

Tweed River Entrance Sand Bypassing Project

Letitia Spit to Kirra



Monthly Environmental Monitoring Summary

JULY 2008

Department of Lands 




**Queensland
Government**
Environmental
Protection Agency

TABLE OF CONTENTS

1. EXECUTIVE SUMMARY	2
2. INTRODUCTION	2
3. SAND PUMPING & DREDGING ACTIVITIES	3
4. TWEED RIVER ENTRANCE CONDITIONS	3
5. SURFING CONDITIONS	7
6. MEDIA COVERAGE	8
7. TWEED LOWER ESTUARY TIDE CONDITIONS	9
8. INDICATIVE LONGSHORE TRANSPORT	10
9. ARGUS COASTAL IMAGING	11
9. CONTACT	13

1. EXECUTIVE SUMMARY

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

In July 2008:

- The number of vessels that passed through the entrance was higher than the average number of crossings for the month of July.
- Surf quality in July was moderate to good, with one moderate sea event and one significant ocean storm with waves reaching 3.0 m.
- Tide data for the month of July 2008 is consistent with ocean tide levels and shows no significant impacts.
- The amount of sand moving north towards the Tweed River Entrance by natural processes was less than the July average. The amount of sand moving north in June 2008 was slightly more than the June average.
- Dredging of the Tweed River Entrance continued in July. About 58,000 m³ of sand was delivered to the Outer Nearshore area of Duranbah and Snapper Rocks East up to the end of July.

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.

**TWEED RIVER ENTRANCE SAND BYPASSING PROJECT
LETITIA SPIT TO KIRRA
MONTHLY ENVIRONMENTAL MONITORING SUMMARY JULY 2008**

3. SAND PUMPING & DREDGING ACTIVITIES

Sand Delivery for JULY 2008

	PUMPED	DREDGED		JUNE 2008 TOTAL DELIVERY
Location	Snapper Rocks East	Snapper Rocks East	Duranbah	
Amount (m ³)	51,114 m ³	30,685 m ³	27,567 m ³	109,366 m ³

Total Sand Delivery This Year (January to July 2008)

	PUMPED	DREDGED	2008 TOTAL DELIVERY
Amount (m ³)	399,540 m ³	137,172 m ³	536,712 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 July 2008)

	PUMPED	DREDGED	TOTAL DELIVERY STAGE 2
Amount (m ³)	4,819,628 m ³	*1,977,095 m ³	*6,796,723 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 July 2008 were recorded by volunteer Mr Brian Mason:

Date	Observations
11 July 2008	Good conditions. Boats entering and leaving at cruise speed. Dredge operating.
22 July 2008	Calm conditions. Dredge not operating.

**TWEED RIVER ENTRANCE SAND BYPASSING PROJECT
LETITIA SPIT TO KIRRA
MONTHLY ENVIRONMENTAL MONITORING SUMMARY JULY 2008**

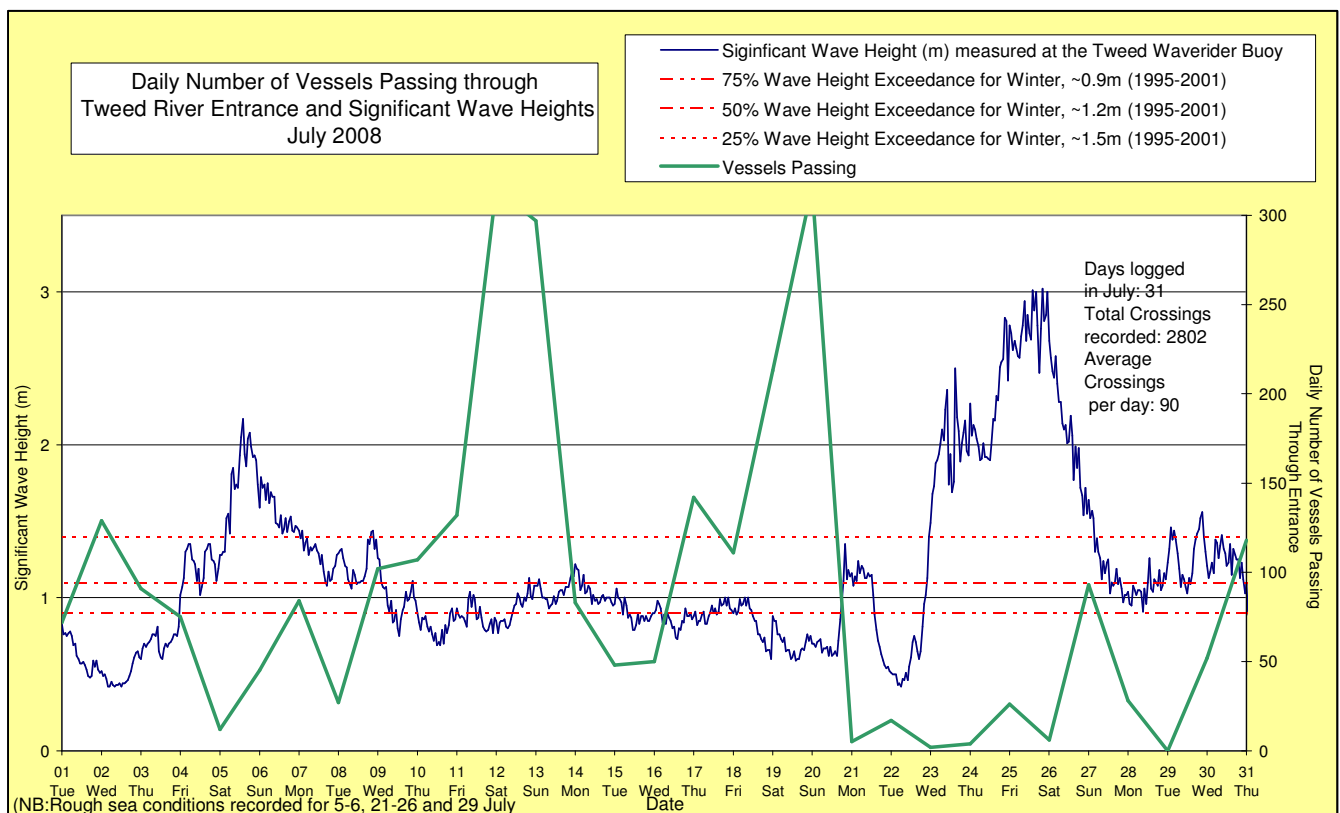
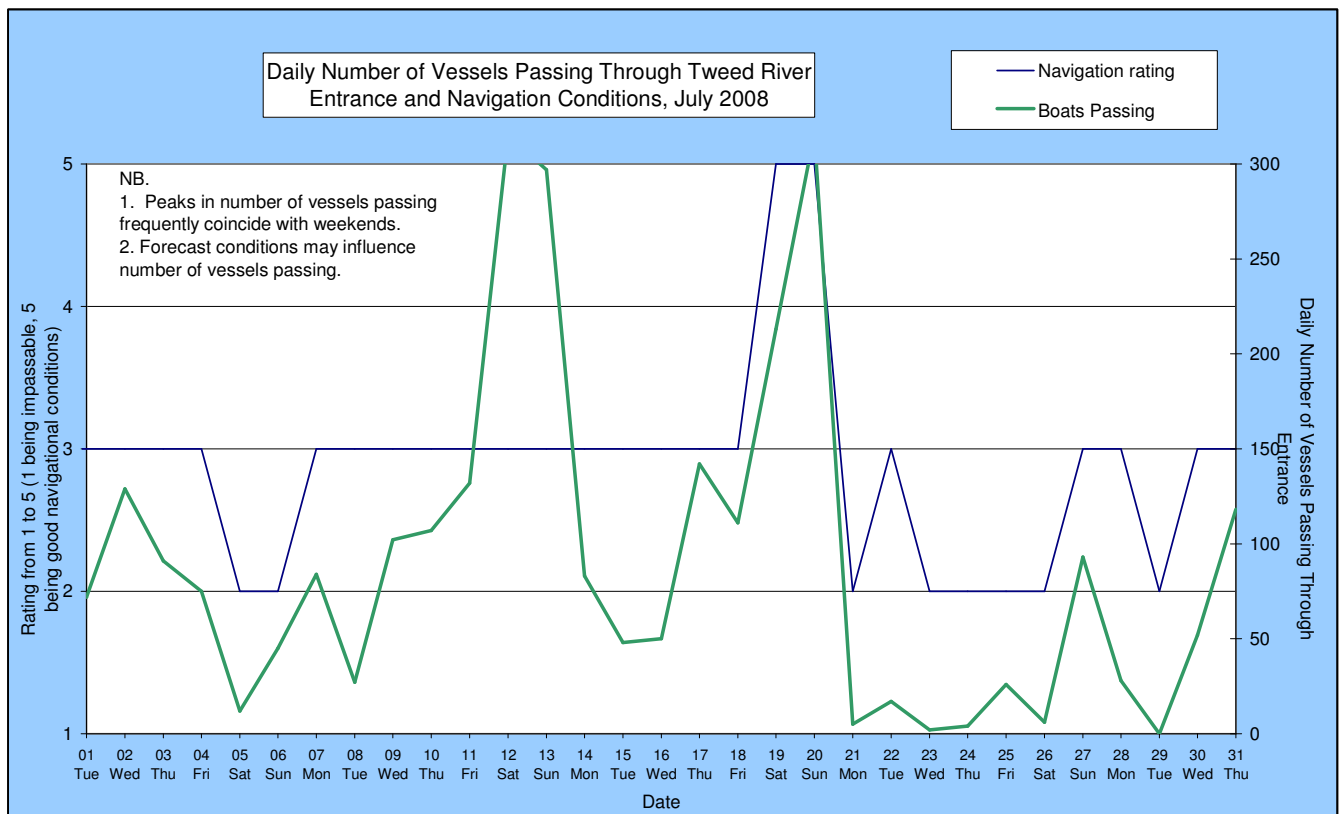
VOLUNTEER MARINE RESCUE REPORTS

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

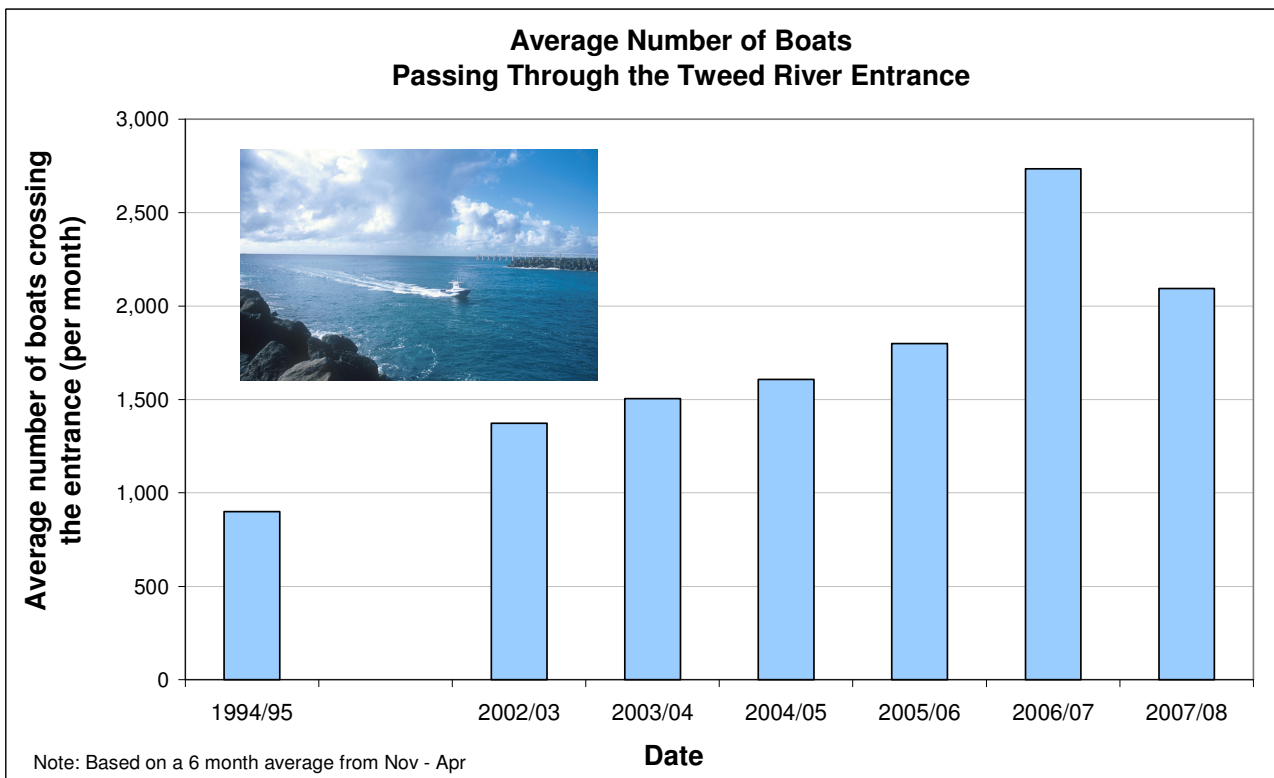
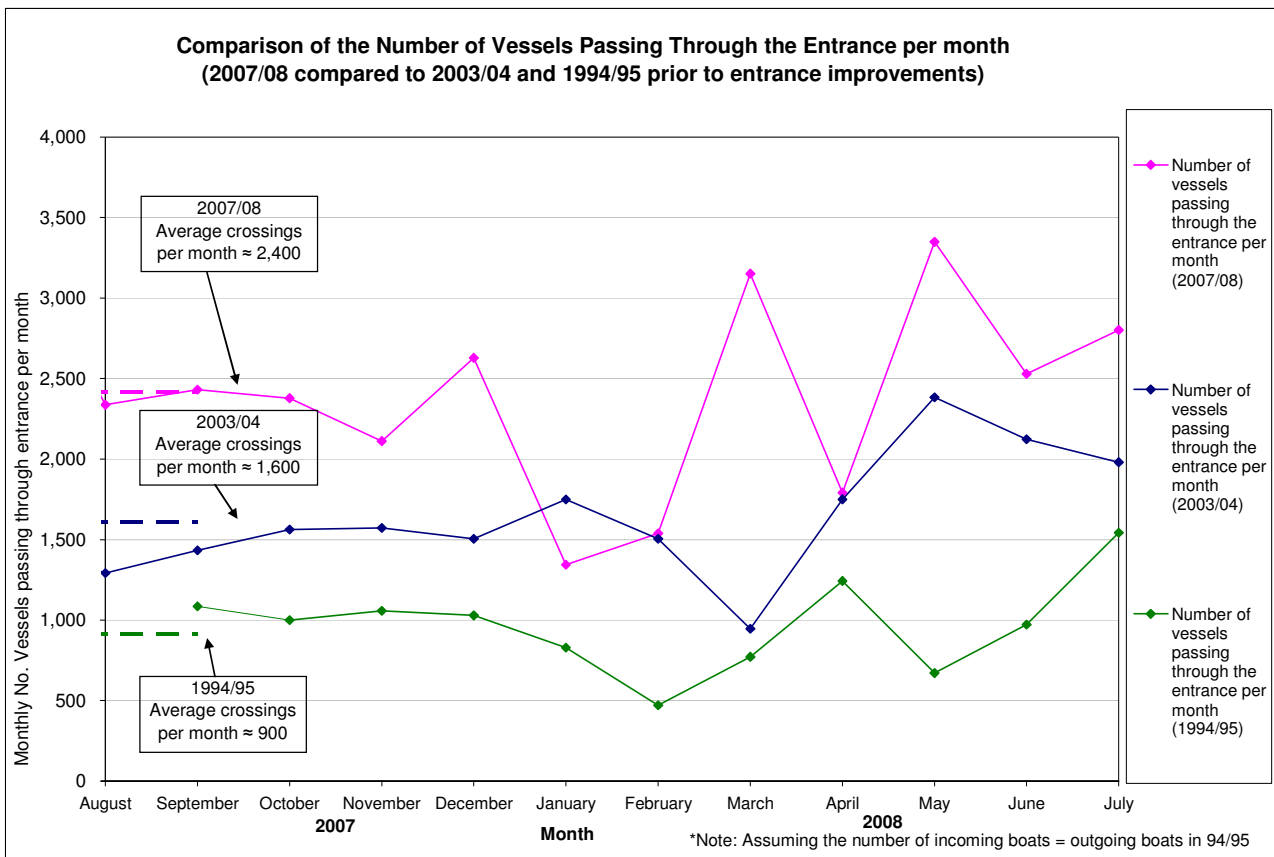
 Weekends and public holidays

Date	Entrance Conditions	Navigation Rating Impassable-----Good					Number of Boats
		Impassable	Difficulty Encountered	Some Difficulty Encountered	Relatively Good Crossing	Good Conditions	
1	Moderate, 10 Kt						72
2	Moderate, 7 Kt						129
3	Moderate, 20 Kt						91
4	Moderate, 15 Kt						75
5	Rough, 25 Kt						12
6	Rough, 15 Kt						45
7	Moderate, 10 Kt						84
8	Moderate, 9 Kt						27
9	Moderate, 8 Kt						102
10	Moderate, 10 Kt						107
11	Moderate, 12 Kt						132
12	Moderate, 22 Kt						315
13	Moderate, 10 Kt						297
14	Moderate, 11 Kt						83
15	Moderate, 12 Kt						48
16	Moderate, 11 Kt						50
17	Moderate, 10 Kt						142
18	Moderate, 12 Kt						111
19	Moderate, 10 Kt						213
20	Moderate, 12 Kt						316
21	Rough, 14 Kt						5
22	Rough, 19 Kt						17
23	Rough, 17 Kt						2
24	Rough, 26 Kt						4
25	Rough, 28 Kt						26
26	Rough, 12 Kt						6
27	Moderate, 11 Kt						93
28	Moderate, 17 Kt						28
29	Rough, 20 Kt						0
30	Moderate, 12 Kt						52
31	Moderate, 16 kt						118

