

Tweed River Entrance Sand Bypassing Project

Letitia Spit to Kirra



Monthly Environmental Monitoring Summary

MARCH 2009

Department of Lands 




**Queensland
Government**
Environmental
Protection Agency

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1. EXECUTIVE SUMMARY

In March 2009:

- 48,644 m³ of sand was pumped.
- Entrance conditions were good, with 2,698 boat crossings recorded (48% above average for March)
- Surf quality was average to excellent. Two high sea events occurred (max H_{sig} = 4.1m)
- Tweed River tide data for March 2009 has not yet been received. February 2009 river tides conformed to ocean tide patterns and were not significantly impacted by the project.
- The estimated amount of sand moving north towards the Tweed River Entrance by natural processes was 61,000 m³ (approximately equal to the March average).

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.

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3. SAND PUMPING & DREDGING ACTIVITIES

Sand Delivery for March 2009

	PUMPED		MAR 2009 TOTAL DELIVERY
Location	Snapper Rocks East	Duranbah	
Amount (m³)	48,644 m ³	0 m ³	48,644 m ³

Total Sand Delivery This Year (January to March 2009)

	PUMPED	DREDGED	2009 TOTAL DELIVERY
Amount (m³)	121,938 m ³	0 m ³	121,938 m ³

Total Sand Delivery Last Year (January to December 2008)

	PUMPED	DREDGED	2008 TOTAL DELIVERY
Amount (m³)	585,809 m ³	198,178 m ³	783,987 m ³

Total Stage 2 Delivery to Date (May 2000 to March 2009)


	PUMPED	DREDGED	TOTAL DELIVERY STAGE 2
Amount (m³)	5,127,835 m ³	1,979,755m ³	7,107,590 m ³

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4. TWEED RIVER ENTRANCE CONDITIONS

