

Tweed River Entrance Sand Bypassing Project

Letitia Spit to Kirra



Monthly Environmental Monitoring Summary

OCTOBER 2008

Department of Lands 




**Queensland
Government**
Environmental
Protection Agency

TABLE OF CONTENTS

1. EXECUTIVE SUMMARY	2
2. INTRODUCTION	2
3. SAND PUMPING & DREDGING ACTIVITIES	3
4. TWEED RIVER ENTRANCE CONDITIONS	3
5. SURFING CONDITIONS	7
6. MEDIA COVERAGE	8
7. TWEED LOWER ESTUARY TIDE CONDITIONS	10
8. INDICATIVE LONGSHORE TRANSPORT	11
9. ARGUS COASTAL IMAGING	13
9. CONTACT	15

1. EXECUTIVE SUMMARY

This report provides a summary of environmental monitoring undertaken by the TRESBP in October 2008.

In October 2008:

- The number of vessels that passed through the entrance was higher than the 2002-2007 average number of crossings for the month of October.
- Surf quality in October was poor to good, with no high or moderate sea events (maximum significant wave height 2.0 m).
- Tide data for the month of October 2008 is currently being analysed. Results will be presented in the project's November 2008 Monthly Environmental Monitoring Summary. Tide data for the month of September 2008 shows no adverse impacts.
- The estimated amount of sand moving north towards the Tweed River Entrance by natural processes was slightly more than the October average.
- No dredging was undertaken during October 2008. About 26,000 m³ of sand was pumped mainly to Duranbah Beach.

