

# **Tweed River Entrance Sand Bypassing Project**

## **Letitia Spit to Kirra**



## **Monthly Environmental Monitoring Summary**

**DECEMBER 2008**

Department of Lands 



  
**Queensland  
Government**  
Environmental  
Protection Agency

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## **1. EXECUTIVE SUMMARY**

This report provides a summary of environmental monitoring undertaken by the TRESBP in December 2008.

In December 2008:

- A record number of 3,521 boats passed through the entrance. This is about 70% higher than the 2002-2007 average number of crossings for the month of December.
- Surf quality in December was poor to average, with consistently small waves and no moderate or high sea events.
- Tide data for the months of October to December 2008 has been held up in transfer and will be analysed as soon as possible.
- The estimated amount of sand moving north towards the Tweed River Entrance by natural processes was significantly less than the December average.

## **2. INTRODUCTION**

This document provides a summary of sand quantities delivered by the project, as well as surf, beach, river, entrance and weather conditions for the southern Gold Coast Beaches, Duranbah and the Tweed River Entrance for ongoing monitoring purposes.

Information has been sourced from TRESBP monitoring programs, GCCC, QEPA, the Bureau of Meteorology, Surfing Australia, media coverage, Coastalwatch.com.au and Swellnet.com.au.

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### 3. SAND PUMPING & DREDGING ACTIVITIES

#### Sand Delivery for December 2008

	PUMPED		DEC 2008 TOTAL DELIVERY
Location	Snapper Rocks East	Duranbah	
Amount (m <sup>3</sup> )	5,703 m <sup>3</sup>	0 m <sup>3</sup>	5,703 m <sup>3</sup>

#### Total Sand Delivery This Year (January to December 2008)

	PUMPED	DREDGED	2008 TOTAL DELIVERY
Amount (m <sup>3</sup> )	585,809 m <sup>3</sup>	198,979 m <sup>3</sup>	784,788 m <sup>3</sup>

#### Total Sand Delivery Last Year (January to December 2007)

	PUMPED	DREDGED	2007 TOTAL DELIVERY
Amount (m <sup>3</sup> )	562,247 m <sup>3</sup>	0 m <sup>3</sup>	562,247 m <sup>3</sup>

#### Total Stage 2 Delivery to Date (May 2000 to December 2008)

	PUMPED	DREDGED	TOTAL DELIVERY STAGE 2
Amount (m <sup>3</sup> )	5,000,194 m <sup>3</sup>	*2,038,901 m <sup>3</sup>	*7,039,095 m <sup>3</sup>

\* Nb. Does not include 22,870 m<sup>3</sup> of dredged sand delivered to Palm Beach from June to September 2005.

### 4. TWEED RIVER ENTRANCE CONDITIONS

#### VOLUNTEER VIDEO MONITORING LOG


The following Entrance Condition observations for December 2008 were recorded by volunteer Mr Brian Mason:

Date	Observations
05/12/08	Excellent entrance conditions.