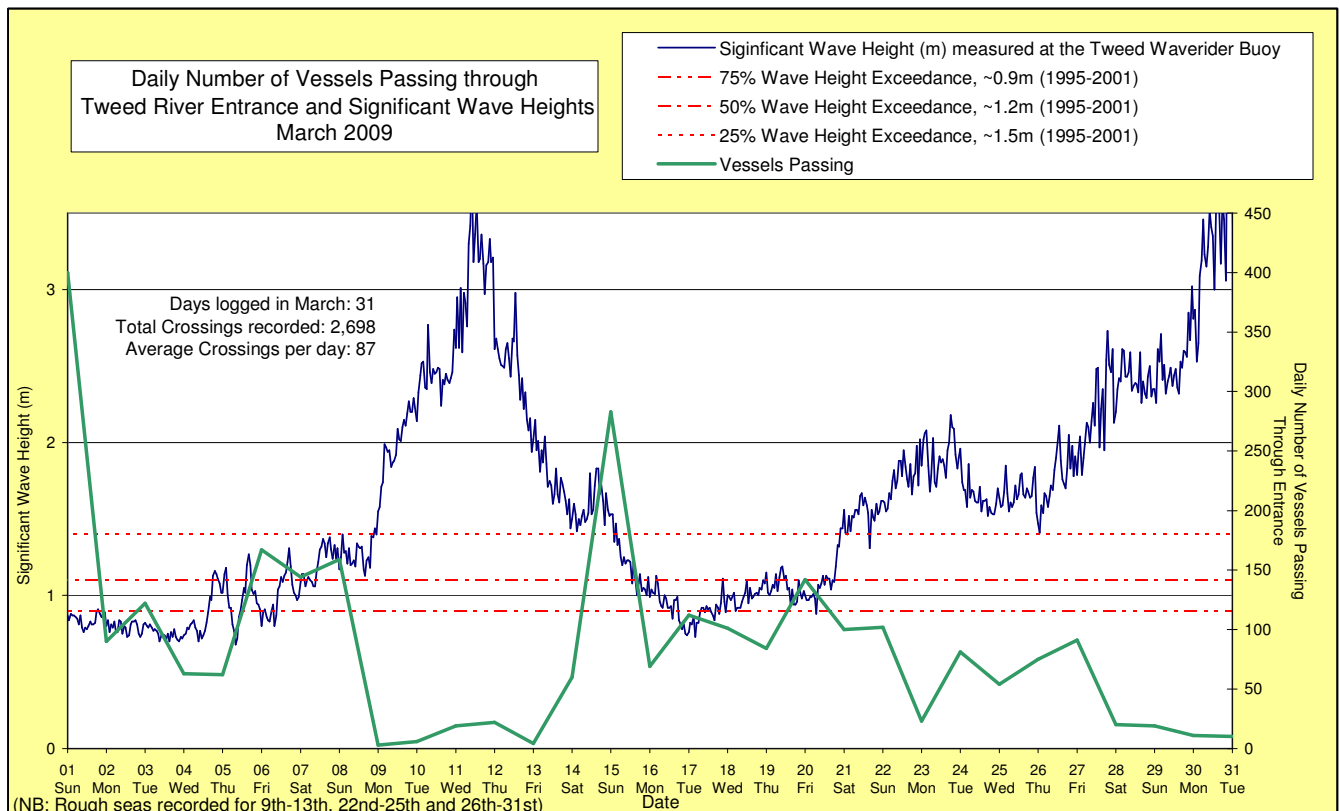
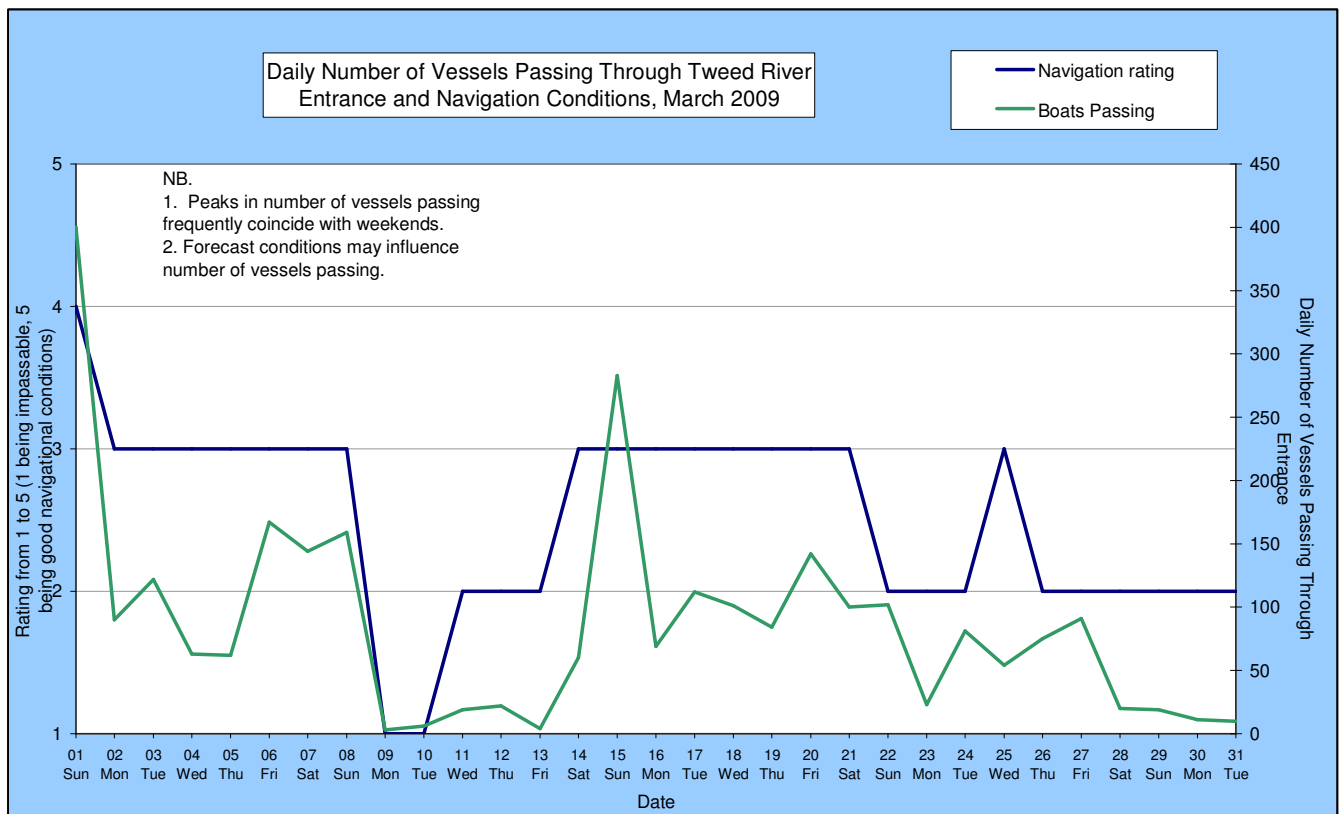
VOLUNTEER MARINE RESCUE REPORTS

Volunteer Marine Rescue Pt Danger has been monitoring entrance conditions on behalf of TRESBP since 20 January 2002. Monitoring results for March 2009 are presented below.

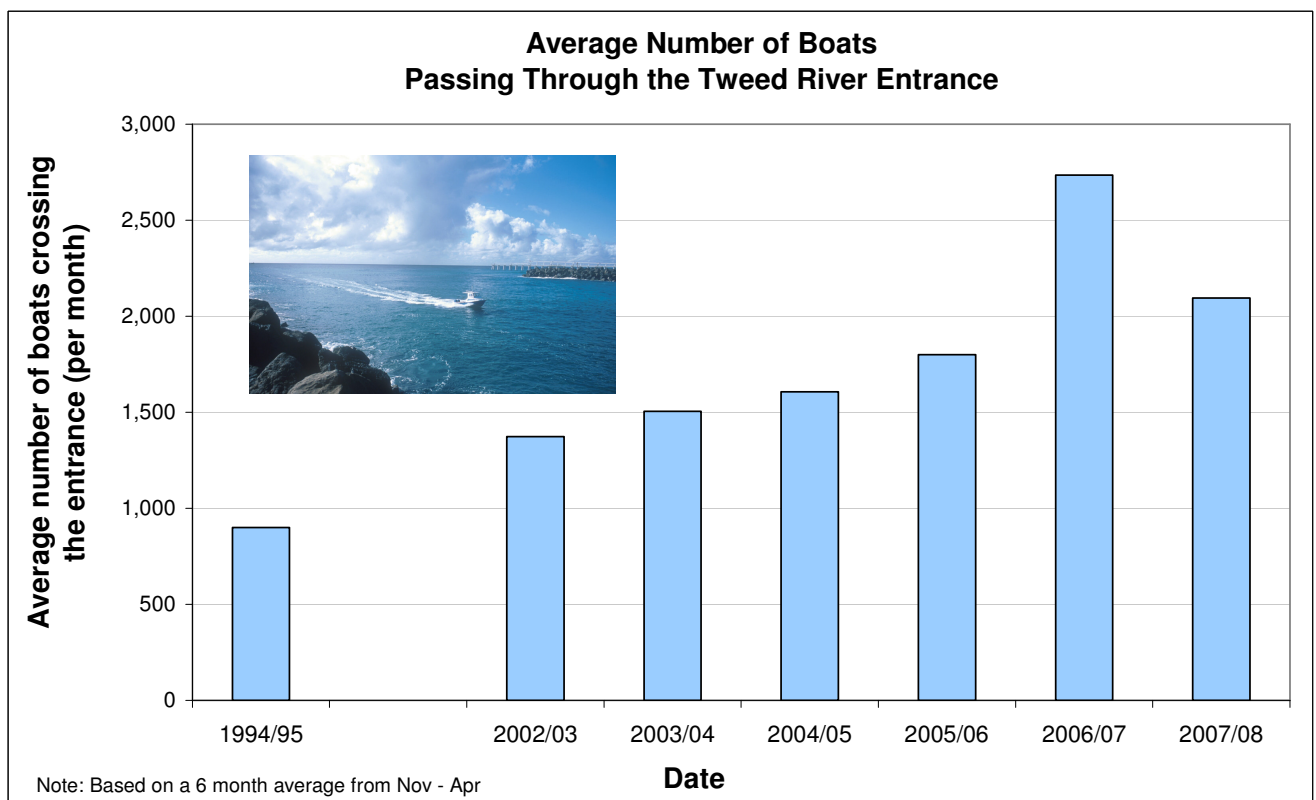
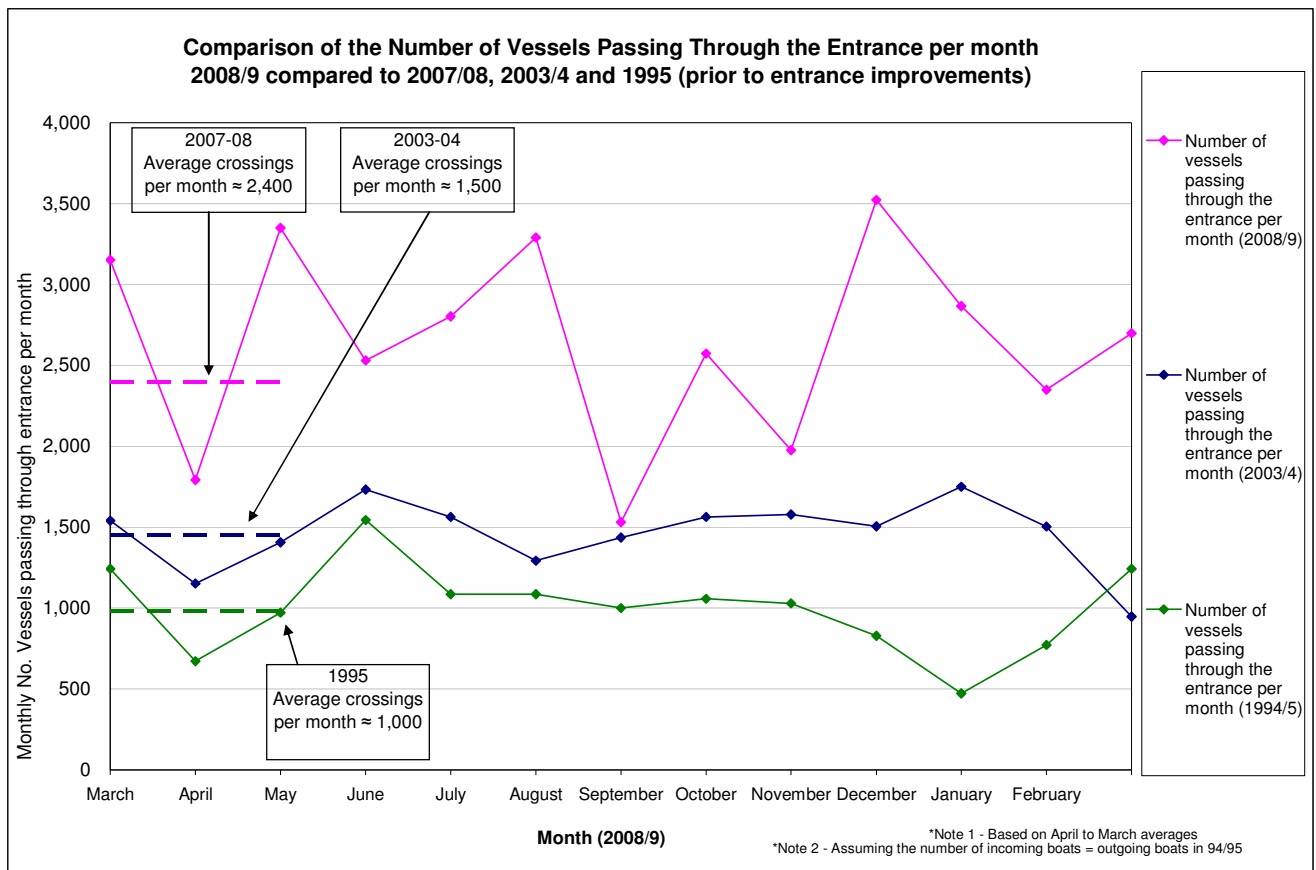
 Weekends and public holidays

Date	Entrance Conditions	Navigation Rating Impassable-----Good					Number of Boats
		Impassable	Difficulty Encountered	Some Difficulty Encountered	Relatively Good Crossing	Good Conditions	
1 st	Moderate, 20 Kt						400
2 nd	Moderate, 15 Kt						90
3 rd	Moderate, 8 Kt						122
4 th	Moderate, 21 Kt						63
5 th	Moderate, 24 Kt						32
6 th	Moderate, 14 Kt						167
7 th	Moderate, 15 Kt						144
8 th	Moderate, 16 Kt						159
9 th	Rough, 32 Kt						3
10 th	Rough, 30 Kt						6
11 th	Rough, 26 Kt						19
12 th	Rough, 30 Kt						22
13 th	Rough, 10 Kt						4
14 th	Moderate, 12 Kt						60
15 th	Moderate, 19 Kt						283
16 th	Moderate, 17 Kt						69
17 th	Moderate, 8 Kt						112
18 th	Moderate, 18 Kt						101
19 th	Moderate, 12 Kt						84
20 th	Moderate, 15 Kt						142
21 st	Moderate, 25 Kt						100
22 nd	Rough, 20 Kt						102
23 rd	Rough, 20 Kt						23
24 th	Rough, 14 Kt						81
25 th	Moderate, 16 Kt						54
26 th	Rough, 19 Kt						75
27 th	Rough, 21 Kt						91
28 th	Rough, 28 Kt						20
29 th	Rough, 25 Kt						19
30 th	Rough, 28 Kt						11
31 st	Rough, 20 Kt						10
							2698

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5. SURFING CONDITIONS

Dominant swell condition: No dominant condition this month. Swells built up steadily to high sea events and waned steadily following high sea events. Swell direction was mainly from the ENE to E.

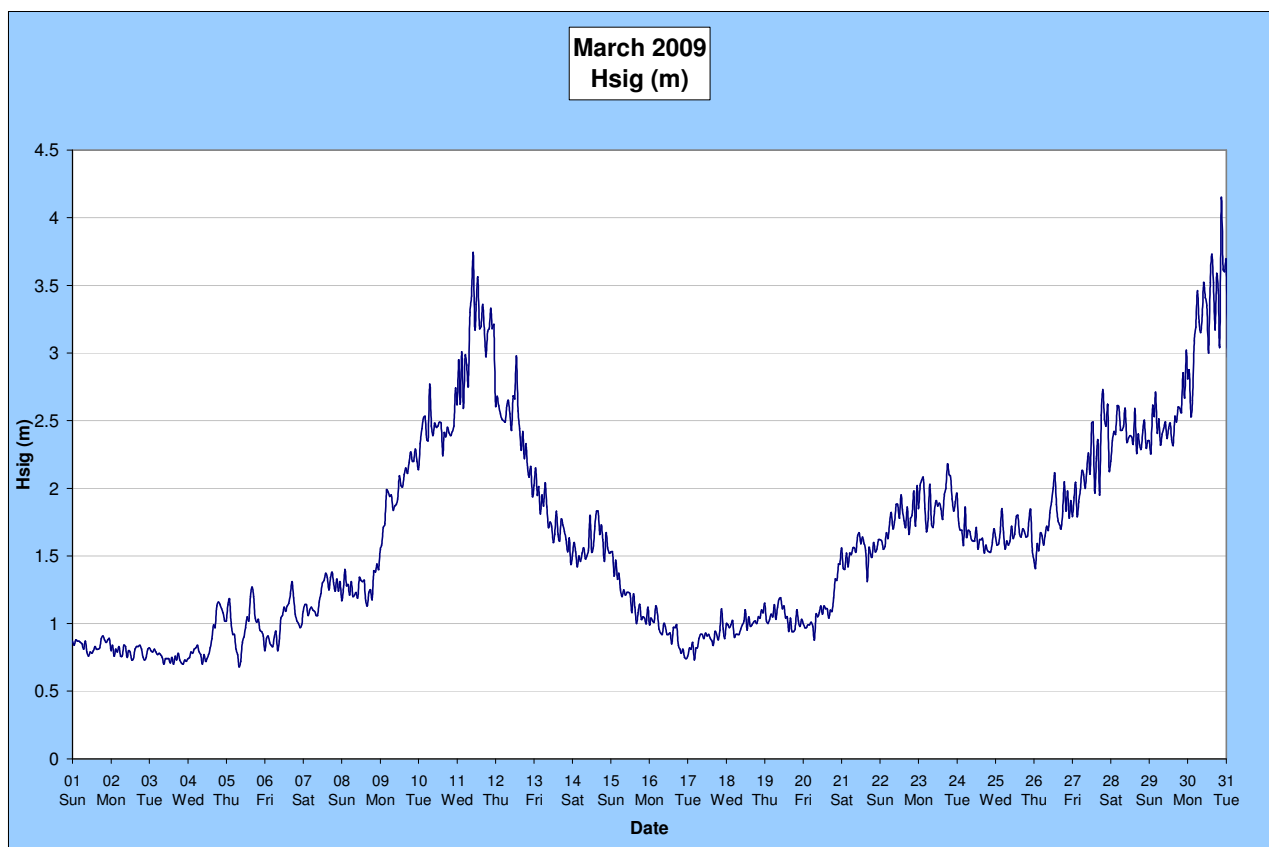
High sea events: 11-12 March (reaching 3.7 m Hs), 30-31 March (reaching 4.1 m Hs)

Monthly minimum significant wave height: 0.7 m on 5 March

Monthly maximum significant wave height: 4.1 m on 31 March

Number of days with waves below 1.0 m: 11 days

Number of days with waves above 2.0 m: 13 days (Source: Tweed & Brisbane Waverider Buoy; BoM)



A link to data recorded by the Tweed Waverider Buoy is available at
<http://www.epa.qld.gov.au/projects/waves/site.cgi?siteid=28&noback=4>

SURF & SURF LIFE SAVING AND OTHER EVENTS

Events in March 2009

Printpoint Masters Event, 21-22 March, Gold Coast

Malfunction Longboard Competition, 23-25 March, Tweed-Byron Coast

Upcoming events in April 2009

High Performance Boys Surf Camp, 15-17 April, Tweed-Byron Coast

Goldsteins JR Open, 18-19 April, Gold Coast

High Performance Boys Surf Camp, 20-22 April, Tweed-Byron Coast

Source: Surfing Australia & Surf Life Saving Queensland

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SURF REPORT OVERVIEW

Based on media and internet daily surf reports and observations by project volunteer Brian Mason.

Date	Surfing Conditions
1-6 March	Very small waves, variable winds.
7-8 March	Small waves, wind affected at times.
9 March	Messy conditions, wave height on the increase.
10-12 March	Stormy conditions. Excellent surf quality for experienced surfers. Large peeling waves. Strong sweep. Jet-skis in use.
13-16 March	Average waves. Sloppy conditions.
17-21 March	Very small, clean waves.
22-25 March	Average waves. Fun conditions. Afternoon sea-breezes affecting surf quality.
26-27 March	Uneven swell on the increase.
28-29 March	Excellent surf quality. Large, clean waves. Light winds.
30-31 March	Excellent surf quality for experienced surfers. Very large waves. Strong winds. Strong sweep. Jet skis in use.

6. MEDIA COVERAGE

Gold Coast Bulletin, 2 March, "Roxy Pro"

"Coolangatta is the ideal location for a world surfing contest, with Snapper Rocks' infamous Superbank one of the best right-handers on the planet."

Gold Coast Bulletin, 2 March, "Quiksilver Pro"

"The Quiksilver Pro folks are based at Coolangatta and aim to stage the event at the iconic Snapper Rocks surf break, famous for its Superbank, but it's a mobile feast."

Gold Coast Mail, 5 March, "'Sandman' minister to visit Kirra"

"Mr Kelly...is due to visit Kirra tomorrow, March 6. He will meet Currumbin's Labor candidate Michael Riordan and discuss advice from Queensland government representatives and his NSW department."

Gold Coast Bulletin, 7 March, "Quiksilver and Roxy Pros heading back to Coast"

"If the swell gets beyond 2-3m, the exposed sand banks at Snapper Rocks will struggle to hold the size, which means the contest must be shifted to either Greenmount or Kirra where it is more protected.... During the past seven years, 10 million cubic tonnes of sand have smothered the Kirra point break. As a result the wave only breaks under persuasion from huge swells and no longer fires perfect barrels."

Gold Coast Bulletin, 7 March, "Burleigh sand dump may create Coast waves"

"Burleigh point could be transformed into a "mini Superbank", with plans to examine the dumping of sand off the headland. Council officers will prepare a report this month about pumping sand from Tallebudgera Creek to the ocean floor off Burleigh headland."

Gold Coast Bulletin, 9 March, "Coast SES orders sandbags for Hamish"

"The Gold Coast State Emergency Service is preparing for Tropical Cyclone Hamish as meteorologists warn its fury will be felt in southeast Queensland."

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Brisbane Times, 9 March, "No tears for Slater as Pro continues"

"Organisers said they were contemplating a move to nearby Kirra for the final two days of competition. Cyclone Hamish's movements off the north Queensland coast have whipped up waves on the south-east coast, with the potential for even bigger barrelling rides at the once famous surf spot. If the competition moved, it would be the first time in 12 years Kirra has hosted a world tour even."

Gold Coast Bulletin, 10 March, "Cyclone may whip up fairytale Kirra finish"

"During the past seven years, 10 million cubic metres of sand have smothered the once mighty point break. Now waves only break during a huge swell and no longer fire perfect barrels. ASP President Wayne "Rabbit" