

Tweed River Entrance Sand Bypassing Project

Letitia Spit to Kirra



Monthly Environmental Monitoring Summary

AUGUST 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 August 2008.

In August 2008:

- The number of vessels that passed through the entrance was higher than the average number of crossings for the month of August.
- Surf quality in August was average, with mainly calm conditions and two moderate sea events in the last week (waves reaching 2.4m).
- Tide data for the month of August 2008 is currently being analysed. Results will be presented in the project's September 2008 Monthly Environmental Monitoring Summary.
- The amount of sand moving north towards the Tweed River Entrance by natural processes was more than the August average.
- Dredging of the Tweed River Entrance was interrupted for most of August due to dredge maintenance requirements. About 14,000 m³ of sand was delivered to Snapper Rocks East up to the end of August.

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 August 2008

	PUMPED	DREDGED	AUG 2008 TOTAL DELIVERY
Location	Snapper Rocks East	Snapper Rocks East	
Amount (m ³)	64,894 m ³	14,418 m ³	79,318 m ³

Total Sand Delivery This Year (January to August 2008)

	PUMPED	DREDGED	2008 TOTAL DELIVERY
Amount (m ³)	464,434 m ³	151,590 m ³	616,024 m ³

Total Sand Delivery Last Year (January to December 2007)

	PUMPED	DREDGED	2008 TOTAL DELIVERY
Amount (m ³)	562,247 m ³	0 m ³	562,247 m ³

Total Stage 2 Delivery to Date (May 2000 to August 2008)

	PUMPED	DREDGED	TOTAL DELIVERY STAGE 2
Amount (m ³)	4,884,522 m ³	*1,991,512 m ³	*6,876,035 m ³

* Nb. Does not include 22,870 m³ 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 August 2008 were recorded by volunteer Mr Brian Mason:

Date	Observations
01/08/08	Care needed. Swells entering and breaking against the rock walls. The recent dredging has obviously cleared the sand from in front of the entrance, this however has allowed incoming wave action to enter the walls and break beside them.
09/08/08	Very good conditions. Two vessels under sail exited the entrance without problems.
16/08/08	Moderate entrance conditions.

