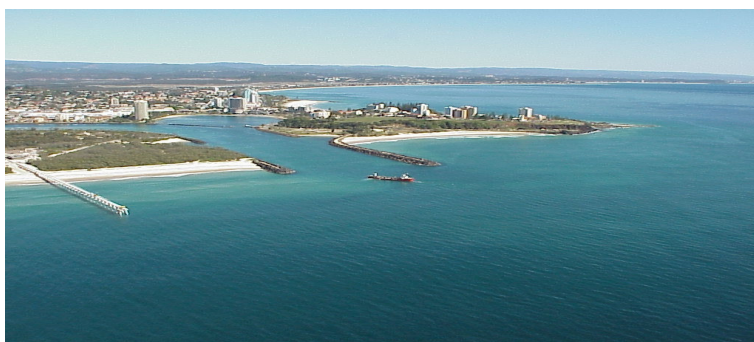


Tweed River Entrance Sand Bypassing Project

Letitia Spit to Kirra



Monthly Environmental Monitoring Summary

JUNE 2007

Department of Lands 




**Queensland
Government**
Environmental
Protection Agency

**TWEED RIVER ENTRANCE SAND BYPASSING PROJECT
LETITIA SPIT TO KIRRA
MONTHLY ENVIRONMENTAL MONITORING SUMMARY JUNE 2007**

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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, the Tweed River Entrance and Letitia Spit.

- Pumping to Duranbah was completed in June.
- The number of vessels that passed through the entrance in June was approximately the same as the average.
- Surf quality in June was moderate, with reports of calm surf conditions across most of the month.
- There were no significant impacts on the Lower Tweed River tides. Recent tidal data is consistent with ocean tidal levels.
- The amount of sand moving north towards the Tweed River entrance was less than the June average.

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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, the Tweed River Entrance and Letitia Spit 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 2007

	PUMPED		DREDGED	JUNE 2007 TOTAL DELIVERY
Location	Snapper Rocks East	Duranbah		
Amount (m ³)	60,129	1,956	0	62,085

Total Sand Delivery This Year (January to June 2007)

	PUMPED	DREDGED	2007 TOTAL DELIVERY
Amount (m ³)	276,793	0	276,793

Total Sand Delivery to Date by the Stage 2 Permanent Sand Bypassing System (May 2000 to June 2007)

	PUMPED	DREDGED	TOTAL DELIVERY STAGE 2
Amount (m ³)	4,134,634	1,862,793	5,997,427

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4. TWEED RIVER ENTRANCE CONDITIONS

VOLUNTEER VIDEO MONITORING LOG

The following Entrance Condition observations for June 2007 were recorded by volunteers Mr Brian Mason and Mr Robert Ford:

Date	Observations
1 June Mid Morning	Fine weather. Calm crossing conditions.
15 June Mid Morning	Overcast. Calm crossing conditions. No breaks in entrance.
22 June Mid Morning	Fine weather. No breaks in entrance. Waves breaking seaward of the entrance.
29 June Mid Morning	Fine weather. Fair crossing conditions. Slight swell seaward of the entrance. Maintenance works on southern wall.

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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 2007 are presented below.

The navigation ratings from 1–5 are as follows:

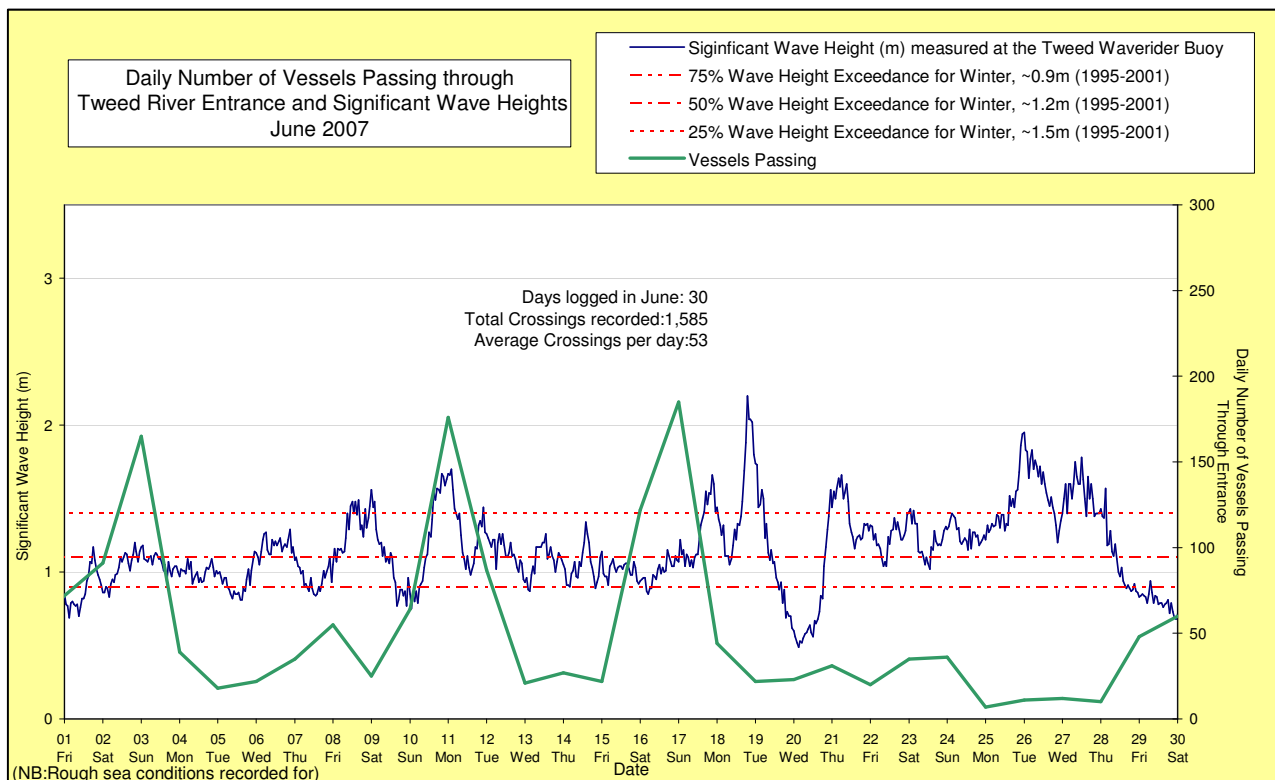
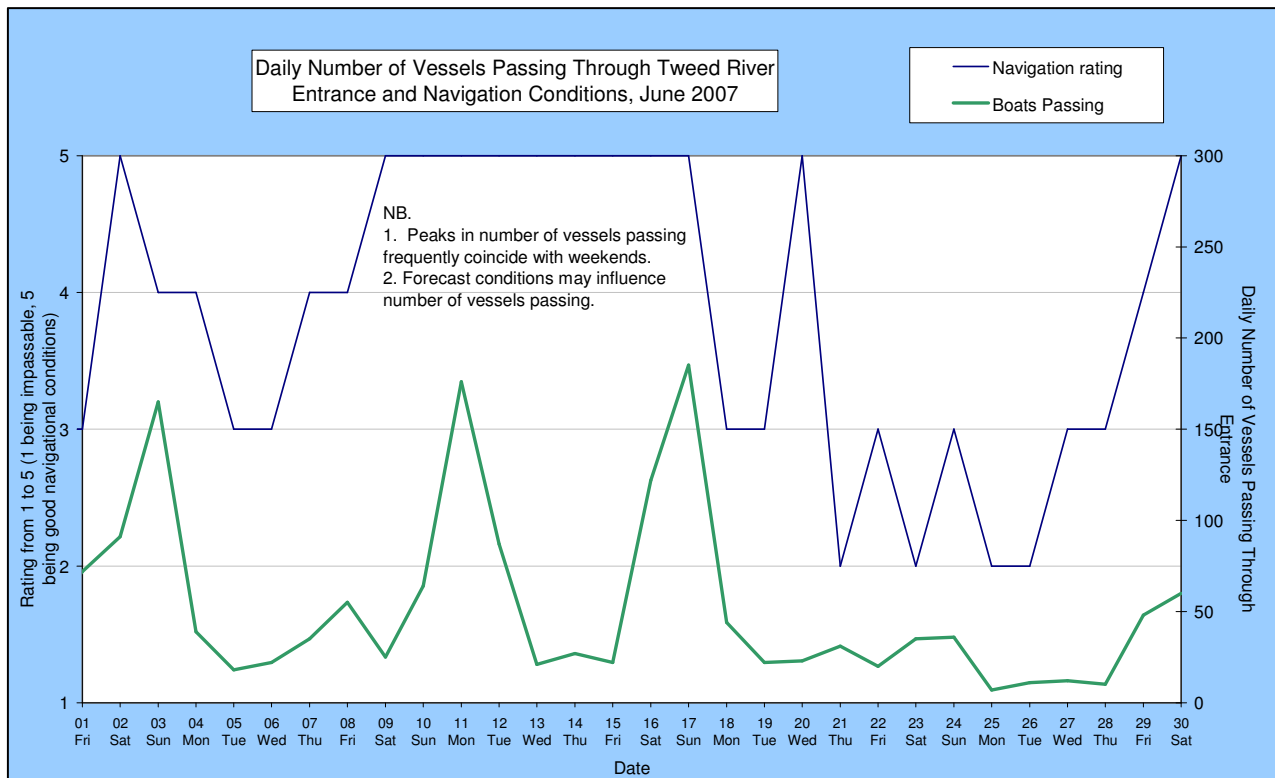
- 1 – Impassable 2 – Difficulty encountered 3 – Some difficulty encountered
4 – Relatively good crossing 5 – Good conditions

