

Tweed River Entrance Sand Bypassing Project

Letitia Spit to Kirra



Monthly Environmental Monitoring Summary

October 2007

Department of Lands 




**Queensland
Government**
Environmental
Protection Agency

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

TABLE OF CONTENTS

1. EXECUTIVE SUMMARY	1
2. INTRODUCTION	2
3. PUMPING AND DREDGING ACTIVITIES	2
4. TWEED RIVER ENTRANCE CONDITIONS	3
5. SURF SUMMARY	7
6. BEACH CONDITIONS	10
7. MEDIA COVERAGE AND COMMUNITY FEEDBACK	11
8. TWEED RIVER LOWER ESTUARY TIDAL CONDITIONS.....	12
9. INDICATIVE LONGSHORE SAND TRANSPORT	13
10. ARGUS COASTAL IMAGING SYSTEM.....	14
11. CONTACT DETAILS	16

1. EXECUTIVE SUMMARY

This report provides a summary of pumping and dredging activities, as well as surf, beach, river, entrance and wave 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 October was higher than on average.
- Surf quality in October was moderate, with reports of calm surfing conditions across most of the month.
- The amount of sand moving north towards the Tweed River Entrance was less than the October average.

**TWEED RIVER ENTRANCE SAND BYPASSING PROJECT
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MONTHLY ENVIRONMENTAL MONITORING SUMMARY OCTOBER 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.surfgaustalia.com.au
- www.swellnet.com.au
- www.tracksmag.com



3. PUMPING AND DREDGING ACTIVITIES

Sand Delivery for OCTOBER 2007

	PUMPED	DREDGED	OCTOBER 2007 TOTAL DELIVERY
Location	Snapper Rocks East		
Amount (m ³)	14,069	0	14,069

Total Sand Delivery This Year (January to October 2007)

	PUMPED	DREDGED	2007 TOTAL DELIVERY
Amount (m ³)	496,515	0	496,515

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

	PUMPED	DREDGED	TOTAL DELIVERY STAGE 2
Amount (m ³)	4,354,356	1,862,793	6,217,149

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

4. TWEED RIVER ENTRANCE CONDITIONS

VOLUNTEER VIDEO MONITORING LOG

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

Date	Observations
5 October Mid Morning	Fine weather. Calm crossing conditions.
12 October Morning	Fine weather. Calm crossing conditions. No break east of the entrance. Several vessels entered without drama.
19 October Morning	Cloudy.
26 October Late morning	Fine weather. Fair crossing conditions.

**TWEED RIVER ENTRANCE SAND BYPASSING PROJECT
LETITIA SPIT TO KIRRA
MONTHLY ENVIRONMENTAL MONITORING SUMMARY OCTOBER 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 October 2007 are presented below.

The navigation ratings from 1–5 are as follows:

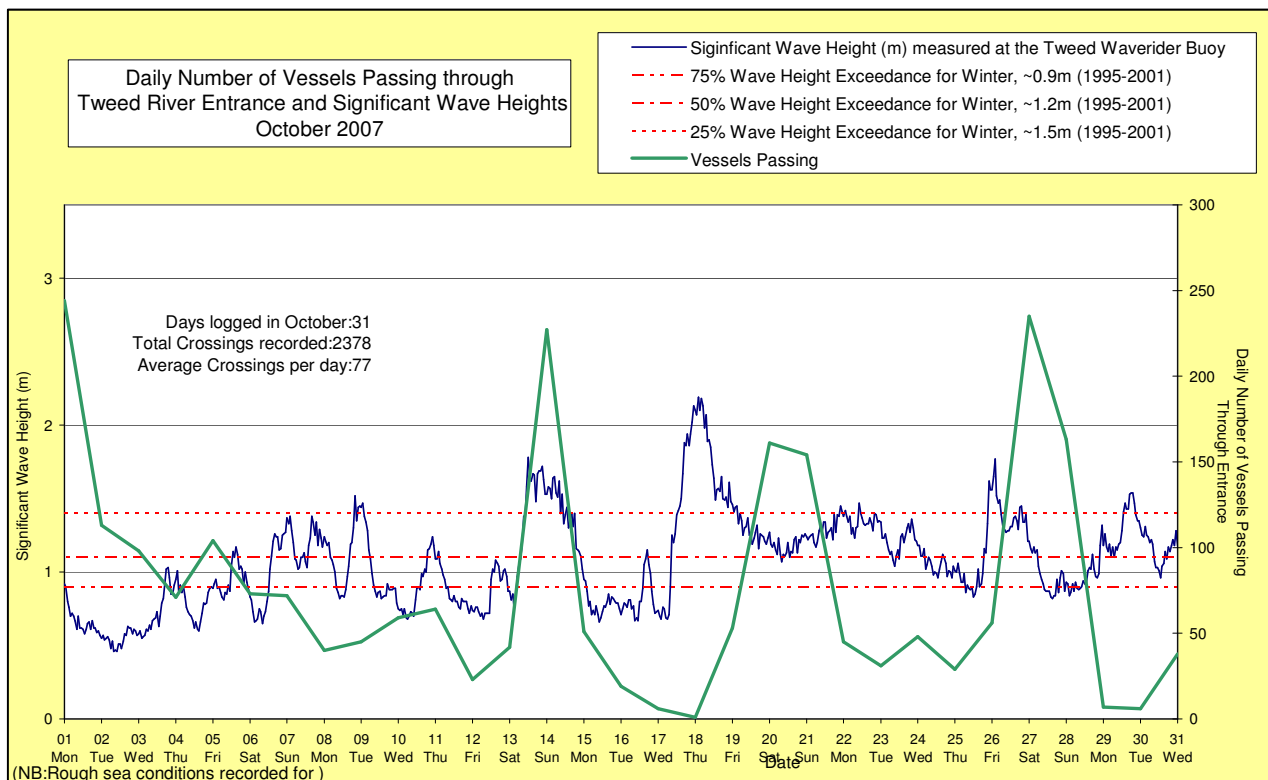
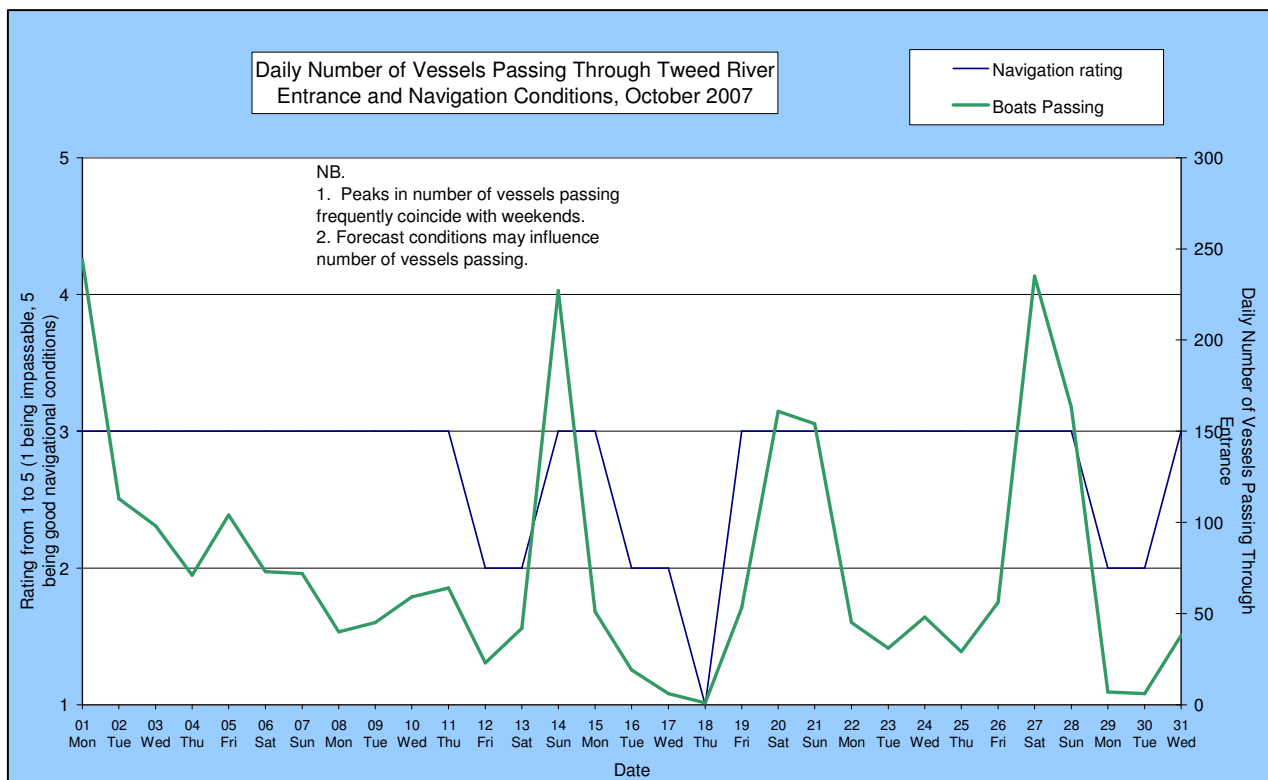
- 1 – Impassable 2 – Difficulty encountered 3 – Some difficulty encountered
4 – Relatively good crossing 5 – Good conditions

☐ – Weekends and public holidays

Date	Entrance Conditions	Navigation Rating Impassable-----Good					Number of Boats
		1	2	3	4	5	
1	Moderate						244
2	Moderate						113
3	Moderate						98
4	Moderate						71
5	Moderate						104
6	Moderate						73
7	Rough						72
8	Moderate						40
9	Moderate						45
10	Moderate						59
11	Moderate						64
12	Rough						23
13	Rough						42
14	Moderate						227
15	Moderate						51
16	Rough						19
17	Rough						6
18	Rough						1
19	Moderate						53
20	Moderate						161
21	Moderate						154
22	Moderate						45
23	Moderate						31
24	Moderate						48
25	Moderate						29
26	Moderate						56
27	Moderate						235
28	Moderate						163
29	Rough						7
30	Rough						6
31	Moderate						38

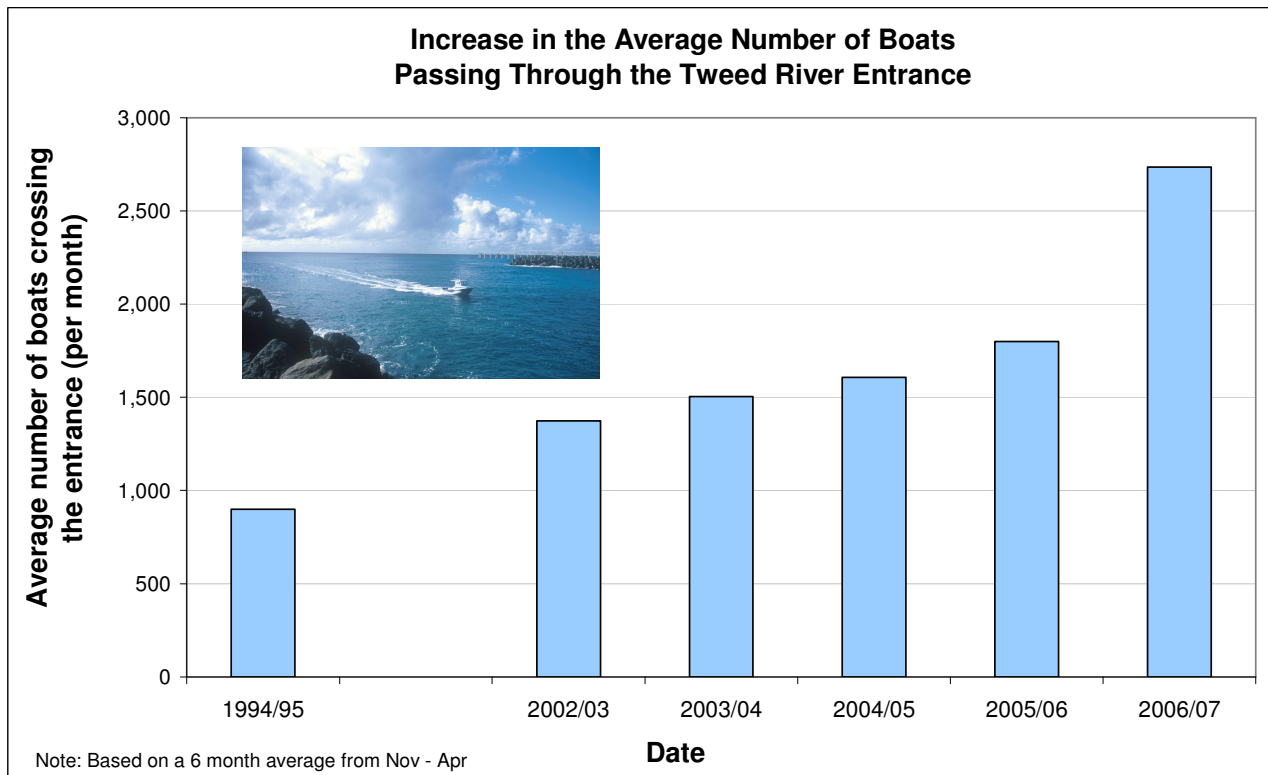
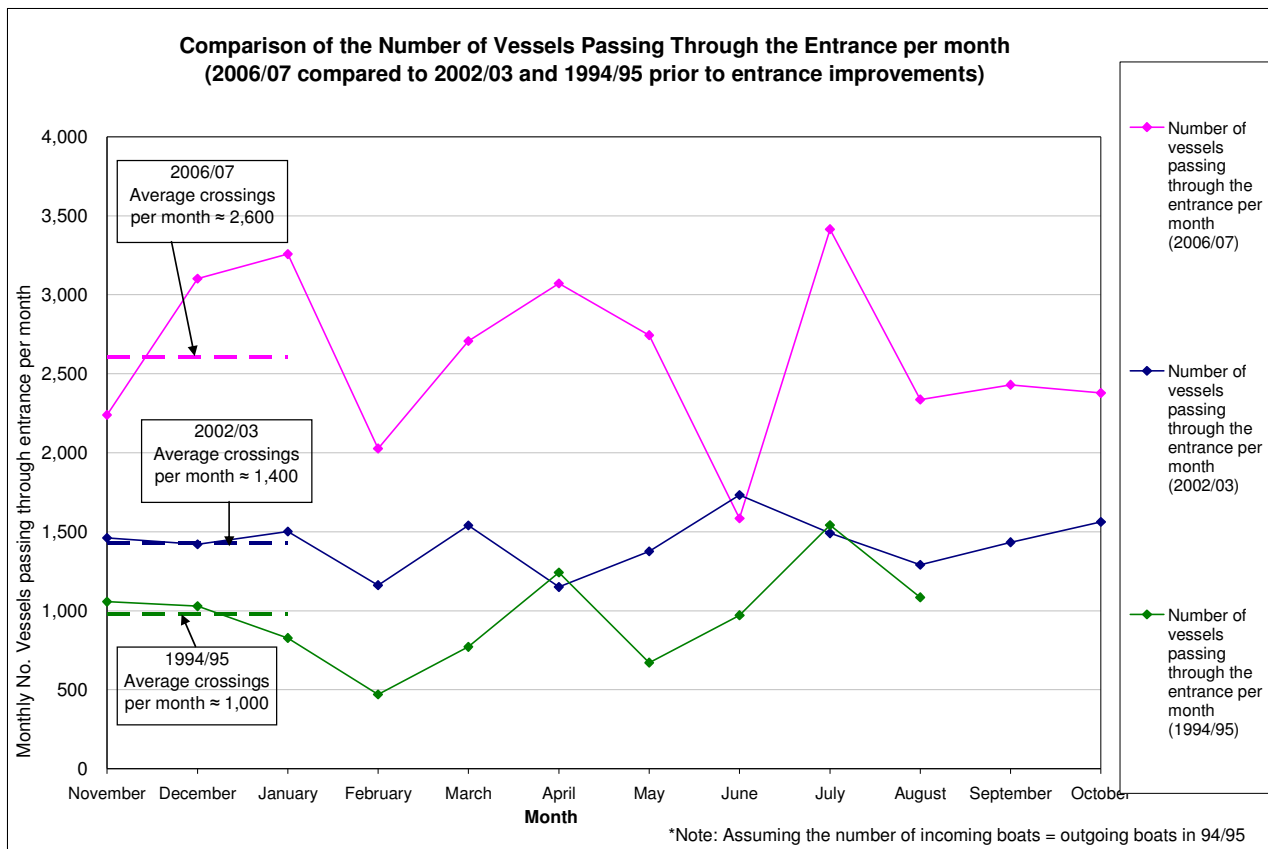
**TWEED RIVER ENTRANCE SAND BYPASSING PROJECT
LETITIA SPIT TO KIRRA
MONTHLY ENVIRONMENTAL MONITORING SUMMARY OCTOBER 2007**

