

Tweed River Entrance Sand Bypassing Project

Letitia Spit to Kirra



Monthly Environmental Monitoring Summary

AUGUST 2007

Department of Lands 




**Queensland
Government**
Environmental
Protection Agency

**TWEED RIVER ENTRANCE SAND BYPASSING PROJECT
LETITIA SPIT TO KIRRA
MONTHLY ENVIRONMENTAL MONITORING SUMMARY AUGUST 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.

- The number of vessels that passed through the entrance in August was higher than on average.
- Surf quality in August was generally average, with reports of excellent surf conditions at the end of the month with the ocean storm occurring from 20th to 27th of August.
- The amount of sand moving north towards the Tweed River Entrance was more than the August 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.surfgaustalia.com.au
- www.swellnet.com.au
- www.tracksmag.com



3. PUMPING AND DREDGING ACTIVITIES

Sand Delivery for AUGUST 2007

	PUMPED	DREDGED	AUGUST 2007 TOTAL DELIVERY
Location	Snapper Rocks East		
Amount (m ³)	83,698	0	83,698

Total Sand Delivery This Year (January to August 2007)

	PUMPED	DREDGED	2007 TOTAL DELIVERY
Amount (m ³)	431,180	0	431,180

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

	PUMPED	DREDGED	TOTAL DELIVERY STAGE 2
Amount (m ³)	4,289,021	1,862,793	6,151,814

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4. TWEED RIVER ENTRANCE CONDITIONS

VOLUNTEER VIDEO MONITORING LOG

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

Date	Observations
3 August Late Morning	Fine weather. Fair crossing conditions. No break outside the entrance.
10 August Afternoon	Fine weather. Calm crossing conditions.
24 August Morning	Storm conditions. Dangerous crossing conditions.
31 August Morning	Cloudy. Calm crossing conditions. No break outside the entrance.

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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 August 2007 are presented below.

The navigation ratings from 1–5 are as follows:

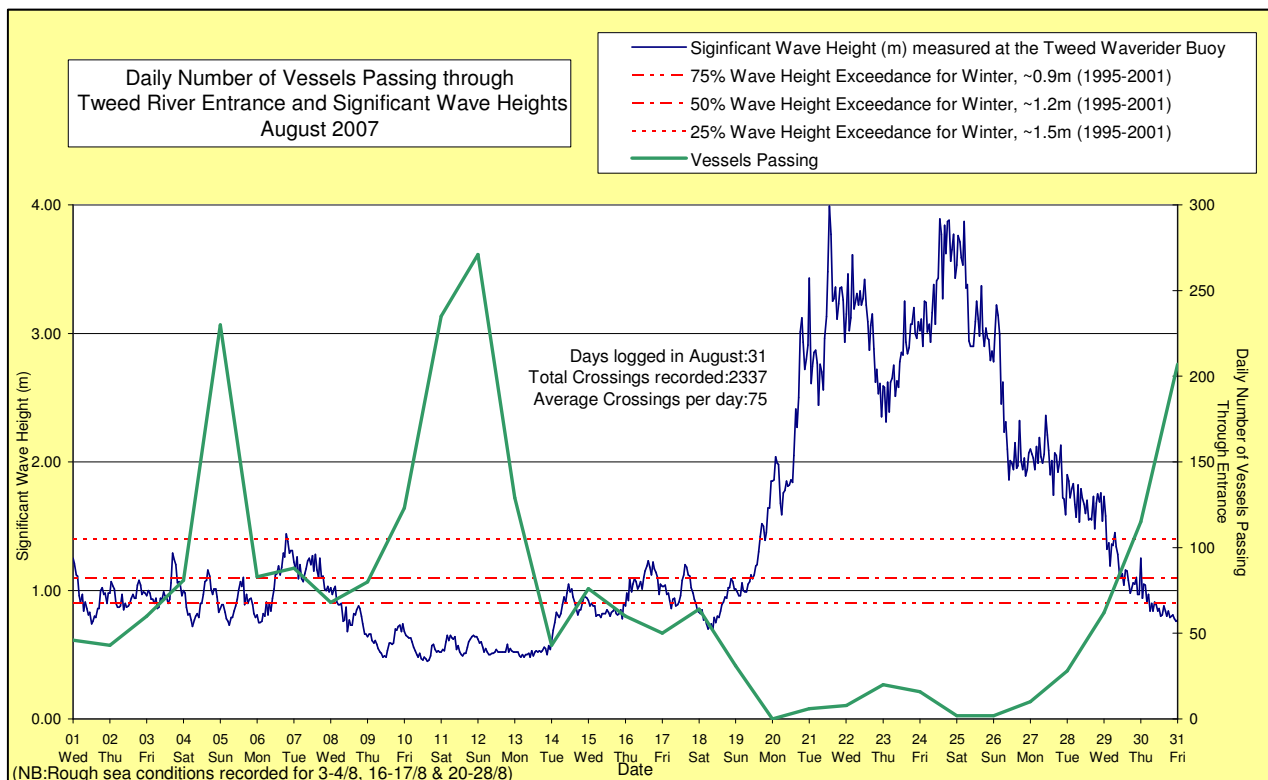
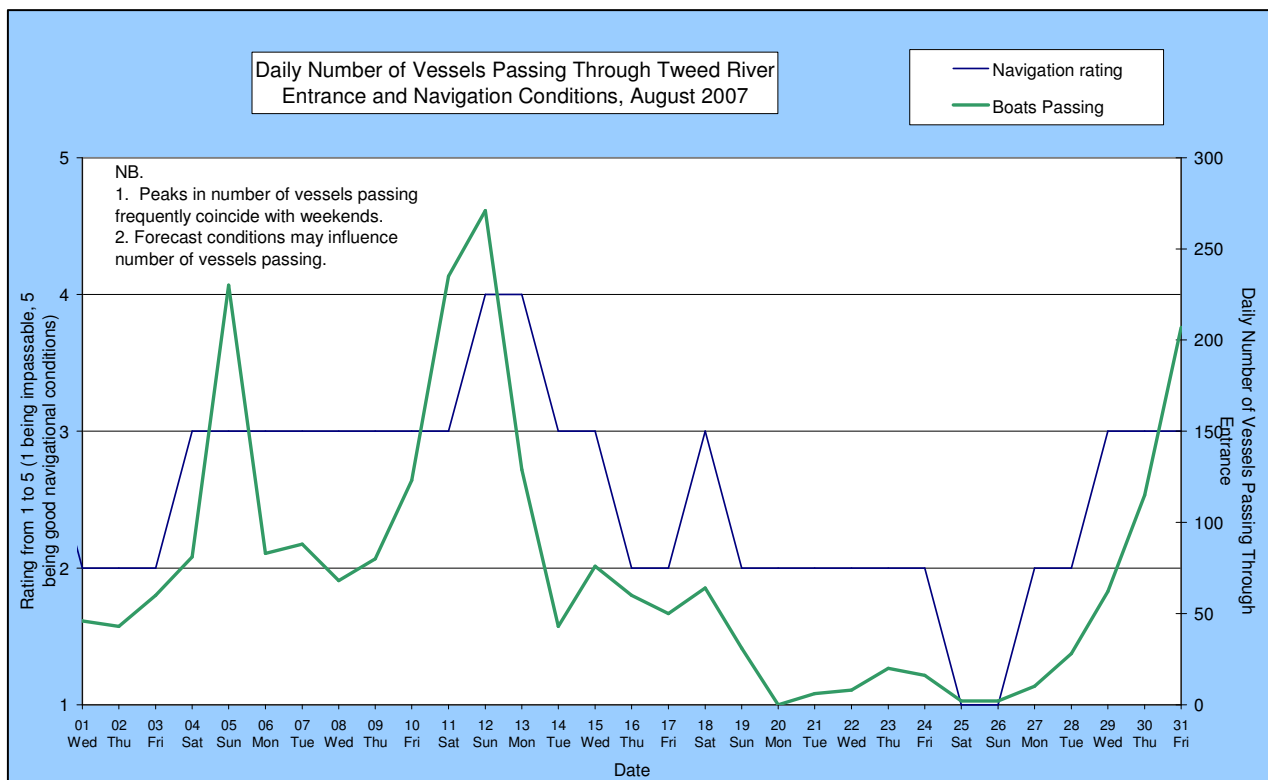
- 1 – Impassable 2 – Difficulty encountered 3 – Some difficulty encountered
4 – Relatively good crossing 5 – Good conditions

