

TRESBP ENVIRONMENTAL MONITORING SUMMARY

MARCH 2011

OVERVIEW

In March, 2011:

- 50,854 m³ of sand was pumped to Snapper Rocks East.
- There were no media articles referring to the project.
- Sea conditions were calm to moderate (0.5 m to 2.4 m wave heights).
- 1,632 boat crossings were recorded at the Tweed River Entrance (this is about the March average).
- The estimated amount of sand moving north towards the Tweed River Entrance by natural processes was about 55,000m³ (this is about 90% of the March average).

1. SAND PUMPING & DREDGING

Sand Delivery March 2011

Pumped:	50,854 m ³
Dredged:	0 m ³
Total:	50,854 m ³

Sand Delivery January to March 2011 (YTD)

Pumped:	116,116 m ³
Dredged:	0 m ³
Total:	116,116 m ³

Sand Delivery January to March 2010

Pumped:	115,991 m ³
Dredged:	0 m ³
Total:	115,991 m ³

Stage II Sand Delivery May 2000 to March 2011

Pumped:	5,926,854 m ³
Dredged:	2,038,900 m ³
Total:	7,965,754 m ³



Crown Lands Division

Department of **Environment**
and **Resource Management**



Queensland Government

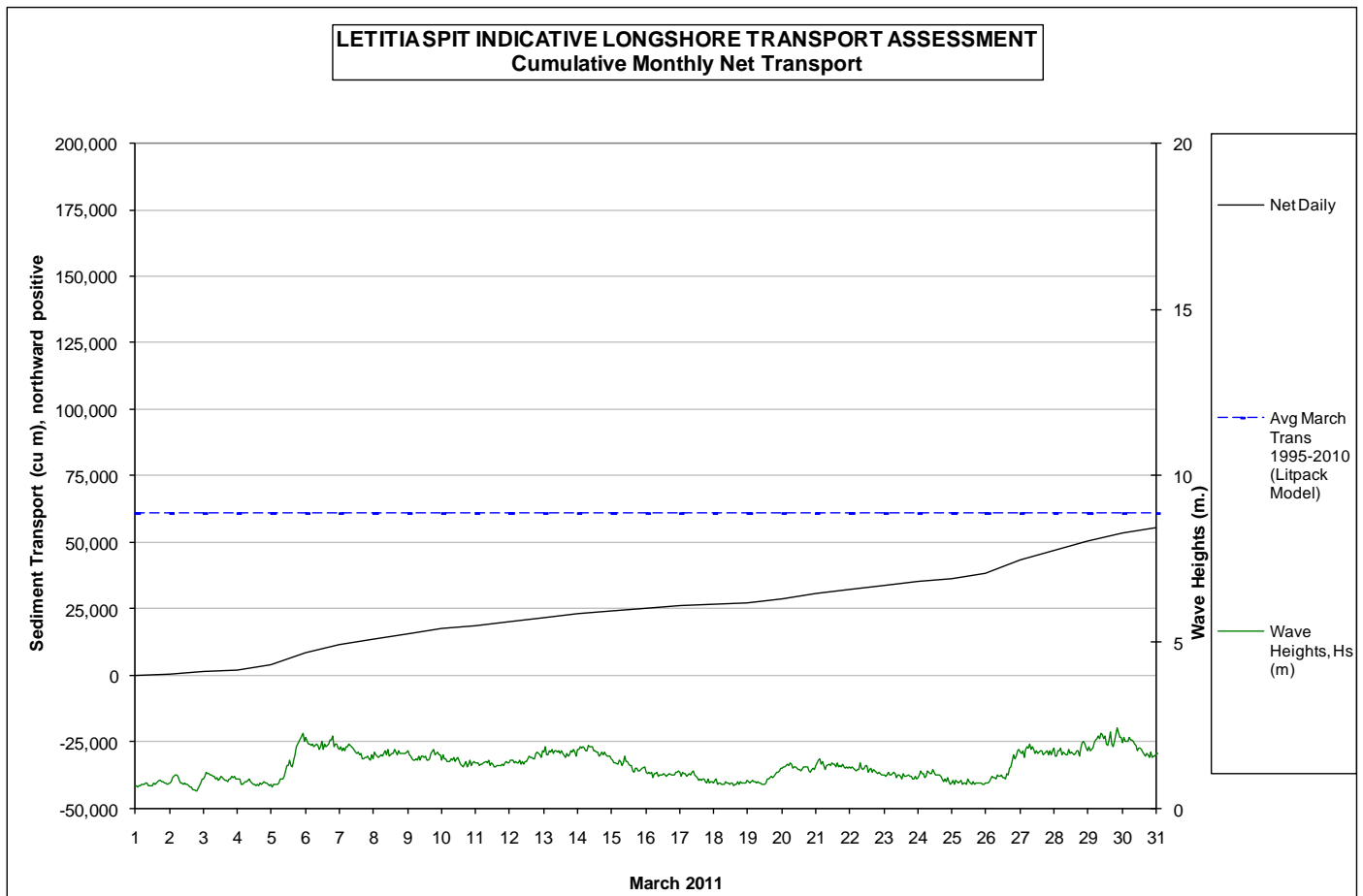


2. INDICATIVE LONGSHORE TRANSPORT

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


March 2011 estimated natural sand transport (moving N towards Tweed entrance): 55,000 m³.

This result is about 90% of the average sand transport quantity for the month of March.

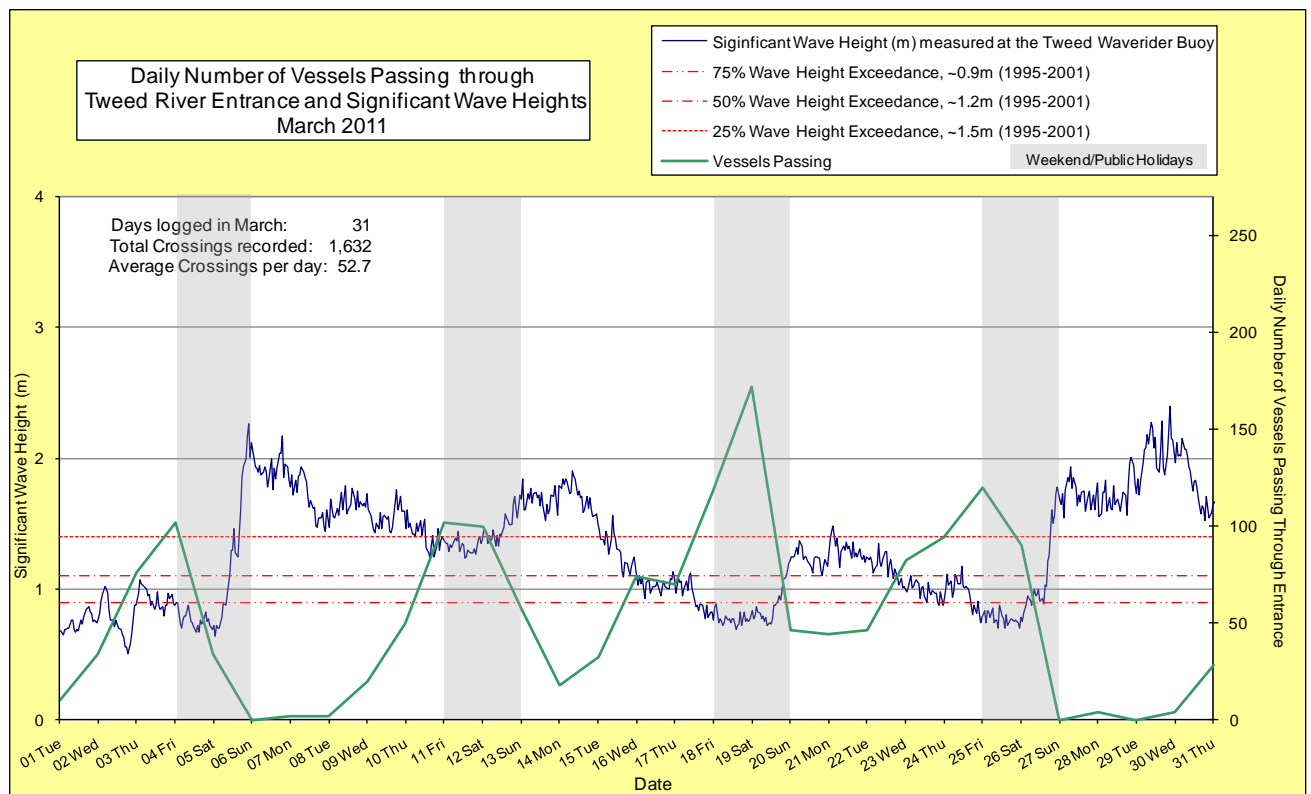
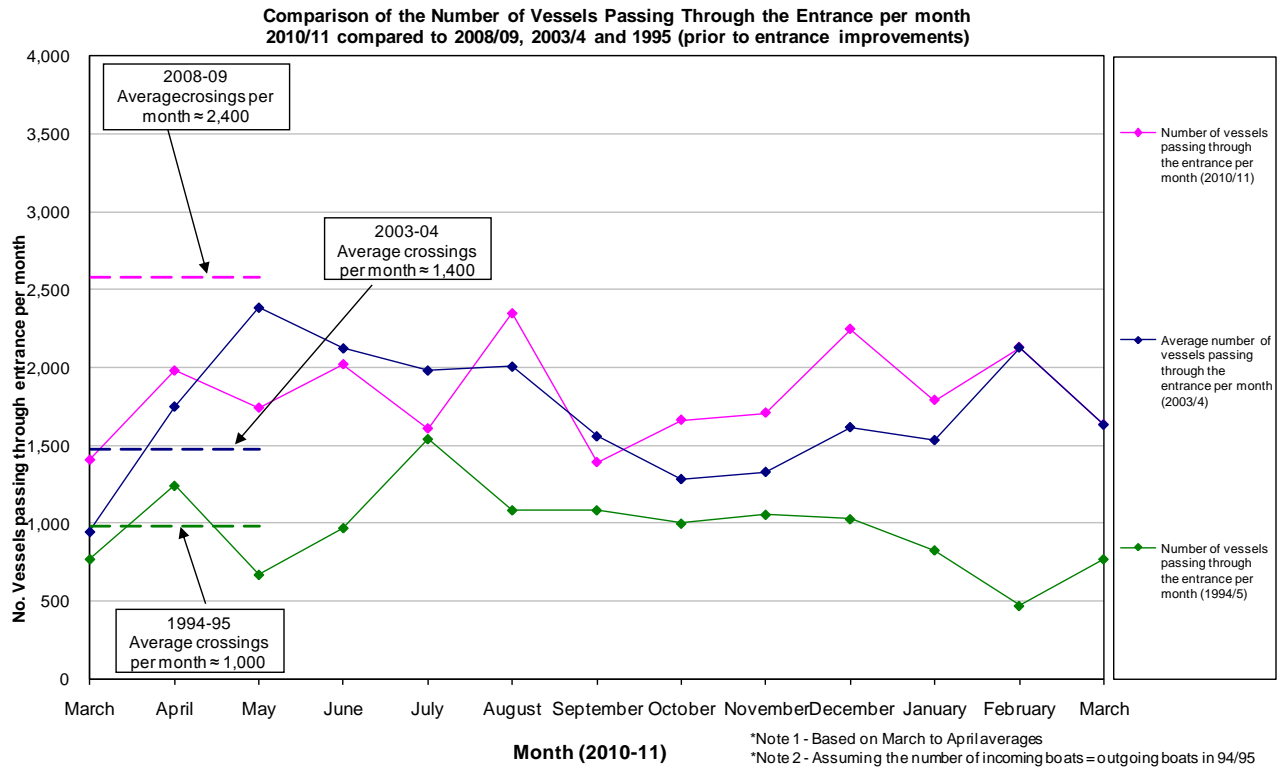


3. MEDIA COVERAGE

No media coverage referring to the project this month.