TWEED RIVER ENTRANCE CONDITIONS CONTINUED



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

TWEED RIVER ENTRANCE CONDITIONS CONTINUED



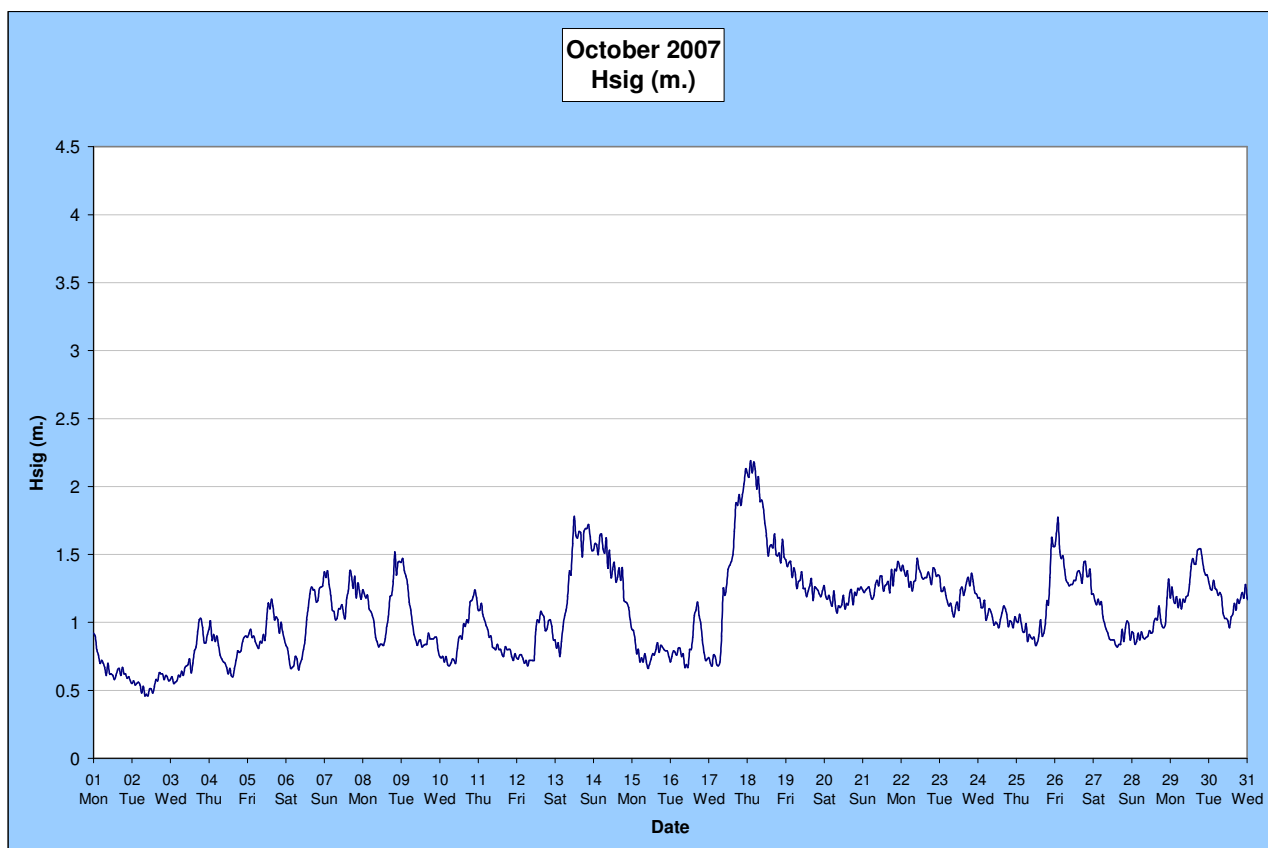
**TWEED RIVER ENTRANCE SAND BYPASSING PROJECT
LETITIA SPIT TO KIRRA
MONTHLY ENVIRONMENTAL MONITORING SUMMARY OCTOBER 2007**