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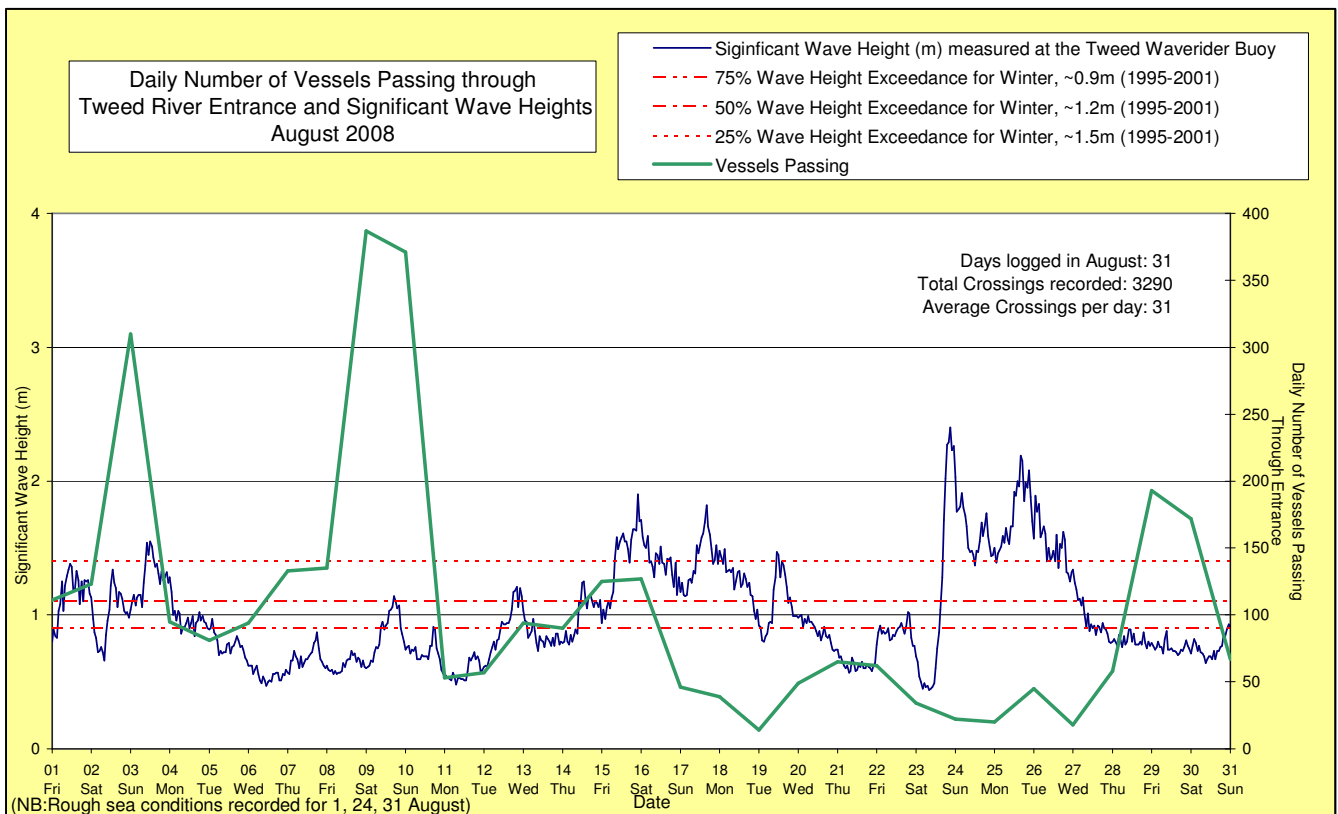
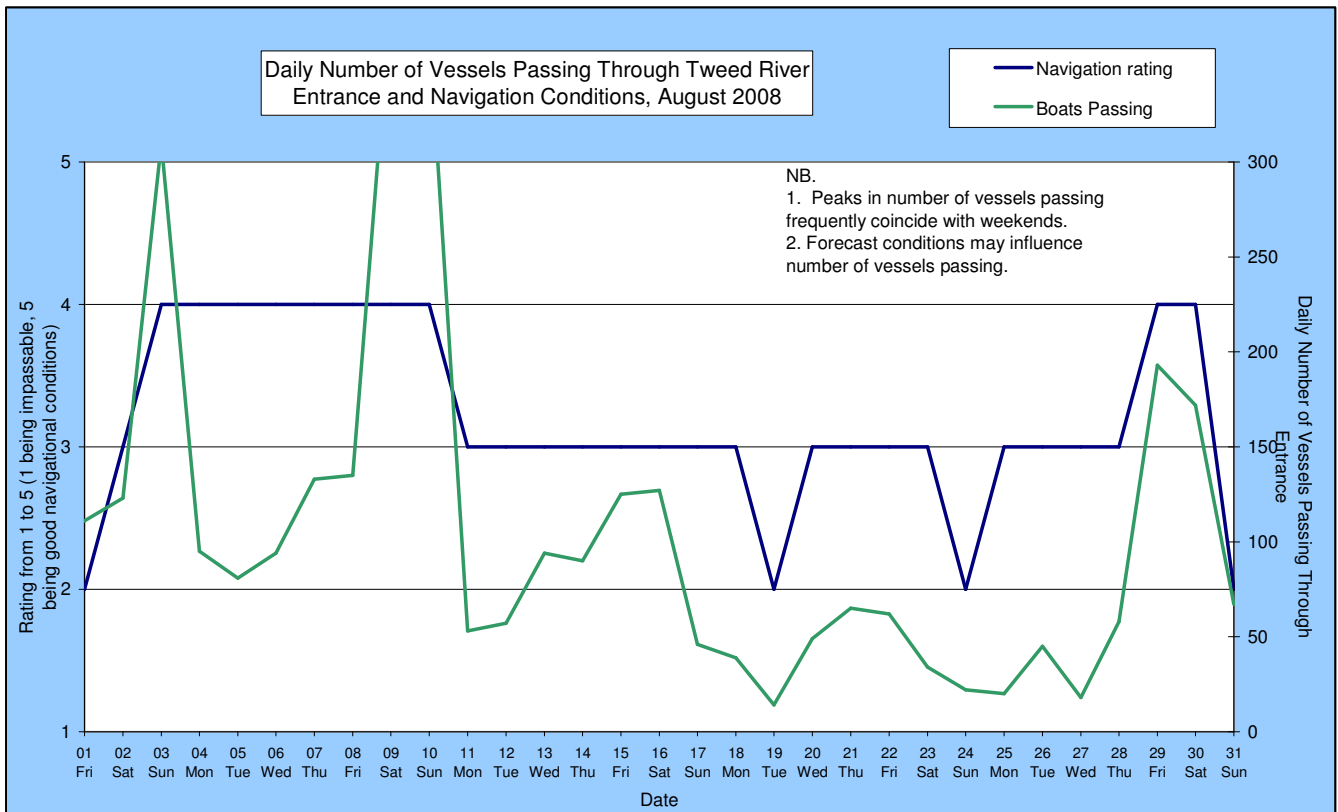
VOLUNTEER MARINE RESCUE REPORTS

