

Tweed River Entrance Sand Bypassing Project

Letitia Spit to Kirra



Monthly Environmental Monitoring Summary

JUNE 2008

Department of Lands 




**Queensland
Government**
Environmental
Protection Agency

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1. EXECUTIVE SUMMARY

This report provides a summary of pumping and dredging activities, as well as surf, beach, river, entrance and weather conditions for the southern Gold Coast Beaches, Duranbah and the Tweed River Entrance.

In June 2008:

- The number of vessels that passed through the entrance was about the same as the average number of crossings for the month of June.
- Surf quality in June was moderate to good, with two moderate sea events and one significant ocean storm with waves reaching 3.9 m.
- Tweed River tide data for June 2008 is consistent with ocean tide levels and shows no significant impacts.
- The estimated amount of sand moving north towards the Tweed River Entrance by natural processes during June 2007 is currently being analysed and will be presented in the July 2008 Environmental Monitoring Summary.
- Dredging of the Tweed River Entrance continued in June. About 60,000 m³ of sand was delivered mostly to the Outer Nearshore area of Duranbah and to a lesser extent to Snapper Rocks East up to the end of June.

**TWEED RIVER ENTRANCE SAND BYPASSING PROJECT
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MONTHLY ENVIRONMENTAL MONITORING SUMMARY JUNE 2008**

2. INTRODUCTION

This document provides a summary of sand quantities delivered by the system, 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 coastal reports, media coverage, Surfing NSW and Surfing Queensland and the following World Wide Websites:

- www.burleighcam.com.au
- www.bom.gov.au
- www.coastalwatch.com.au
- www.surfingaustralia.com.au
- www.swellnet.com.au
- www.tracksmag.com



3. PUMPING AND DREDGING ACTIVITIES

Sand Delivery for JUNE 2008

	PUMPED	DREDGED		JUNE 2008 TOTAL DELIVERY
Location	Snapper Rocks East	Snapper Rocks East	Duranbah	
Amount (m ³)	64,782 m ³	16,284 m ³	42,845 m ³	123,911 m ³

Total Sand Delivery This Year (January to June 2008)

	PUMPED	DREDGED	2008 TOTAL DELIVERY
Amount (m ³)	348,426 m ³	78,919 m ³	427,345 m ³

Total Sand Delivery Last Year (January to December 2007)

	PUMPED	DREDGED	2007 TOTAL DELIVERY
Amount (m ³)	562,247 m ³	0 m ³	562,247 m ³

Total Sand Delivery to Date by the Stage 2 Permanent Sand Bypassing System (May 2000 to June 2008)

	PUMPED	DREDGED	TOTAL DELIVERY STAGE 2
Amount (m ³)	4,768,514 m ³	*1,919,072 m ³	*6,687,586 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 June 2008 were recorded by volunteer Mr Brian Mason:

Date	Observations
13 June Late Morning	Cloudy. Dredge operating. Small craft entering and leaving without problems.
20 June Late Morning	Fine weather. Good crossing conditions. Dredge still operating at the entrance.
27 June Late Morning	Fine weather. Very good crossing conditions. Dredge operating.

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TWEED RIVER ENTRANCE CONDITIONS CONTINUED

VOLUNTEER MARINE RESCUE REPORTS

Volunteer Marine Rescue Pt Danger (VMR) has been monitoring daily entrance conditions on behalf of the TRESBP since 20 January 2002, monitoring results for June 2008 are presented below.

The navigation ratings from 1–5 are as follows:

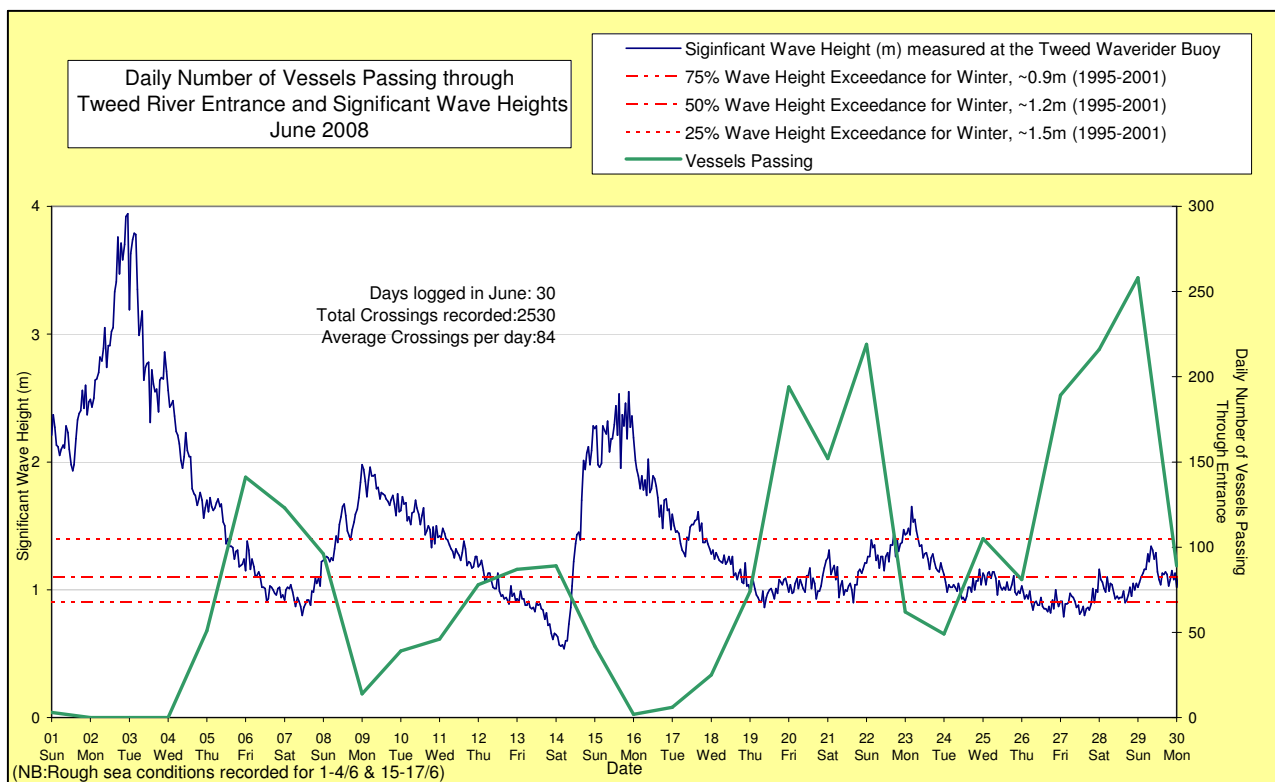
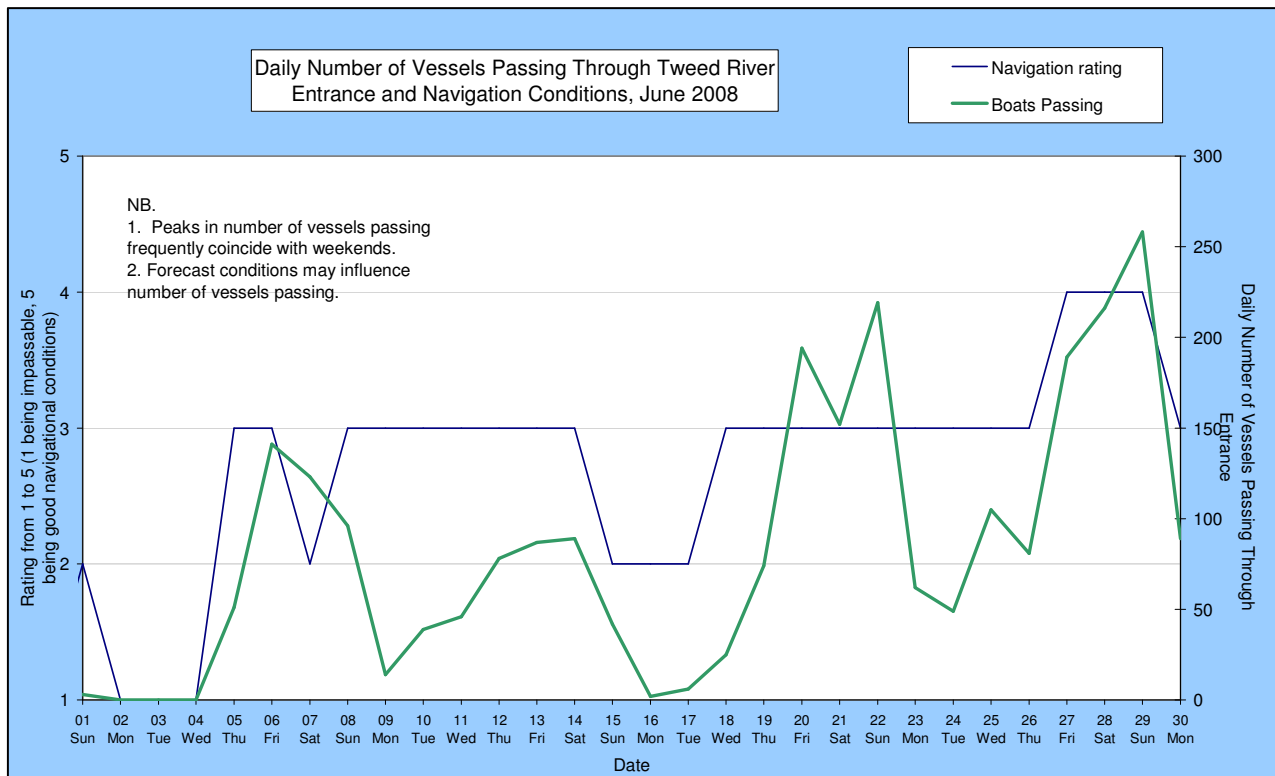
- 1 – Impassable 2 – Difficulty encountered 3 – Some difficulty encountered
4 – Relatively good crossing 5 – Good conditions

☐ – Weekends and public holidays

Date	Entrance Conditions	Navigation Rating Impassable-----Good					Number of Boats
		1	2	3	4	5	
1	Rough						3
2	Rough						0
3	Rough						0
4	Rough						0
5	Moderate						51
6	Moderate						141
7	Moderate						123
8	Moderate						96
9	Moderate						14
10	Moderate						39
11	Moderate						46
12	Moderate						78
13	Moderate						87
14	Moderate						89
15	Rough						42
16	Rough						2
17	Rough						6
18	Moderate						25
19	Moderate						74
20	Moderate						194
21	Moderate						152
22	Moderate						219
23	Moderate						62
24	Moderate						49
25	Moderate						105
26	Moderate						81
27	Moderate						189
28	Moderate						216
29	Moderate						258
30	Moderate						89

