

Tweed River Entrance Sand Bypassing Project

Letitia Spit to Kirra



Monthly Environmental Monitoring Summary

MARCH 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 March 2008:

- The number of vessels that passed through the entrance was higher than the average number of crossings for the month of March.
- Surf quality was good to excellent.
- The amount of sand moving north towards the Tweed River Entrance by natural processes was less than the March average.
- Pumping of sand onto Duranbah Beach commenced on 11th March. About 21,000 m³ of sand was delivered to Duranbah up to the end of March. Delivery will continue in April.

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

	PUMPED		DREDGED	MARCH 2008 TOTAL DELIVERY
Location	Snapper Rocks East	Duranbah		
Amount (m ³)	29,927	21,048	0	50,975

Total Sand Delivery This Year (January to March 2008)

	PUMPED	DREDGED	2008 TOTAL DELIVERY
Amount (m ³)	149,166	0	149,166

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

	PUMPED	DREDGED	TOTAL DELIVERY STAGE 2
Amount (m ³)	4,569,254	*1,862,795	*6,432,049

* 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 March 2008 were recorded by volunteer Mr Brian Mason:

Date	Observations
7 March Late Morning	Fine weather. Calm crossing conditions. No breaks outside the walls.
14 March Morning	Good crossing conditions. No breaks at the entrance. Several boats returned and entered without problems.
28 March Morning	Overcast to rainy. Good crossing conditions.

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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 March 2008 are presented below.

The navigation ratings from 1–5 are as follows:

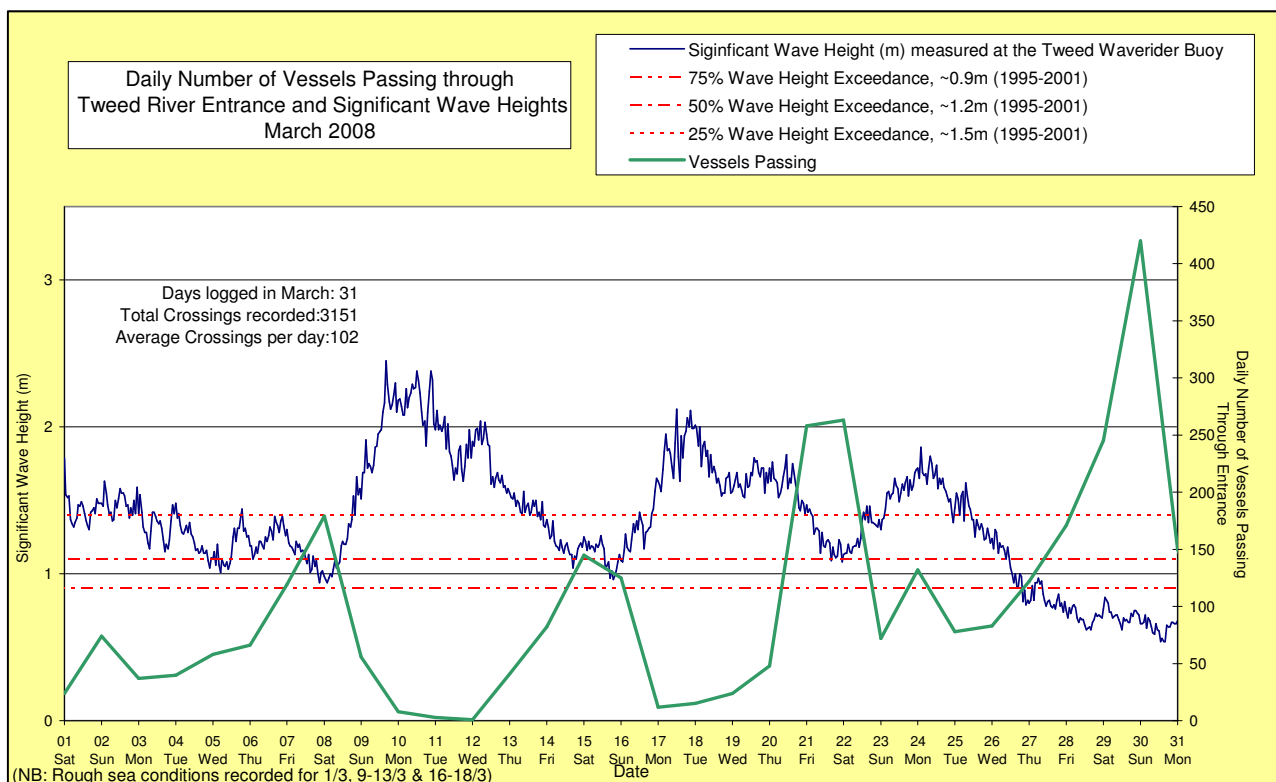
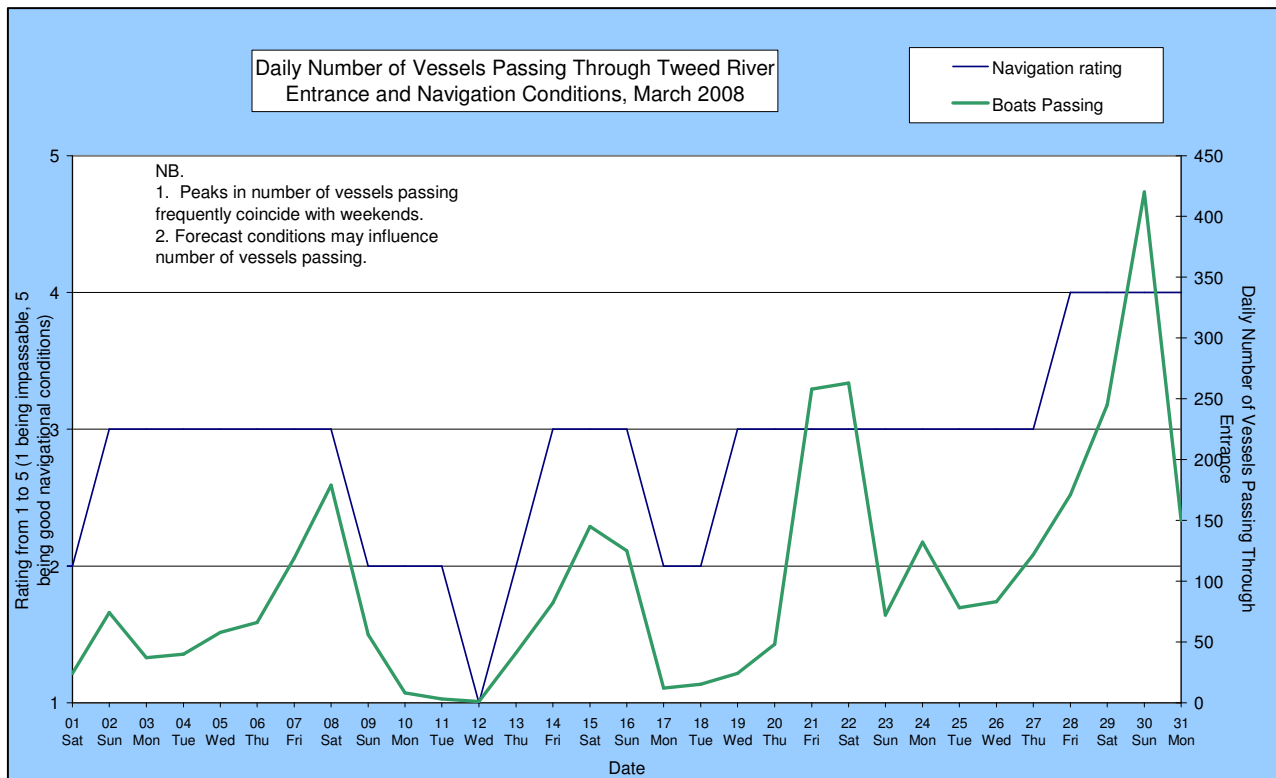
- 1 – Impassable 2 – Difficulty encountered 3 – Some difficulty encountered
4 – Relatively good crossing 5 – Good conditions

☐ – Weekends and public holidays

Date	Entrance Conditions	Navigation Rating Impassable-----Good					Number of Boats
		1	2	3	4	5	
1	Rough						24
2	Moderate						74
3	Moderate						37
4	Moderate						40
5	Moderate						58
6	Moderate						66
7	Moderate						119
8	Moderate						179
9	Rough						56
10	Rough						8
11	Rough						3
12	Rough						1
13	Rough						41
14	Moderate						82
15	Moderate						145
16	Rough						125
17	Rough						12
18	Rough						15
19	Moderate						24
20	Moderate						48
21	Moderate						258
22	Moderate						263
23	Moderate						72
24	Moderate						132
25	Moderate						78
26	Moderate						83
27	Moderate						122
28	Moderate						171
29	Moderate						245
30	Moderate						420
31	Moderate						150

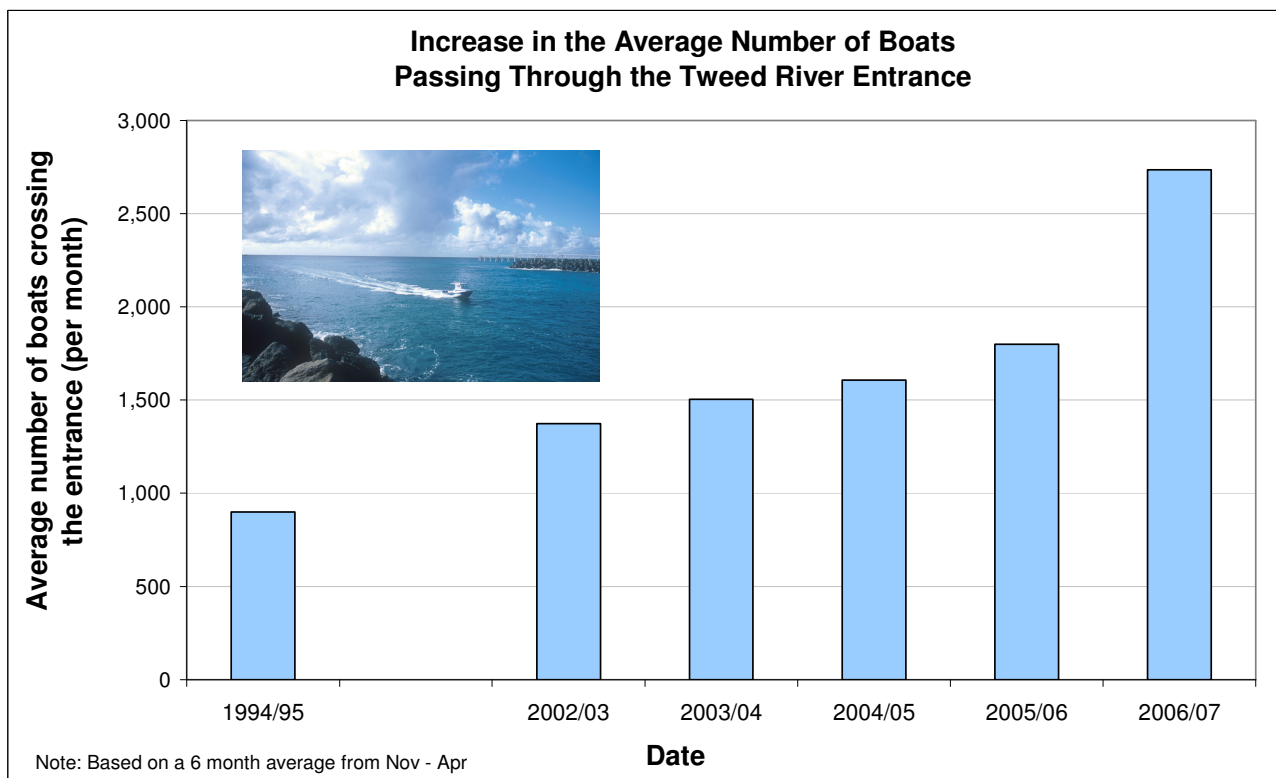
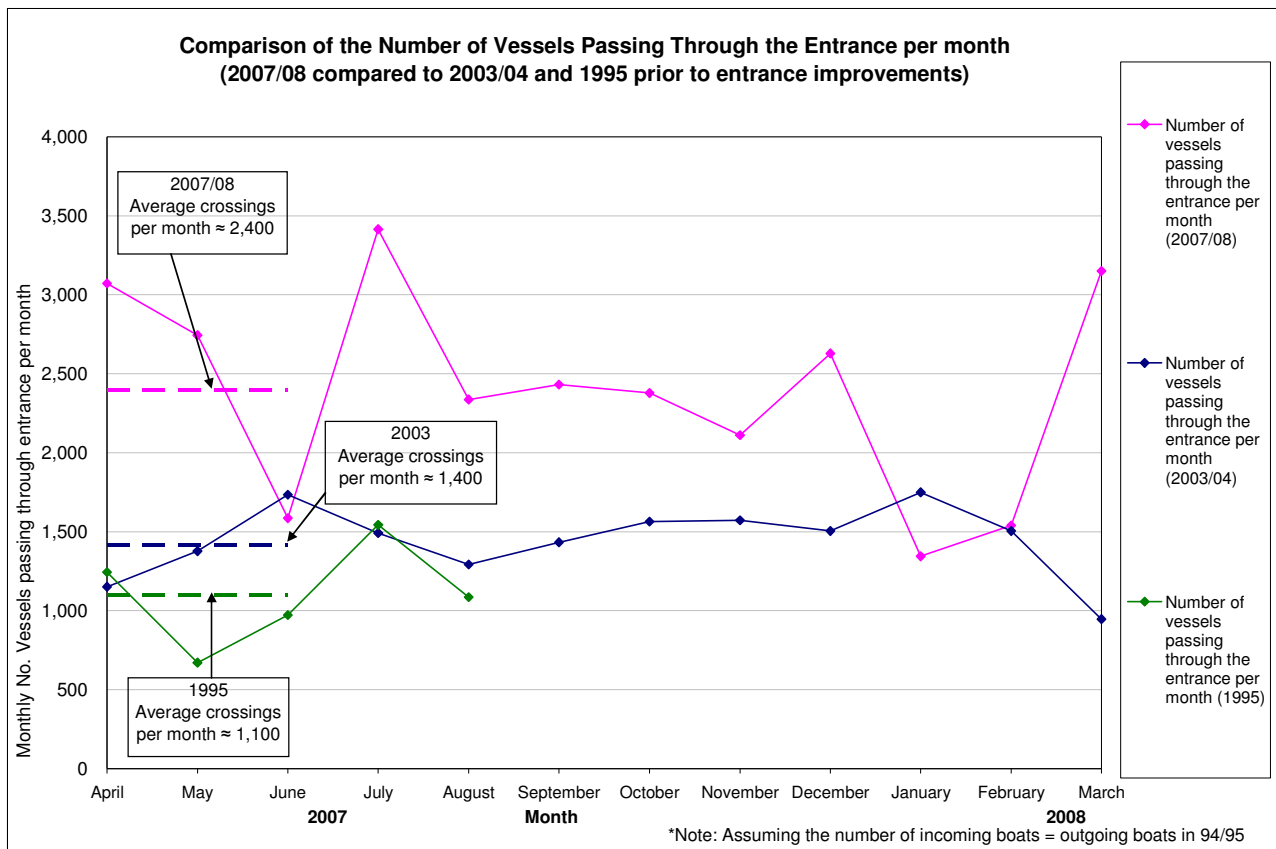
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TWEED RIVER ENTRANCE CONDITIONS CONTINUED



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TWEED RIVER ENTRANCE CONDITIONS CONTINUED



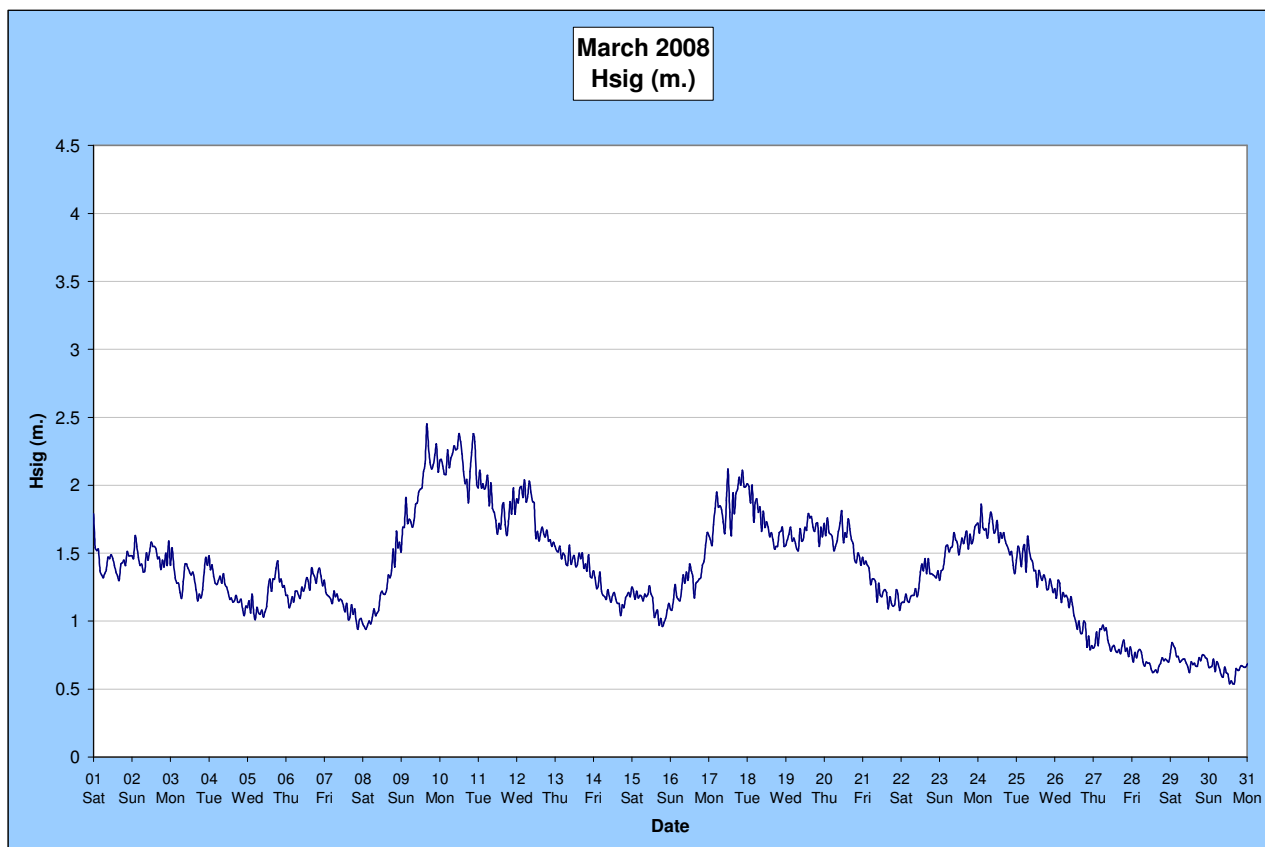
**TWEED RIVER ENTRANCE SAND BYPASSING PROJECT
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5. SURF SUMMARY

Waves of between 1.0 – 1.5 m (ie average conditions) from the E dominated surf conditions on the Southern Gold Coast in March 2008. Winds varied over the month with the predominant wind condition being SSW at 10-30 Knots.

Readings from the Tweed Waverider Buoy showed a minimum significant wave height of 0.54 m on 30 March and a maximum significant wave height of 2.45 m on 9 March. There were 9 recorded days when waves dropped below 1.0 m and 6 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 March 2008

- 22 February - 5 March – Quiksilver Pro (Duranbah Beach and Snapper Rocks)
- 22 February - 5 March – Roxy Women's Pro (Duranbah Beach and Snapper Rocks)
- 1 March – Quiksilver Pro Show Music Festival (Duranbah Beach)
- 7 - 9 March – Rip Curl Kirra Teams Challenge (Duranbah Beach)
- 29 - 30 March – Printpoint Queensland Masters Surfing Circuit – Event 1 (Duranbah Beach)

Upcoming events in April 2008

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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 March 2008 were made by volunteer Mr Brian Mason on behalf of the TRESBP.

Date	Duranbah	Frog's Beach / Snapper Rocks	Kirra Point
7 March Late Morning	1.5 – 2m ENE swell, plunging waves. 85 surfers present. Ideal surfing conditions. Exposed rocks on the beach keeping surfers away from the northern rock wall.	36 surfers present. Average northern longshore transport.	Flat to 1 – 1.5m spilling waves. 37 surfers present. School group with 22 children and 3 adults entered surf whilst these observations were underway, included in the main beach figures.
14 March Morning	1.5 – 2m NE swell. 102 surfers present. Sand pumping underway from outlet adjacent to the rock wall.	47 surfers present. Small longshore transport.	<1m to 1 – 1.5m spilling waves. 27 surfers present. School group 46 in number were being organised for a session. The role for Kirra beach is becoming more defined. Surf board riders not skilled enough for the tougher conditions elsewhere, family and school groups. The removal of the offshore bar has resulted in better wave profile along the beach.
28 March Morning	1.5 – 2m ENE swell, plunging waves. 52 surfers present.	5 surfers present.	1 – 1.5m plunging and spilling waves. 0 surfers present. Beach completely deserted due to weather conditions: wet and windy.

6. BEACH CONDITIONS

PHOTOGRAPHS OF BEACH CONDITIONS

DURANBAH



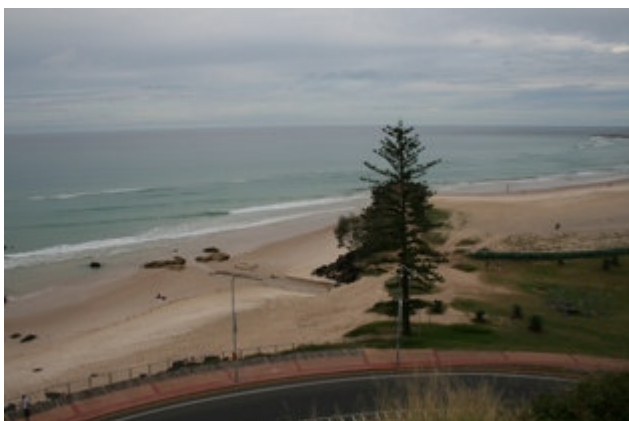
View from Pt Danger

COOLANGATTA



View from Kirra Hill

KIRRA



View from Kirra Hill



View from Kirra Hill

(Duranbah) Photos taken: 6 March 2008, approx 9am, high tide

(Coolangatta & Kirra) Photos taken: 27 March 2008, approx 4pm, mid tide

Source: NSW Department of Lands

7. MEDIA COVERAGE AND COMMUNITY FEEDBACK

MEDIA COVERAGE

March, 2008, Gold Coast Bulletin – Display Homes and land, “Surf, sand and sun are part of appeal”

“Excellent surf has placed Tweed Heads on the world map, with the appropriately named ‘superbank’ stretching from Snapper Rocks to Kirra Point arguably one of Australia’s best beach breaks.”

3 March, 2008, Gold Coast Bulletin, “Surfing heroes pull the crowd”

“Thousands of spectators descended on the iconic Snapper Rocks surf break to catch a glimpse of their surfing icons in action...”It was just one of those days where the elements just combined. There was sunshine. There were decent waves”, said Mr Wilson [Event co-ordinator Matt Wilson].”

10 March, 2008, Gold Coast Bulletin, “Boomers in luxury beach unit spree”

“Cashed-up baby boomers are flocking to Kirra and buying luxury beachfront apartments so they can spend their retirement surfing.”

17 March, 2008, Gold Coast Bulletin, “D-bah gets a boost”

“The popular surf beach, badly eroded by months of drenching rain and wild seas, will receive 30,000 cubic metre sand boost in the next few weeks in an effort to rebuild the damaged dunes.

20 March, 2008, Tweed Sun, “Beach gets a break”

“Heavy machinery has been used to replenish sand-starved Duranbah Beach for the second time this year. Snapper Rocks surfer Bruce Lee agreed the foreshore dune replenishment program was necessary, but he said January’s erosion had its ‘good side’. “It resulted in sandbank formations which allowed a return of Duranbah’s world famous A-framed peaks and hopefully this new work won’t affect the perfect beach break waves,” he said.”

20 March, 2008, ABC News, “Men rescued after boat overturns”

“Two men were rescued from the hull of an upturned boat on Tweed River shortly before 4:00pm AEST today.”

27 March, 2008, Tweed Daily News, “Triple-0 call alerts VMR to bar drama”

“A recent rock-fishing trip took a dramatic turn for Darren Barber, who came to the aid of two stranded boaties after their boat capsized on the Tweed bar... A VMR vessel was then sent to retrieve the stricken boat which had drifted more than a kilometre to sea within an hour, with rough conditions hampering salvage efforts.”

23 – 29 March, 2008, Tweed Weekly, “Duranbah beach to get more sand”

“Around 30,000 cubic metres of sand is now being pumped onto Duranbah Beach from three outlets along the beach... Snapper Rocks Surfriders Club member Bruce Lee said surfing conditions had been excellent, despite the erosion... The sand placement is expected to take four to five weeks to complete depending on how quickly nature brings sand to the pumping jetty, south of the river entrance.”

8. TWEED RIVER LOWER ESTUARY TIDAL CONDITIONS

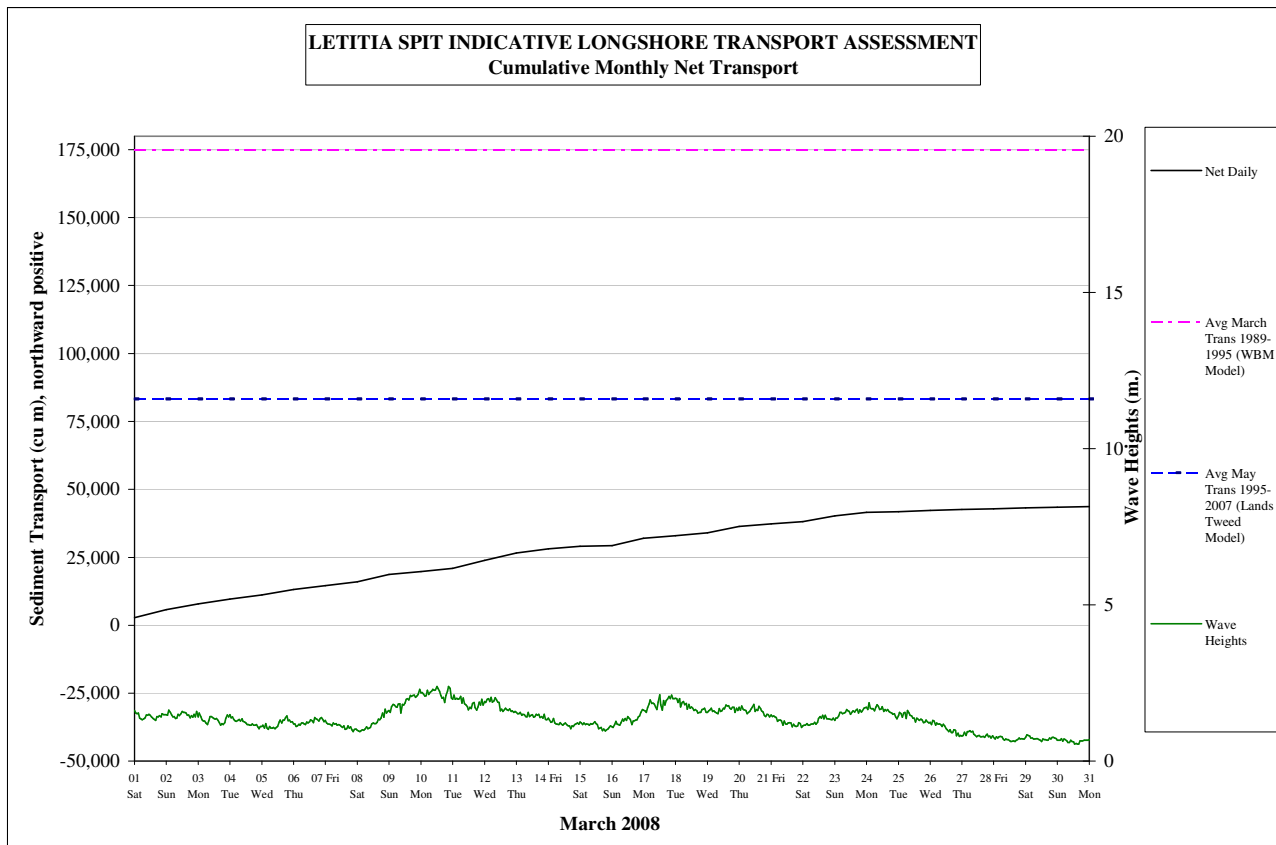
Tidal data for the month of March, 2008 has not yet been received for analysis. Tidal monitoring results for March, 2008 will be reported in next month's monitoring summary (April, 2008).

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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.

It is estimated that during March 2008, 44,000 m³ 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 March.



10. ARGUS COASTAL IMAGING SYSTEM

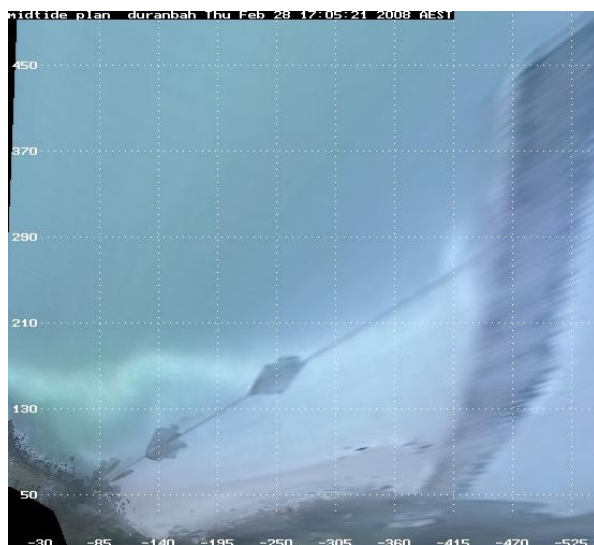
The University of New South Wales is monitoring Duranbah Beach to North Kirra Beach for the project using an ARGUS coastal imaging system. Images are available on the internet at the following address:

<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

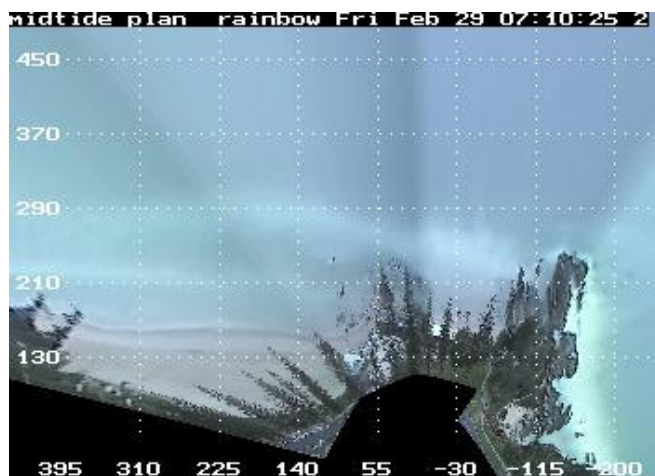


28 February 2008

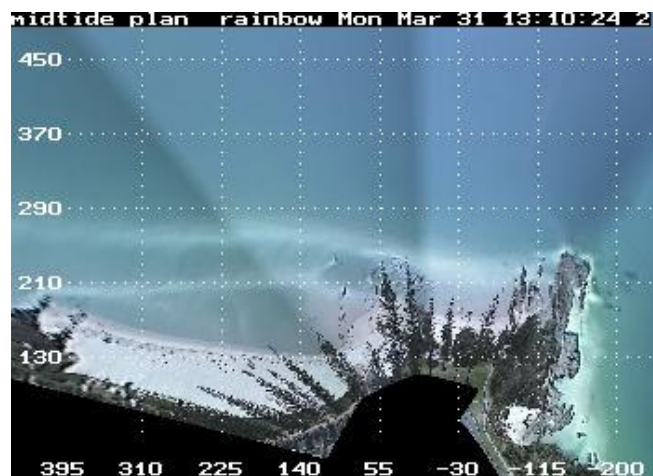


31 March 2008

RAINBOW BAY



29 February 2008

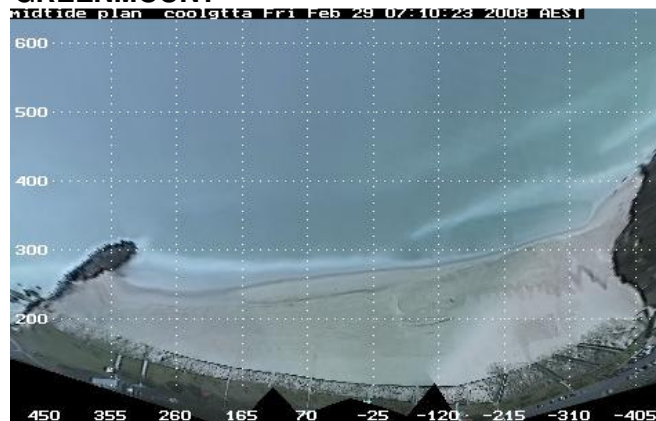


31 March 2008

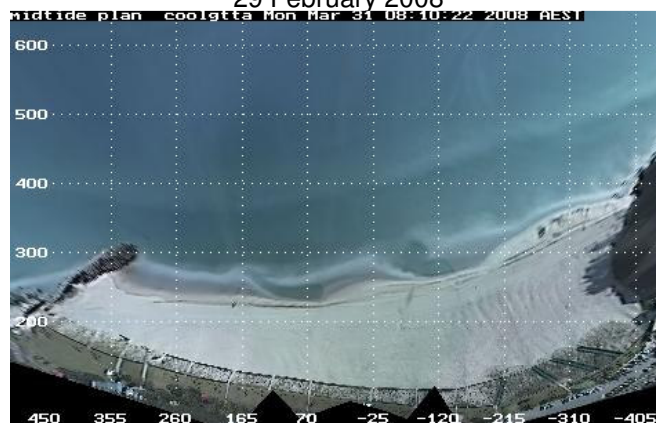
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ARGUS COASTAL IMAGING SYSTEM CONTINUED

COOLANGATTA - GREENMOUNT

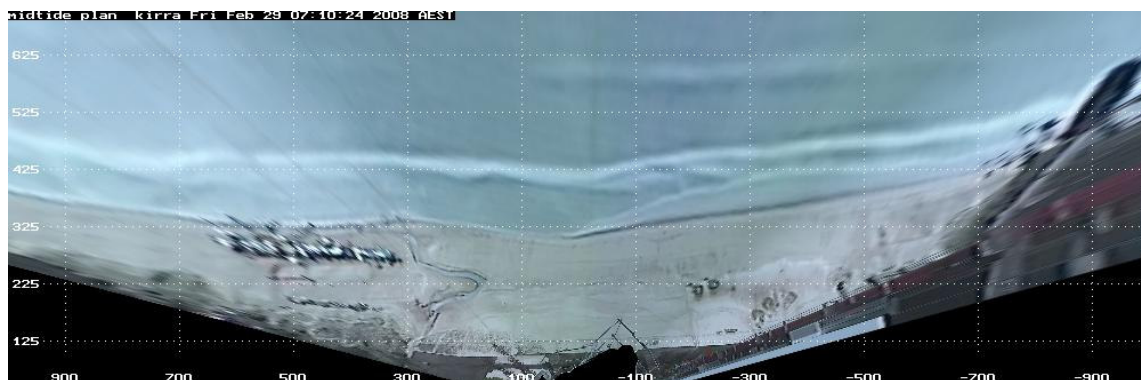


29 February 2008



31 March 2008

NORTH KIRRA - KIRRA



29 February 2008



31 March 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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