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

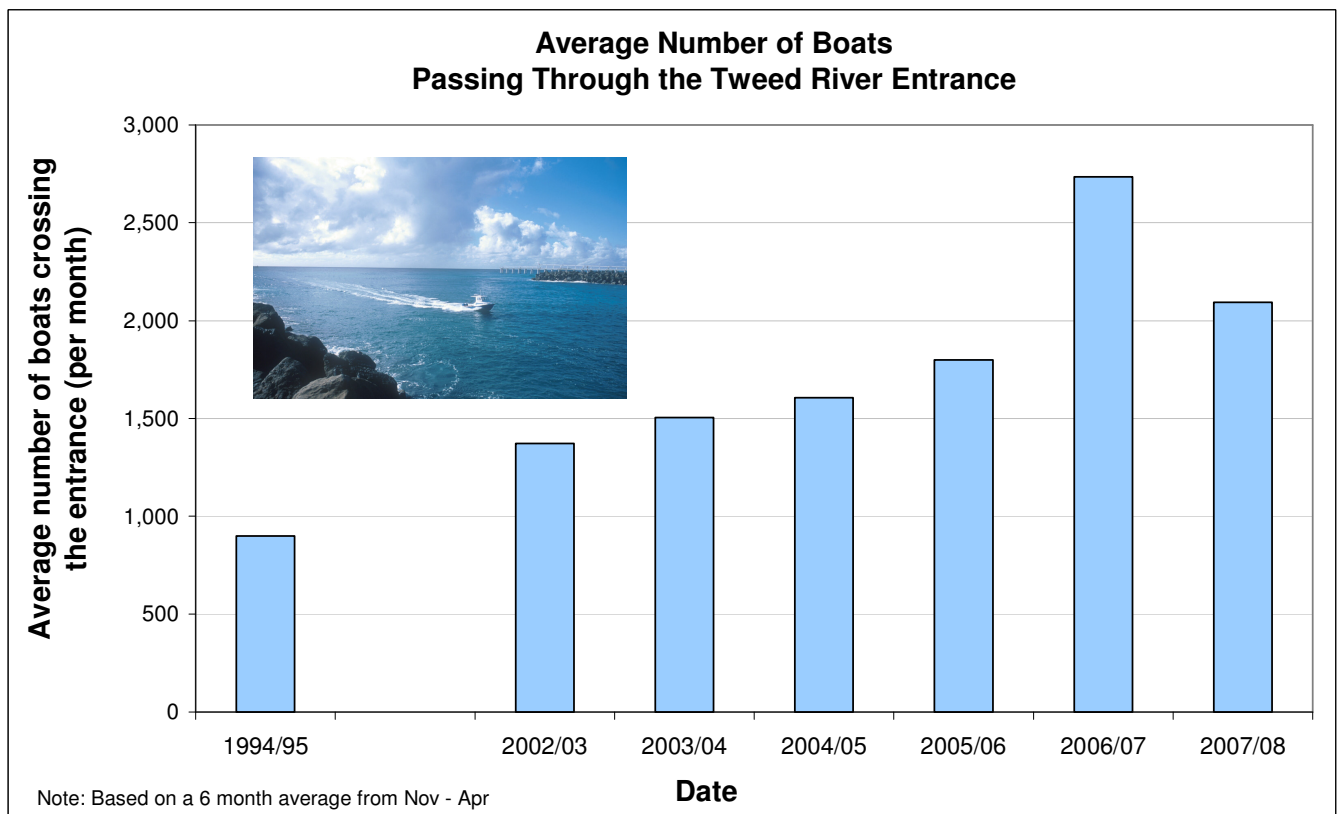
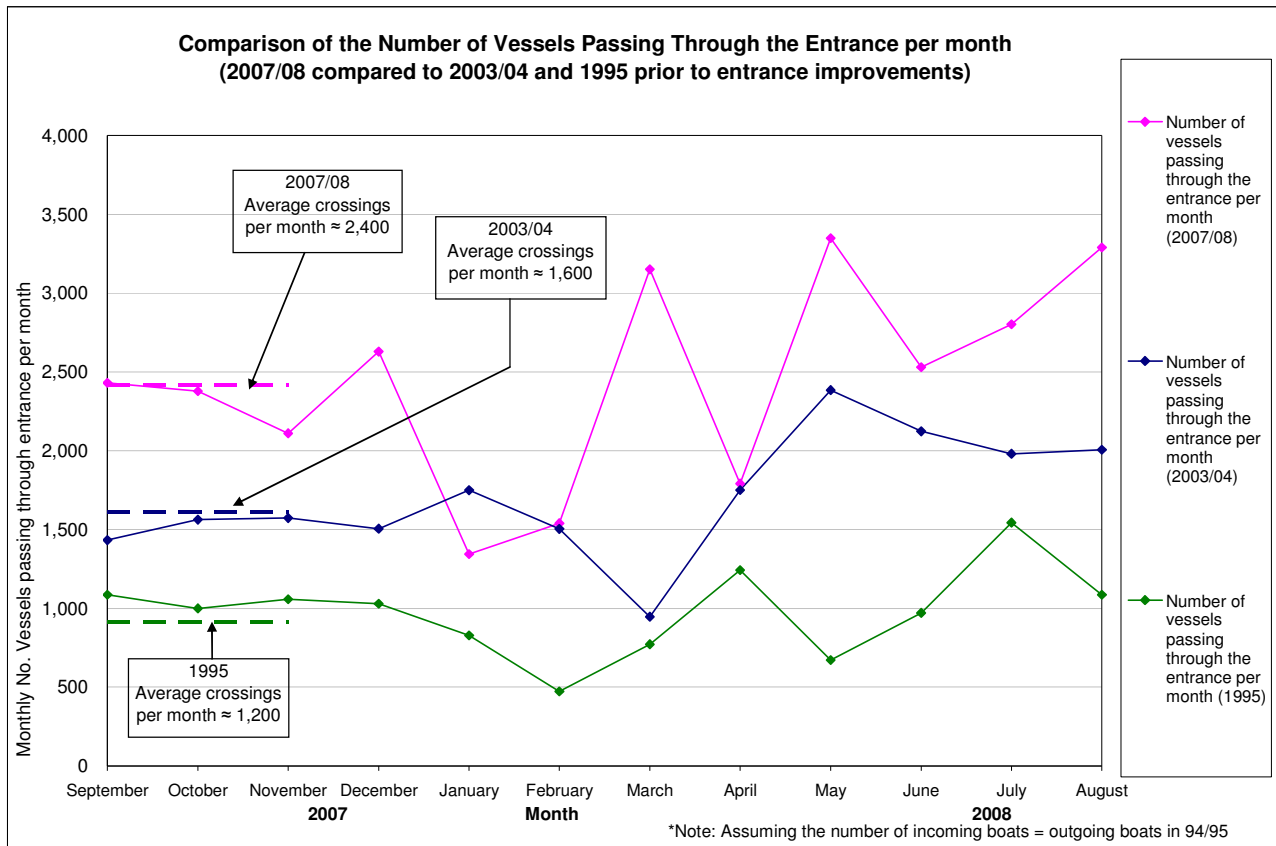
 Weekends and public holidays