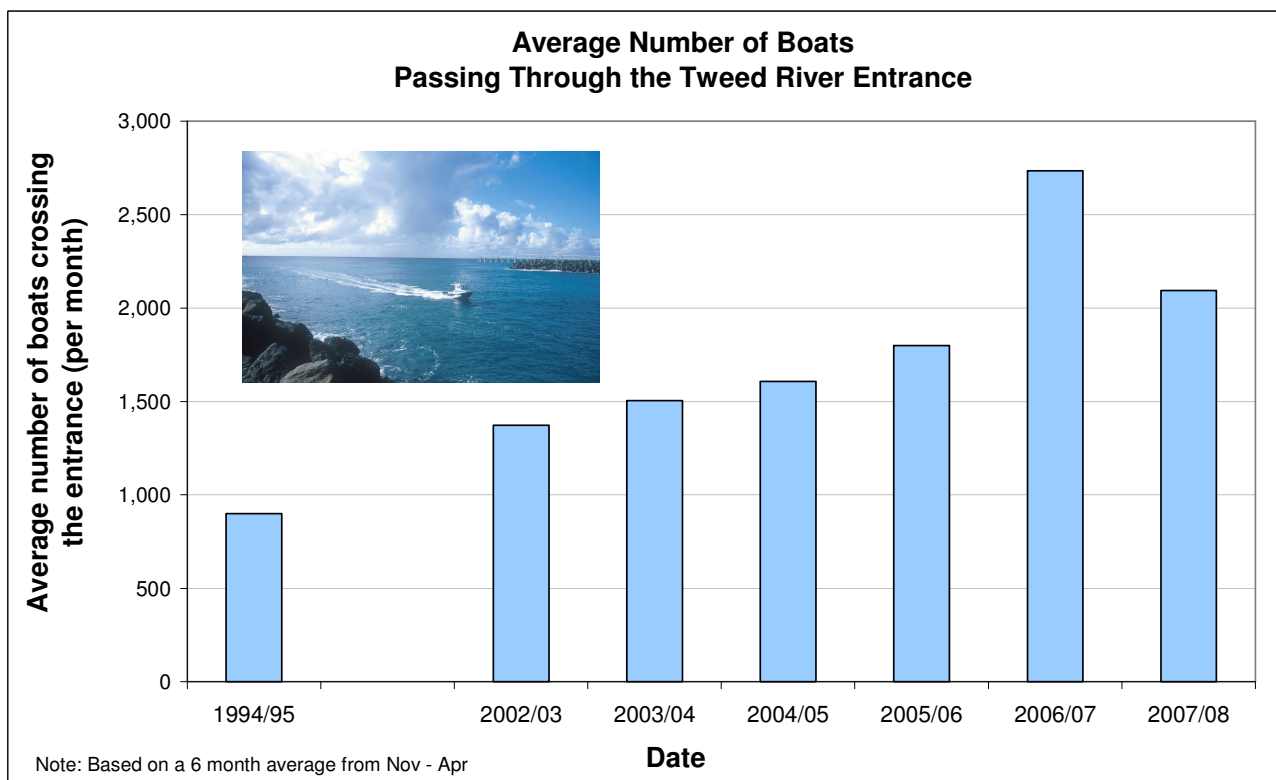
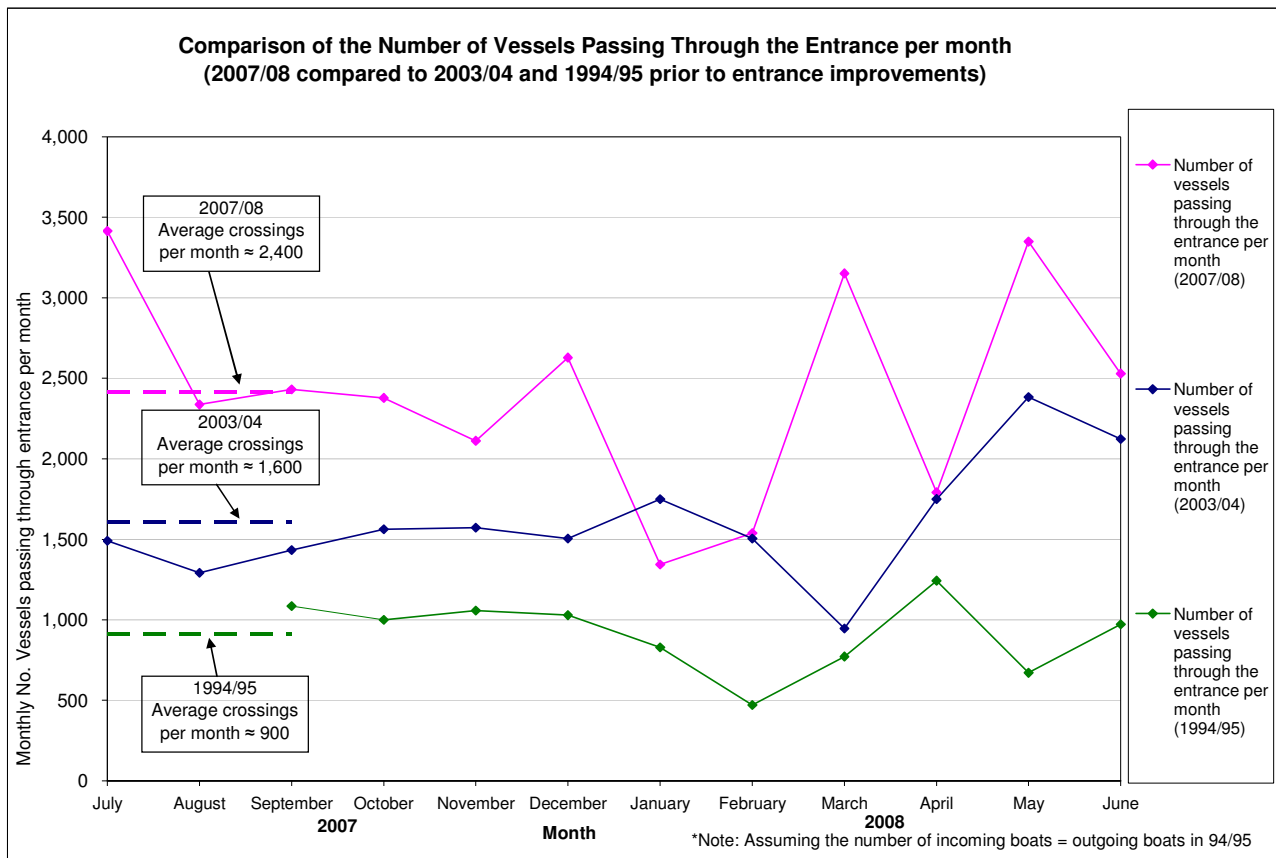
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TWEED RIVER ENTRANCE CONDITIONS CONTINUED



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TWEED RIVER ENTRANCE CONDITIONS CONTINUED



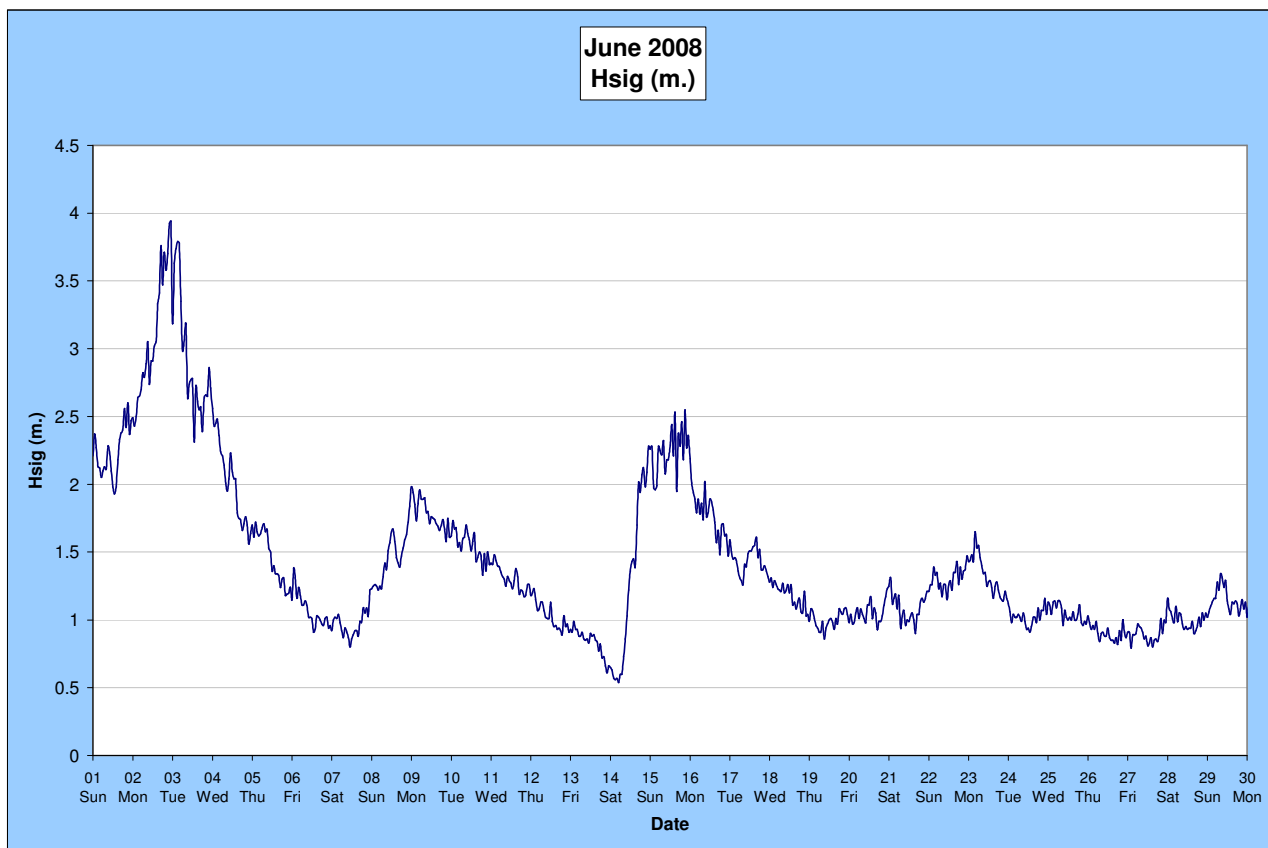
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5. SURF SUMMARY

Waves of between 1.0 – 2.0 m (ie average conditions) from the SE dominated surf conditions on the Southern Gold Coast in June 2008. A significant ocean storm with waves reaching almost 4 m occurred in the first week of the month. Winds varied over the month with the predominant wind condition being SW at 10-20 Knots.

Readings from the Tweed Waverider Buoy showed a minimum significant wave height of 0.54 m on 14 June and a maximum significant wave height of 3.94 m on 2 June. There were 14 recorded days when waves dropped below 1.0 m and 7 days when waves were above 2.0 m.

Source: Tweed and Brisbane Waverider Buoy and BoM.



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

SURF & SURF LIFE SAVING AND OTHER EVENTS

Events in June 2008

1 June - FCS Queensland Manufacturers Cup (Duranbah Beach)

7-9 June - Quiksilver Queensland State Junior Titles - Event 1 (Duranbah Beach)

Upcoming events in July 2008

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

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

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

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SURF SUMMARY CONTINUED

VOLUNTEER SURF QUALITY OBSERVATIONS

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

Date	Duranbah	Frog's Beach / Snapper Rocks	Kirra Point
6 June Late Morning			1.0 – 1.5 m spilling waves. 3 surfers present.
13 June Late Morning	1.0-1.5 m waves. 9 surfers present. Erosion scarp present along the beach. Rocks exposed in patches in the surf zone.	4 surfers present.	1.0 – 1.5 m spilling waves. 0 surfers present. Weather clouding over rapidly. Beach deserted except for 2 sea fishing crews, boats and vehicles. Weather conditions make for the beach to not be a good place to be.
20 June Late Morning	1.0-1.5 m plunging waves. 41 surfers present. Very little sand dune left. Steep slope to the face of the remnant dune and wave action reaching the toe of the dune at high tide. Exposed bed of rock near the landward end of the walls.	10 surfers present.	<1.0 m waves. 0 surfers present. Offshore sand bar forming from groyne to about the entrance from Coolangatta creek.
27 June Late Morning	1.5-2.0 m plunging waves. 55 surfers present.	55 surfers present.	1.0 – 1.5 m plunging waves. 3 surfers present. Offshore bar slowly moving onshore. Only 27 people on beach, north of Kirra groyne to the Coolangatta Creek outlet.

6. BEACH CONDITIONS

PHOTOGRAPHS OF BEACH CONDITIONS

DURANBAH



View from Pt Danger

RAINBOW BAY



View from Greenmount

COOLANGATTA



View from Greenmount



View from Kirra Hill

KIRRA



View from Kirra Hill



View from Kirra Hill

(Coolangatta – View from Greenmount) Photo taken: 5 June 2008, approx 8am, high tide

Photos taken: 27 June 2008, approx 2-3pm, high tide

Source: NSW Department of Lands

7. MEDIA COVERAGE AND COMMUNITY FEEDBACK

MEDIA COVERAGE

31 May, 2008, Tweed Daily News, "Fingal jetty off limits: police"

"Police say they are fed up with people using jetty for fishing and other recreational activities and will now issue fines of up to \$340 to anyone caught within the restricted area."

31 May – 1 June, 2008, Weekend Bulletin, "Pounding waves make it a swell time to be a surfer"

"Surfers were out making the most of the swell at Snapper Rocks early yesterday before conditions got too dangerous and there were plenty of snapped surfboards floating ashore... "The Super Bank is holding for now but in a few days when the surf gets bigger, then waves will be perfect," [President of Coastal Alliance Phil Arnott said]."

2 June, 2008, Brisbane Times, "Flash flooding plagues SEQ"

"The heavy rain is the result of a trough moving onto the coast from the east, which has also caused dangerous surf conditions for much of the south-east. Beaches on the Sunshine Coast and Gold Coast will again be closed today... A severe surf warning has been issued for the coast between Fraser Island and the New South Wales border."

2 June, 2008, Gold Coast Bulletin, "No bomb, but surfers enjoy a rough ride"

"Surfers made the most of the woolly weather, flocking to surf the 3 m waves at Snapper Rocks."

4 June, 2008, Sunshine Coast Daily, "Sharks warning issued for Qld coast"

"Queensland Department of Primary Industries and Fisheries shark control program manager Tony Ham have advised people not to swim in surf on the southern Queensland coast after heavy rainfall this week."

5 June, 2008, Gold Coast Bulletin, "Murky water fuels shark fears"

"The department warns that anyone planning on swimming or surfing should be careful to avoid areas where the water is dirty, such as near river outlets. Northern NSW lifeguard co-ordinator Stephen Leahy said the warning was 'certainly warranted' and lifeguards were considering issuing a similar notice in the next day of two for beaches between Ballina to Duranbah."

10 June, 2008, Gold Coast Bulletin, "Beaches on high alert for sharks"

"Alarm bells are ringing as recent rain provides the perfect environment for bull sharks on the Gold Coast and in northern NSW."

8 – 14 June, 2008, Tweed Weekly, "River dredging resumes"

"Tweed River's entrance will be dredged during the next four months to remove up to 200,000 cubic metres of sand. The Tweed River Entrance Sand Bypassing Project manager, Ian Taylor said dredging began late last month... "Given the abundance of sand in Coolangatta Bay, sand will be placed as far south in the placement areas as possible, between Point Danger and Duranbah Beach," he said."

18 June, 2008, Gold Coast Bulletin, "Gold Coast beaches the best kept secret"

"...I've travelled and competed in many carnivals and competitions around the world and there are no better beaches than the Gold Coast's," [former ironwoman Karla Gilbert said]... "The Gold Coast beaches are an Australian icon and the fact the Coast is a truly international destination is reflected in our tourism numbers," [Gold Coast Tourism spokesman Ben Pole] said."

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19 June, 2008, Tweed Daily News, "Fight to reclaim waves goes on internet"

"The new website, www.kirrapoint.org, was launched ahead of World Surfing Day celebrations tomorrow... The committee, along with the Marine Teachers Association of Queensland South Coast Branch and Surfrider Foundation, will host an education workshop this Saturday for teachers to pass on their message."

21 June, 2008, Tweed Daily News, "Good time to set up shop"

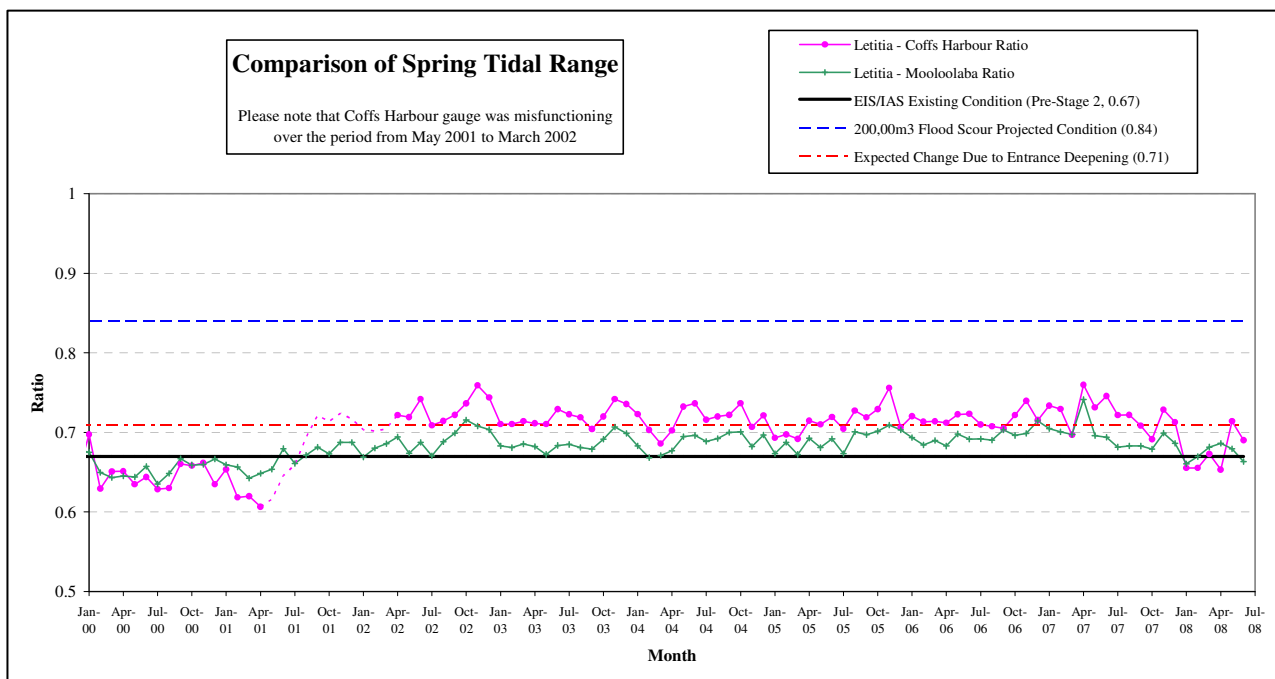
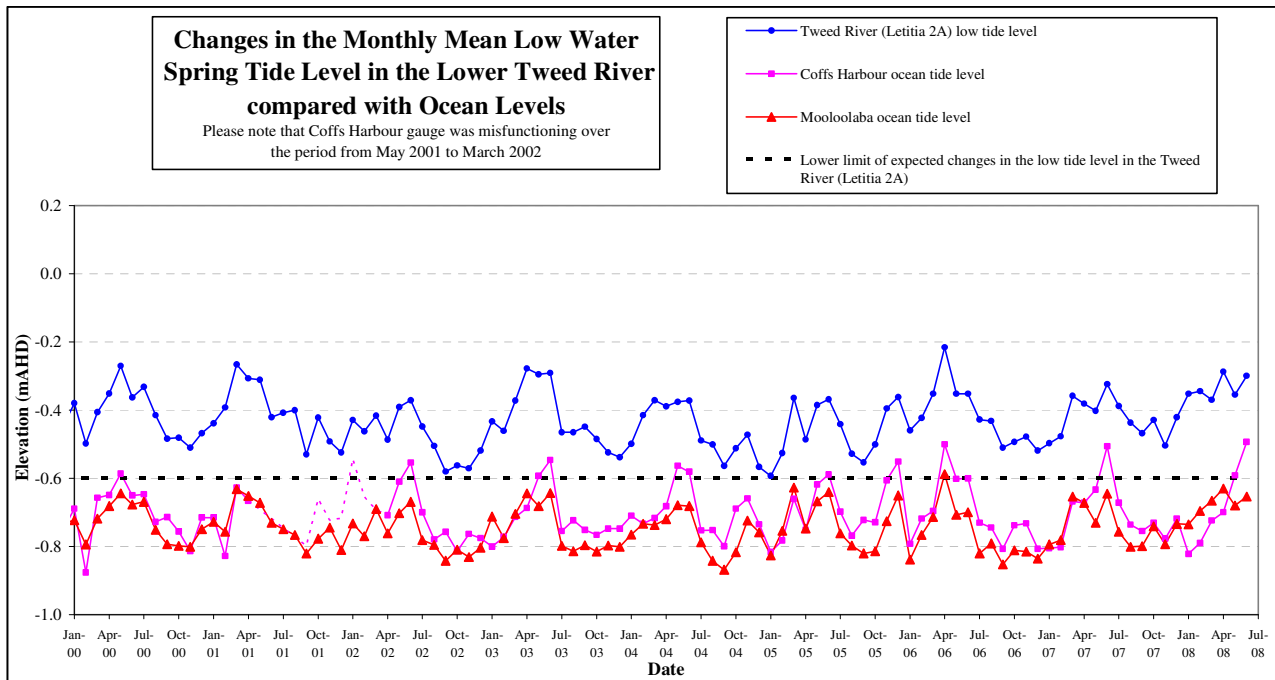
"Mr Turner[Peter Turner, former Gold Coast City councillor from 1991-1997] also said he had been advocating a sand bypass system to clear the Tweed Bar and stop erosion on the southern Gold Coast before the Tweed River Sand Bypass system was built. He believes the sand bypass has been successful in restoring the beach profile."

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8. TWEED RIVER LOWER ESTUARY TIDAL CONDITIONS

The Mean Low Water Spring (MLWS) tide level in the lower Tweed River was -0.299 m AHD in June 2008.

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

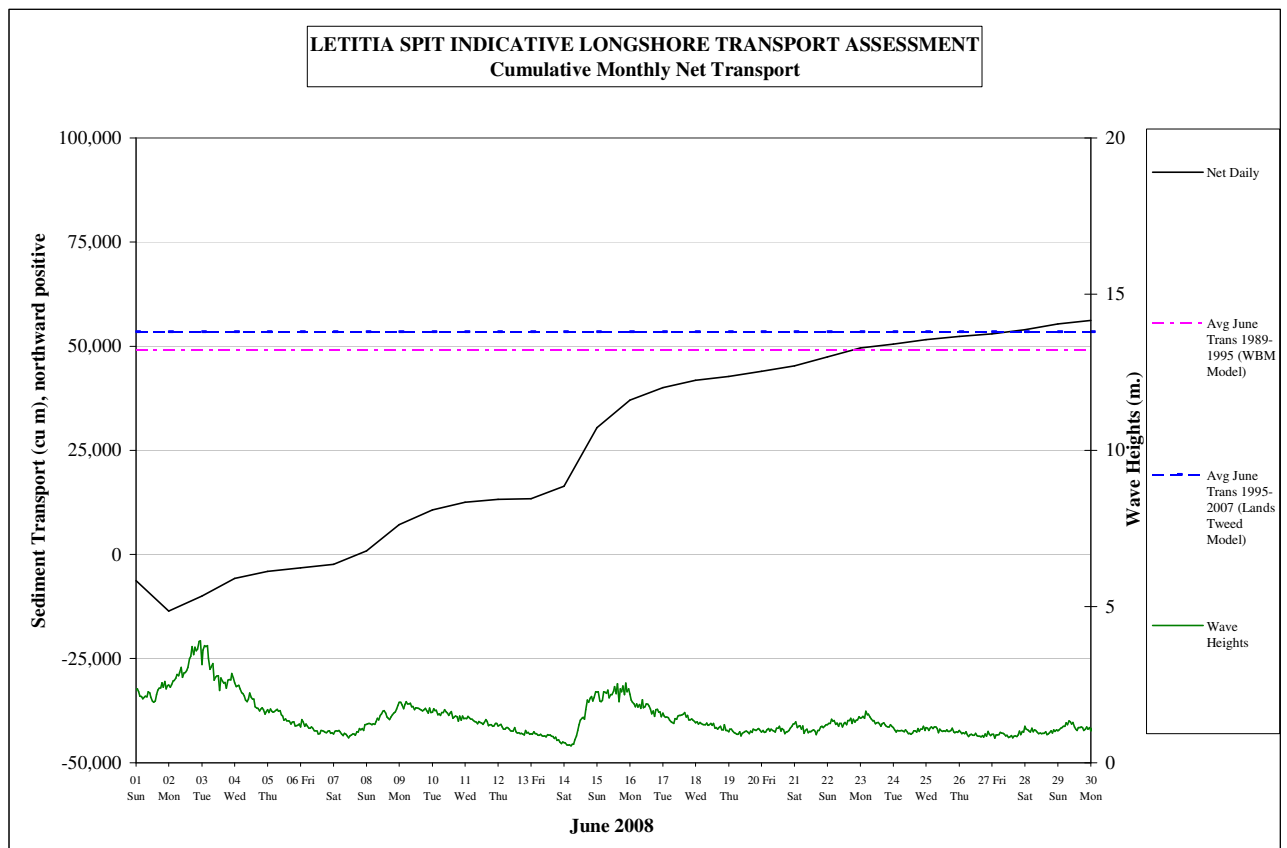


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9. INDICATIVE LONGSHORE SAND TRANSPORT

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.

June 2008 estimated natural sand transport (moving north towards Tweed River entrance): 56,000 m³. This result was slightly higher than average sand transport for the month of June.



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10. ARGUS COASTAL IMAGING SYSTEM

The University of New South Wales is monitoring Duranbah Beach to North Kirra Beach for the project using an ARGUS coastal imaging system. Images are available on the internet at the following address:

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

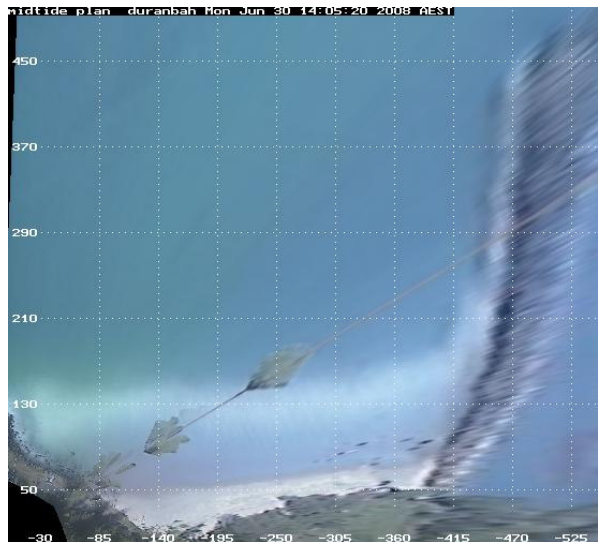
These images are updated hourly and all past photos can be accessed in the archives.

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

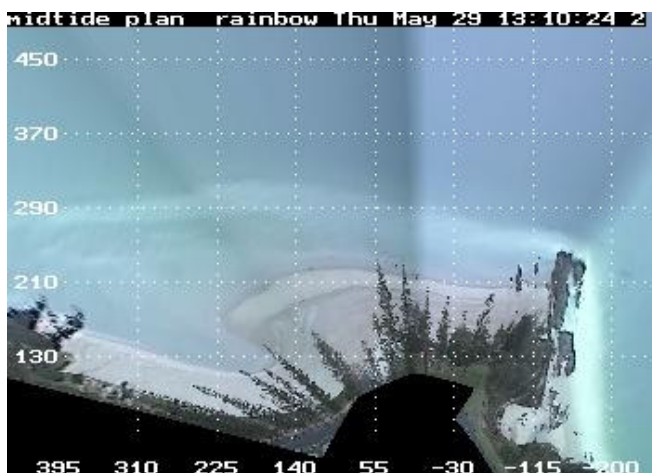


29 May 2008

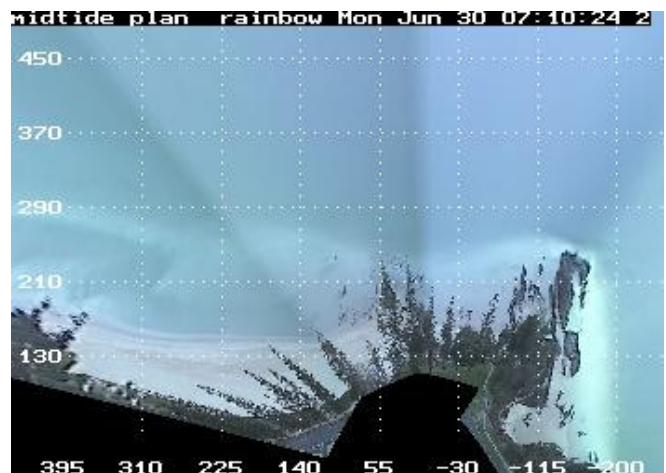


30 June 2008

RAINBOW BAY



29 May 2008

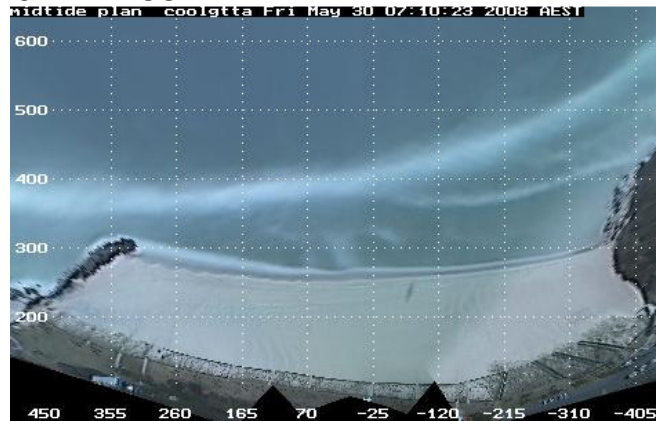


30 June 2008

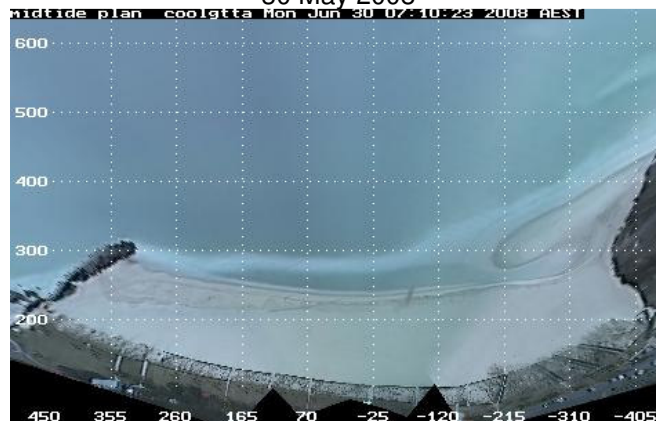
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ARGUS COASTAL IMAGING SYSTEM CONTINUED

COOLANGATTA - GREENMOUNT

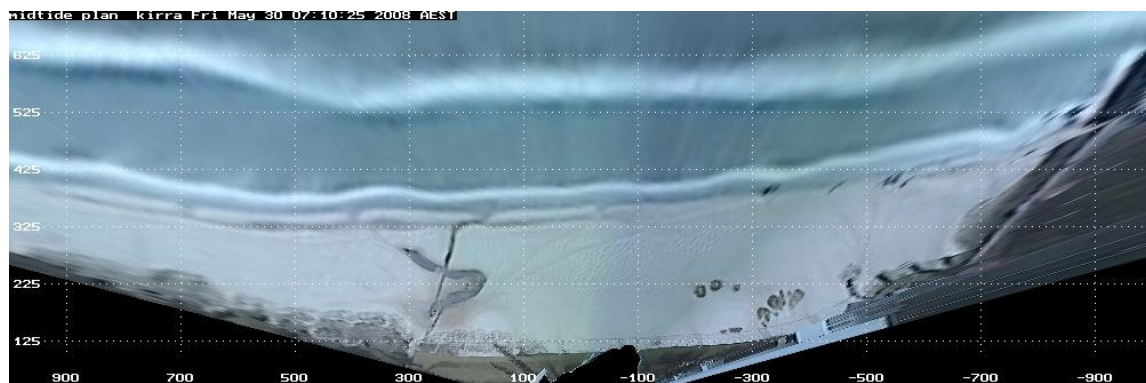


30 May 2008

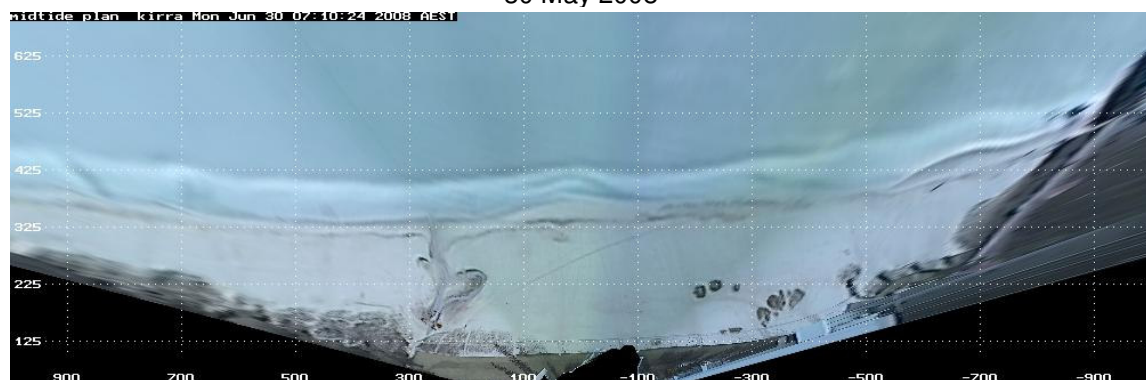


30 June 2008

NORTH KIRRA - KIRRA



30 May 2008



30 June 2008

11. CONTACT DETAILS

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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