☐ – Weekends and public holidays

Date	Entrance Conditions	Navigation Rating Impassable-----Good					Number of Boats
		1	2	3	4	5	
1	Moderate						72
2	Slight						91
3	Moderate						165
4	Moderate						39
5	Moderate						18
6	Moderate						22
7	Moderate						35
8	Moderate						55
9	Slight						25
10	Slight						64
11	Slight						176
12	Slight						87
13	Slight						21
14	Slight						27
15	Slight						22
16	Slight						122
17	Slight						185
18	Moderate						44
19	Moderate						22
20	Slight						23
21	Rough						31
22	Moderate						20
23	Rough						35
24	Moderate						36
25	Rough						7
26	Rough						11
27	Rough						12
28	Rough						10
29	Moderate						48
30	Slight						60

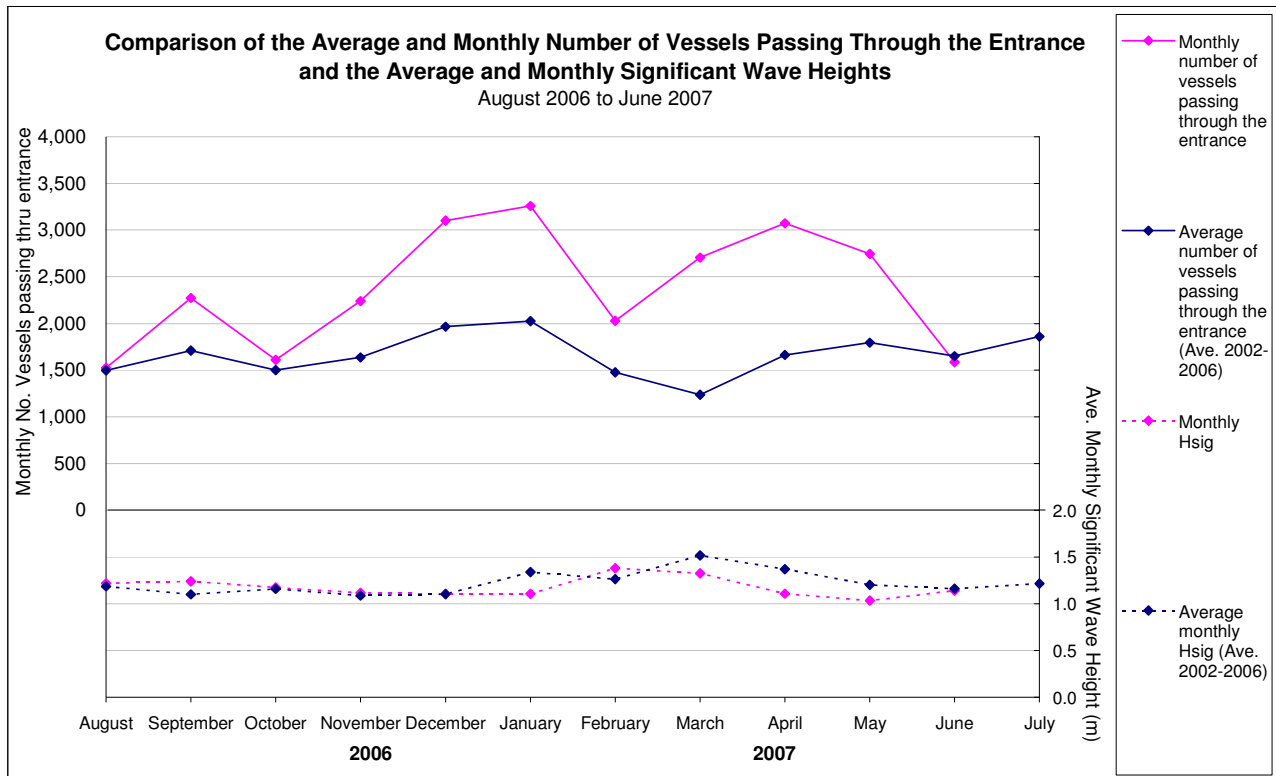
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TWEED RIVER ENTRANCE CONDITIONS CONTINUED