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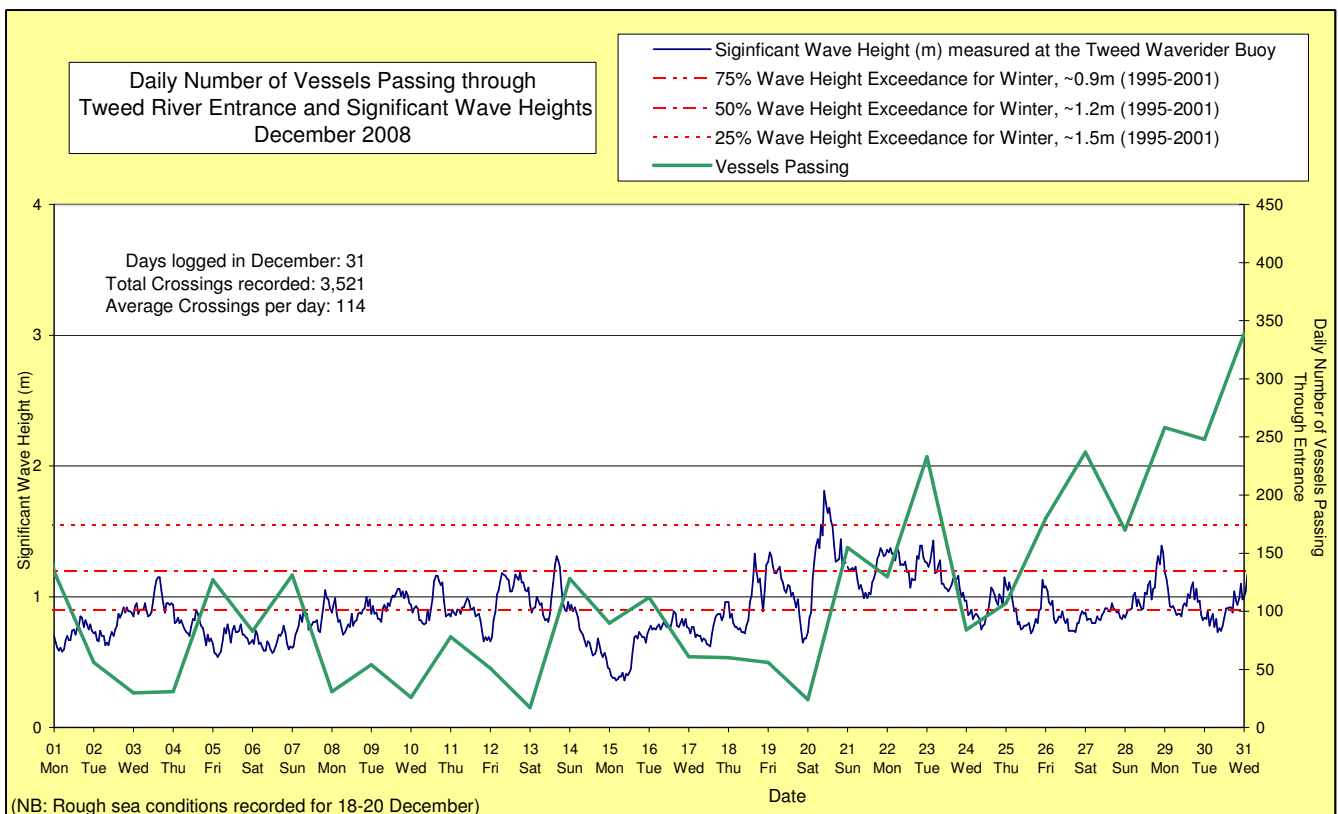
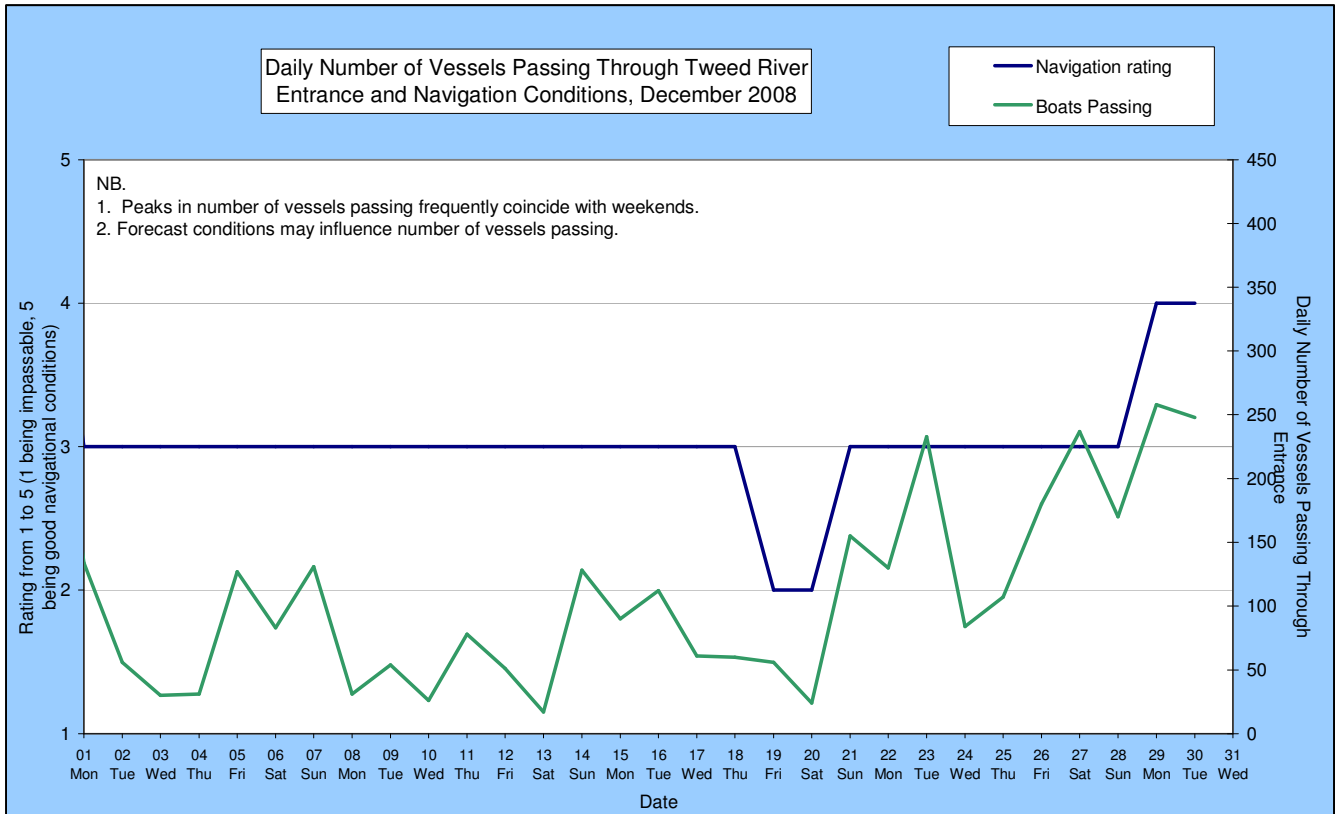
**VOLUNTEER MARINE RESCUE REPORTS**

Volunteer Marine Rescue Pt Danger has been monitoring entrance conditions on behalf of TRESBP since 20 January 2002. Monitoring results for December 2008 are presented below.