5. SURF SUMMARY

Waves of between 0.5 – 1.5 m from the SE dominated surf conditions on the Southern Gold Coast in October 2007. Winds varied over the month, predominant winds were from the NW at 10-30 Knots.

Readings from the Tweed Waverider Buoy showed a minimum significant wave height of 0.46m on 2nd October and a maximum significant wave height of 2.19m on 18th October. There were 21 recorded days when waves dropped below 1.0m and 2 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 October 2007

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Upcoming events in November 2007

24 November – Honolua Stand Up Paddle (S.U.P) Challenge

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

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

SURF SUMMARY CONTINUED

VOLUNTEER SURF QUALITY OBSERVATIONS

The following observations for October 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
5 October Mid Morning	1 – 1.5m plunging swell. 76 surfers present.	66 surfers present. No longshore transport occurring. No offshore bar apparent.	<1m spilling waves. 58 surfers present. No longshore transport occurring. No offshore bar apparent. NSW school holidays. Surfers mostly young children coaching in a shallow pool along the shoreline.
12 October Morning	1 – 1.5m plunging and spilling swell. 36 surfers present.	0 surfers present. No longshore transport occurring. No offshore bar apparent. Waves breaking on shoreline.	<1m spilling waves. 5 surfers present. No longshore transport occurring. Wind speed increasing over time. Large number of people on Rainbow Beach and South Kirra.
19 October Morning	1 – 1.5m plunging swell. 89 surfers present.	26 surfers present. Small longshore transport occurring. No offshore bar apparent.	1 – 1.5m waves. 6 surfers present. No longshore transport occurring. No offshore bar apparent.
26 October Late morning	1.5 – 2m plunging swell. 27 surfers present. No break seawards of the entrance but lot of white water south of the southern wall.	22 surfers present. No longshore transport occurring. No offshore bar apparent.	1 – 1.5m spilling waves. 2 surfers present. No longshore transport occurring. No offshore bar apparent.

