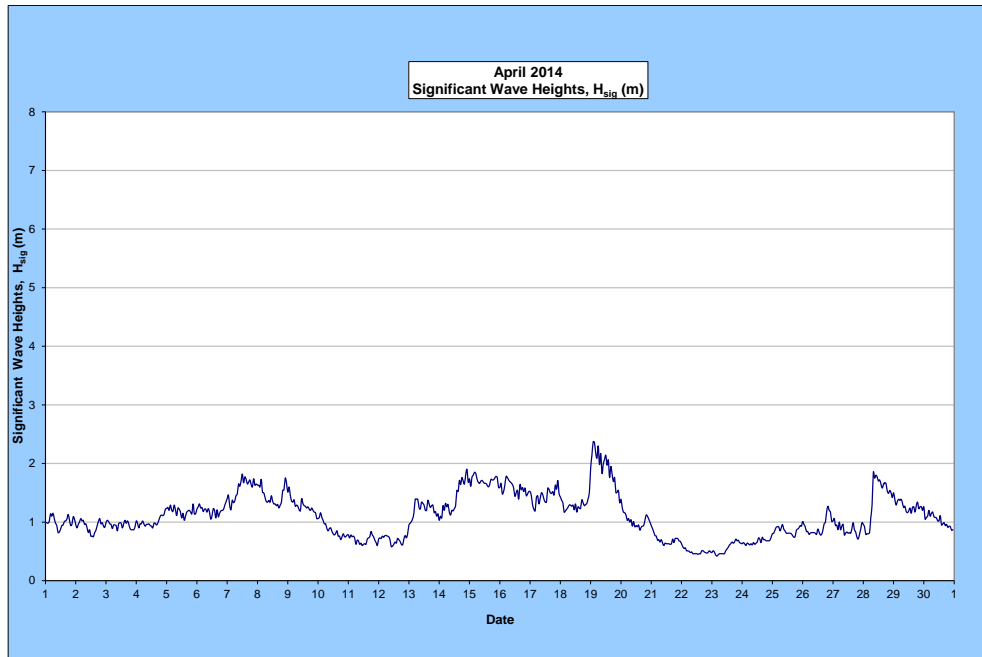
Monthly Maximum significant wave height: 2.4 m on 19<sup>th</sup> April.

Number of days on which waves were below 1.0 m: 19 days

Number of days on which waves were above 2.0 m: 1 days

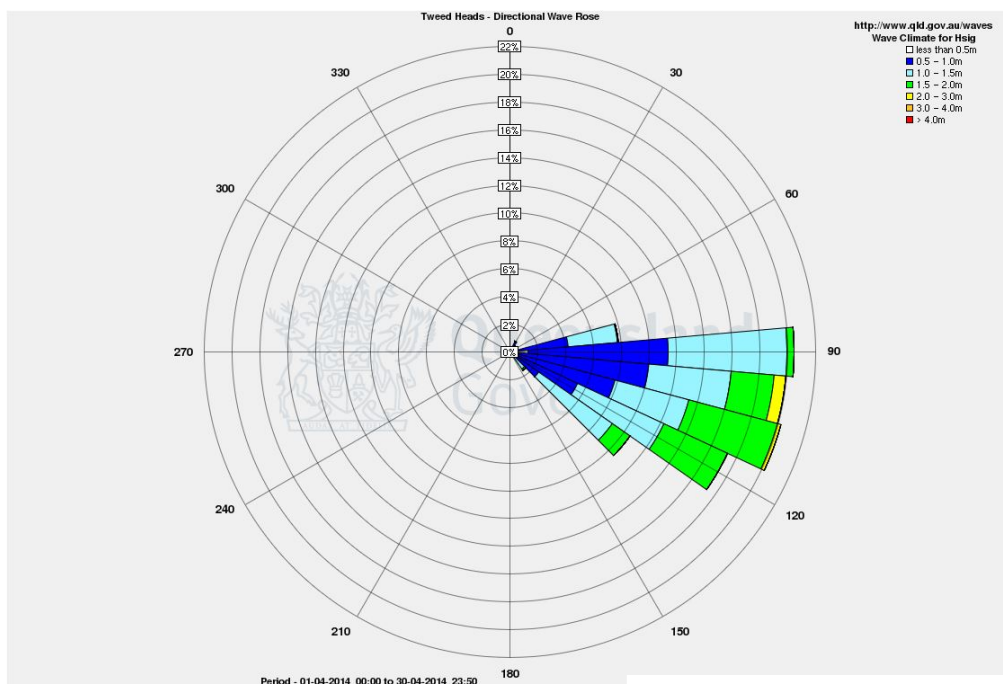
**Note:** Significant wave heights or  $H_{sig}$  is the average of the highest one third of recorded waves.

(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



END

Source: Queensland Government