2. INTRODUCTION

This document provides a summary of sand quantities delivered by the project, 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, QEPA, the Bureau of Meteorology, Surfing Australia, media coverage, Coastalwatch.com.au and Swellnet.com.au.

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

3. SAND PUMPING & DREDGING ACTIVITIES

Sand Delivery for October 2008

	PUMPED		DREDGED	OCT 2008 TOTAL DELIVERY
Location	Snapper Rocks East	Duranbah	NIL	
Amount (m³)	11,235 m³	15,220 m³		26,455 m³

Total Sand Delivery This Year (January to October 2008)

	PUMPED	DREDGED	2008 TOTAL DELIVERY
Amount (m ³)	547,880 m ³	198,979 m ³	746,859 m ³

Total Sand Delivery Last Year (January to December 2007)

	PUMPED	DREDGED	2007 TOTAL DELIVERY
Amount (m ³)	562,247 m ³	0 m ³	562,247 m ³

Total Stage 2 Delivery to Date (May 2000 to October 2008)

	PUMPED	DREDGED	TOTAL DELIVERY STAGE 2
Amount (m ³)	4,967,968 m ³	*2,038,901 m ³	*7,006,869 m ³

* 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 October 2008 were recorded by volunteer Mr Brian Mason:

Date	Observations
10/10/08 early morning	No break in front of the entrance. Moderate navigation conditions. (NB. Conditions deteriorated on this day)

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

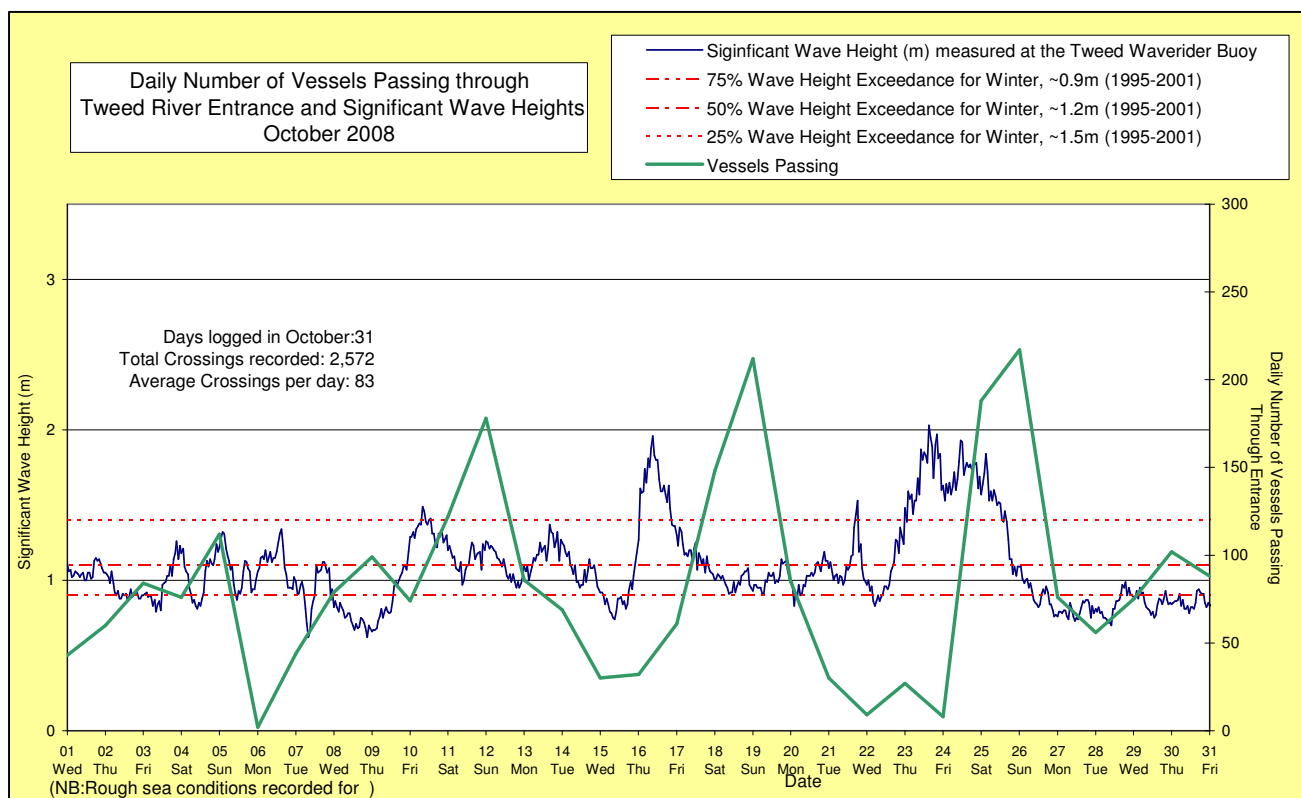
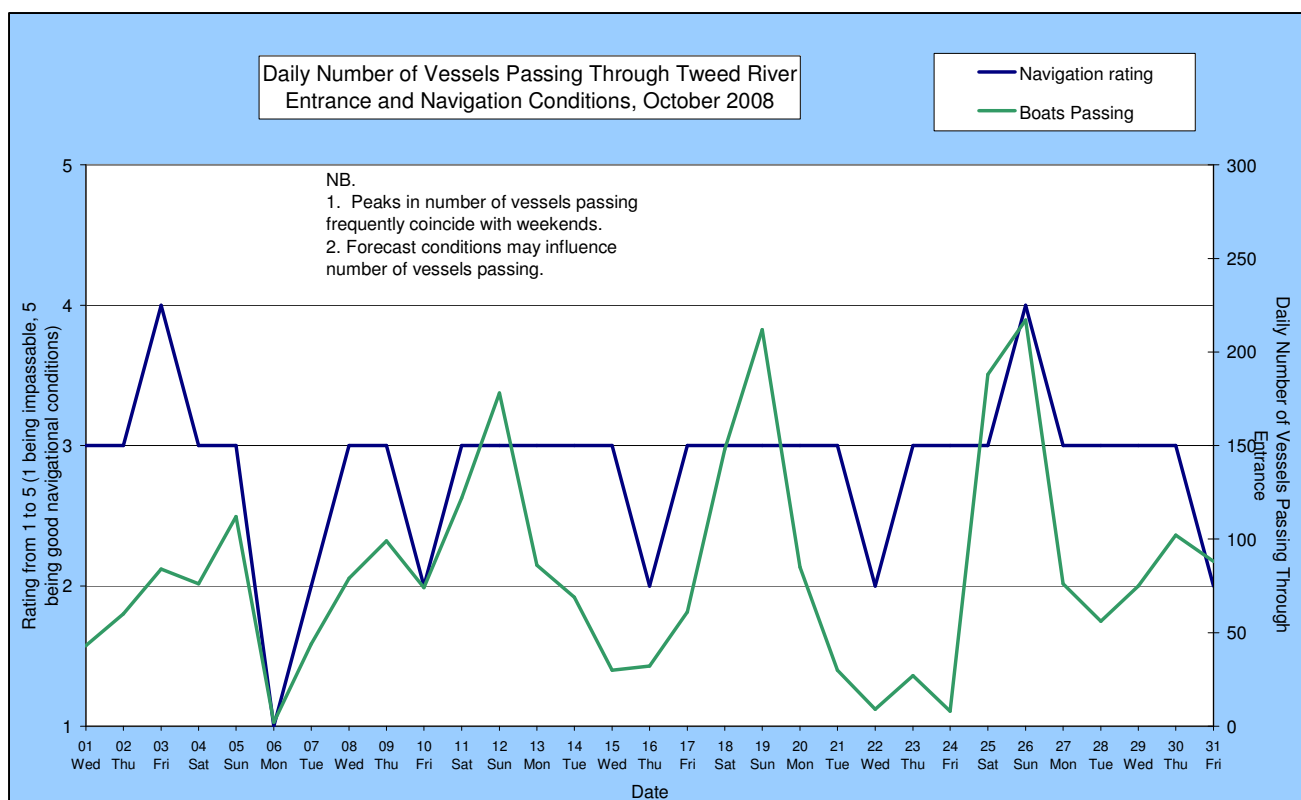
VOLUNTEER MARINE RESCUE REPORTS