4. TWEED RIVER ENTRANCE CONDITIONS**MARINE RESCUE NSW - MONITORING RESULTS**
 Weekends and public holidays

Date	Navigation Rating Impassable-----Good					Number of Boats
	Impassable	Difficulty Encountered	Some Difficulty Encountered	Relatively Good Crossing	Good Conditions	
1 st						10
2 nd						34
3 rd						76
4 th						102
5 th						34
6 th						0
7 th						2
8 th						2
9 th						20
10 th						50
11 th						102
12 th						100
13 th						58
14 th						18
15 th						32
16 th						74
17 th						70
18 th						118
19 th						172
20 th						46
21 st						44
22 nd						46
23 rd						82
24 th						94
25 th						120
26 th						90
27 th						0
28 th						4
29 th						0
30 th						4
31 st						28
					Total	1,632



5. WAVE & SURFING CONDITIONS

Dominant swell condition: Wave heights ranged from calm to moderate seas (0.5 to 2.4 m), with about half the month exhibiting higher than annual average wave energy ($\geq H_s=1.3\text{m}$). Wave directions varied from E to SE, but mostly from ESE. A significant swing to the SE from previous months.

Moderate sea events: 2.3 m on 5th and 2.4 m on 29th March

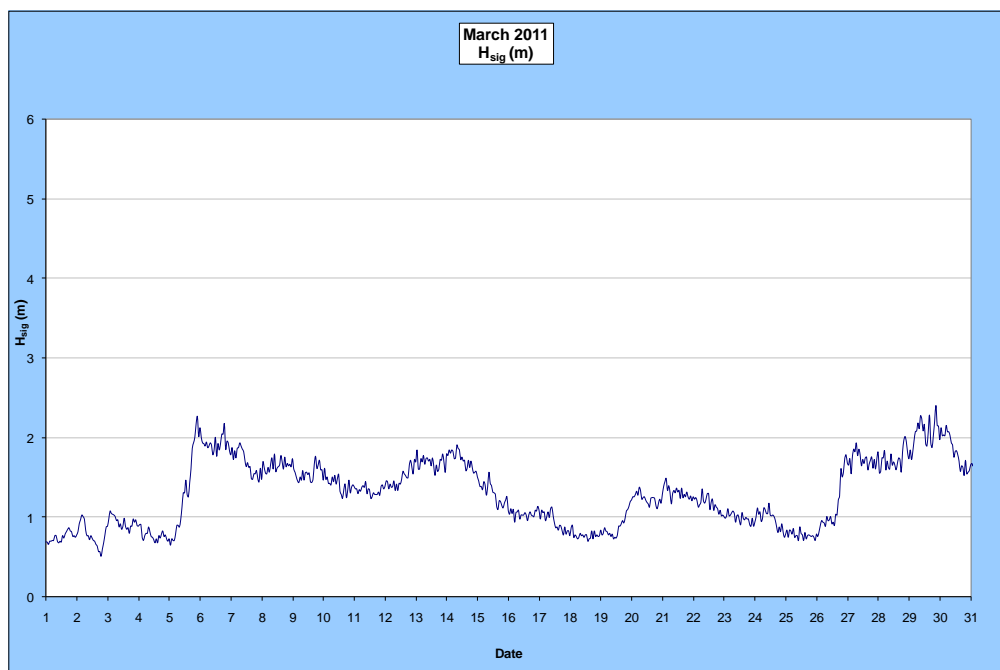
Monthly minimum significant wave height: 0.5 m on 2nd March

Monthly maximum significant wave height: 2.4 m on 29th March

Number of days on which waves were below 1.0 m: 14 days

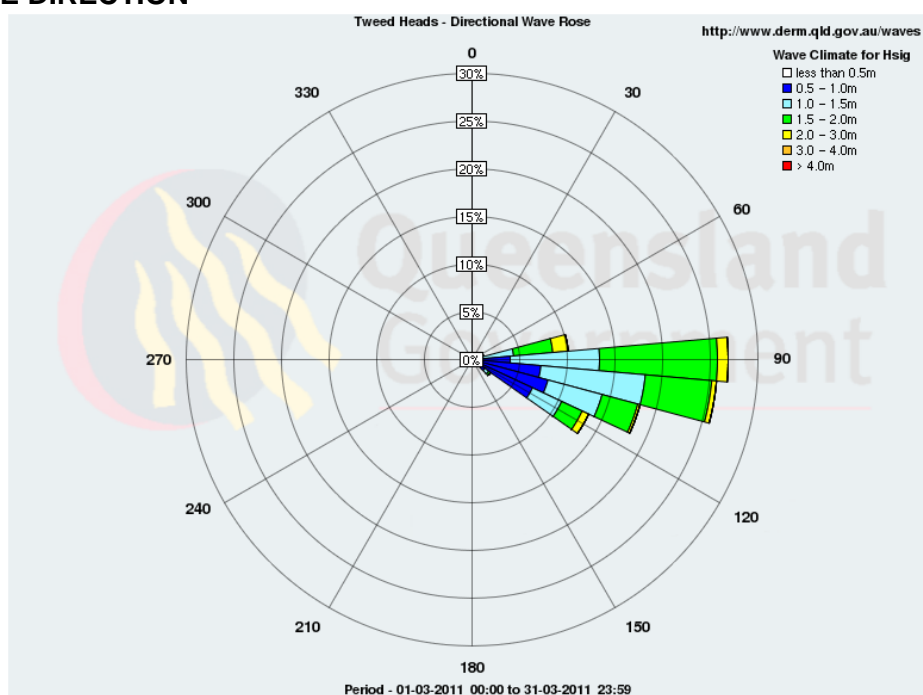
Number of days on which waves were above 2.0 m: 4 days

(Source: Tweed & Brisbane Wave Buoy; QDERM)



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

WAVE DIRECTION



Source: Queensland
Department of Environment
and Resource Management

UPCO MING SURF AND SURF LIFESAVING EVENTS

- U15 Masters Craft Carnival, 12 March 2011, Tugun (TBC)
- Student Surfing Festival, 19-20 March 2011, Gold Coast Qld
- Junior Qld Championships, 18 -20 March 2011, Kirra
- Qld State, Championships, 25–27 March 2011, Kirra
- Aussie Titles 4-10 April 2011, Kirra
- Queensland Masters Surfing Championship, 25-26 June 2011, Gold Coast Qld

PHOTOGRAPHS OF SURF CONDITIONS



Duranbah, 4 March 2011 (source: Swellnet Surf Report)



Coolangatta, 9 March 2011 (source: Swellnet Surf Report)



Duranbah, 16 March 2011 (source: Swellnet Surf Report)



Snapper Rocks, 23 March 2011 (source: Swellnet Surf Report)



Kirra, 24 March 2011 (source: Swellnet Surf Report)



Snapper Rocks, 28 March 2011 (source: Swellnet Surf Report)