SURF SUMMARY CONTINUED

PHOTOGRAPHS OF SURF CONDITIONS



4 October 2007, Letitia Spit



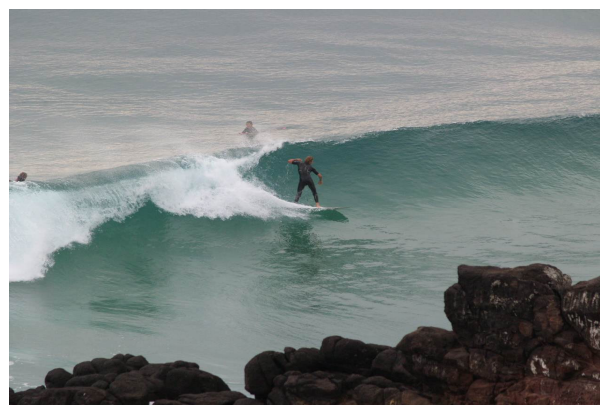
8 October 2007, Letitia Spit

Source: Burleighcam



20 October 2007, Duranbah

Source: Coastalwatch



22 October 2007, Froggies Beach

Source: Swellnet



30 October 2007, Letitia Spit



31 October 2007, Letitia Spit

Source: Burleighcam

6. BEACH CONDITIONS

PHOTOGRAPHS OF BEACH CONDITIONS

DURANBAH



View from Pt Danger, 11 October 2007

RAINBOW BAY



View from Greenmount, 11 October 2007

COOLANGATTA



View from Greenmount , 11 October 2007



View from Kirra Hill, 11 October 2007

KIRRA



View from Kirra Hill, 11 October 2007



View from Kirra Hill, 11 October 2007

Source: NSW Department of Lands

7. MEDIA COVERAGE AND COMMUNITY FEEDBACK

MEDIA COVERAGE

1 October, Daily News, In Brief, "Sand-pump quandary"

"...National Party candidate for Richmond Dr Sue Page... said Gold Coast environmental campaigner Phil Arnott would have brief Federal Environment and Water Minister Malcolm Turnbull tomorrow on the sand pumping which had affected surfing and fishing."

8. TWEED RIVER LOWER ESTUARY TIDAL CONDITIONS

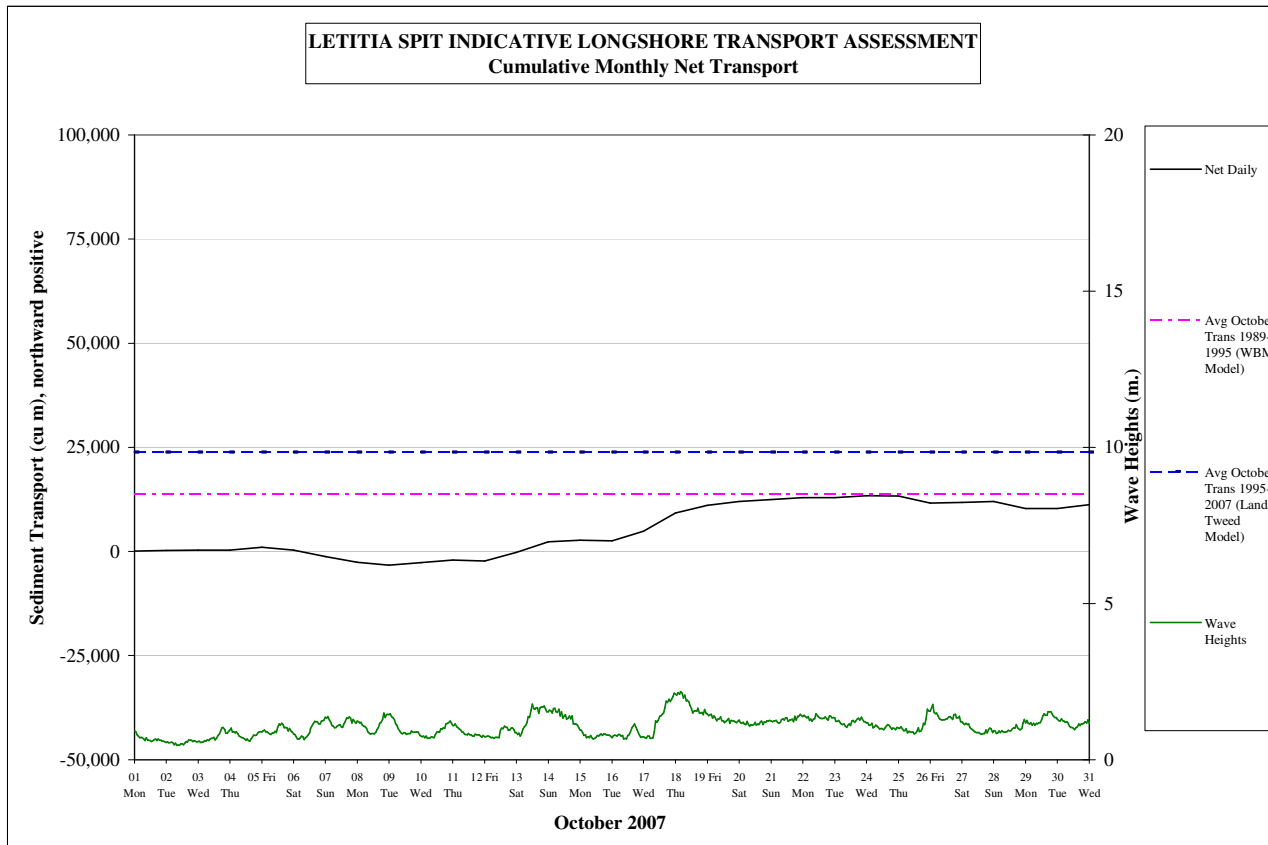
Tidal data for the month of October, '07 has not yet been received for analysis. Tidal monitoring results for October, '07 will be reported in next month's monitoring summary (November, '07).

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

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 October 2007, 11,000m³ of sand was moved north towards the Tweed River entrance by natural processes. This is less than the average modelled sand transport quantity for the month of October.