Volunteer Marine Rescue Pt Danger has been monitoring entrance conditions on behalf of TRESBP since 20 January 2002. Monitoring results for October 2008 are presented below.

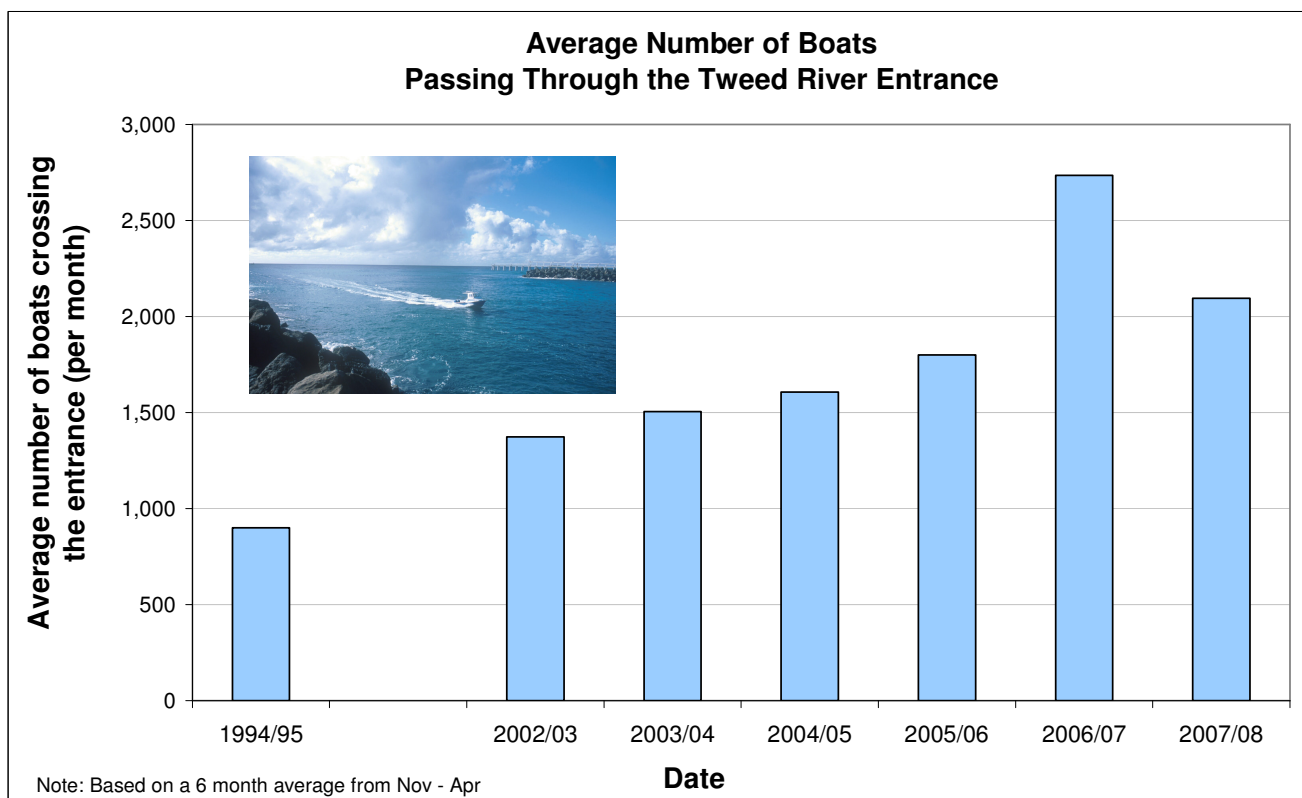
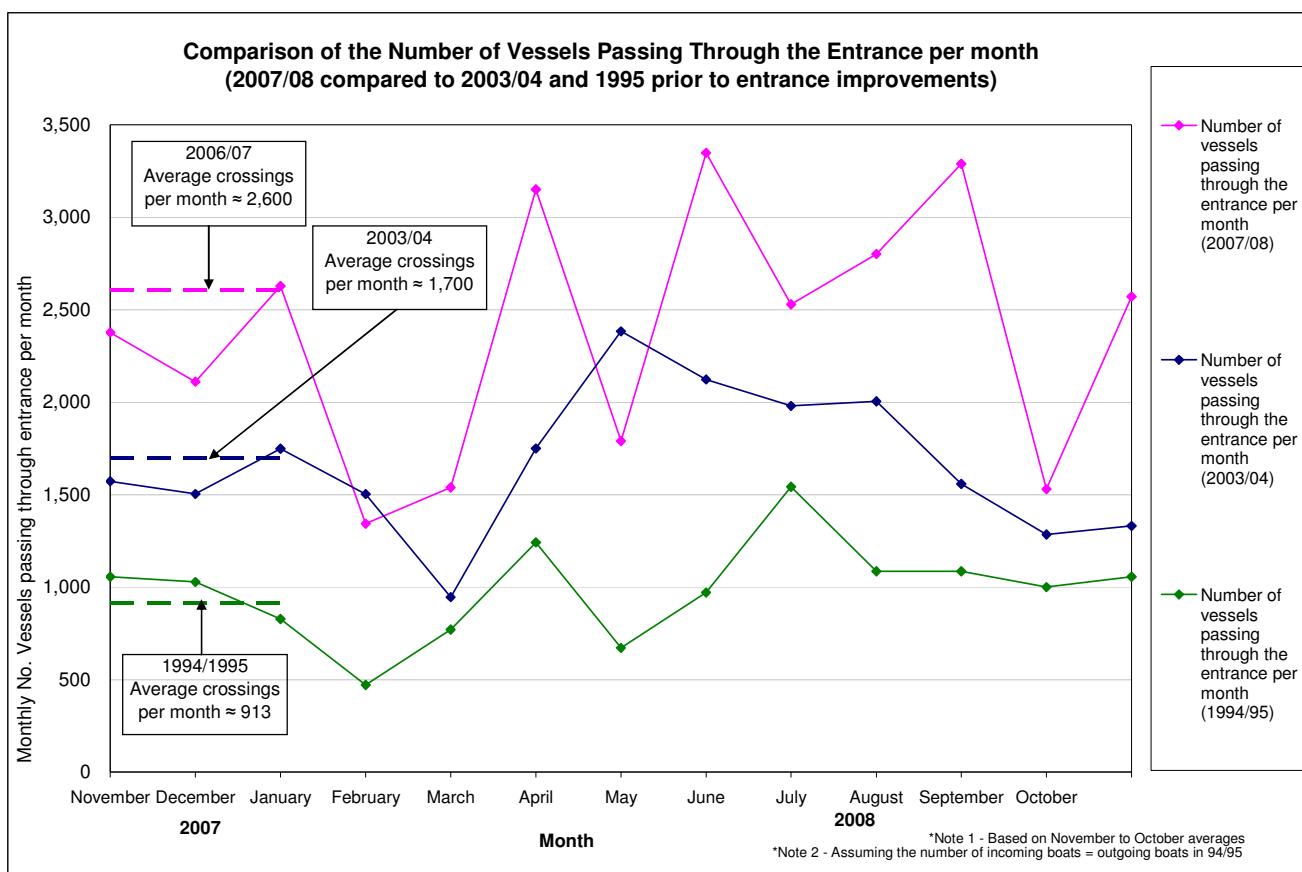
 Weekends and public holidays

Date	Entrance Conditions	Navigation Rating Impassable-----Good					Number of Boats
		Impassable	Difficulty Encountered	Some Difficulty Encountered	Relatively Good Crossing	Good Conditions	
1	Moderate, 19 Kt						43
2	Moderate, 20 Kt						60
3	Moderate, 18 Kt						84
4	Moderate, 20 Kt						76
5	Moderate, 17 Kt						112
6	Rough, 25 Kt						2
7	Moderate, 28 Kt						44
8	Moderate, 16 Kt						79
9	Moderate, 20 Kt						99
10	Rough, 15 Kt						74
11	Moderate, 6 Kt						122
12	Moderate, 10 Kt						178
13	Moderate, 12 Kt						86
14	Moderate, 15 Kt						69
15	Moderate, 20 Kt						30
16	Rough, 25 Kt						32
17	Moderate, 20 Kt						61
18	Moderate, 12 Kt						148
19	Moderate, 9 Kt						212
20	Moderate, 16 Kt						85
21	Moderate, 15 Kt						30
22	Rough, 23 Kt						9
23	Moderate, 22 Kt						27
24	Moderate, 23 Kt						8
25	Moderate, 13 Kt						188
26	Moderate, 10 Kt						217
27	Moderate, 13 Kt						76
28	Moderate, 17 Kt						56
29	Moderate, 13 Kt						75
30	Moderate, 15 Kt						102
31	Moderate, 25 Kt						88
TOTAL							2572

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



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



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

5. SURFING CONDITIONS

Dominant swell condition: 0.5-1.5 m from E/SE (with some northerly events)

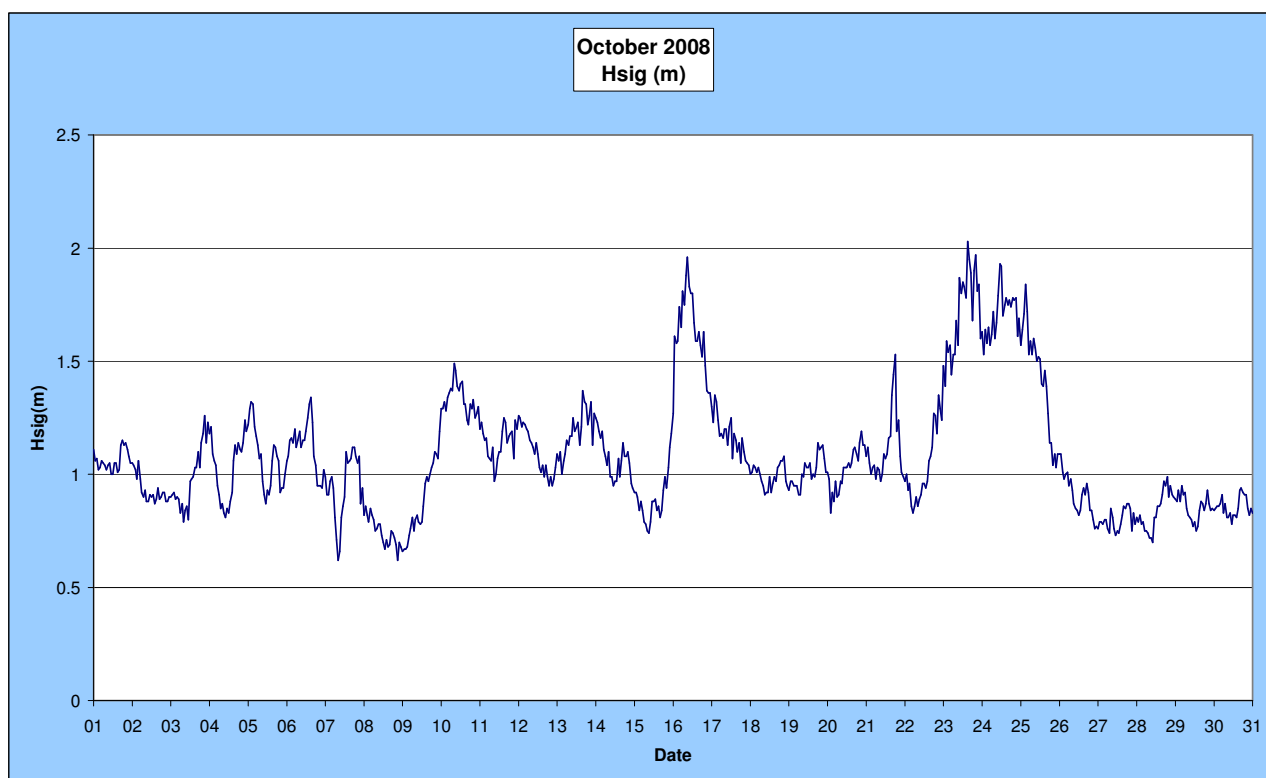
High/moderate sea events: None

Monthly minimum significant wave height: 0.6 m on 7 October

Monthly maximum significant wave height: 2.0 m on 23 October

Number of days with waves below 1.0 m: 25 days

Number of days with waves above 2.0 m: 0 days (Source: Tweed & Brisbane Waverider Buoy; BoM)



A link to data recorded by the Tweed Waverider Buoy is available at www.epa.qld.gov.au/sandbypass/

VOLUNTEER SURF QUALITY OBSERVATIONS

The following observations for October 2008 were made by volunteer Mr Brian Mason on behalf of the TRESBP.

Date	Duranbah	Frog's Beach / Snapper Rocks	Kirra Point
10/10/08	SE plunging waves, moderate winds. 20 surfers present.	No offshore bar visible. 50 surfers present.	Spilling 1.0-1.5 m waves, 6 surfers. Beach deserted except for 2 or 3 people. Weather conditions unpleasant. Council carrying out maintenance works on drains alongside groyne.
22/10/08	ESE plunging waves, 1.0-1.5 m, light winds. 47 surfers present	No longshore transport visible, no offshore bar visible. 31 surfers present.	Spilling 1.0-1.5 m waves, 3 surfers. An offshore bar has formed and extends north up to and beyond Coolangatta Creek. South of the Kirra groyne there were about 40 people on beach.

SURF & SURF LIFE SAVING AND OTHER EVENTS

Events in October 2008

FCS Manufacturer's Cup, 11 October, Gold Coast
SLSQ Surf Carnival, 11 October, Rainbow Bay

Upcoming events in November 2008

Roxy Pro Trial for Trials Contest, 1-2 November, Gold Coast
RipCurl Into Summer Junior Challenge, 1-2 November, Tweed-Byron Coast
SLSQ Surf Carnival, 2 November, Kirra Beach
Surfing Australia Boys Surf Camp, 3-5 November, Tweed-Byron Coast
Surfing Australia Girls Surf Camp, 10-12 November, Tweed-Byron Coast
Lizzy Girls Surf Series Event 3, 15-16 November, Gold Coast
RipCurl Girls Go Surfing Day, 15-16 November, Australia-wide
Honolua Stand Up Paddle Challenge, 22-23 November, Gold Coast
SLSQ Ocean Assault, 24 November, Coolangatta
Surfing Australia Adult Surf Camp, 24-26 November, Tweed-Byron Coast

Source: Surfing Australia & Surf Life Saving Queensland

6. MEDIA COVERAGE

Gold Coast Bulletin, 1 October 2008, "Heyday became mayday at Kirra"

"Business people who have invested money into livelihoods at Kirra are getting impatient, but acknowledge there's unlikely to be a short-term solution to reviving the surf break. They're also furious at the lip service allegedly paid to them and the community by the sand bypass project."

Gold Coast Bulletin, 2 October 2008, "Tourism rides on surfing"

"The Gold Coast attracts almost 10.5 million overnight and day-trip visitors each year – that's almost 29,000 visitors a day – who, according to Tourism Research Australia figures, spend almost \$4.6 billion here each year. A total of 11,500 surfers make 64,000 surf visits to South Stradbroke in a year. The super bank at Snapper Rocks is believed to attract many times more."

Gold Coast Bulletin, 2 October 2008, "Beach-goers avoid Cooly's desert storm"

"Cr Betts said tourism providers around Coolangatta began about four years ago bemoaning the effects of the Tweed sand bypass system – the loss of surfing point breaks and the mammoth growth of beaches such as Coolangatta and Kirra. 'In the meantime, the beach has grown wider, and with summer approaching it's likely to only get worse.'"