☐ – Weekends and public holidays

Date	Entrance Conditions	Navigation Rating Impassable-----Good					Number of Boats
		1	2	3	4	5	
1	Moderate						46
2	Moderate						43
3	Rough						60
4	Moderate/ Rough						81
5	Moderate						230
6	Moderate						83
7	Moderate						88
8	Moderate						68
9	Moderate						80
10	Moderate						123
11	Moderate						235
12	Slight						271
13	Slight						129
14	Moderate						43
15	Moderate						76
16	Rough						60
17	Rough						50
18	Moderate						64
19	Moderate						31
20	Rough						0
21	Rough						6
22	Rough						8
23	Rough						20
24	Rough						16
25	Rough						2
26	Rough						2
27	Rough						10
28	Rough						28
29	Moderate						62
30	Moderate						115
31	Moderate						207

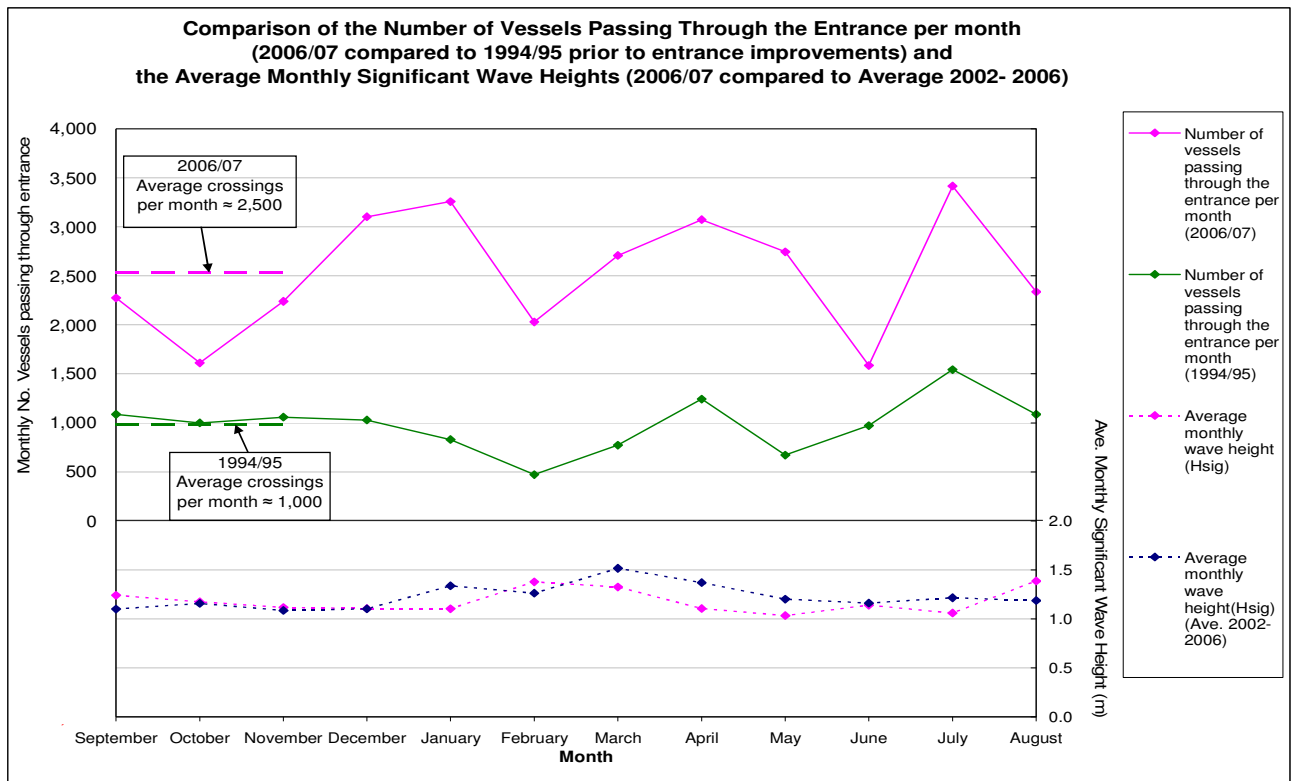
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TWEED RIVER ENTRANCE CONDITIONS CONTINUED