SURF REPORT OVERVIEW

DATE	SURF	DIRECTION	COMMENTS
1	Bumpy, 0.3m	NE	Average conditions, tiny swell with Duranbah offering tiny wave.
3	Clean, 0.3m- 0.6m	SSE	Inconsistent southerly swell, patient waits between sets.
4	Clean, 0.3m	SE	No swell worth the effort to get out of bed.
7	Inconsistent, 0.6m	ESE	Swell ESE at 0.6m with points lining up for longer rides.
8	Bumpy, 0.3-0.6m	E	Occasional 0.6m waves.
9	Inconsistent, 0.6m-0.9m	E	Sets are only bringing the occasional soft 0.6m wave through the high tide.
14	Bumpy, 0.6-0.9m	E	The swell is sticking around maintaining up to 0.9m sets and 0.6m sliders through from snapper to greenmount and al little bigger at Duranbah / tweed coast
15	Clean, 0.9m	E	Magical morning with clear conditions and a lot of fun little waves to be had for all levels of surfer.
16	Glassy, 0.6m	E	Really clean. 0.6m-0.9m sets at Snapper Rocks with 0.3-0.6m through Rainbow Bay and Greenmount.
17	Clean, 0.3m- 0.6m	E	conditions are clean but the swell has backed off to 0.45m waves and up to 0.6m sets.
18	Clean, 0.3m-0.45m	E	0.45m peelers just making it around Snapper Rocks with the occasional 0.6m set will roll through there and Duranbah
21	Clean, 0.6m	ESE	A maximum of 0.6m at the points and a bit less on the beaches this morning
22	Choppy, 0.3m-0.45m	ESE	Pretty crummy conditions this morning
23	Choppy, 0.3-0.45m	ESE	Beachies are close to nonexistent with only a small wave in behind Greenmount, off SnapperRocks and at Duranbah being the pick
24	Clean, 0.3m	SE	Clean, but tiny and virtually unridable
25	Clean, 0.3m	ESE	The ESE swell missing this part of the coast
28	Clean, 0.6m-0.9m	SE	A lot of clean and really fun waves around this morning

Source: Swellnet - Coolangatta Surf Report

Generally, March experienced calm to moderate conditions.

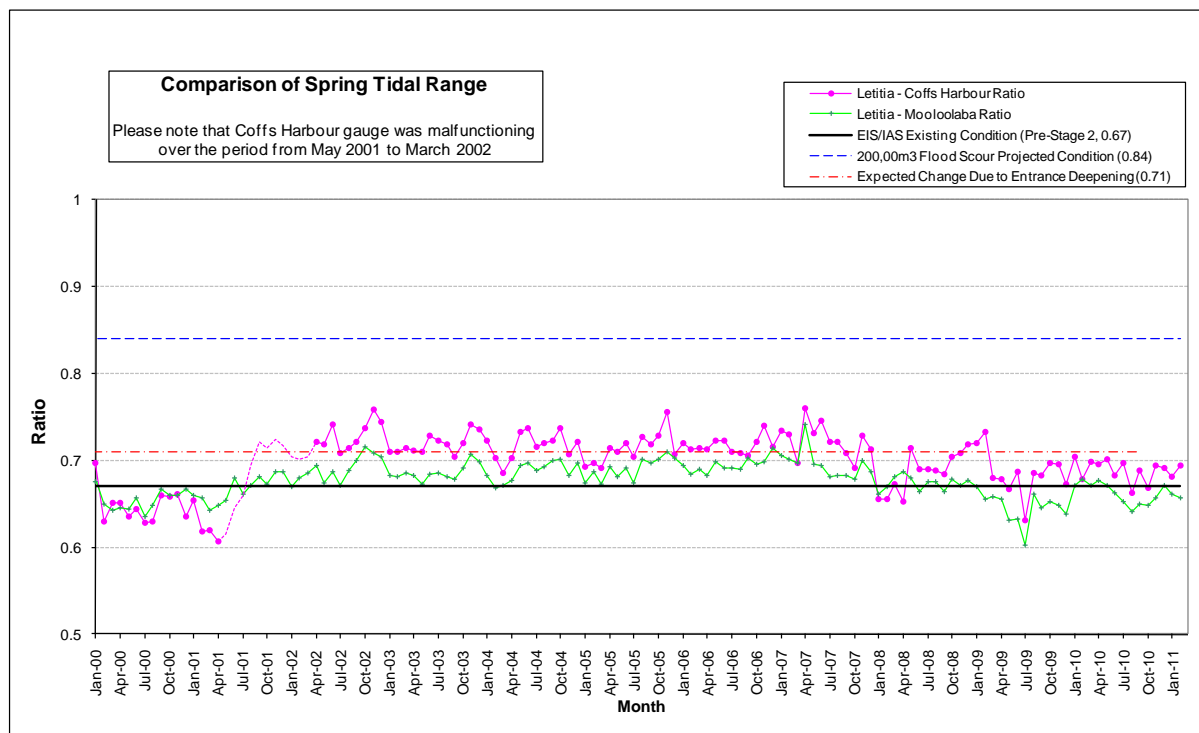
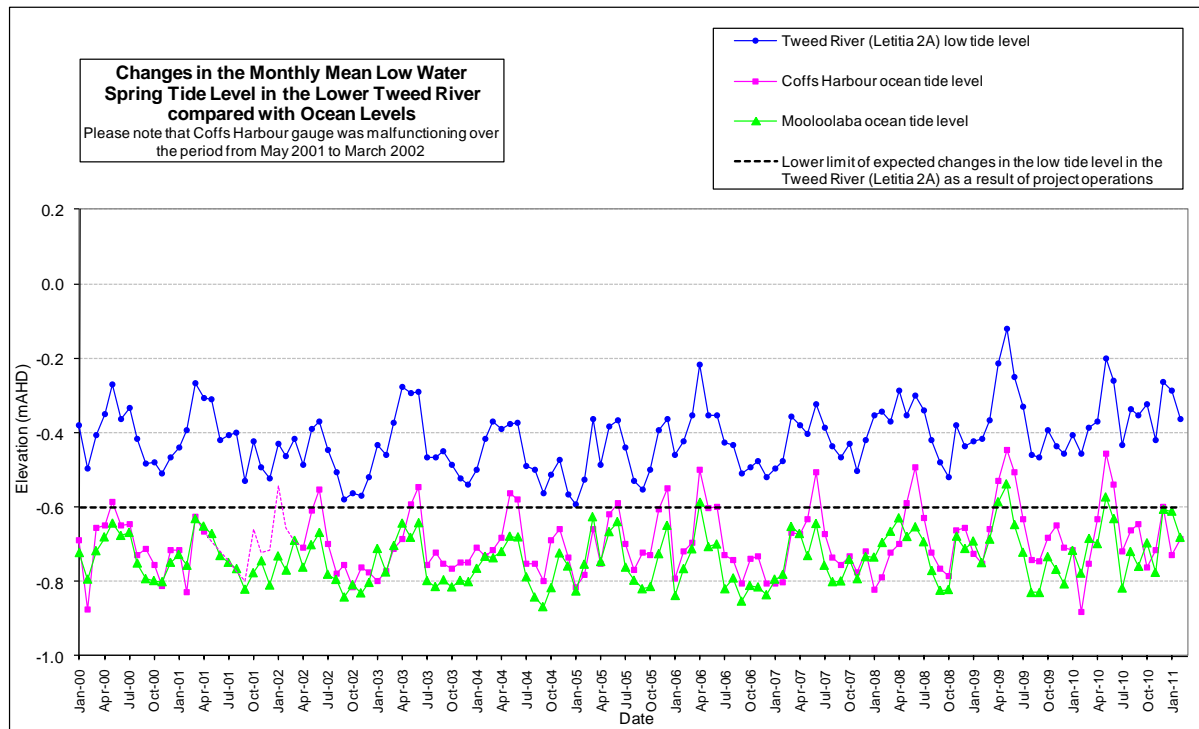
6. TIDES

Tweed River Mean Low Water spring (MLWS) tide level varied from a minimum of -0.420 m AHD to a maximum of -0.264 m AHD for the six months September 2010 to February 2011. This is similar to the natural river tidal behaviour prior to project operations.

Over the last six months (September 2010 to February 2011) the river spring tidal range behaviour has been similar to the natural behaviour observed prior to project operations.

The TRESBP has not had a significant impact on the Lower Tweed River tidal behaviour to February 2011.

Next set of data is due in September 2011 (six months).



END