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TWEED RIVER ENTRANCE CONDITIONS CONTINUED



**TWEED RIVER ENTRANCE SAND BYPASSING PROJECT
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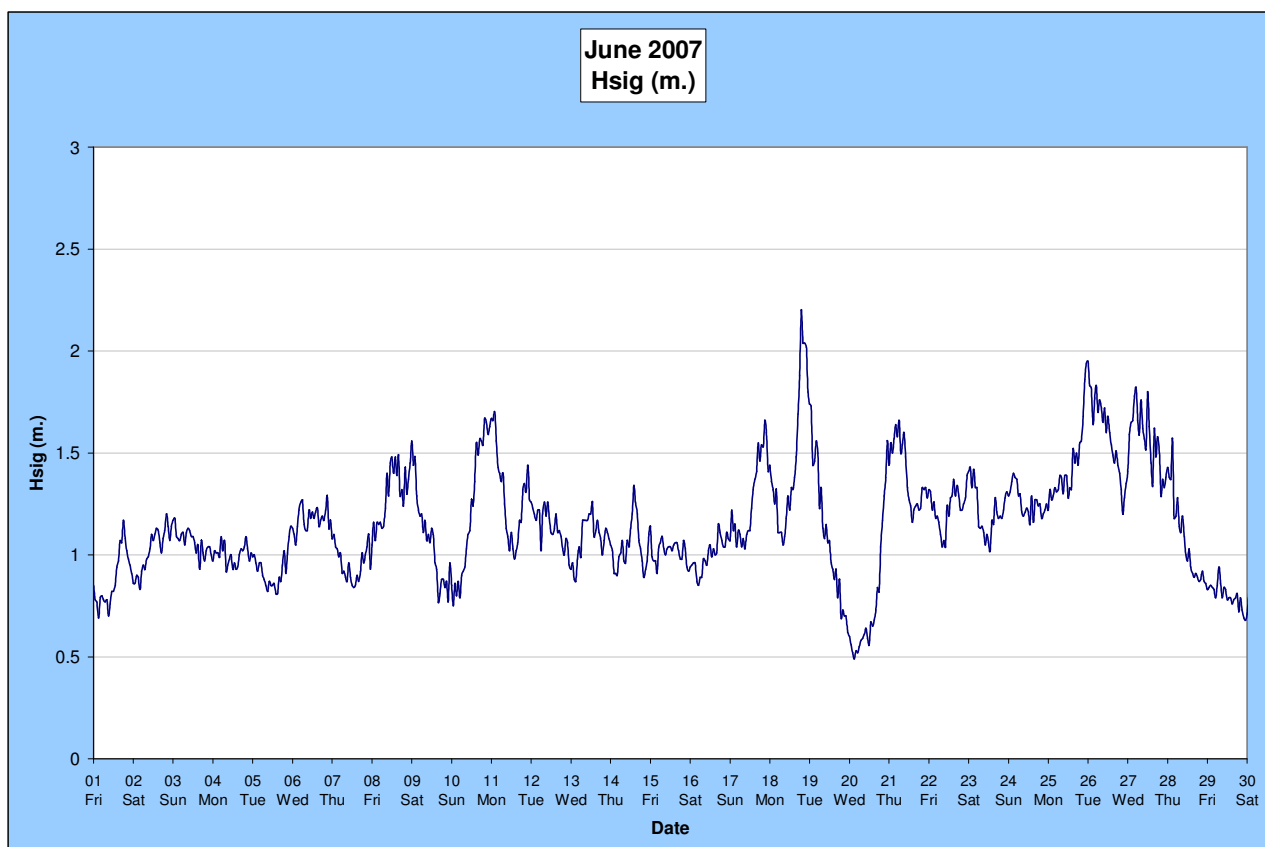
5. SURF SUMMARY

Waves of between 0.5 – 1.5 m from the ESE dominated surf conditions on the Southern Gold Coast in June 2007. Winds varied over the month where the most predominant wind conditions were SW and NW at 10-30 Knots.

Readings from the Tweed Waverider Buoy showed a minimum significant wave height of 0.49m on 20 June and a maximum significant wave height of 2.2m on 18 June. There were 19 recorded days when waves dropped below 1.0m and 1 day when waves were above 2.0m.

Surf quality in June was moderate, with reports of calm surf conditions occurring along the month.

Source: Tweed and Brisbane Waverider Buoy, RealSurf, Swellnet, Burleighcam, Coastalwatch, 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 EVENTS

Events in June 2007

30 June – 4 July - Billabong Occy's Grom Comp (Duranbah Beach)

Upcoming events in July 2007

30 June – 4 July - Billabong Occy's Grom Comp (Duranbah Beach)

14-15 July – Billabong Winter Classic (Duranbah Beach)

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 2007 were made by volunteers Mr Brian Mason and Mr Robert Ford on behalf of the TRESBP.

Date	Duranbah	Frog's Beach / Snapper Rocks	Kirra Point
1 June Mid Morning	1.5 – 2m ENE swell, plunging waves. 52 surfers present.	25 surfers present. No longshore transport occurring. No offshore bar apparent.	1 – 1.5m waves. 1 surfer present. No longshore transport occurring. Offshore bar present. Small scarp at the north from Kirra Point Groyne.
15 June Mid Morning	1.5 – 2m E swell, plunging waves. 75 surfers present.	22 surfers present. No longshore transport occurring. No offshore bar apparent.	Flat to <1m spilling waves. 0 surfers present. No longshore transport occurring. Offshore bar present.
22 June Mid Morning	1 – 1.5m ENE swell. 56 surfers present.	16 surfers present. Average northward longshore transport occurring. No offshore bar apparent.	<1m plunging and spilling waves. 1 surfer present. No longshore transport occurring. Low tide. No breaks on the outer bar. Some recession of the beach line since last observations at Kirra.
29 June Mid Morning	ENE swell. 43 surfers present.	3 surfers present. Large northward longshore transport occurring.	<1m waves. 3 surfers present. Longshore transport occurring. Offshore bar present. Unpleasant beach conditions.