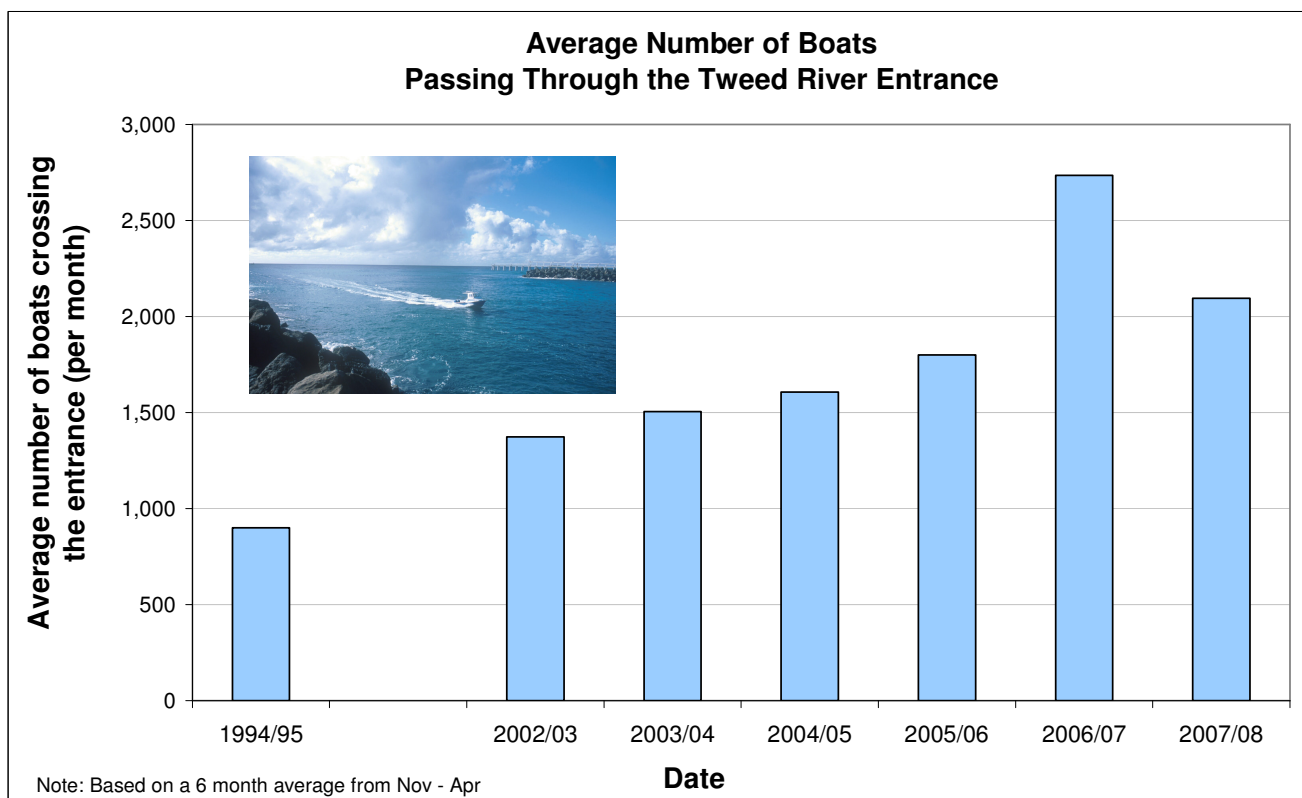
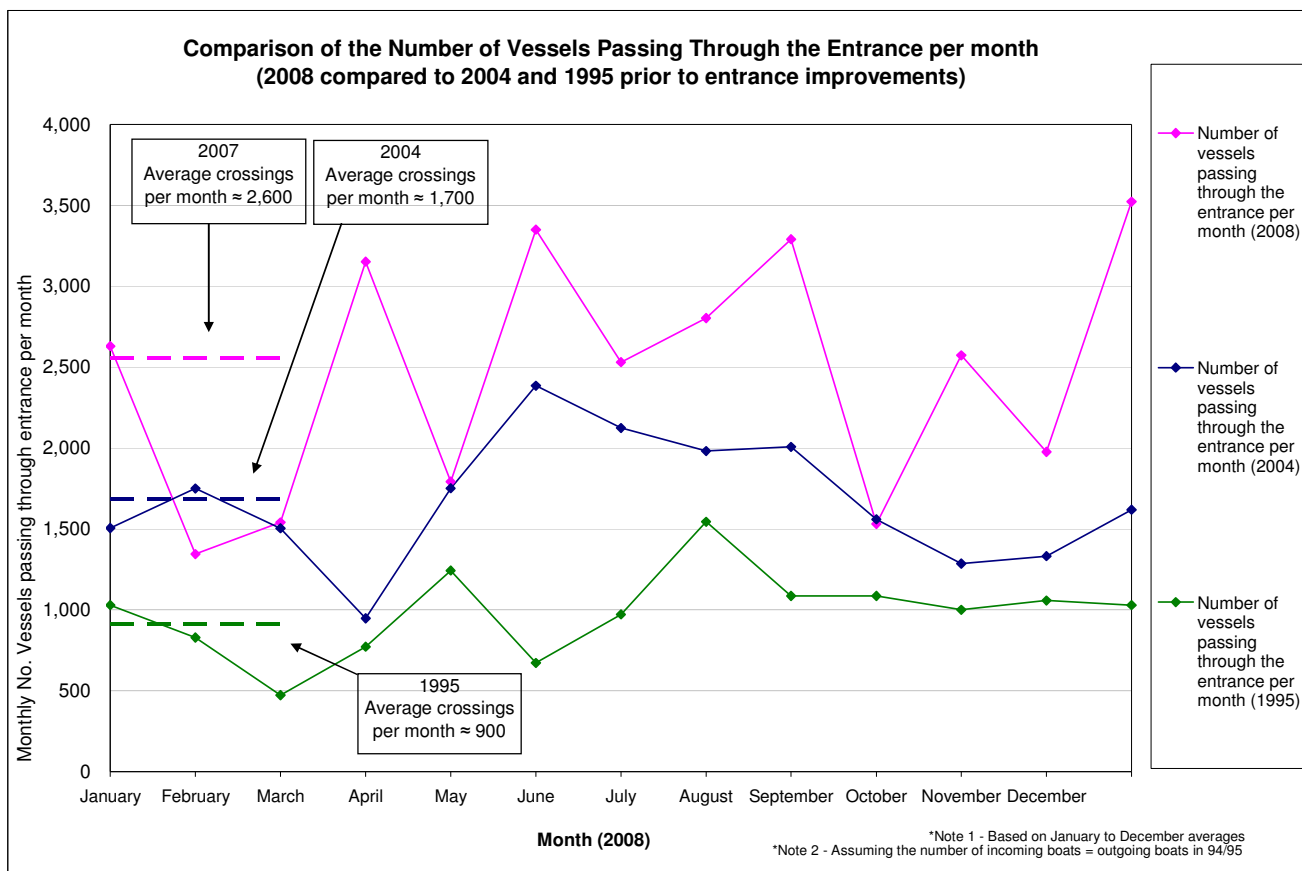
 Weekends and public holidays