**TWEED RIVER ENTRANCE SAND BYPASSING PROJECT
LETITIA SPIT TO KIRRA
MONTHLY ENVIRONMENTAL MONITORING SUMMARY JULY 2008**



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LETITIA SPIT TO KIRRA
MONTHLY ENVIRONMENTAL MONITORING SUMMARY JULY 2008**



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LETITIA SPIT TO KIRRA
MONTHLY ENVIRONMENTAL MONITORING SUMMARY JULY 2008**

5. SURFING CONDITIONS

Dominant swell condition: 0.5 -1.5m from east (fairly calm conditions)

Moderate/high sea events: 5 July – waves reaching 2.17 m & 23-26 July, waves reaching 3.02 m

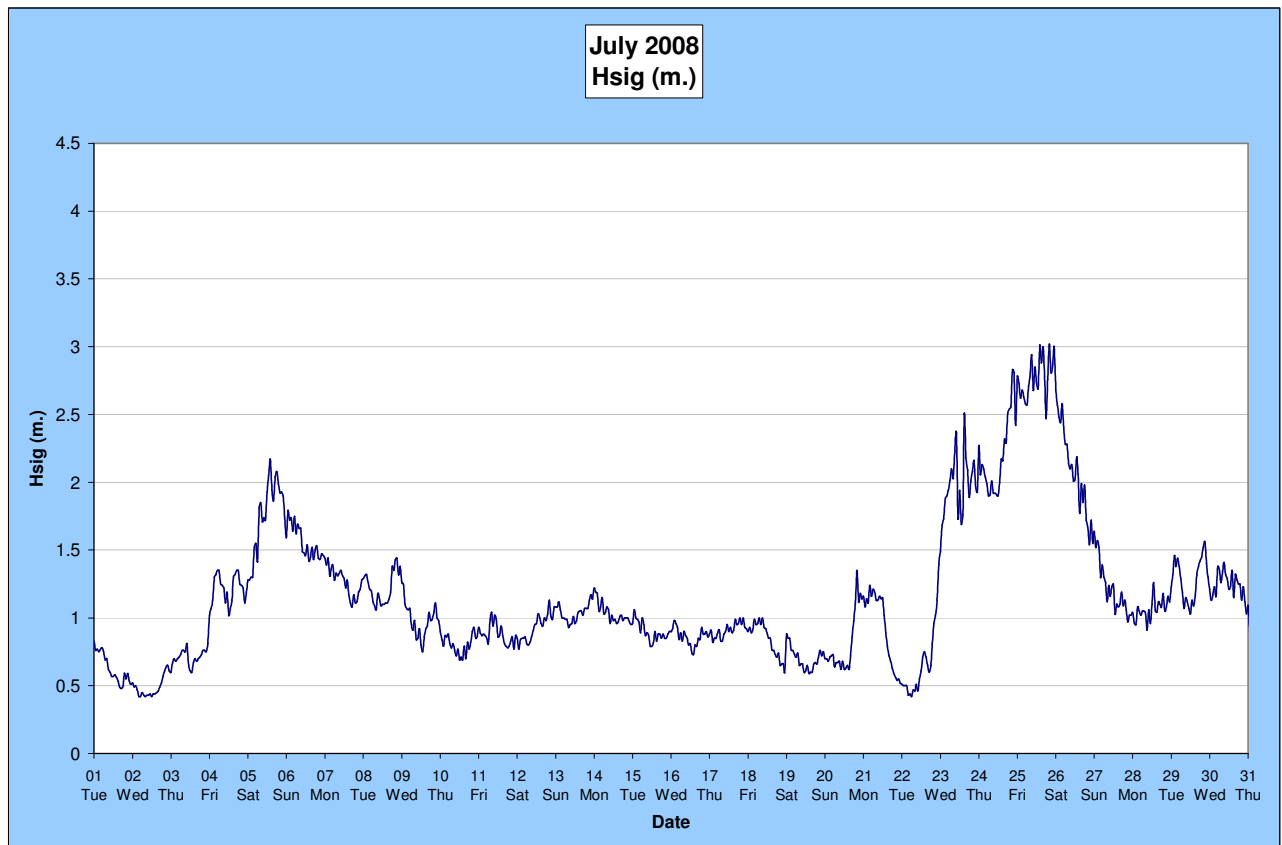
Monthly minimum significant wave height: 0.42 m on 2 July

Monthly maximum significant wave height: 3.02 m on 25 July

Number of days with waves below 1.0 m: 20 days

Number of days with waves above 2.0 m: 5 days

(Source: Tweed and Brisbane Waverider Buoy and 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 July 2008

5-9 July – Billabong Occy's Grom Comp (Duranbah Beach)

12-13 July – Billabong Winter Classic (Gold Coast)

Upcoming events in August 2008

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

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

**TWEED RIVER ENTRANCE SAND BYPASSING PROJECT
LETITIA SPIT TO KIRRA
MONTHLY ENVIRONMENTAL MONITORING SUMMARY JULY 2008**

VOLUNTEER SURF QUALITY OBSERVATIONS

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

Date	Duranbah	Frog's Beach / Snapper Rocks	Kirra Point
11/07/08	1.5 to 2.0 m plunging waves. Light SE winds. 40 surfers present.	29 surfers present.	1.0 to 1.5 m plunging waves. 8 surfers present. Only 7 people out at Kirra Beach groyne to outlet of Coolangatta Creek.
22/07/08	Less than 1.0 m plunging waves. SE winds, 15 knots. Very flat wave conditions. Only a few surfers present. Cold SE winds keeping people off the beach.	8 surfers present.	Less than 1.0 m plunging waves. 1 surfer present. Very few people on the beach. Cold wind keeping beach conditions unpleasant.

6. MEDIA COVERAGE

23 July 2008, ABC News, "Wild Qld weather continues to whip up waves"

"The low pressure system that has caused bleak weather in parts of Queensland is still whipping up large seas on the Gold Coast. Chief lifeguard Warren Yong says only experienced surfers should brave the rough conditions."

24 July 2008, Gold Coast Bulletin, "Racial friction rages on waves"

"Brazilian and local surfers are frequently abusing each other to secure the best waves at crowded beaches. Duranbah, Snapper Rocks, Currumbin Alley and Burleigh Point have been the main areas where clashes have occurred."

"A Greenmount man who is a lifelong Snapper Rocks surfer said the hostility had recently escalated dramatically. The man said arguments broke out on the Super Bank 'all the time'."

24 July 2008, Gold Coast Bulletin, "Steady rain as Gold Coast chills out"

"On Tuesday it was almost flat but overnight a dramatic change took place, bumping waves up to about 1.5m to 2m on the beaches while offshore they were peaking at 4m to 5m."

"Boating and surf expert Paul Burt yesterday said it would be the southern beaches today that would pick up most of the swell...He said under no circumstances should boaties be trying to cross the river bars today."

24 July 2008, Gold Coast Bulletin, "Beaches bleak as rain rolls in"

"Steady rainfall and cool conditions have made Gold Coast beaches a no-go zone for everyone bar super keen surfers today as the coastal strip cops the brunt of the wet weather...The best waves are being found at Snapper Rocks, Rainbow Bay, Greenmount, the Alley and at Burleigh."

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

25 July 2008, Gold Coast Bulletin, "Wild winter drops in"

"Surfers can expect some of the best surf in recent months with Snapper, Currumbin Alley and Burleigh Point likely to be the best on offer today. Surf forecaster Ben Matson from the website Swellnet said this was the second patch of 'unseasonal swell' for southeast Queensland this winter with waves and weather similar to that usually experienced in the summer months. 'It's been a very unusual winter but it's been good for surfers,' he said."

25 July 2008, Gold Coast Bulletin, "Call for surfing etiquette following surf rage"

"Snapper is the most crowded wave in the world and it's not because of the Brazilians, it's always been like this,' [Brazilian surfer Jorge De Oliveira who has lived in Coolangatta for 15 years said]."

"[Coast identity Terry 'Tappa' Teece] said tensions were highest at the Super Bank where there's a large population and 'it's overcrowded'."

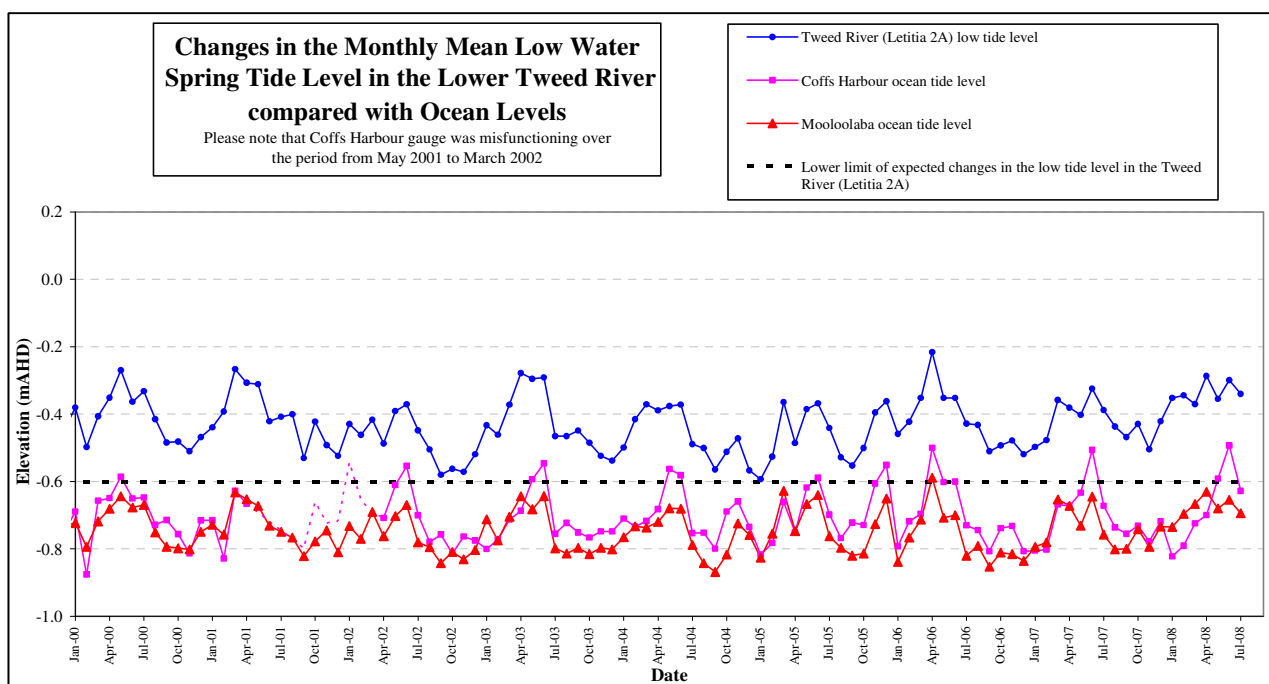
26-27 July, 2008, Tweed Daily News Weekend Edition "D-bah all at Sea: 'Bypass neglect' leaves iconic beach denuded"

"The latest wild and windy weather has continued the ongoing destruction of Duranbah Beach...A sand encarpment stood more than two metres high as the ocean continued to eat away at the dunes. "Duranbah, one of the most consistent waves on the east coast of Australia, has been desecrated by the lack of attention by our local council and the Tweed sand bypass," [Coastal Alliance President] Mr Arnott said."

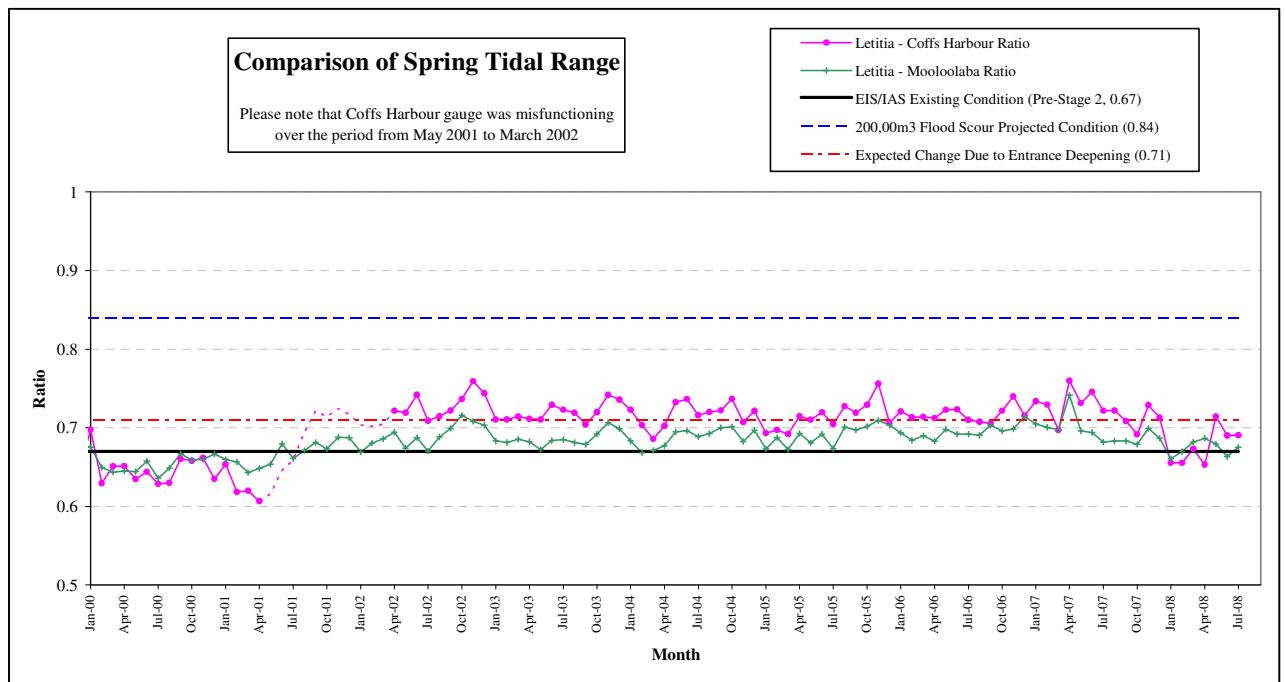
7. TWEED LOWER ESTUARY TIDE CONDITIONS

Tweed River July Mean Low Water Spring (MLWS) tide level: -0.340 m AHD

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



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LETITIA SPIT TO KIRRA
MONTHLY ENVIRONMENTAL MONITORING SUMMARY JULY 2008**

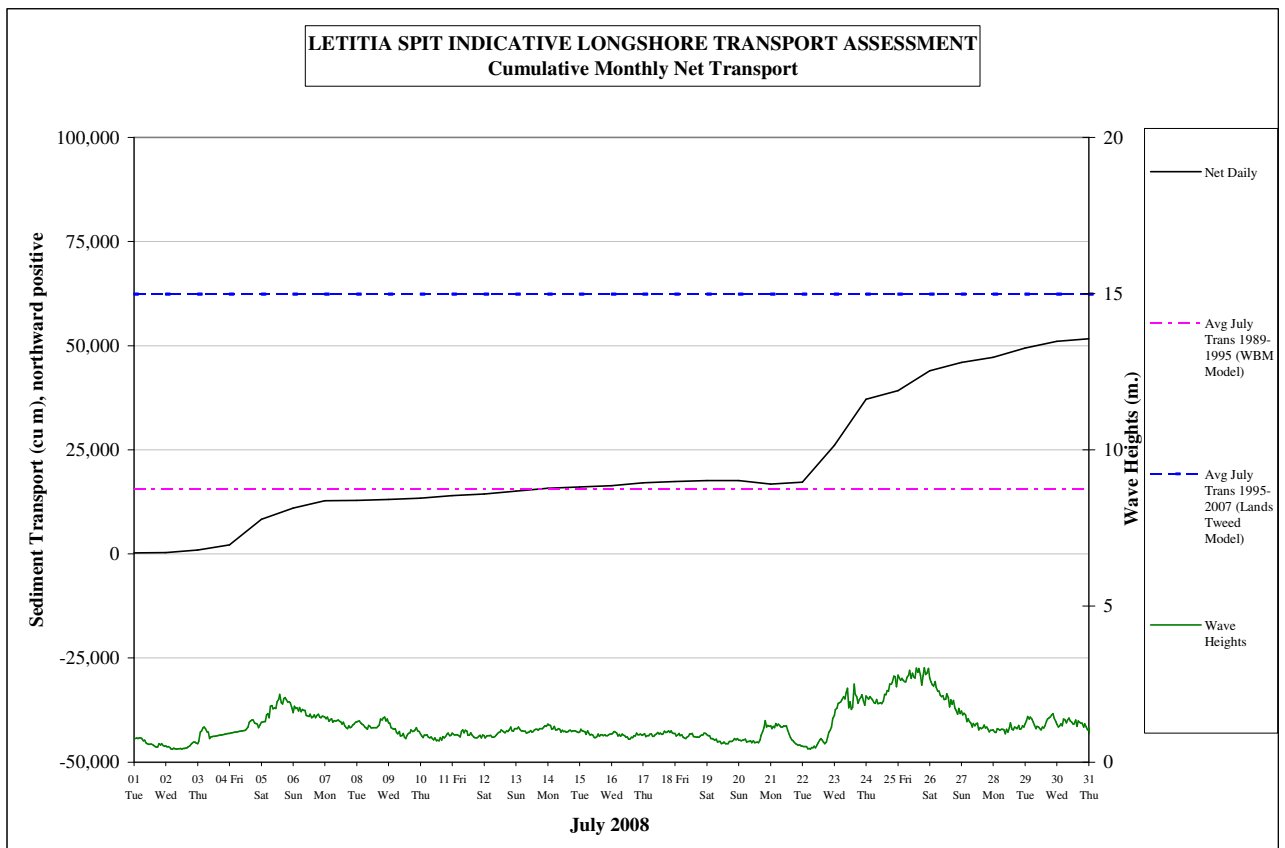


8. INDICATIVE LONGSHORE TRANSPORT

The longshore sand transport information presented in the graph below 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.

July 2008 estimated natural sand transport (moving north towards Tweed River entrance): 51,000 m³. This result is lower than average sand transport for the month of July.

**TWEED RIVER ENTRANCE SAND BYPASSING PROJECT
LETITIA SPIT TO KIRRA
MONTHLY ENVIRONMENTAL MONITORING SUMMARY JULY 2008**



9. ARGUS COASTAL IMAGING

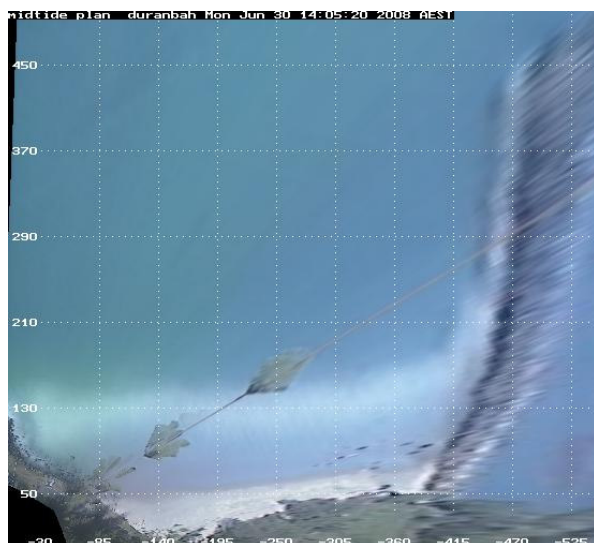
UNSW monitors Duranbah Beach to North Kirra Beach for the project using an ARGUS coastal imaging system. Hourly and archived images are available on the internet at the following address:

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

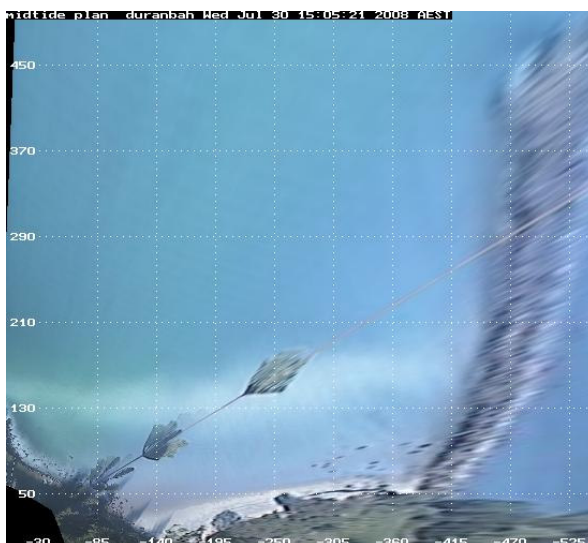
Merged and rectified images taken at mid tide for each of the locations are shown below. Refer to Appendix A for beach width and shoreline analysis for each of the beaches.

DURANBAH BEACH

**TWEED RIVER ENTRANCE SAND BYPASSING PROJECT
LETITIA SPIT TO KIRRA
MONTHLY ENVIRONMENTAL MONITORING SUMMARY JULY 2008**

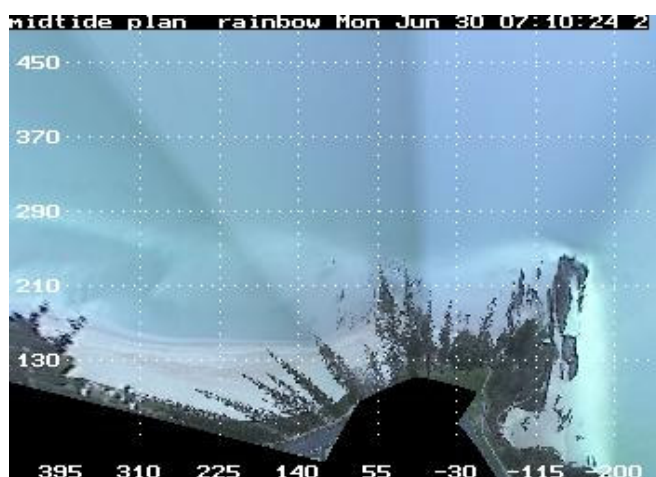


30 June 2008

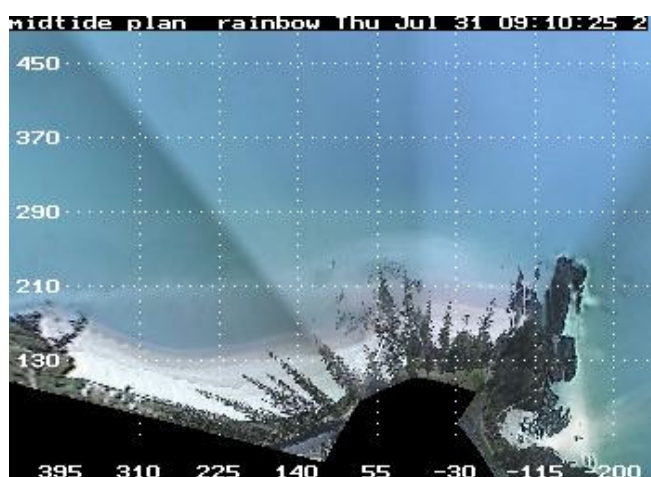


31 July 2008

RAINBOW BAY

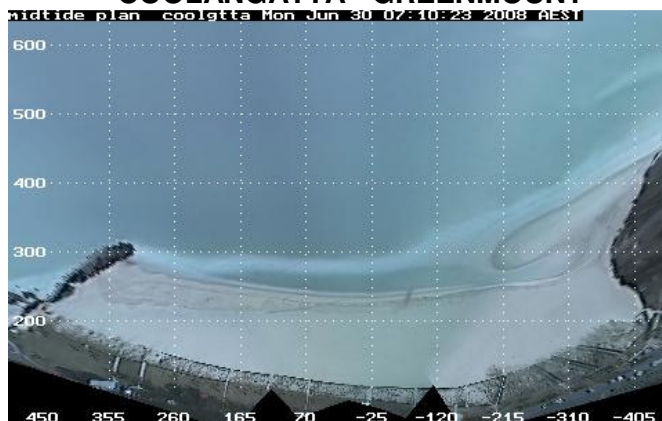


30 June 2008

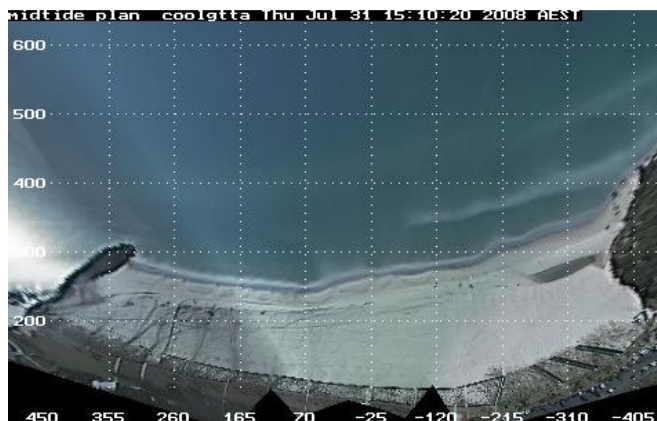


31 July 2008

COOLANGATTA - GREENMOUNT



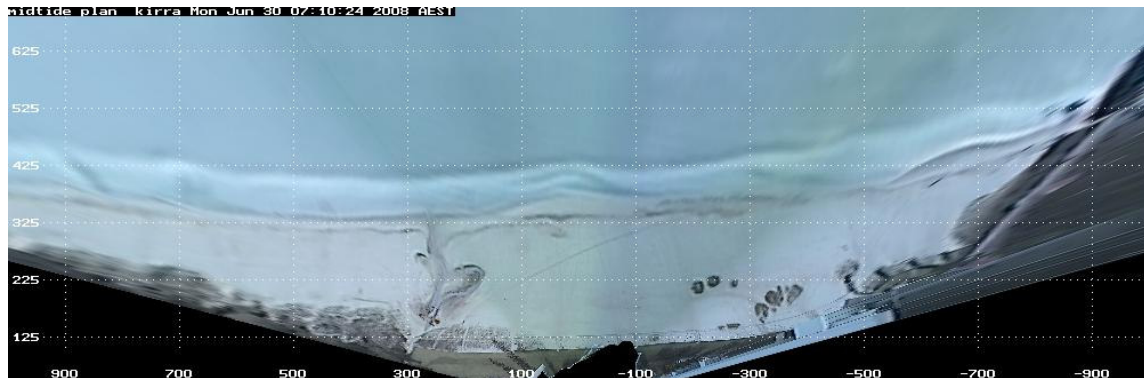
30 June 2008



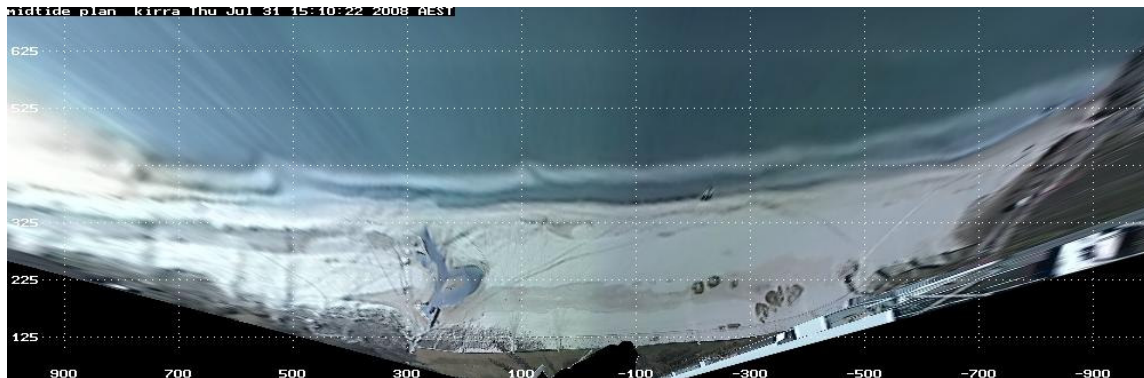
31 July 2008

**TWEED RIVER ENTRANCE SAND BYPASSING PROJECT
LETITIA SPIT TO KIRRA
MONTHLY ENVIRONMENTAL MONITORING SUMMARY JULY 2008**

NORTH KIRRA - KIRRA



30 June 2008



31 July 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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