SURF SUMMARY CONTINUED

PHOTOGRAPHS OF SURF CONDITIONS



Duranbah, 27 June 2007



Coolangatta, 27 June 2007

Source: SwellNet



30 June 2007, Billabong Occy's Grom Comp, Duranbah Beach

Source: Surfing Australia

6. MEDIA COVERAGE AND COMMUNITY FEEDBACK

MEDIA COVERAGE

20 June 2007, Daily News, "Fingal feels pressure of abuse"

"Ms Williams, a descendant of the Bundjalung people, lives on Letitia Road and says the local environment is at threat because of sandpumping and the continuous onslaught of 4WD owners using the land as their personal playground."

22 June 2007, Gold Coast Bulletin, "Tide turns Kirra from desert to deep blue sea"

"A high tide of more than 2m on Monday night left the beaches from North Kirra through to Greenmount covered with lagoons."

25 June 2007, Gold Coast Bulletin, "Big waves barrel in"

"They maybe small but they still like their waves big... The swell peaked at more than 1m at the points from Burleigh Heads through to Snapper Rocks. Pauly Posadas and Olivia Wheeler were among the horde of surfers at Duranbah keen to catch one of the bigger waves."

30 June 2007, Surfing Australia, "Billabong Occy's Grom Comp"

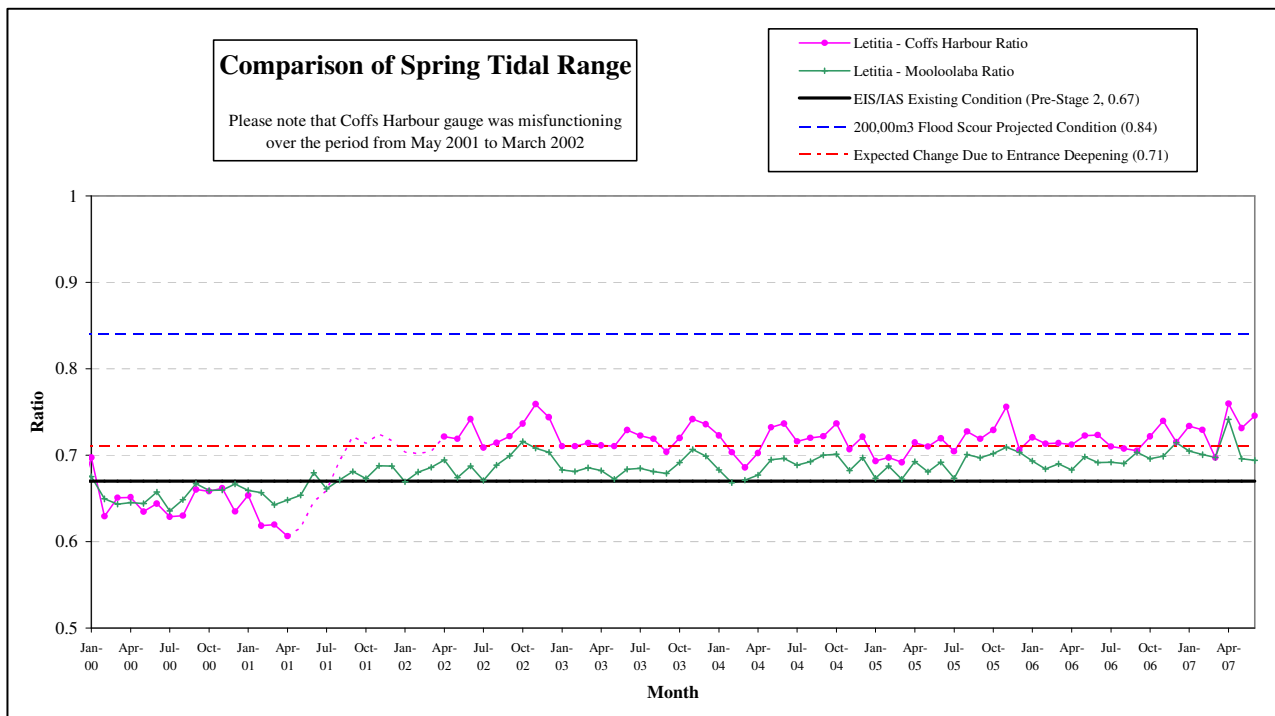
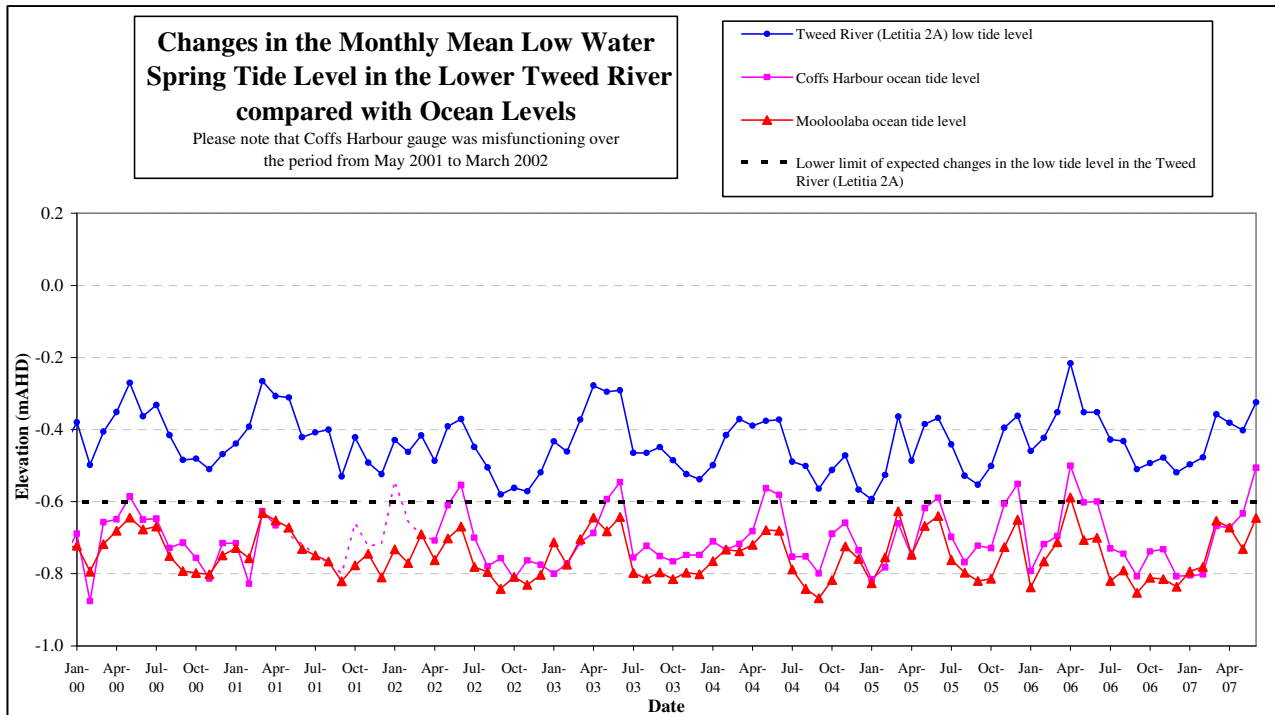
"A clean 1- 1.5m swell and brisk offshore winds welcomed competitors on day one of the five day event with the blue ribbon 16/U boy's and girl's divisions commencing their opening rounds."