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TWEED RIVER ENTRANCE CONDITIONS CONTINUED



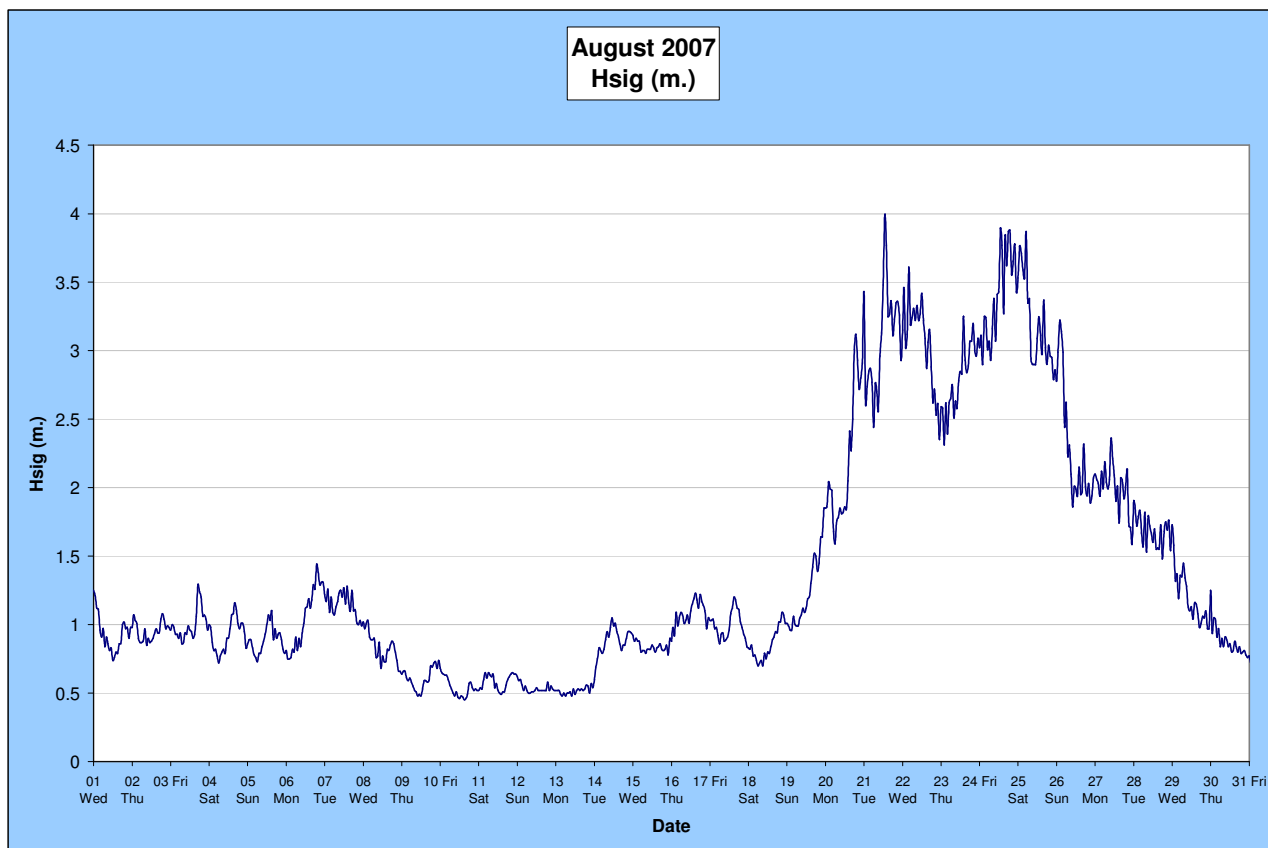
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5. SURF SUMMARY

Over the first three weeks of August calm waves of between 0.5 – 1.5m from the SE were predominant on the Southern Gold Coast. After 20th August, swells rose significantly to between 1.3 – 4m. Winds varied over the month with the most predominant wind conditions being SE and SW at 10-50 Knots.