Date	Entrance Conditions	Navigation Rating Impassable-----Good					Number of Boats
		Impassable	Difficulty Encountered	Some Difficulty Encountered	Relatively Good Crossing	Good Conditions	
1	Moderate, 16 Kt						134
2	Moderate, 17 Kt						56
3	Moderate, 18 Kt						30
4	Moderate, 25 Kt						31
5	Moderate, 20 Kt						127
6	Moderate, 18 Kt						83
7	Moderate, 14 Kt						131
8	Moderate, 14 Kt						31
9	Moderate, 15 Kt						54
10	Moderate, 23 Kt						26
11	Moderate, 20 Kt						78
12	Moderate, 12 Kt						51
13	Moderate, 20 Kt						17
14	Moderate, 16 Kt						128
15	Moderate, 17 Kt						90
16	Moderate, 19 Kt						112
17	Moderate, 15 Kt						61
18	Rough, 30 Kt						60
19	Rough, 22 Kt						56
20	Rough, 23 Kt						24
21	Moderate, 19 Kt						155
22	Moderate, 16 Kt						130
23	Moderate, 20 Kt						233
24	Moderate, 23 Kt						84
25	Moderate, 10 Kt						107
26	Moderate, 11 Kt						180
27	Moderate, 15 Kt						237
28	Moderate, 19 Kt						170
29	Moderate, 15 Kt						258
30	Moderate, 17 Kt						248
31	Moderate, 17 Kt						339
TOTAL							3521

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## **5. SURFING CONDITIONS**

Dominant swell condition: Less than 1.0 m from varying directions.

Moderate/high sea events: Nil to report

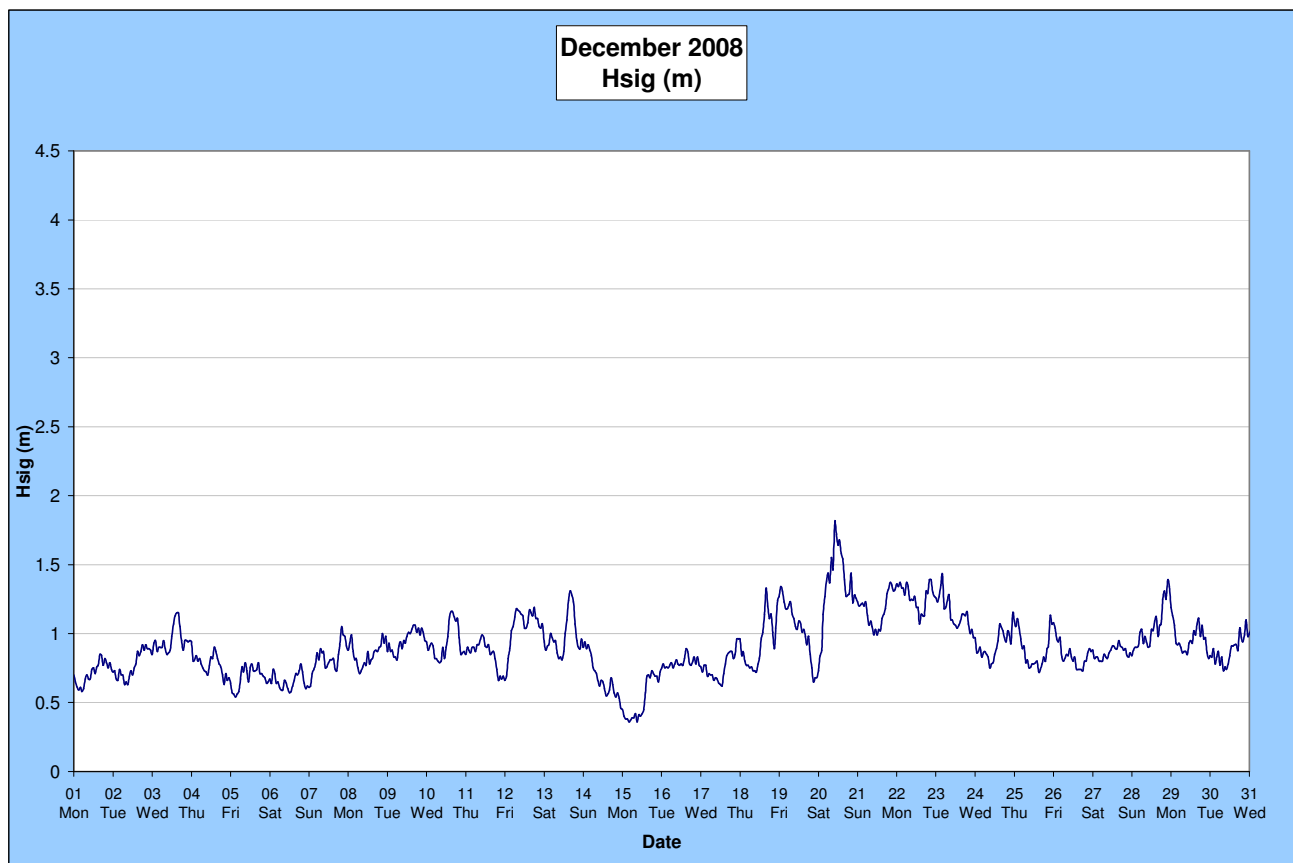
Monthly minimum significant wave height: 0.4 m on 15<sup>th</sup> December