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7. TWEED RIVER LOWER ESTUARY TIDAL CONDITIONS

The Mean Low Water Spring (MLWS) tide level in the lower Tweed River increased to -0.324 m AHD in June 2007.

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

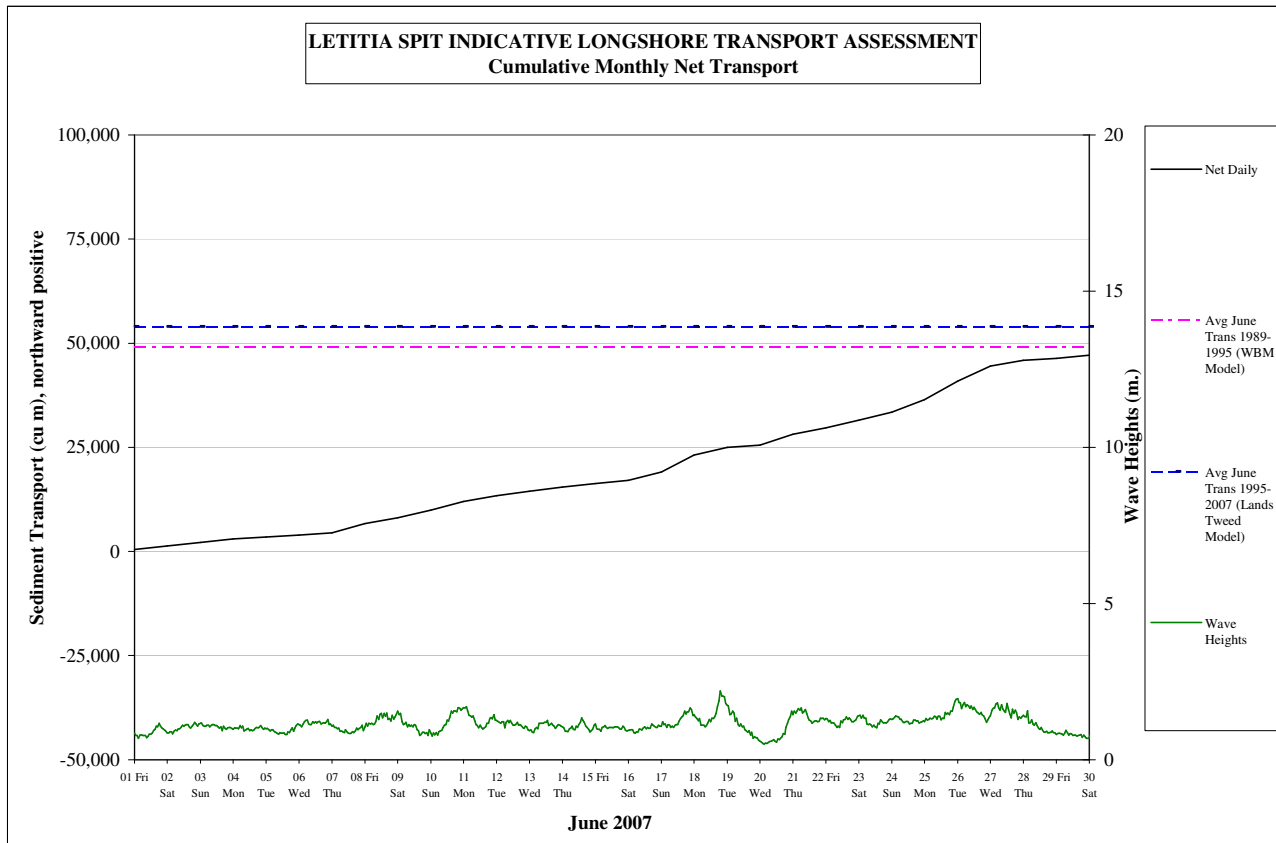


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8. INDICATIVE LONGSHORE SAND TRANSPORT

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.

It is estimated that during June 2007, 47,000m³ of sand was moved north towards the Tweed River entrance by natural processes. This is less than the modelled average sand transport quantity for the month of June.



9. ARGUS COASTAL IMAGING SYSTEM

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

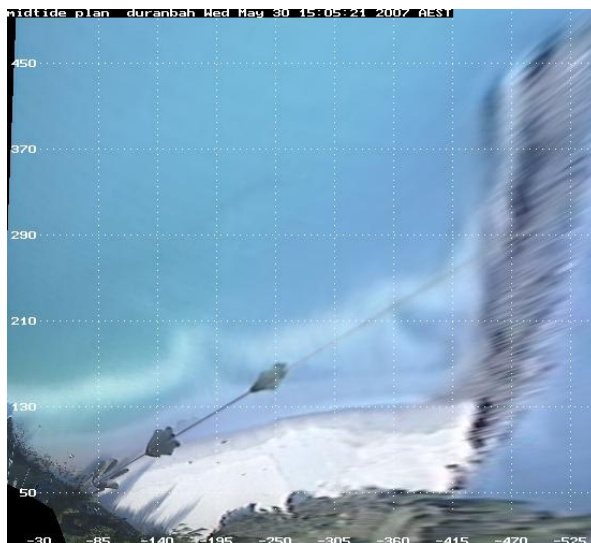
<http://www.wrl.unsw.edu.au/coastalimaging/public/tweed/index.html>

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

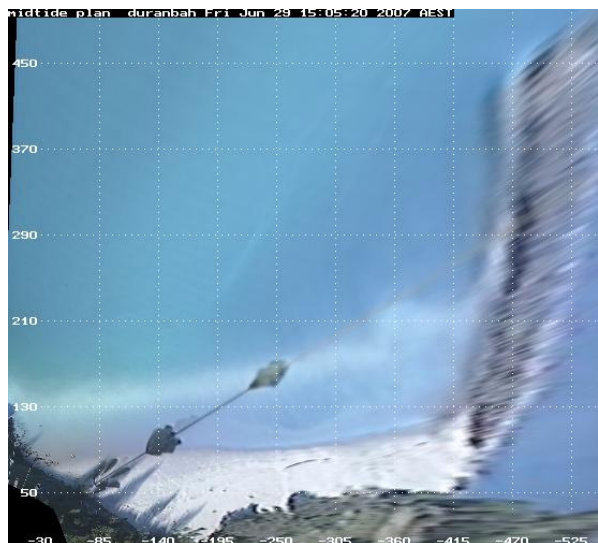
Merged and rectified images taken at mid tide for each of the locations are shown below. Refer to Appendix A for beach width and shoreline analysis for each of the beaches.