Readings from the Tweed Waverider Buoy showed a minimum significant wave height of 0.45m on 10 August and a maximum significant wave height of 4m on 21 August. There were 22 recorded days when waves dropped below 1.0m and 8 days when waves were above 2.0m.

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 August 2007

25 August – Malibu Teams Challenge (Kirra Point)

Upcoming events in September 2007

22-23 September – Billabong Girls Queensland Surf Series

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 August 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
3 August Late Morning	1 – 1.5m NE swell, plunging waves. 14 surfers present. Unpleasant conditions with strong wind.	3 surfers present. Small longshore transport occurring. No offshore bar apparent.	1 – 1.5m spilling waves. 3 surfers present. No longshore transport occurring.
10 August Afternoon	1 – 1.5m NE swell, plunging and spilling waves. 6 surfers present. Flat surfing conditions.	20 surfers present. No longshore transport occurring. No offshore bar apparent.	<1m spilling waves. 1 surfer present. No longshore transport occurring. Offshore bar present. [Gold Coast City] Council [undertaking dune works along Central Kirra using sand from the beach face drawing back beach alignment.]
24 August Morning	>>2.5m NE swell. 0 surfers present. Erosion on Duranbah beach.	12 surfers present. No longshore transport occurring. No offshore bar apparent.	1.5 – 2m and >>2m plunging waves. 8 surfers present. No longshore transport occurring. Beaches are holding up well.
31 August Morning	1 – 1.5m ENE spilling swell. 37 surfers present. 2m scarp[ing] [contained within] Duranbah beach [sand store. No dune erosion]	15 surfers present. No longshore transport occurring. No offshore bar apparent.	1 – 1.5m spilling waves. 3 surfers present. No longshore transport occurring. No offshore bar apparent. Seems the offshore bar has come [on]shore south from the Miles St groyne to Greenmount. There is an area of deep water just offshore 4 – 5m in width from north [of] Mile St groyne to the stormwater outlet.

NB – [] Bracketed comments added for clarity.

SURF SUMMARY CONTINUED

PHOTOGRAPHS OF SURF CONDITIONS



Kirra, 24 August 2007

Source: Courier Mail



Malibu Teams Challenge, Kirra, 25 August 2007

Source: Surfing Australia



Snapper Rock, 22 August 2007



Snapper Rock, 29 August 2007

Source: SwellNet



Coolangatta, 22 August 2007



Rainbow Bay, 27 August 2007

Source: SwellNet

6. MEDIA COVERAGE AND COMMUNITY FEEDBACK

MEDIA COVERAGE

2 August, Gold Coast Bulletin, "Kirra's shore thing" (also appears on 17 August, Gold Coast Bulletin, "A sea change, for sure")

"The work will include reducing the width of the beach while retaining sand to protect against storm erosion, increasing turfed parklands to cater for population growth, extra parklands at Kirra and sand pumping off North Kirra to improve surfing conditions."

16 August, Tweed Border Mail, "Pumping options eyed to aid Kirra"

"Gold Coast City Council are pushing the Queensland government to review sand dredging at Kirra to improve the break's once-legendary waves."

16 August, Tweed Border Mail, "Saving surf break could take years"

"Surfers have welcomed news that Gold Coast City Council is pressing the Queensland government to review sand pumping to Kirra beach, but believe it would take years for the beach to regain its former glory."

22 August, Daily News, "Gun surfers making the most of wacky weather"

"While the wild weather might have forced most of the Tweed indoors yesterday, the surfing fraternity made the most of the large swell, with some of the sport's biggest names taking to the waves at Snapper Rocks."

23 August, Daily News, "Americans amazed by ferocious surf"

"Although it was a "blast from the past" to actually see some rideable surf at Kirra, the waves were nothing like Kirra's old time "kegs"."

24 August, Gold Coast Bulletin, "It's a big-surf surfeit"

"The winds are going to back off a bit and turn southerly and that's better for the Queensland points between Snapper and Kirra"

25 August, Daily News, "Mick cuts it at the groyne"

"Mere mortal surfers could only watch in awe... The swell will be large, but by tomorrow morning lighter southerly winds could create good conditions for wave hounds."

26 August, Surfing Australia, "Malibu Teams Challenge"

"It was great to be back surfing Kirra... The waves have been pumping all week on the Superbank, so it was great to be able to combine both of them today"

27 August, Gold Coast Bulletin, "Doctors operate on surf victim"

"A 21 year old bodyboarder received serious spinal injuries when he was dumped in monster surf at Kirra on Saturday."

30 August, Daily News, "D-bah falling apart"

"The whopper seas have gouged and pushed the Duranbah Beach shoreline inland, up to five metres or more in places."

31 August, Courier Mail, "Delighted with what's left"

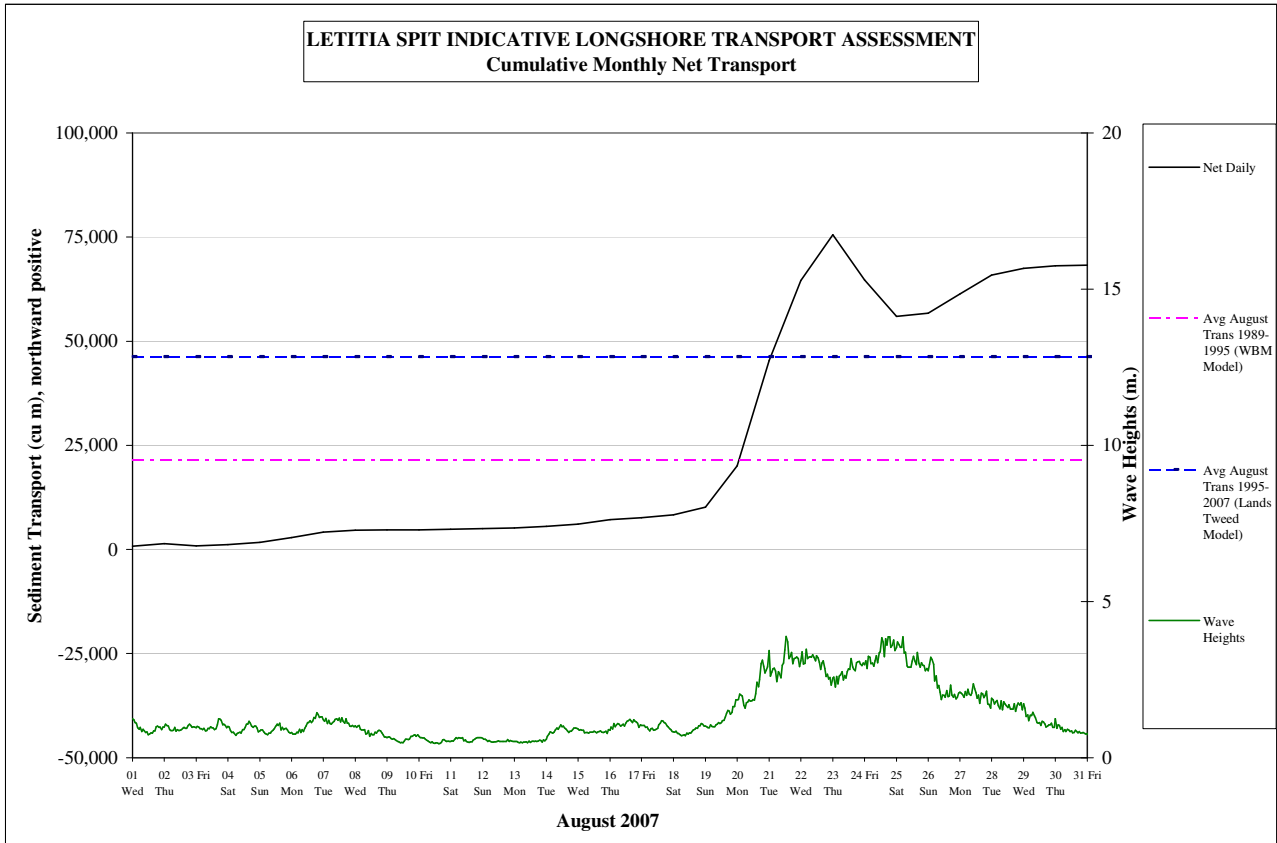
"The Gold Coast's Superbank from Snapper to Kirra turned on spectacular tubes for a week, with the end section from Coolangatta to Big Groyne showing the best form."

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7. 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 August 2007, 68,000m³ of sand was moved north towards the Tweed River entrance by natural processes. This is more than the average modelled sand transport quantity for the month of August.



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8. ARGUS COASTAL IMAGING SYSTEM

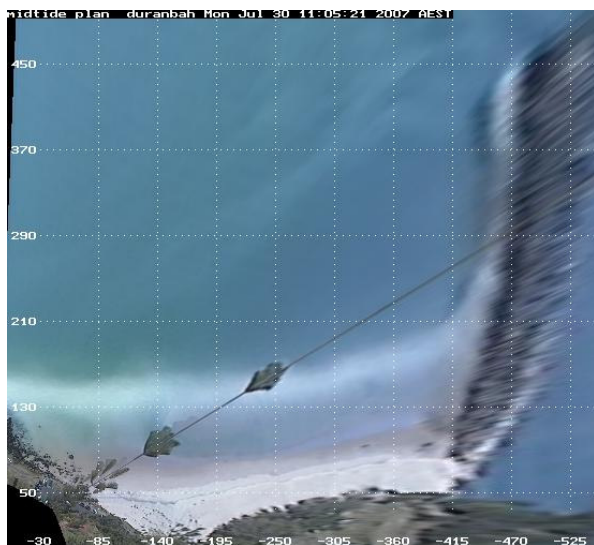
The University of New South Wales is monitoring Letitia Spit to North Kirra for the project using an ARGUS coastal imaging system. Images are available on the internet at the following address:

<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

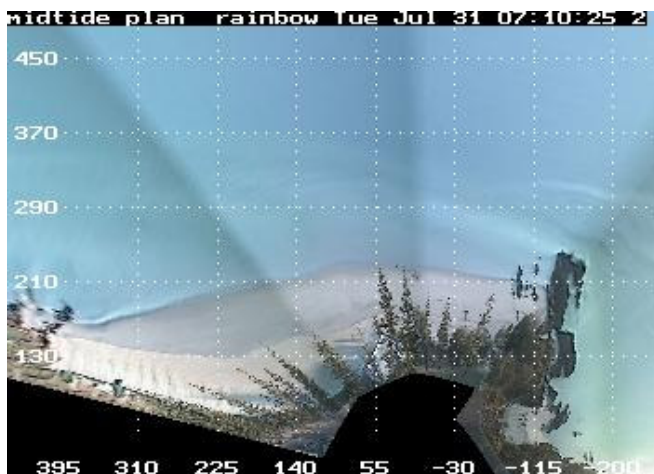


30 July 2007

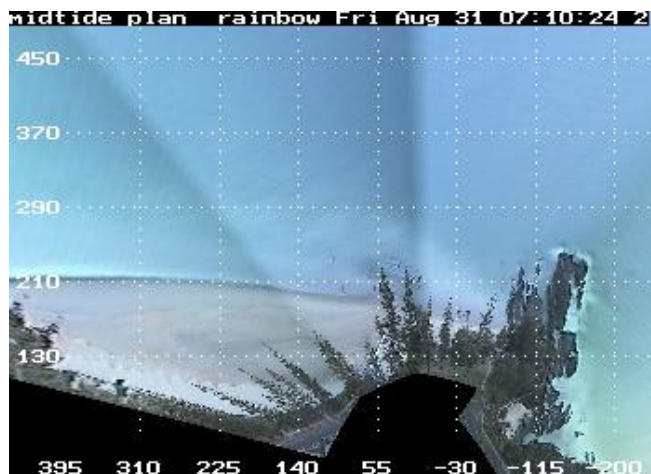


31 August 2007

RAINBOW BAY



31 July 2007

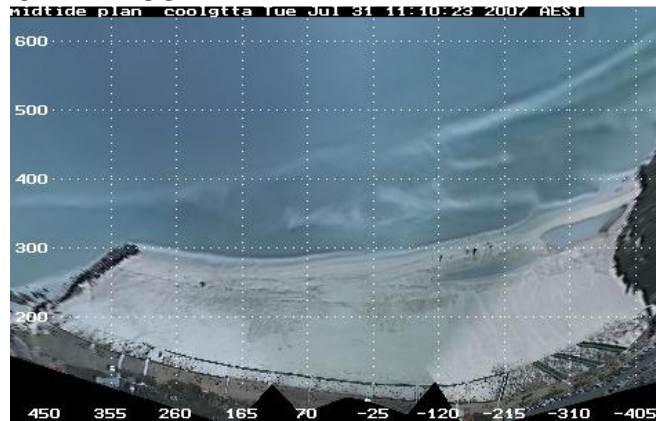


31 August 2007

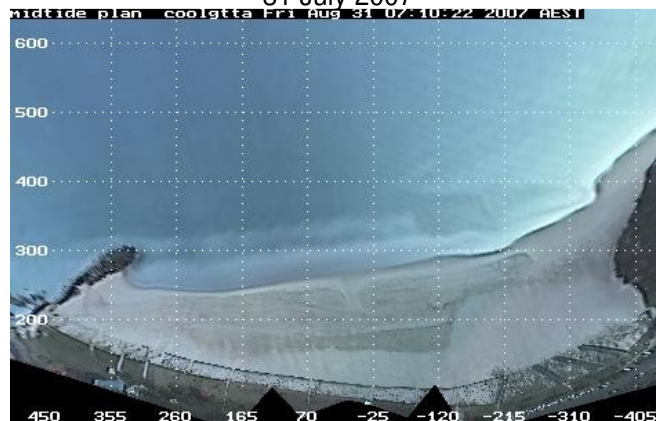
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ARGUS COASTAL IMAGING SYSTEM CONTINUED

COOLANGATTA - GREENMOUNT

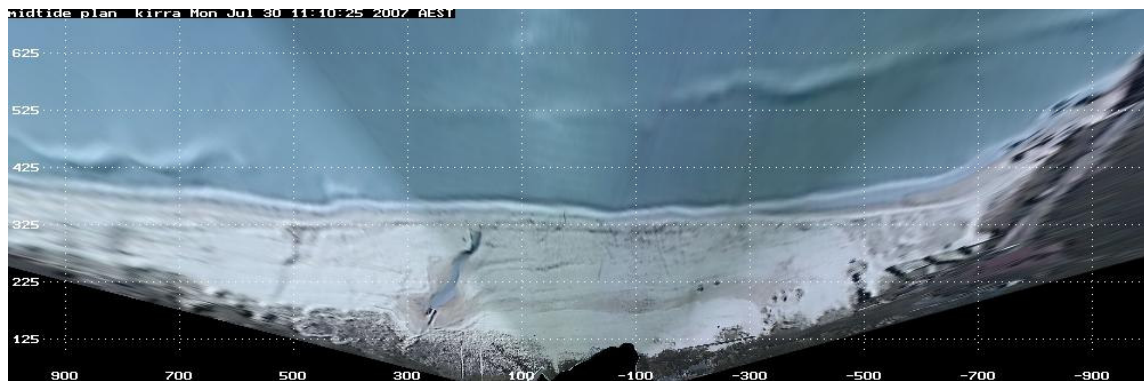


31 July 2007



31 August 2007

NORTH KIRRA - KIRRA



30 July 2007



30 August 2007

9. 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:

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