Date	Entrance Conditions	Navigation Rating Impassable-----Good					Number of Boats
		Impassable	Difficulty Encountered	Some Difficulty Encountered	Relatively Good Crossing	Good Conditions	
1	Rough, 26 Kt						111
2	Moderate, 10 Kt						123
3	Moderate, 10 Kt						310
4	Moderate, 11 Kt						95
5	Moderate, 10 Kt						81
6	Moderate, 12 Kt						94
7	Moderate, 12 Kt						133
8	Moderate, 10 Kt						135
9	Moerate, 9 Kt						387
10	Moderate, 7 Kt						371
11	Moderate, 16 Kt						53
12	Moderate, 7 Kt						57
13	Moderate, 6 Kt						94
14	Moderate, 11 Kt						90
15	Moderate, 7 Kt						125
16	Moderate, 11 Kt						127
17	Moderate, 17 Kt						46
18	Moderate, 12 Kt						39
19	Moderate, 19 Kt						14
20	Moderate, 14 Kt						49
21	Moderate, 15 Kt						65
22	Moderate, 17 Kt						62
23	Moderate, 18 Kt						34
24	Rough, 24 Kt						22
25	Moderate, 16 Kt						20
26	Moderate, 12 Kt						45
27	Moderate, 16Kt						18
28	Moderate, 11 Kt						58
29	Moderate, 9 Kt						193
30	Moderate, 14 Kt						172
31	Rough, 20 Kt						67

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5. SURFING CONDITIONS

Dominant swell condition: 0.5 -1.0 m from E/SE (calm conditions)

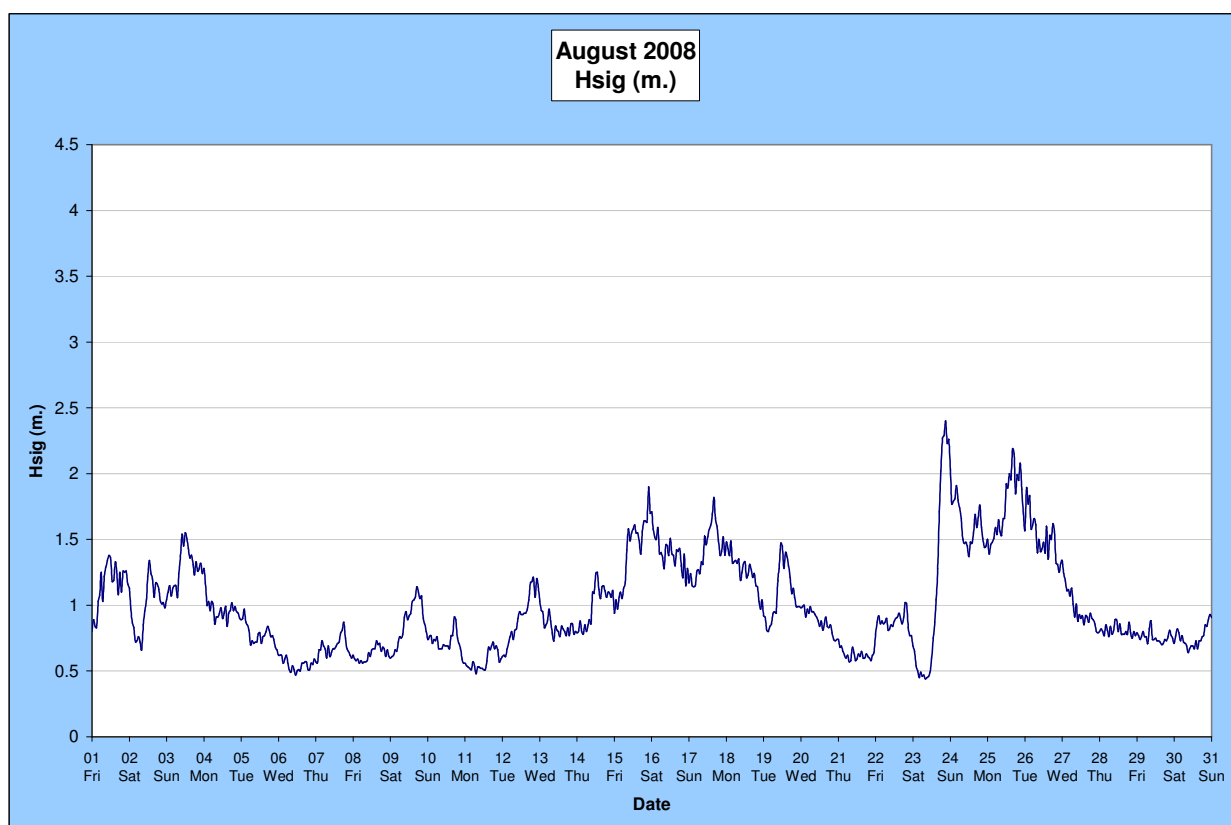
Moderate sea events: 24 August – waves reaching 2.4 m, 26 August - waves reaching 2.15 m