Gold Coast Bulletin, 3 October 2008, "Fingal points finger"

"Fingal locals are convinced that the drawing of sand from the Tweed River entrance (which is pumped to nourish the Gold Coast's southern beaches) has led to a deficit of sand on their side of the river, causing unprecedented erosion."

Gold Coast Bulletin, 3 October 2008, "Special series: Save our beaches' (with historic photos)"

"In recent years, Kirra retailer Graham Nicholls has watched Kirra Beach eating its way into ocean, growing into a vast expanse which locals joke, blackly, is more suited to camel racing than swimming."

Tweed Daily News, 11 October 2008, "Kirra's sandy expanse – 'Beach too big to use'"

"If Kirra wins the Clean Beach Challenge it is because it is so wide nobody uses it, according to locals."

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

Gold Coast Bulletin, 13 October 2008, "Boat flips during bar-crossing demo"

"The boat flipped yesterday morning on its way across the bar and sparked a rescue.... 'The bar was passable with waves about 1.4m high,' said VMR media office Lockhart Olsen... 'They must have just picked a rough set of waves that sprung up and pipped him. Once it gets you, you can't do much with it.'"

Swellnet.com.au, 16 October 2008, Gold Coast Daily Surf Report

"...points are far more protected despite a lack of good banks on all 3 Burleigh/Alley/Snapper... A day of action planned for Currumbin Alley this Monday 20th, meeting at 7am, bring your spades to 'have a dig' protesting about Council's lack of action on Currumbin bar and banks."

Gold Coast Bulletin, 16 October 2008, "Save the Alley"

"The Surfrider Foundation has sent out an urgent SOS (Save Our Surf) for people to protest at Currumbin Alley on Monday morning. Concerned surfers claim local and state governments need to better manage the dredging, pumping and placement of sand from Currumbin Creek so that break does not become 'another Kirra disaster'."

Gold Coast Bulletin, 17 October 2008, "Dredging up Kirra fears"

"The problem is always going to be there until the State Government and Gold Coast City Council work together to fix the problem which was created when they built the groynes 20 years ago. We are going to lose Currumbin Alley point break like we've lost Kirra,' [said Surfrider Foundation spokesman Chris Butler]"

Tweed Daily News, 20 October 2008, "Tossed over on the bar – Two rescued after drift to Cook Isl."

"The men were rescued by Point Danger VMR after their boat, Tiara's Little Screamer, overturned on the Tweed bar just after 2.20am DST."

Gold Coast Bulletin, 20 October 2008, "Surf group digs in over Currumbin dredging"

"A surfing group took a symbolic dig at the state government at Currumbin Alley on the Gold Coast today, taking to the beach with shovels to protest over dredging in the area... The group warn that Currumbin will become another 'Kirra disaster', leaving the Gold Coast without another popular surf break."

Courier Mail, 21 October 2008, "Strong winds and savage storms to hit southeast"

"Weather bureau regional director Jim Davidson is predicting the likelihood of cyclones slamming into the coast this summer... there was some indication that a La Nina bias would continue. Since 1980, conditions like these had occurred three times and in each of the following summers a cyclone hit the east coast."

Gold Coast Bulletin, 21 October 2008, "King tide sends bodyboarders flying"

"Once every few weeks we get a king tide which causes a backwash of waves near the rocks at Snapper said [bodyboarder] Cody Harmer. "It's known by all the locals as the best spot for bodyboarders. What happens is the wave crashes onto the rocks then sucks back toward the ocean. As another wave rolls in you get between the two and get launched into the air."

Courier Mail, 21 October 2008, "Gold Coast surfers angry at build-up of NSW sand"

"The bypass was established seven years ago to keep the Tweed River navigable for boats, including the local trawler fleet, and at the same time buffer Gold Coast beaches against erosion. But so much sand has been pumped out that it has buried the prime southern Gold Coast surf breaks, resulting in a rising tide of surf rage as increasing numbers of boardriders compete for a dwindling supply of waves"

Gold Coast Bulletin, 22 October 2008, "World champ now D'bah king"

"Fanning said Duranbah – one of the world's most famous beachbreaks and a cradle for Australian pro surfing talent for decades – had always been his surfing 'home'. He said he and Karissa had been looking for a property on the hill above the waves for some time."

Gold Coast Bulletin, 23 October 2008, "Study ordered on silted creek"

"Coastal management experts will work with council officers in an attempt to fix the silted-up Currumbin Creek. An exhaustive estuarine modelling study is expected to focus on fixing the creek's sand build-up."

Gold Coast Bulletin, 27 October 2008, "Wild wet is on the way back"

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

"Wild rains that battered the Gold Coast last summer have been predicted to return next month... 'I won't be surprised if we see a cyclone down the Queensland coast in January, as far down as the border" said Haydon Walker from his Bunderberg research station yesterday."

Gold Coast Bulletin, 28 October 2008, "Skydivers set to get beach landing spot"

"North Kirra is the prefect spot for this sport and it sends a strong message that we are here to support the tourism industry," [Cr Chris Robbins] said."

Gold Coast Bulletin, 29 October 2008, "More women get on board"

"Female surfing on the Gold Coast has been given a major boost with the introduction of the inaugural Roxy Pro Trials for Trials contest at the weekend."

Gold Coast Bulletin, 30 October 2008, "Coast makes bucket list"

"'Frommer's 500 Places To See Before They Disappear', recently released in Australia, listed the Gold Coast as one of the destinations at risk – in the Coast's case from over-development and climate change."

Tweed Daily News, 30 October 2008, "Jet skier feared death in hit-and-run"

"The Tugun volunteer who was assisting with the running of an outrigger canoeing regatta from Tweed Heads to Runaway Bay on Saturday has been left with three stitches above his eye and lacerations to his head and is battered and bruised after his jet-ski was hit by a powerboat as it crossed the Tweed Bar."

Tweed Daily News, 30 October 2008, "Making a splash on first day"

"'This big wave came and this surfboard rider tried to catch it and lost control of his board. His board flew out and hit the [8-10 year old] girl. She fell off her bodyboard and went under the wave,' [said surf lifesaver David Heggie at Rainbow Bay]."

