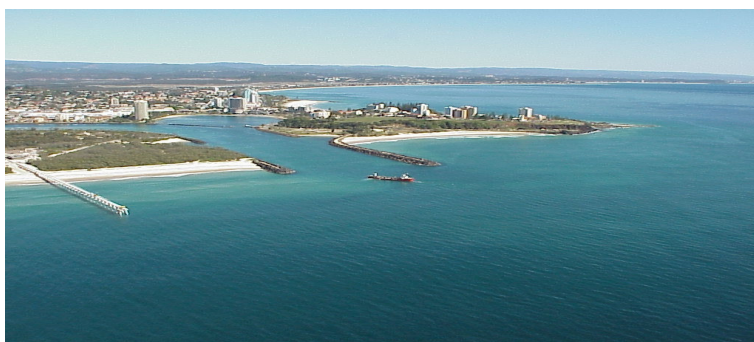


Tweed River Entrance Sand Bypassing Project

Letitia Spit to Kirra



Monthly Environmental Monitoring Summary

MARCH 2007

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, the Tweed River Entrance and Letitia Spit.

- The number of vessels that passed through the entrance in March was significantly higher than on average.
- Surf quality in March was generally good, with excellent conditions occurring during the Quiksilver Pro held at Snapper Rocks in early March.
- 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 March average.

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

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 MARCH 2007

	PUMPED	DREDGED	MARCH 2007 TOTAL DELIVERY
Location	Snapper Rocks East		
Amount (m ³)	52,736	0	52,736

Total Sand Delivery This Year (January to March 2007)

	PUMPED	DREDGED	2007 TOTAL DELIVERY
Amount (m ³)	137,941	0	137,941

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

	PUMPED	DREDGED	TOTAL DELIVERY STAGE 2
Amount (m ³)	3,995,782	1,862,793	5,858,575

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4. TWEED RIVER ENTRANCE CONDITIONS

VOLUNTEER VIDEO MONITORING LOG

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

Date	Observations
2 March Early afternoon	Fine weather. Fair crossing conditions. Choppy conditions outside entrance.
9 March Morning	Fine weather. Good crossing conditions.
16 March Morning	Fine weather. Good crossing conditions.
23 March Morning	Overcast. Good crossing conditions. Some small craft entering.
30 March Morning	Choppy entrance conditions. Some whitecaps seaward of entrance.

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

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 2007 are presented below.

The navigation ratings from 1–5 are as follows:

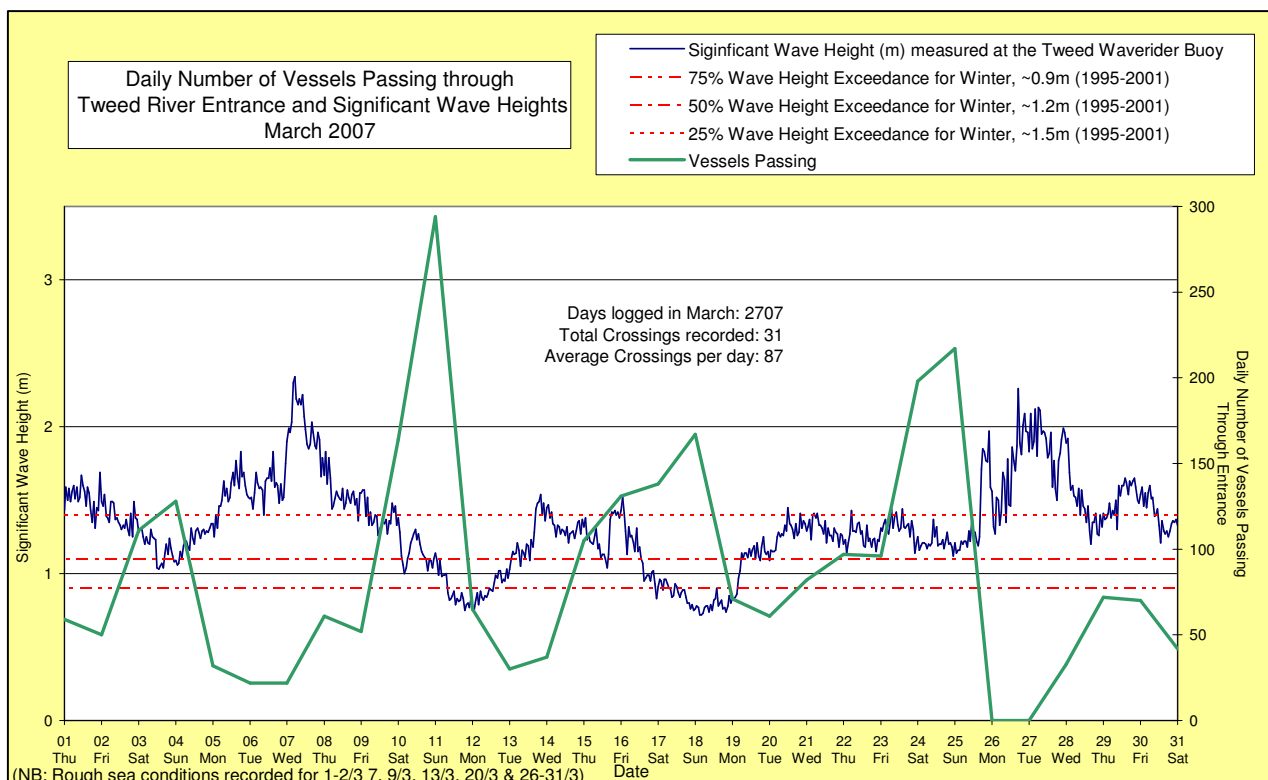
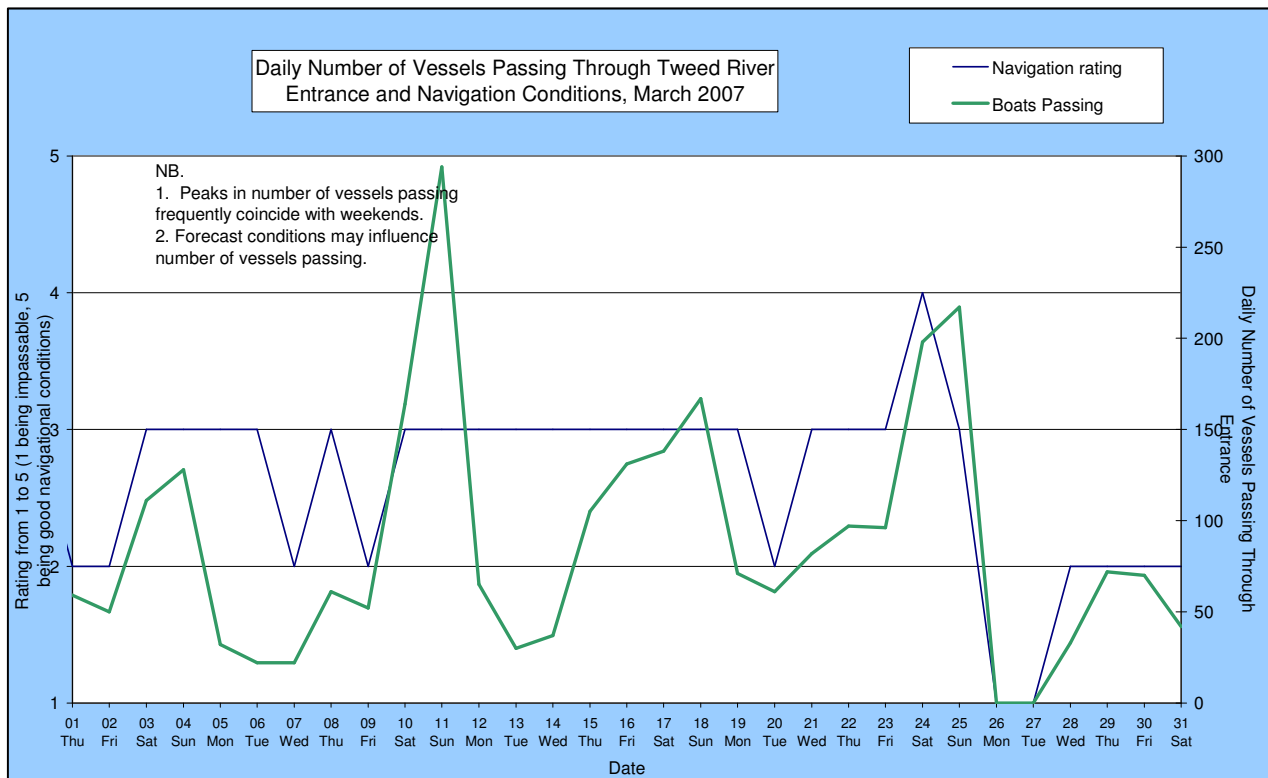
- 1 – Impassable 2 – Difficulty encountered 3 – Some difficulty encountered
4 – Relatively good crossing 5 – Good conditions

☐ – Weekends and public holidays

Date	Entrance Conditions	Navigation Rating Impassable-----Good					Number of Boats
		1	2	3	4	5	
1	Rough						59
2	Rough						50
3	Moderate						111
4	Moderate						128
5	Moderate						32
6	Moderate						22
7	Rough						22
8	Moderate						61
9	Rough						52
10	Slight						164
11	Slight						294
12	Moderate						65
13	Rough						30
14	Moderate						37
15	Moderate						105
16	Moderate						131
17	Moderate						138
18	Moderate						167
19	Moderate						71
20	Rough						61
21	Moderate						82
22	Moderate						97
23	Moderate						96
24	Slight						198
25	Moderate						217
26	Rough						0
27	Rough						0
28	Rough						33
29	Rough						72
30	Rough						70
31	Rough						42

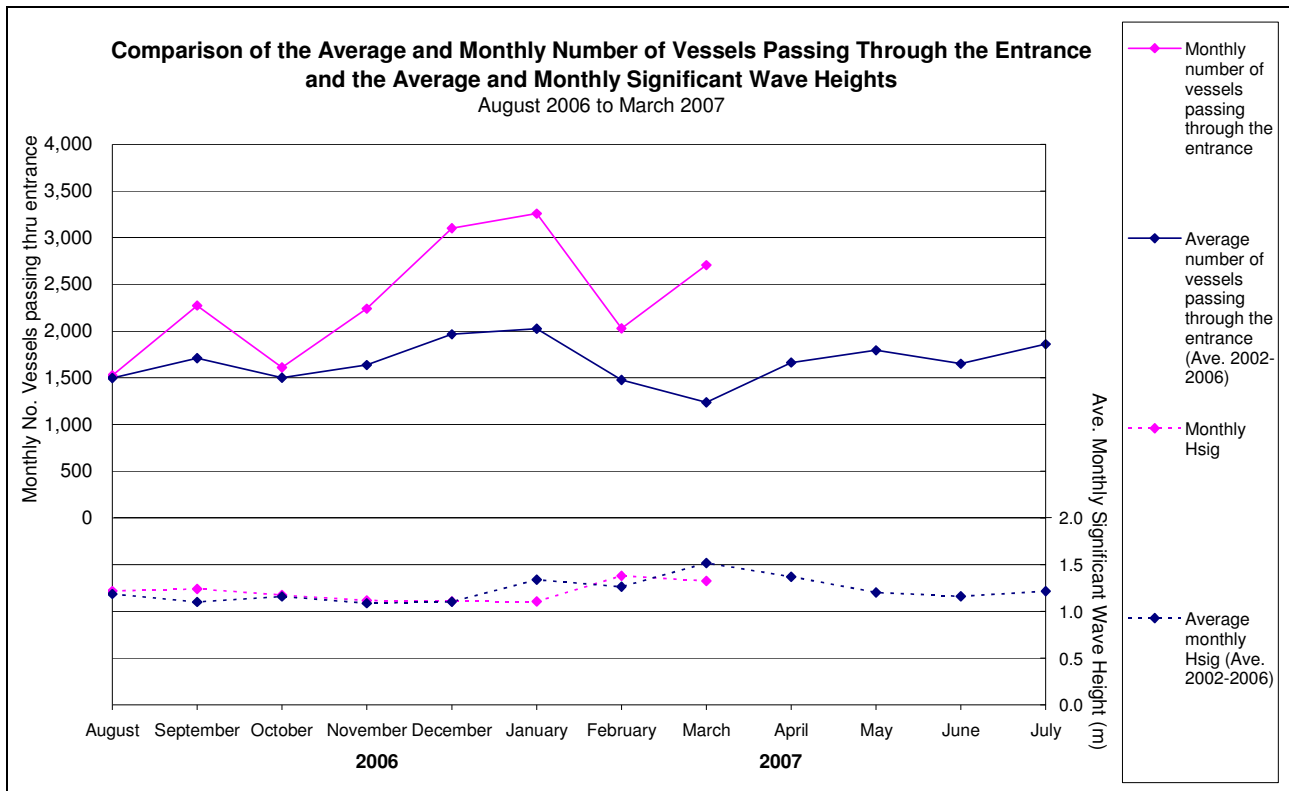
**TWEED RIVER ENTRANCE SAND BYPASSING PROJECT
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TWEED RIVER ENTRANCE CONDITIONS CONTINUED



**TWEED RIVER ENTRANCE SAND BYPASSING PROJECT
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TWEED RIVER ENTRANCE CONDITIONS CONTINUED



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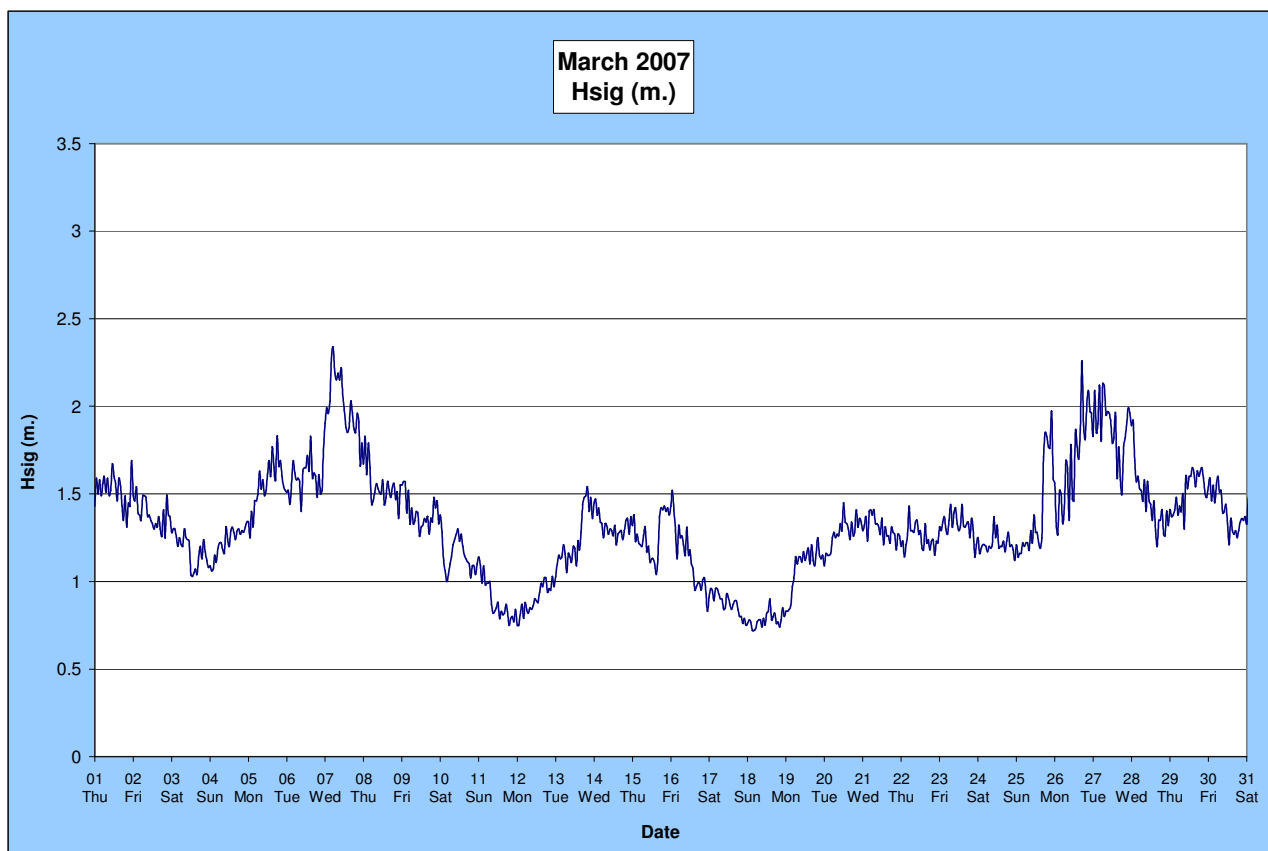
5. SURF SUMMARY

Waves of between 1 – 2 m from the E dominated surf conditions on the Southern Gold Coast in March 2007. Winds varied over the month where the most predominant wind conditions were SE and SW at 10-25 Knots.

Readings from the Tweed Waverider Buoy showed a minimum significant wave height of 0.72m on 18 March and a maximum significant wave height of 2.34m on 7 March. There were 6 recorded days when waves dropped below 1.0m and 3 days when waves were above 2.0m.

Surf quality in March was generally good. There were reports of excellent surf conditions occurring throughout the month, in particular in the beginning of the month at Snapper Rocks during the Quiksilver Proas a result of Cyclone Odette.

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 March 2007

27 February – 11 March - Quiksilver Pro Gold Coast - Snapper Rocks

Upcoming events in April 2007

16-22 April - Brothers Neilsen Pro Junior

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

**TWEED RIVER ENTRANCE SAND BYPASSING PROJECT
LETITIA SPIT TO KIRRA
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SURF SUMMARY CONTINUED

VOLUNTEER SURF QUALITY OBSERVATIONS

The following observations for March 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
2 March Early afternoon	1.5 – 2m ENE swell, plunging and spilling waves. 19 surfers present.	36 surfers present. Large longshore transport occurring. No offshore bar apparent.	1 – 1.5m spilling waves. 14 surfers present. Average longshore transport occurring. Offshore bar present.
9 March Morning	1 – 1.5m ENE swell, plunging and spilling waves. 11 surfers present. Small scarp at southern end of beach.	54 surfers present. Average longshore transport occurring. No offshore bar apparent.	Flat conditions, spilling waves. 11 surfers present. No longshore transport occurring. Offshore bar present.
16 March Morning	1 – 1.5m ENE swell, plunging and spilling waves. 51 surfers present. Fairly flat conditions.	44 surfers present. Average longshore transport occurring. No offshore bar apparent.	<1m plunging and spilling waves. 13 surfers present. No longshore transport occurring. Offshore bar present.
23 March Morning	ENE swell. 43 surfers present. Gutter in middle of beach.	35 surfers present. Average northward longshore transport occurring. No offshore bar apparent.	<1m spilling waves. 11 surfers present. No longshore transport occurring. Offshore bar present.
30 March Morning	1 – 1.5m ENE swell, plunging waves. 28 surfers present.	28 surfers present. Large northward longshore transport occurring. No offshore bar apparent.	1 – 1.5m plunging and spilling waves. 4 surfers present. Small longshore transport occurring. Offshore bar present.

SURF SUMMARY CONTINUED

PHOTOGRAPHS OF SURF CONDITIONS



Roxy Pro, Snapper Rocks, 4 March 2007



Quiksilver Pro, Snapper Rocks, 7 March 2007



Quiksilver Pro, Snapper Rocks, 6 March 2007



Roxy Pro, Snapper Rocks, 4 March 2007



Quiksilver Pro, Snapper Rocks, 6 March 2007



Quiksilver Pro, Snapper Rocks, 7 March 2007

Source: www.aspworldtour.com

6. MEDIA COVERAGE AND COMMUNITY FEEDBACK

MEDIA COVERAGE

2 March 2007, Gold Coast Bulletin, "Cyclone wipeout threat to Pro"

"Surfers are stoked about the prospect of surfing the biggest waves to hit the Gold Coast in 40 years."

May 2007, Tracks Magazine, "Silver Linings"

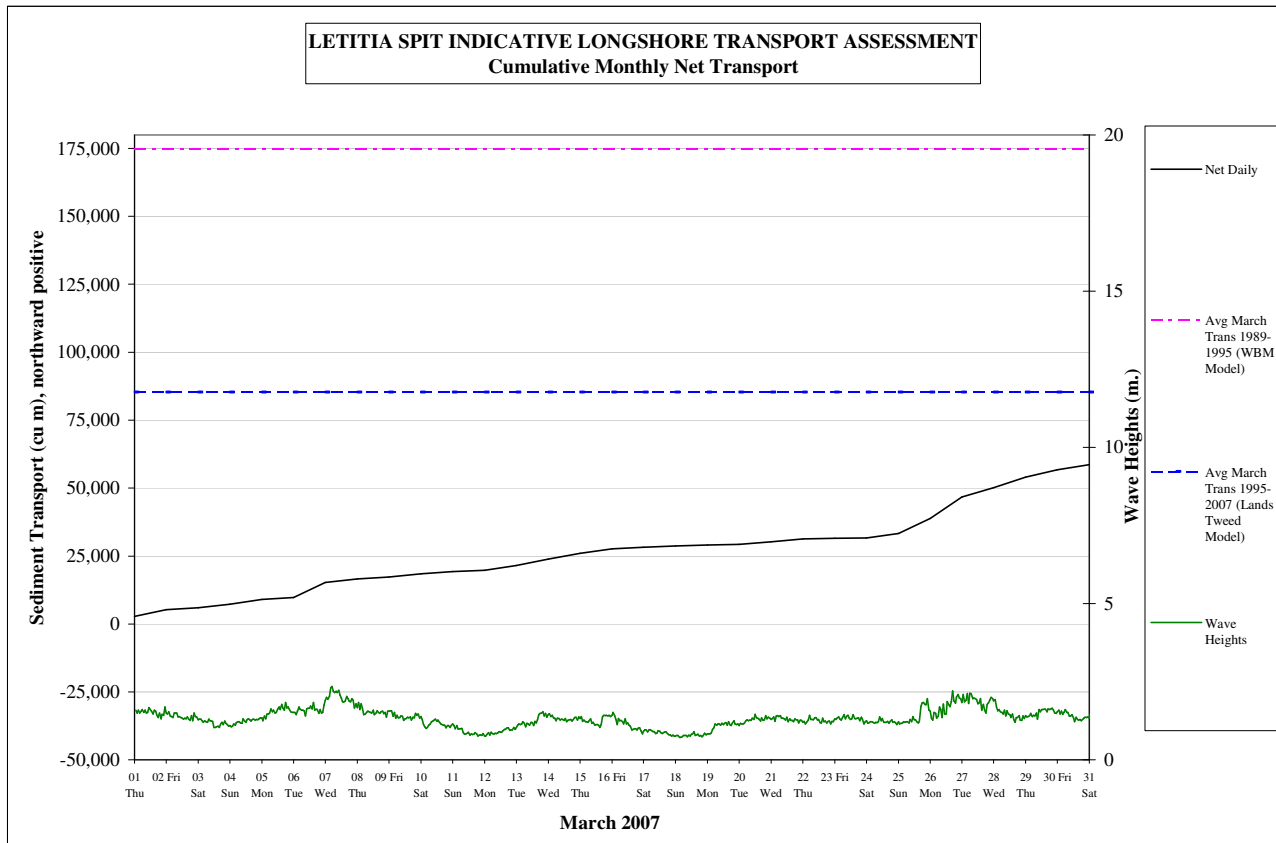
"Quiksilver Pro... Within two days of being named, Odette had lived up to her name and been downgraded into a tropical depression, and instead of bringing about the destruction of the Gold Coast, she produced epic surf for the entire event."

**TWEED RIVER ENTRANCE SAND BYPASSING PROJECT
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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 March 2007, 59,000m³ 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 March.



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



28 February 2007

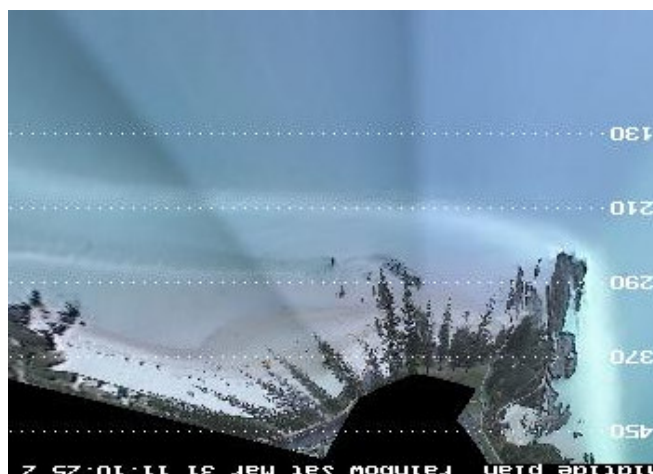


31 March 2007

RAINBOW BAY



28 February 2007



31 March 2007

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ARGUS COASTAL IMAGING SYSTEM CONTINUED

COOLANGATTA - GREENMOUNT

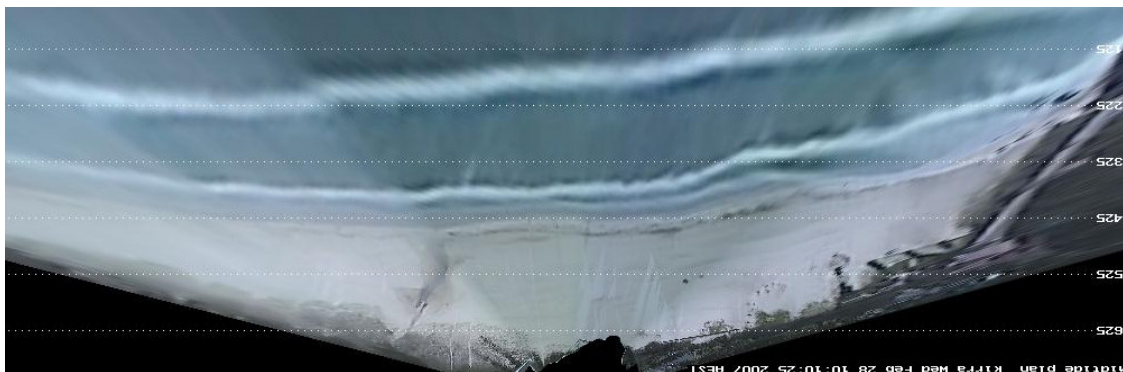


28 February 2007



31 March 2007

NORTH KIRRA - KIRRA



28 February 2007



31 March 2007

9. CONTACT DETAILS

This report was completed by Natalie Crawford.

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 Natalie at any of the addresses below:

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Tweed River Entrance Sand Bypassing Project

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