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

10. ARGUS COASTAL IMAGING SYSTEM

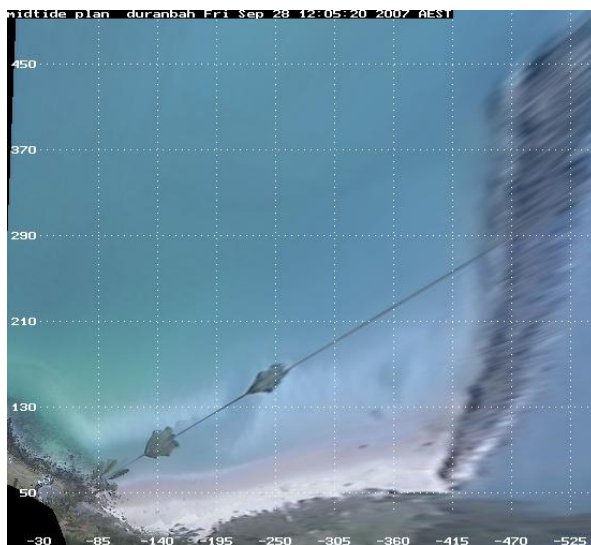
The University of New South Wales is monitoring Letitia Spit to North Kirra for the project using an ARGUS coastal imaging system. Images are available on the internet at the following address:

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

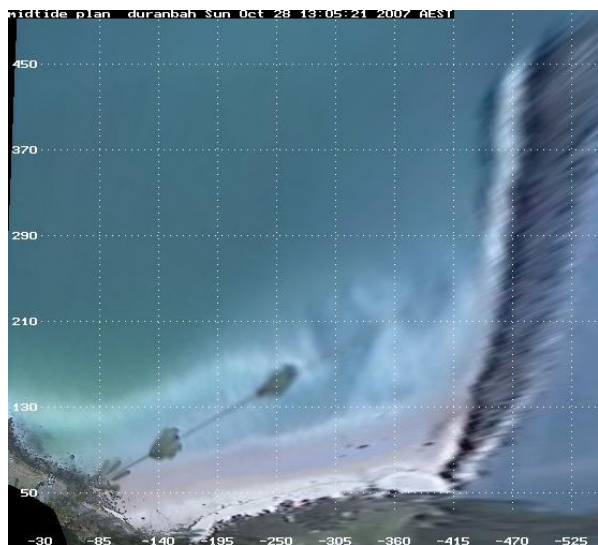
These images are updated hourly and all past photos can be accessed in the archives.