Monthly minimum significant wave height: 0.46 m on 23 August

Monthly maximum significant wave height: 2.4 m on 24 August

Number of days with waves below 1.0 m: 25 days

Number of days with waves above 2.0 m: 2 days (Source: Tweed & Brisbane Waverider Buoy; BoM)



A link to data recorded by the Tweed Waverider Buoy is available at www.epa.qld.gov.au/sandbypass/

SURF & SURF LIFE SAVING AND OTHER EVENTS

Events in August 2008

15 August - Joel Green and Sean Fanning Memorial Event, Snapper Rocks

Upcoming events in September 2008

12-14 Sept – SLSA Surf Sports Conference, Gold Coast

24-26 Sept – Ocean & Earth Teenage Rampage, Gold Coast

Source: Surfing Australia, Surf Life Saving Australia & Surf Life Saving Queensland

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VOLUNTEER SURF QUALITY OBSERVATIONS

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

Date	Duranbah	Frog's Beach / Snapper Rocks	Kirra Point
01/08/08	2.0 to 2.5 m plunging waves. Light NE winds. 97 surfers present.	3 surfers present	1.0 to 1.5 m plunging and spilling waves. 2 surfers present. Only other beach users are four kite surfers having a good time just offshore due to the strong winds.
09/08/08	1.0 to 1.5 m plunging waves. Very light E winds. 43 surfers present.	35 surfers present	Less than 1.0 m spilling waves. 3 surfers present. Very flat surf.
16/08/08	1.5 to 2.0 m plunging waves. Moderate ENE winds. 94 surfers present.	53 surfers present.	Less than 1.0 m spilling waves. 18 surfers present. Sand transport visible close to the rocky walls of the groyne.

6. MEDIA COVERAGE

14 August, Gold Coast Bulletin, "Surf-cam operator's \$1m grant to keep beach safe"

"Yesterday, it was announced Coastalwatch had been given a \$1million grant from the Queensland Government's Smart State Innovation Fund. Most of that will go to fund the technology which will allow Coastalwatch cameras to count the number of beach users at a particular break [on the Gold Coast], measure wave height, and the shoreline position hourly."

17 August, Gold Coast Bulletin, "Surf traditions at break point"

"In recent times tensions between Gold Coast and Brazilian surfers apparently have been rising, with reports of heated arguments at surfing breaks and even a knife incident at the Snapper Rocks carpark."

20 August, Gold Coast Bulletin, "Duranbah beach on the rocks"

"Ongoing attempts to rejuvenate Duranbah's depleted shoreline have been made through the TRESBP, however a year of wild weather has seen fresh sand washed from the beach almost as quickly as it can be pumped in."