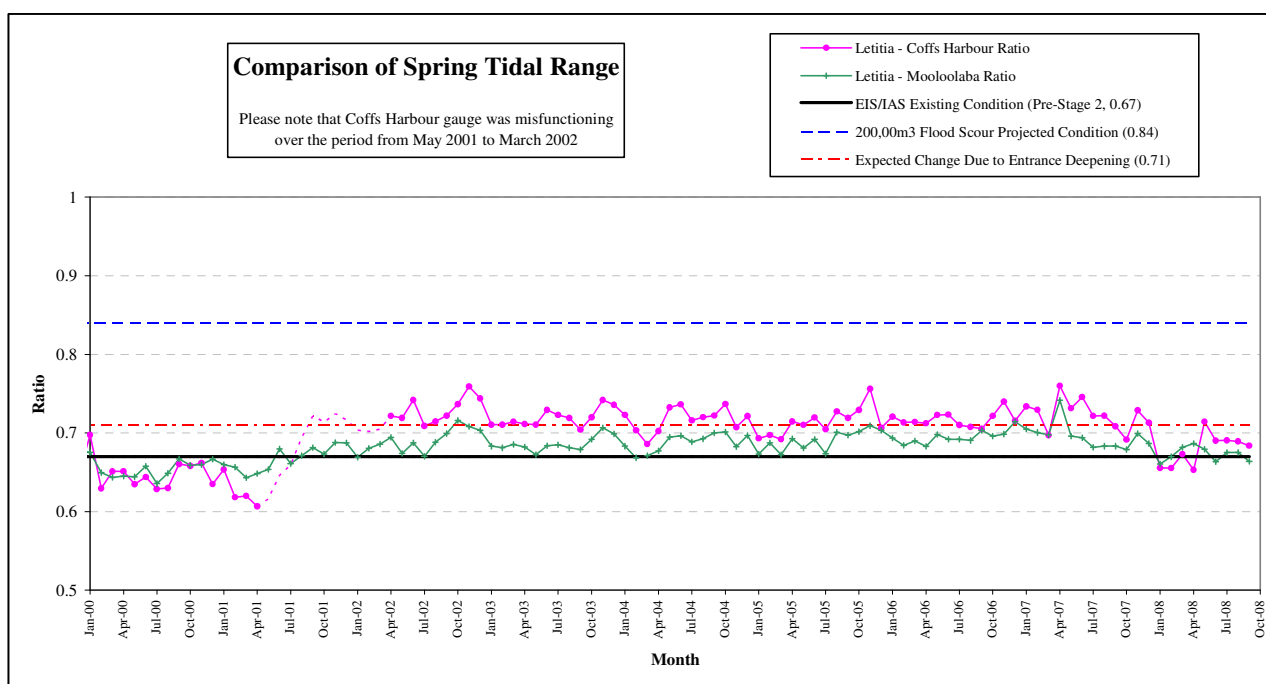
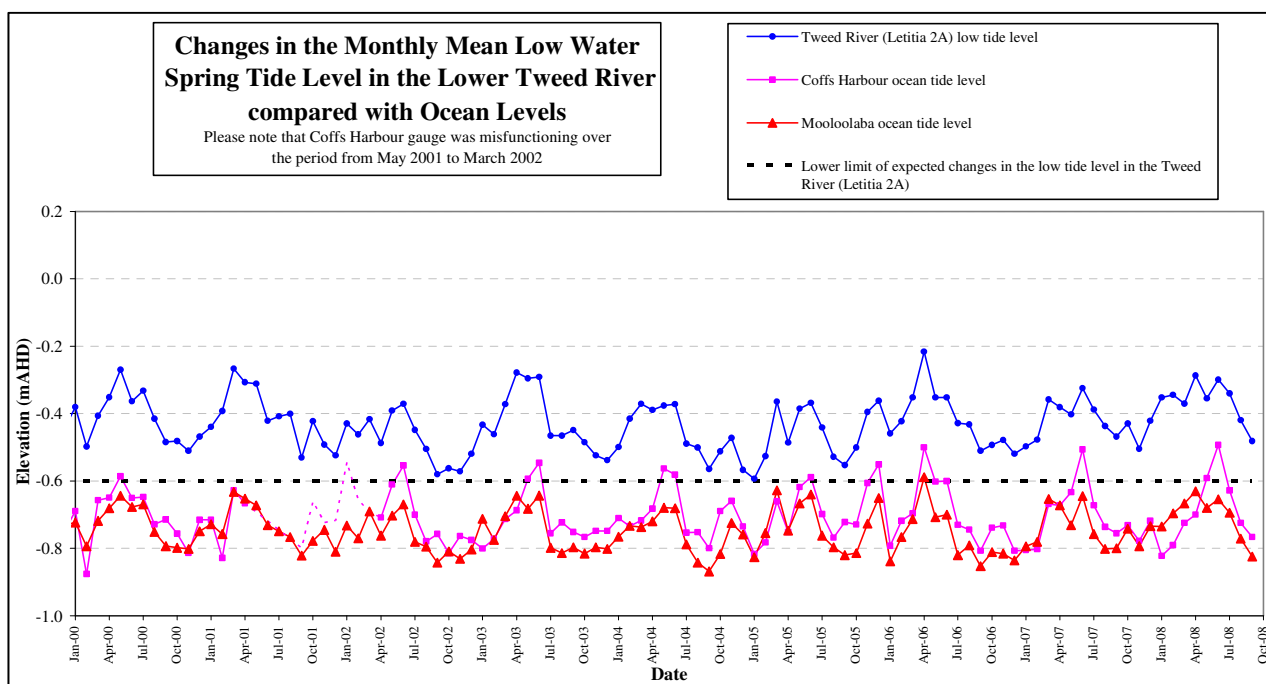
7. TWEED LOWER ESTUARY TIDE CONDITIONS

Tweed River tide data for October 2008 is currently being analysed. Results will be presented in the project's November 2008 Environmental Monitoring Summary.

Tweed River Mean Low Water Spring (MLWS) tide level for September 2008: -0.48 m AHD

Letitia 2A tide data for September 2008 mirrored the Mooloolaba ocean tidal trends indicating that the TRESBP had not had a significant impact on the Lower Tweed River tidal range.