DURANBAH BEACH

Note: Sand was pumped to Duranbah beach from 2-28 May and 4-5 June 2007

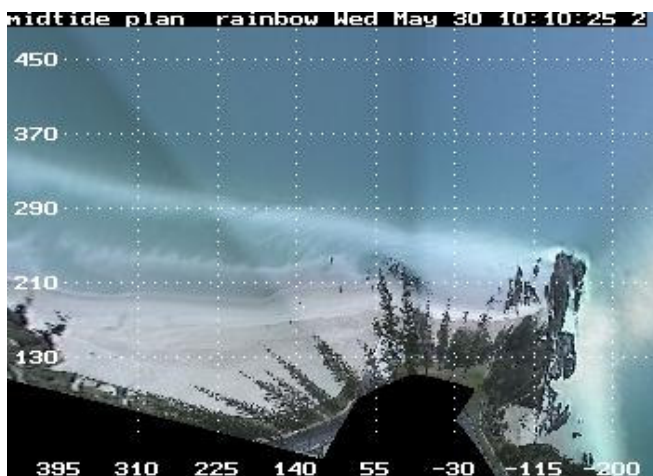


30 May 2007

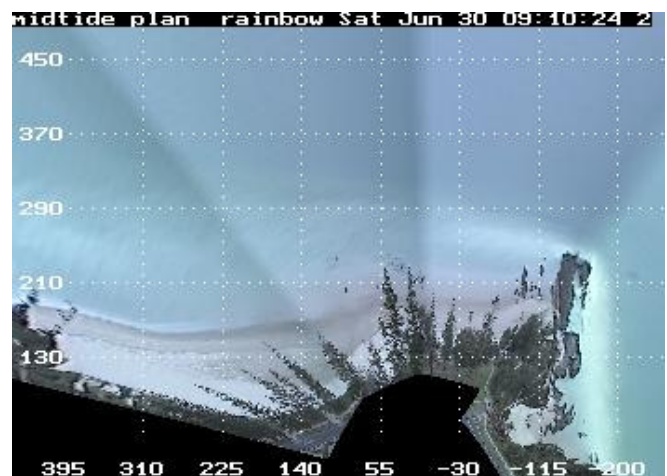


29 June 2007

RAINBOW BAY



30 May 2007

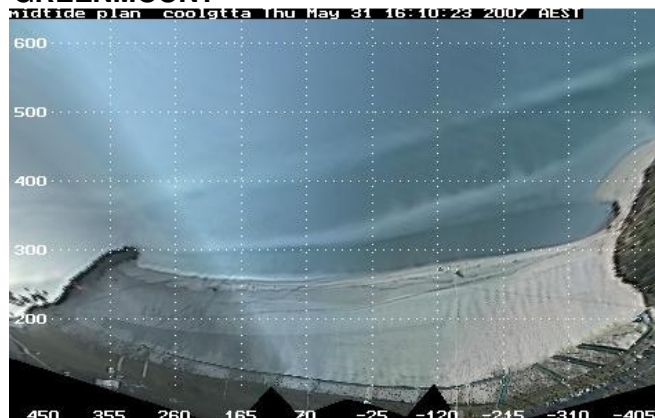


30 June 2007

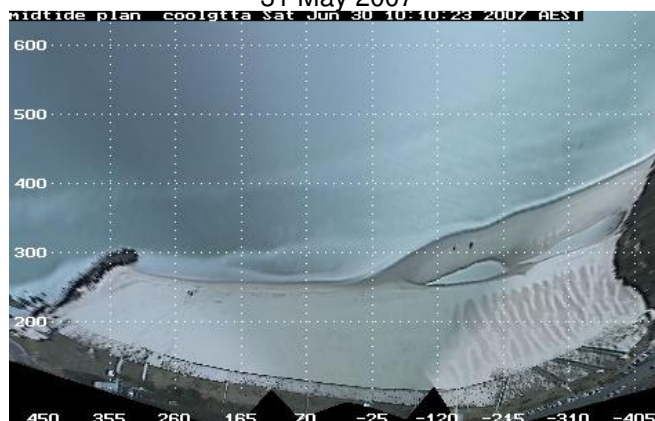
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ARGUS COASTAL IMAGING SYSTEM CONTINUED

COOLANGATTA - GREENMOUNT

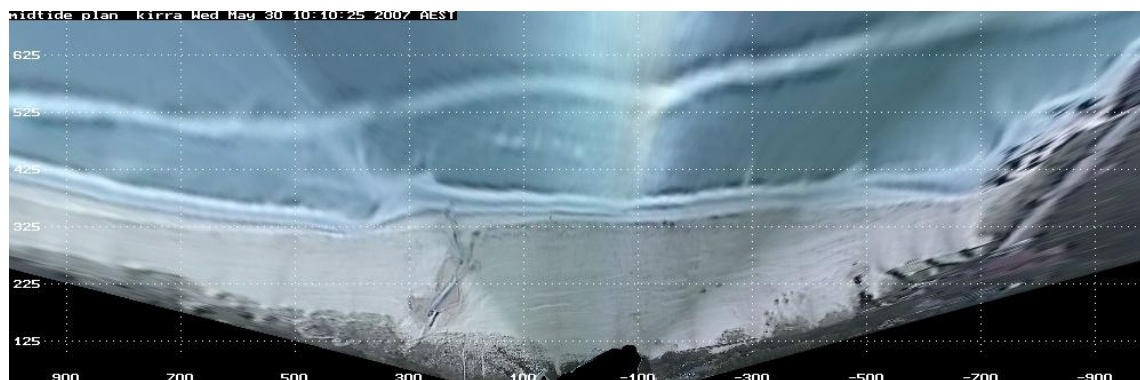


31 May 2007



30 June 2007

NORTH KIRRA - KIRRA



30 May 2007



30 June 2007

10. CONTACT DETAILS

This report was completed by Becky Wong.

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 Becky at any of the addresses below:

Becky Wong

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