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

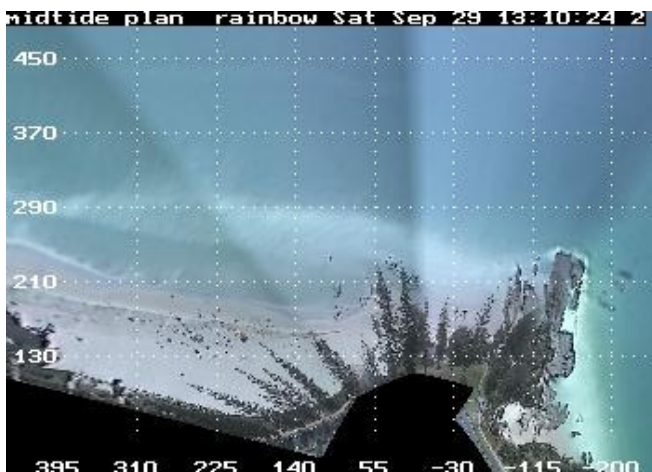


28 September 2007

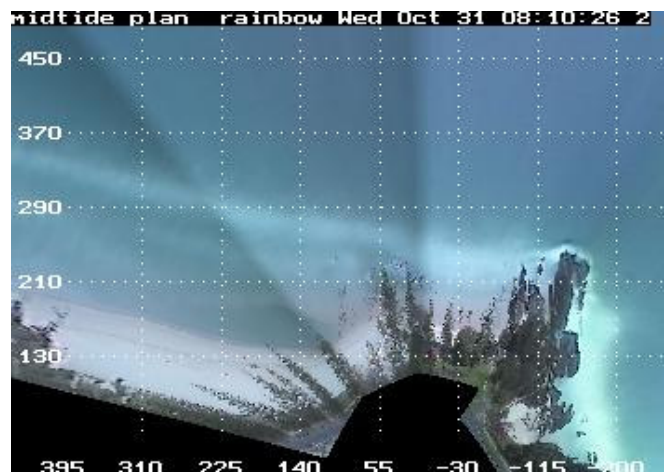


28 October 2007

RAINBOW BAY



29 September 2007

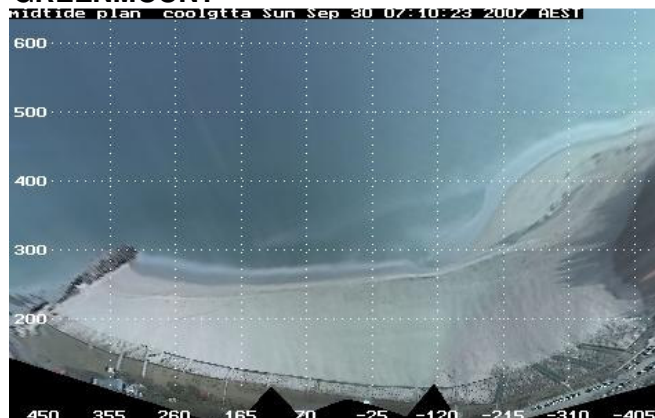


31 October 2007

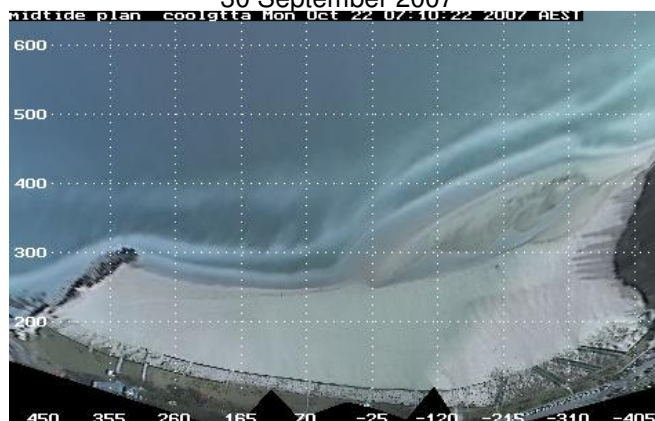
**TWEED RIVER ENTRANCE SAND BYPASSING PROJECT
LETITIA SPIT TO KIRRA
MONTHLY ENVIRONMENTAL MONITORING SUMMARY OCTOBER 2007**

ARGUS COASTAL IMAGING SYSTEM CONTINUED

COOLANGATTA - GREENMOUNT

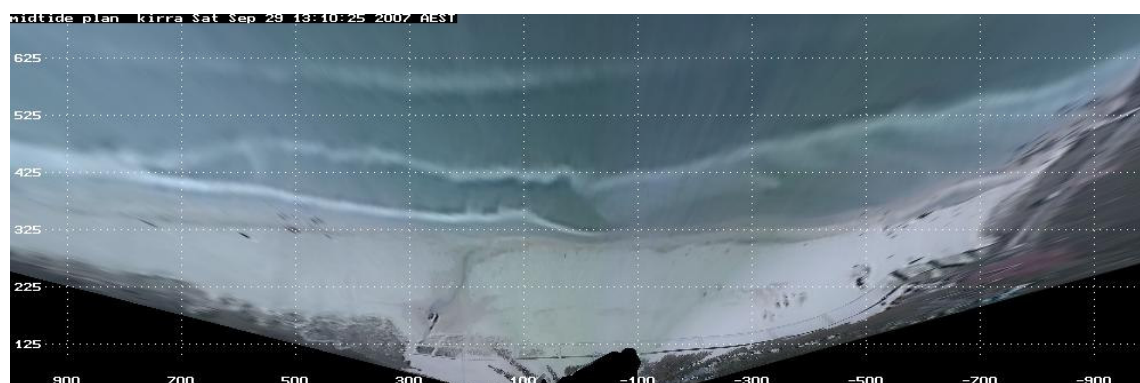


30 September 2007

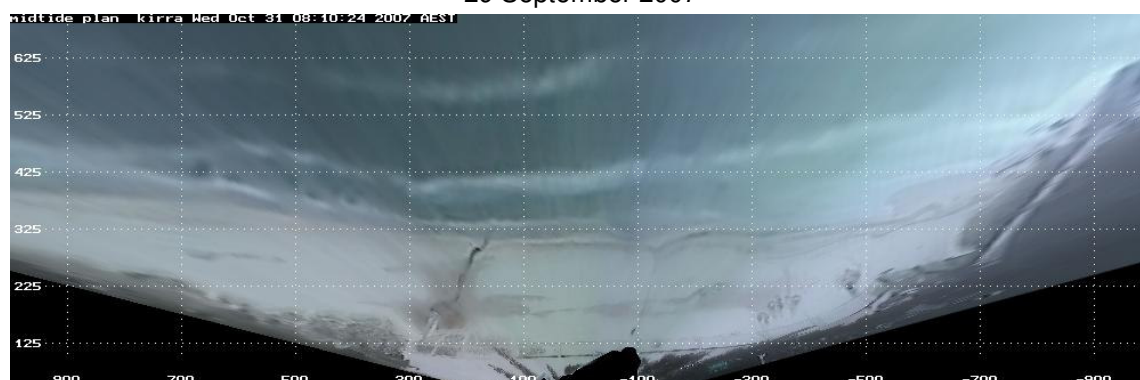


22 October 2007

NORTH KIRRA - KIRRA



29 September 2007



31 October 2007

11. 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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Tweed River Entrance Sand Bypassing Project

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