Monthly maximum significant wave height: 1.81 m on 20<sup>th</sup> December

Number of days with waves below 1.0 m: 29 days

Number of days with waves above 2.0 m: 0 days

(Source: Tweed & Brisbane Waverider Buoy; BoM)



A link to data recorded by the Tweed Waverider Buoy is available at  
<http://www.epa.qld.gov.au/projects/waves/site.cgi?siteid=28&noback=4>

## **SURF & SURF LIFE SAVING AND OTHER EVENTS**

### ***Events in December 2008***

Billabong Queensland Open, 6-7 December, Gold Coast  
Wahu Surfer Grom Comp, 13-14 December, Gold Coast  
Ripcurl Grom Search, 15-19 December, Gold Coast  
Quiksilver Pro Trials for Trials, 20-21 December, Gold Coast

### ***Upcoming events in January 2008***

Jim Beam Surf Tag, 4 January, Duranbah  
WBC Branch Surf Lifesaving HP Tour 8-11 January, Gold Coast  
SLSA State Performance Camp, 12-14 January, Gold Coast

Source: Surfing Australia & Surf Life Saving Queensland

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**SURF & SURF LIFE SAVING AND OTHER EVENTS**

<b>Date</b>	<b>Quoted from <u>Coastalwatch.com.au</u></b>
02/12/08	"Nothing to get amped about again today as once again it's still as good as flat"
03/12/08	"Poor waves once again this morning"
04/12/08	"It's not happening early with poor waves once again this morning"
05/12/08	"It looks like a lake this morning"
08/12/08	"Only a tiny swell of around 1ft this morning out of the ESE"
09/12/08	"The SE swell has picked up a bit, it's gone from tiny to small"
12/12/08	"Very average this morning"
16/12/08	"Just tiny waves early while conditions are glassy"
17/12/08	"Small fun beachies on the incoming tide before the NNE winds get up"
18/12/08	"Conditions are only average at the best"
19/12/08	"The run of poor waves continues"
21/12/08	"Nice ones early"

**VOLUNTEER SURF QUALITY OBSERVATIONS**

The following observations for December 2008 were made by volunteer Mr Brian Mason on behalf of the TRESBP.

<b>Date</b>	<b>Duranbah</b>	<b>Frog's Beach / Snapper Rocks</b>	<b>Kirra Point</b>
05/12/08	NE spilling waves, 1.0 to 1.5 m. Very flat surf for Duranbah. 56 surfers present.	No longshore transport or offshore bar visible.	Spilling waves, less than 1.0 m. No longshore transport of offshore bar. Very flat surf.



## **6. MEDIA COVERAGE**

Gold Coast Bulletin, 3 December 2008, "Kingscliff to host longboard event"

*"Australia's premier longboard event, the Hyundai Malfunxion Surf Festival, will be staged at Kingscliff for a second year running....The relocation [from Rainbow Bay] was contentious – organisers cited surf rage incidents, overcrowding and lack of support from the Gold Coast City Council as reasons."*

Gold Coast Bulletin, 8 December 2008, "Sand sculptures spread Kirra message"

*"The subtle message is to raise awareness to the loss of the world famous Kirra Point surf break and, in that, we are supporting the Bring Back Kirra campaign," [Surfider spokesman] Chris Butler said. "There's been damage done to the marine habitat and the environmental loss of Kirra Reef but also the social and economic impact to the local community."*

Tweed Daily News, 12 December 2008, "Parko stars at Pipeline"

*"Hosted by the Kirra Surfriders Club and endorsed by the Surfrider Foundation, the paddle out will be staged on Monday, January 26, to raise awareness of the loss of Kirra Point."*

Tweed Daily News, 15 December 2008, "Key to Kirra break through – Contract may hold the answer"

*"[Currumbin MP Jann Stuckey] said since the bypass started eight years ago, several million cubic metres of sand had been pumped and had moved in a northerly drift at three times the normal rate. "It has destroyed baitfish reefs and surf breaks, including the world famous Kirra break,""*

Surferspath.com, 21 December 2008. "Bring back Kirra Point Australia Day Paddle Out"