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



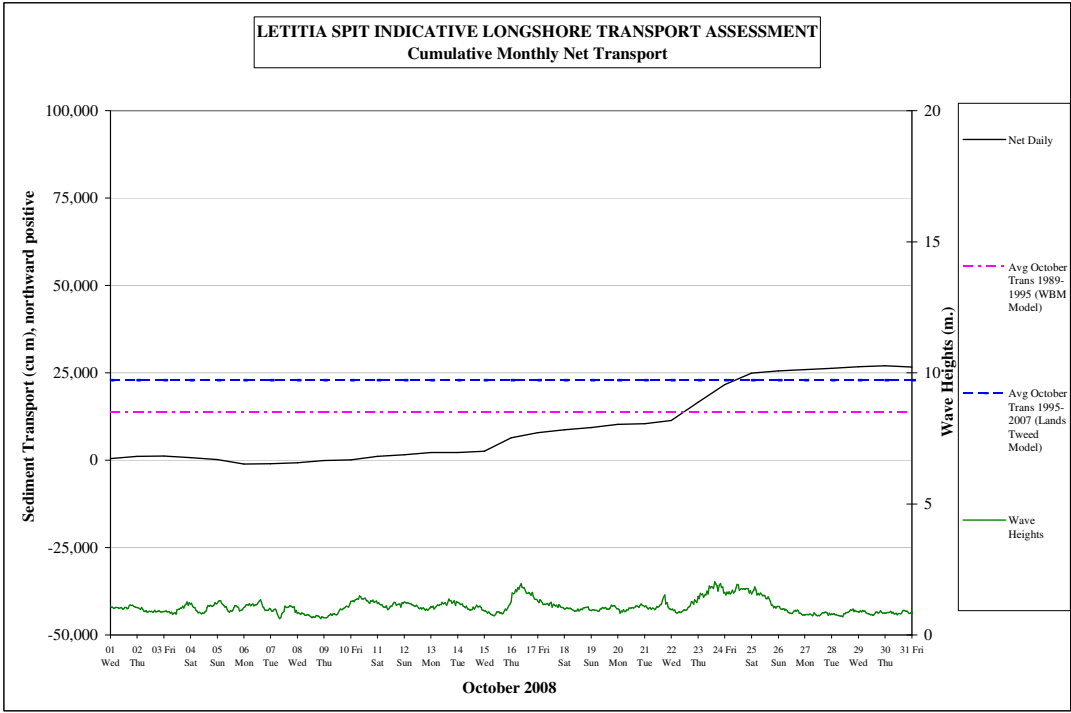
8. INDICATIVE LONGSHORE TRANSPORT

The longshore sand transport information presented in the graph overleaf 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.

Oct 2008 estimated natural net sand transport (moving along Letitia towards Tweed entrance): 27,000m³.

This result is slightly higher than the average sand transport for the month of October.

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



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

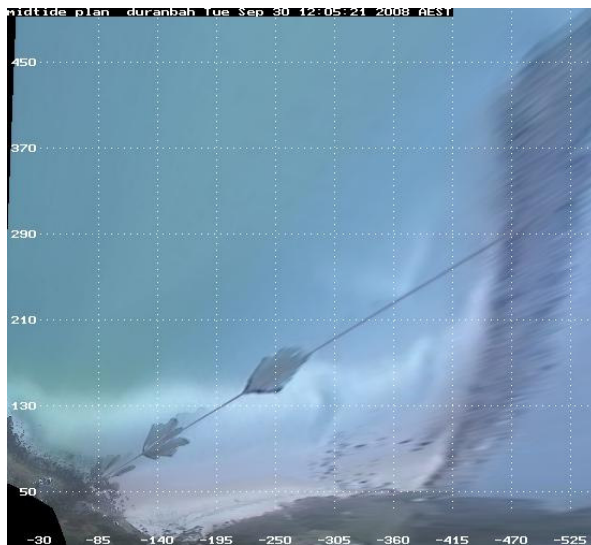
9. ARGUS COASTAL IMAGING

UNSW monitors Duranbah Beach to North Kirra Beach for the project using an ARGUS coastal imaging system. Hourly and archived images are available on the internet at the following address:

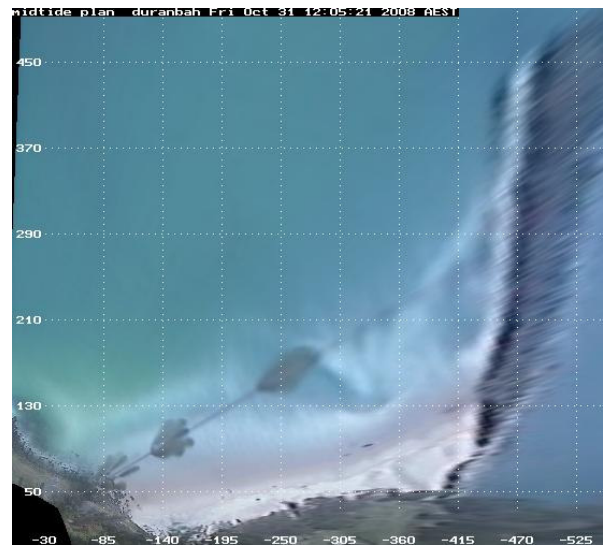
<http://www.wrl.unsw.edu.au/coastalimaging/public/tweed/index.html>

Merged and rectified images taken at mid tide for each of the locations are shown below.