25 August, Gold Coast Bulletin, "Fine food festival with a beach flavour"

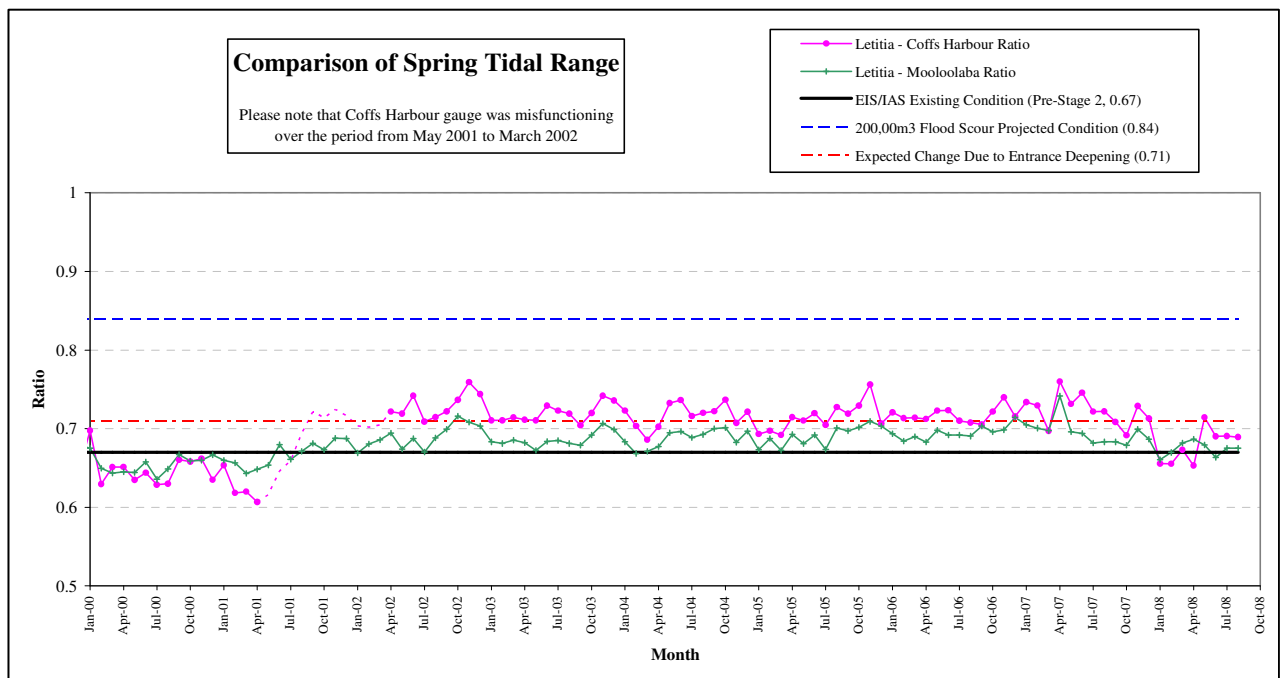
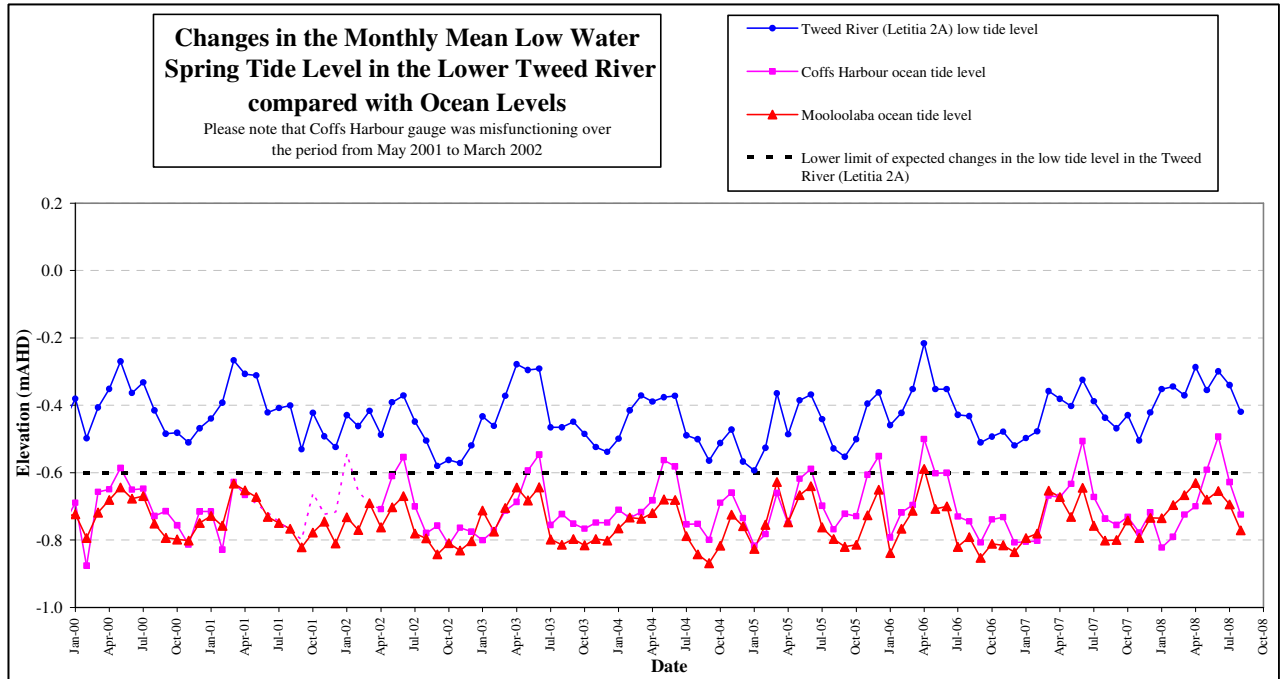
"There was more than salt to taste at Coolangatta Beach yesterday as the city's finest eateries converged for the 11th annual A La Carte on the Beach...Organisers said about 15,000 people attended the free community event, making it one of the largest held."

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7. TWEED LOWER ESTUARY TIDE CONDITIONS

Tweed River August Mean Low Water Spring (MLWS) tide level: -0.419 m AHD

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

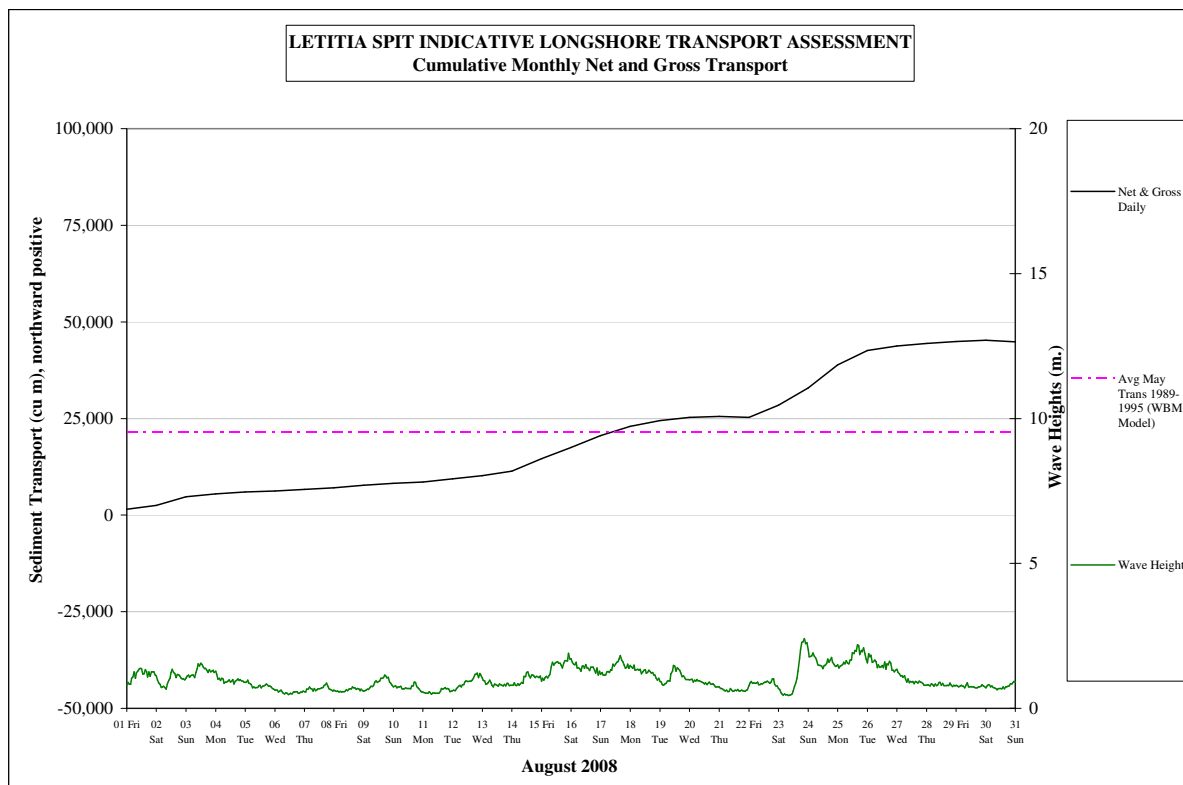


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8. INDICATIVE LONGSHORE TRANSPORT

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.

August 2008 estimated natural sand transport (moving N towards Tweed River entrance): 42,000 m³. This result is higher than average sand transport for the month of August.



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://www.wrl.unsw.edu.au/coastalimaging/public/tweed/index.html>

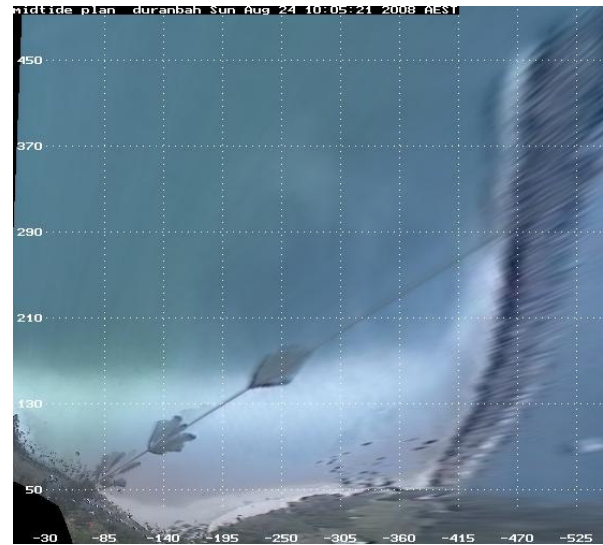
Merged and rectified images taken at mid tide for each of the locations are shown below.

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DURANBAH BEACH

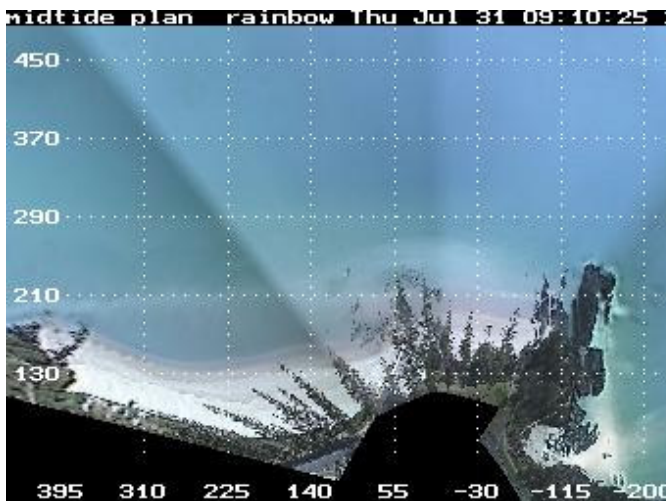


31 July 2008

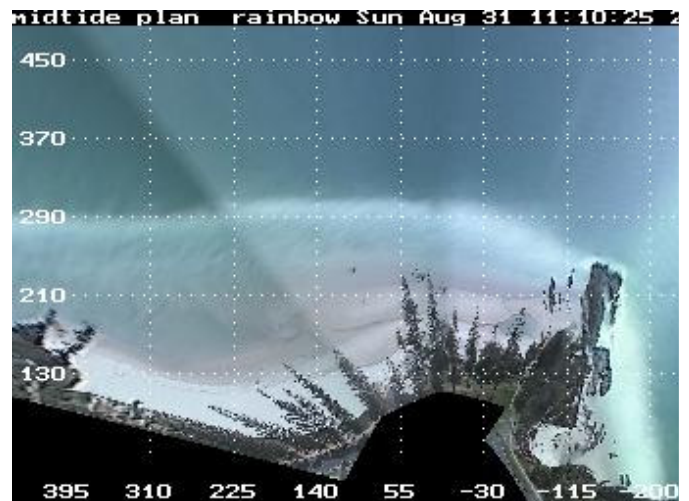


24 August 2008

RAINBOW BAY



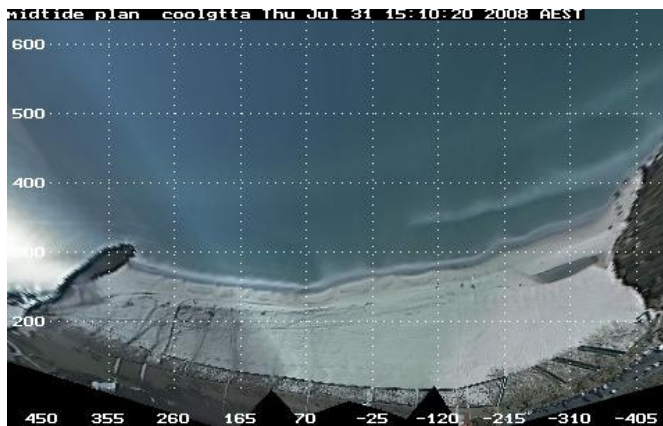
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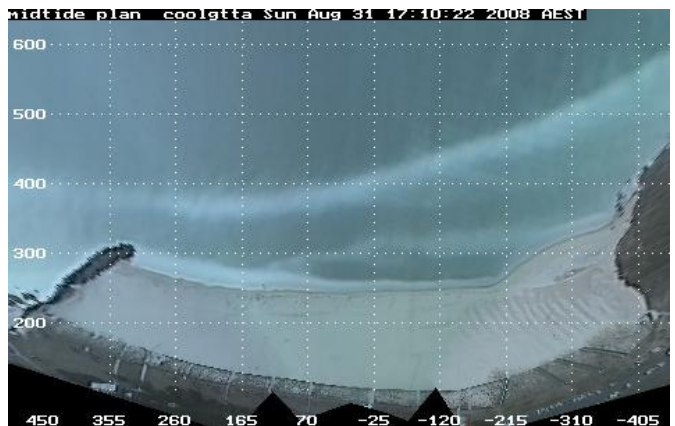
31 August 2008

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COOLANGATTA - GREENMOUNT

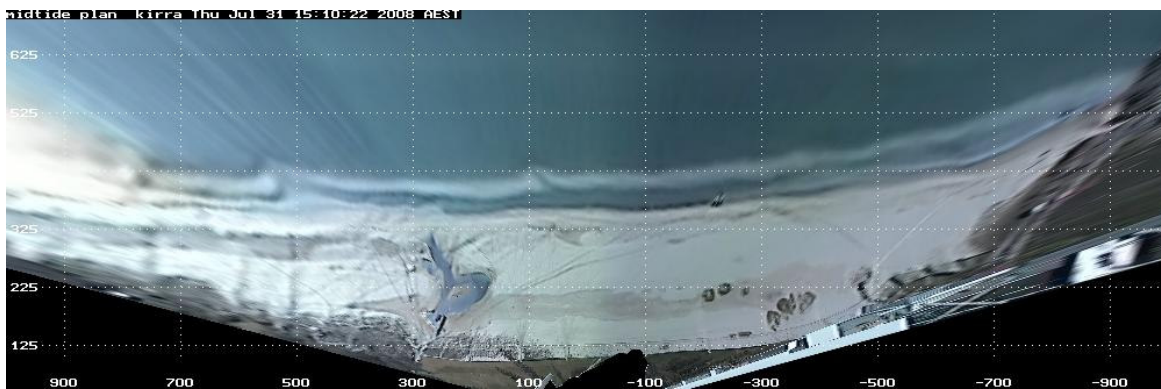


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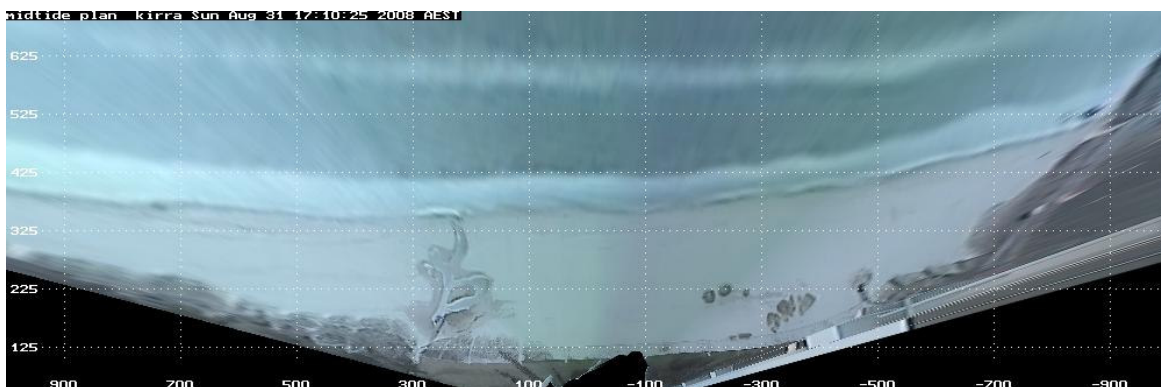


31 August 2008

NORTH KIRRA – KIRRA



31 July
2008



31 Aug
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

www.epa.qld.gov.au/sandbypass/

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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