*"Apart from Kirra Point losing its famous barrelling kegs and deepest tube rides on the Gold Coast, the reefs that created the Kirra Point were also buried with an over supply of sand completely wrecking the marine habitat once popular with divers and fishermen."*

Gold Coast Bulletin, 22 December 2008, "Paddle for Kirra to hit the Point"

*"Parkinson and fellow 'Coolie kids' Mick Fanning and Dean Morrison will join what is expected to be 300 boardriders on Australia Day for a paddle out at the dormant point break, with surfers hoping a show of force will place pressure on decision-makers of the Tweed Sand Bypass System to act."*

Swellnet.com.au, 22 December 2008. "Paddle out at Kirra Point – Australia Day 2009"

*"At the core of that matter is the 25 year contract between NSW and QLD to continue pumping sand. There are many options being considered by a group known as the kirrapoint.org committee which are seeking solutions; namely selective pumping, dredging the unwanted sand, sand sculpturing the beach or restoring dunes to allow the sand to flow."*

ABC News, 23 December 2008 "Losing a surfing great"

*"Today there's little point paddling out at all, and that's after the long walk to reach the water [at Kirra]. The build-up of sand both on the beach and under the water has put an end to an international institution."*

## **7. TWEED LOWER ESTUARY TIDE CONDITIONS**

Tweed River tide data for October to December 2008 has been held up and will be analysed as soon as possible.

Tweed River September Mean Low Water Spring (MLWS) tide level: -0.481 m AHD

# TWEED RIVER ENTRANCE SAND BYPASSING PROJECT LETITIA SPIT TO KIRRA MONTHLY ENVIRONMENTAL MONITORING SUMMARY DECEMBER 2008

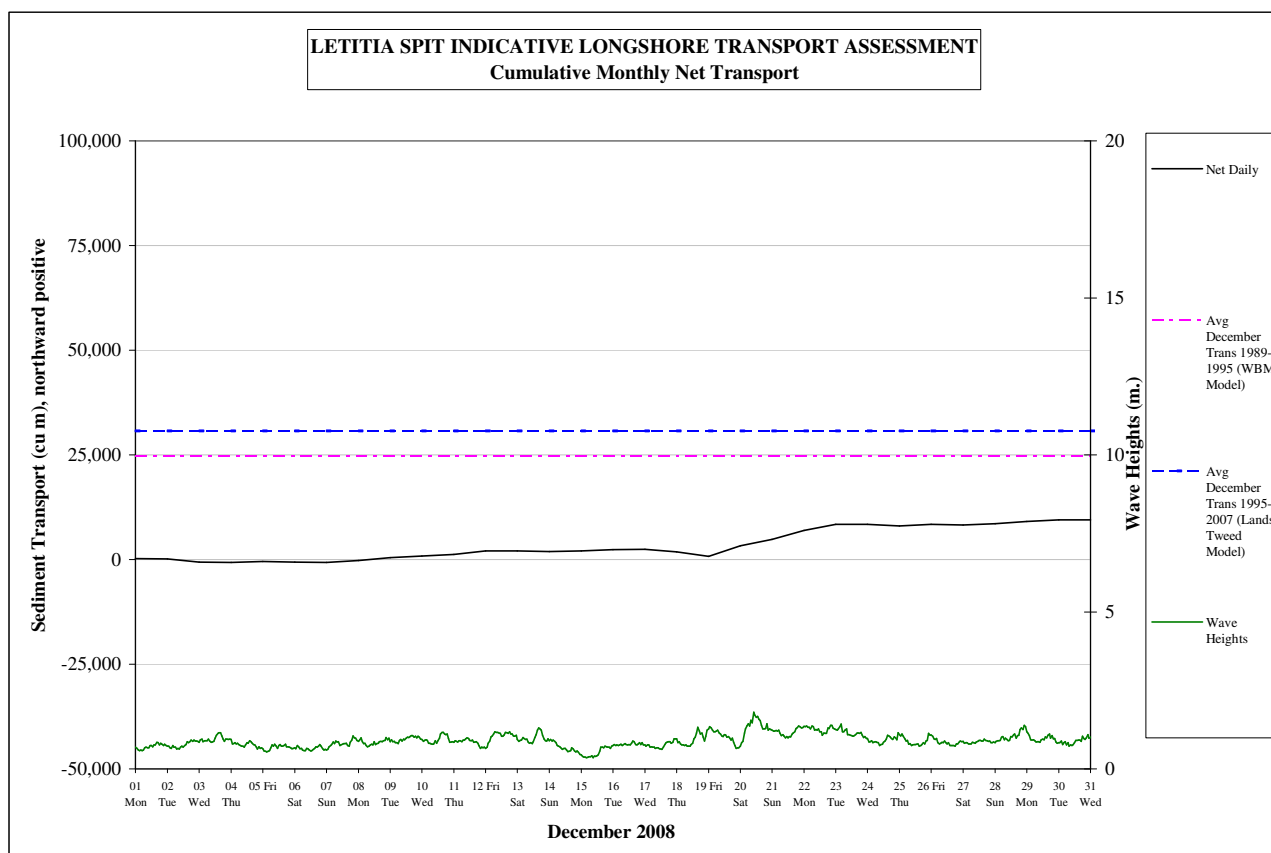
Letitia 2A tide data for September 2008 mirrored the Mooloolaba ocean tidal trends indicating that the TRESBP had not had a significant impact on the Lower Tweed River tidal range.

## 8. INDICATIVE LONGSHORE TRANSPORT

The longshore sand transport information presented in the graph overleaf is based on a simplified sediment transport model and should only be used as an indicator of the actual sand transport quantities for the month.

December 2008 estimated natural sand transport (moving N towards Tweed entrance): 9,000 m<sup>3</sup>.

This result is significantly lower than average sand transport for the month of December.



## 9. ARGUS COASTAL IMAGING

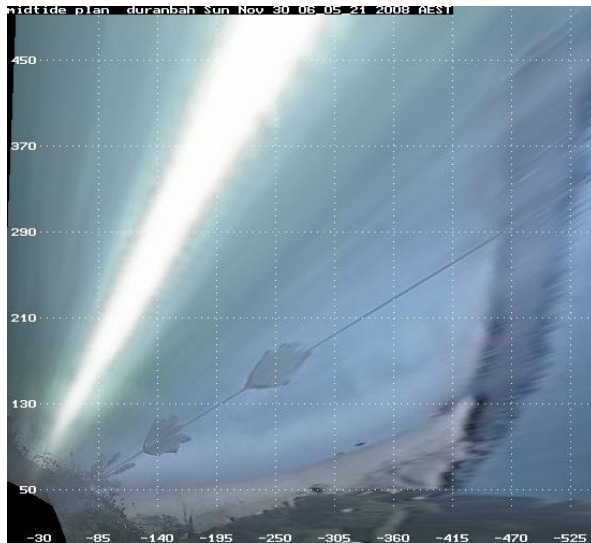
UNSW monitors Duranbah Beach to North Kirra Beach for the project using an ARGUS coastal imaging system. Hourly and archived images are available on the internet at the following address:

<http://ci.wrl.unsw.edu.au/public/tweed/index.php>

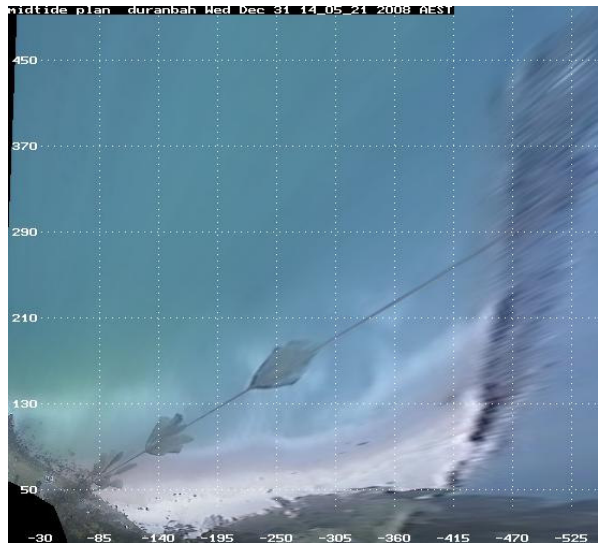
Merged and rectified images taken at mid tide for each of the locations are shown below.

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**DURANBAH BEACH**

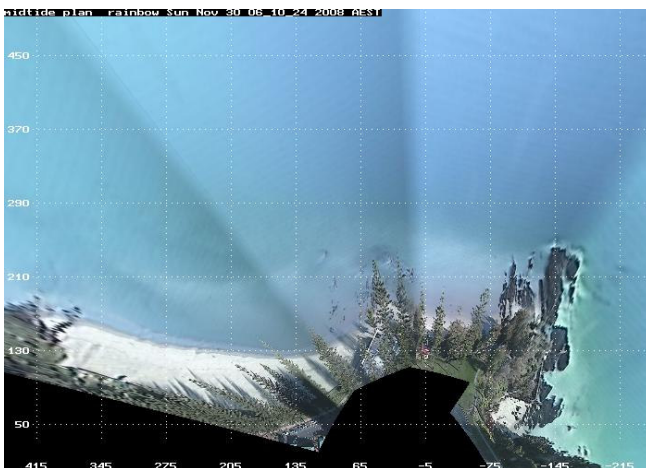


30 November 2008

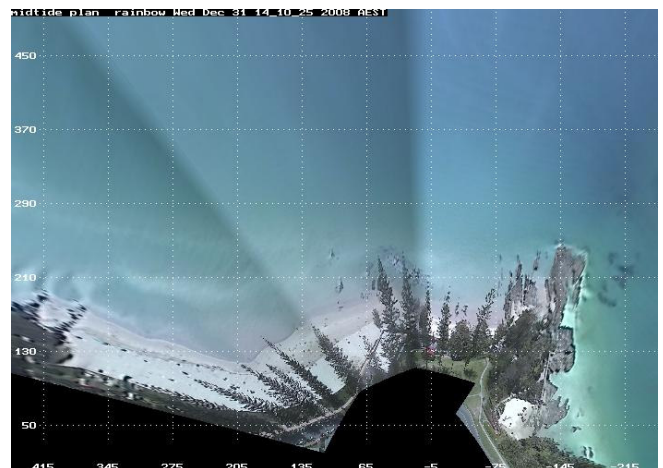


31 December 2008

**RAINBOW BAY**

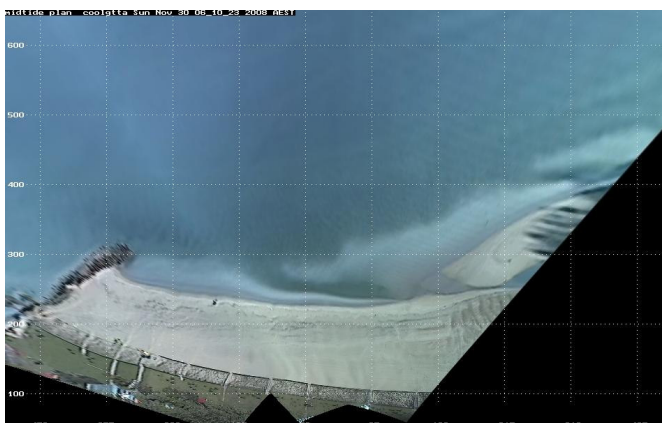


30 November 2008

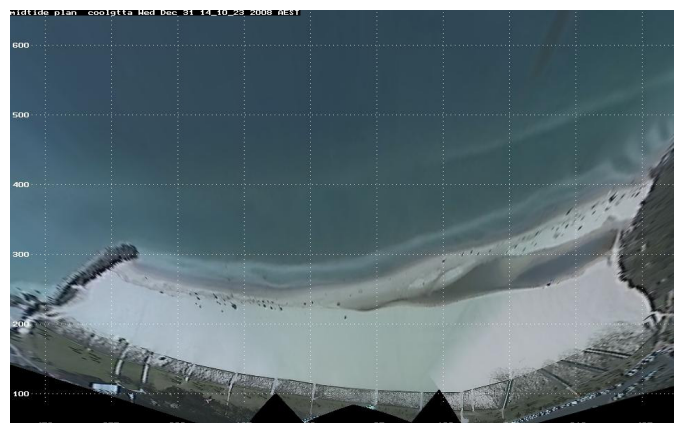


31 December 2008

**COOLANGATTA - GREENMOUNT**



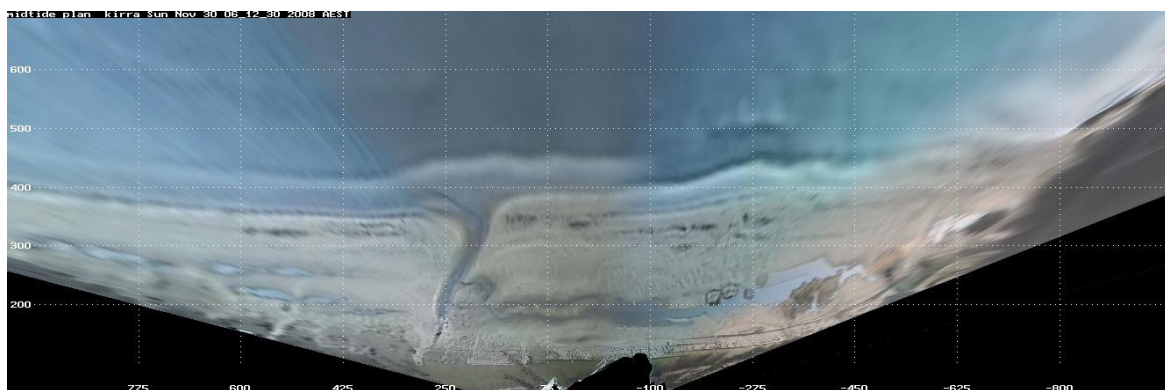
30 November 2008



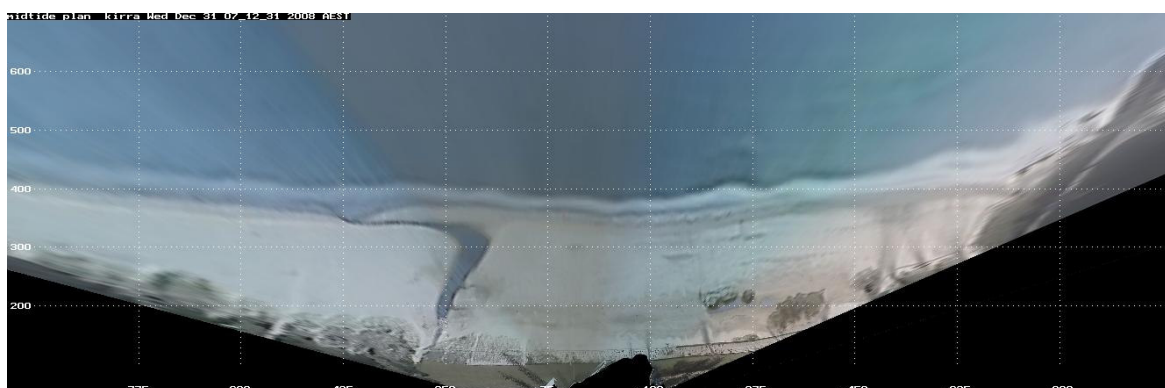
31 December 2008

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**NORTH KIRRA – KIRRA**



30 Nov  
2008



31 Dec  
2008

## **9. CONTACT**

For more information regarding the Tweed River Entrance Sand Bypassing Project please refer to the following web addresses:

[www.tweedsandbypass.nsw.gov.au](http://www.tweedsandbypass.nsw.gov.au)

[www.epa.qld.gov.au/sandbypass/](http://www.epa.qld.gov.au/sandbypass/)

[www.wrl.unsw.edu.au/coastalimaging/public/tweed/index.html](http://www.wrl.unsw.edu.au/coastalimaging/public/tweed/index.html)

For all enquires regarding this report, please contact the Project Manager for the Governments:

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