DURANBAH BEACH

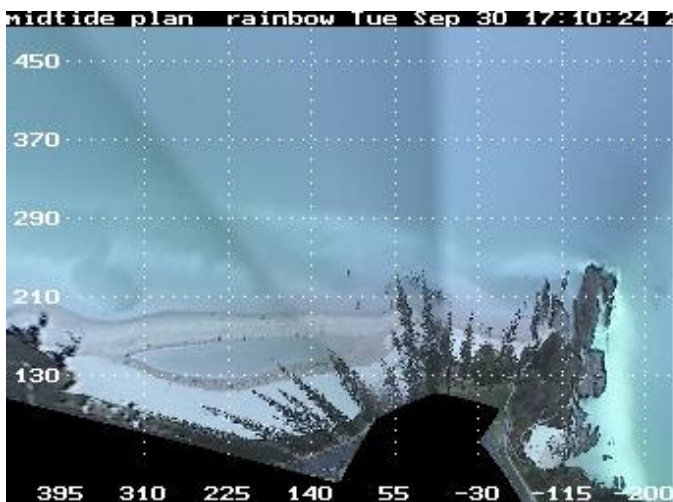


30 September 2008

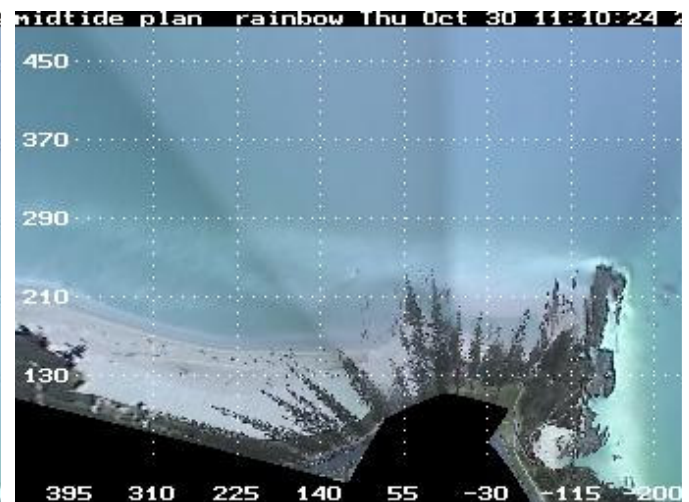


31 October 2008

RAINBOW BAY



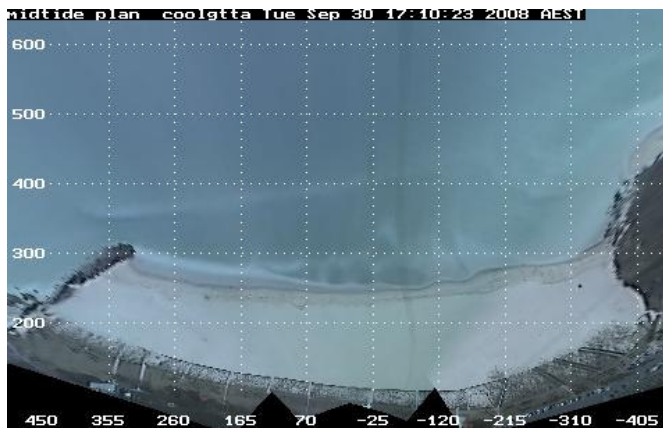
30 September 2008



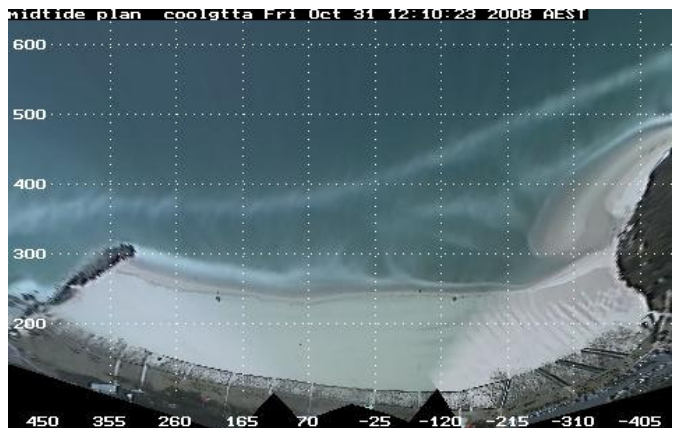
30 October 2008

COOLANGATTA - GREENMOUNT

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

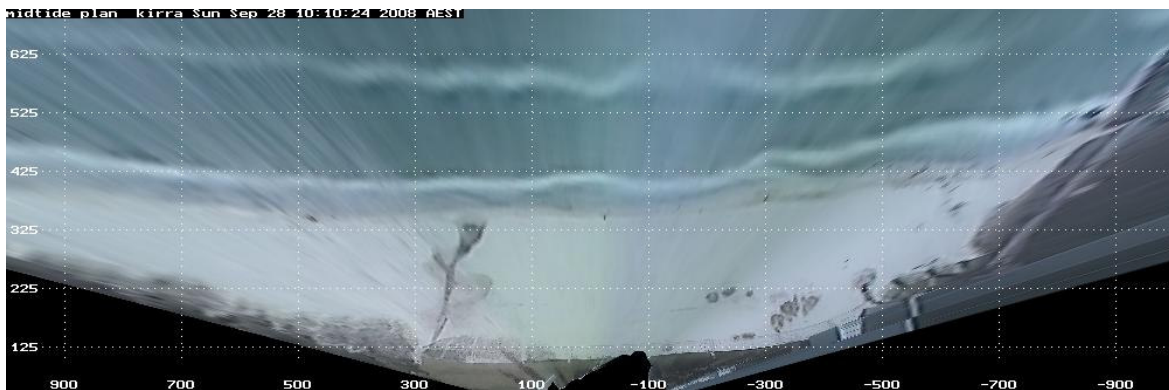


30 September 2008

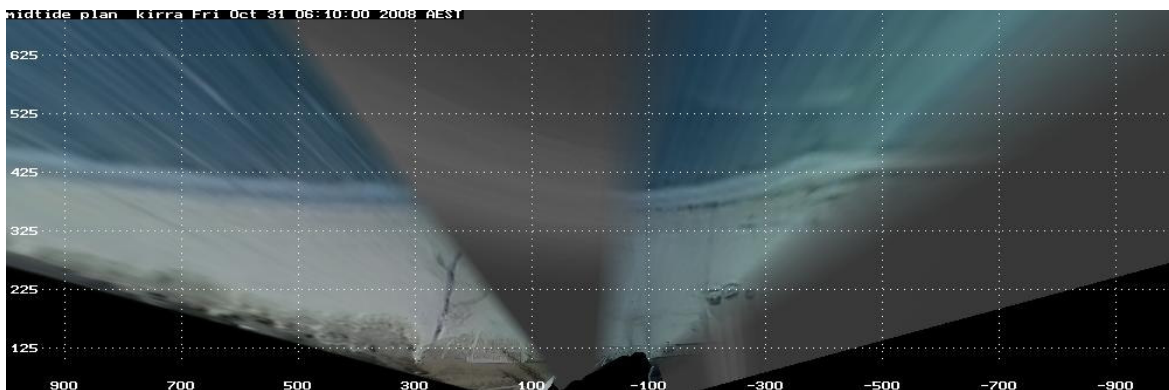


31 October 2008

NORTH KIRRA – KIRRA



28 Sep
2008



31 Oct
2008
(camera
problem
now
rectified,
current
photos
available
on project
website)

9. CONTACT

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:

Ian Taylor
Tweed River Entrance Sand Bypassing Project
NSW Department of Lands
ian.j.taylor@lands.nsw.gov.au
PO Box 624, Ballina, NSW 2478
Ph: (02) 6620 – 5501
Fax: (02) 6681 – 6944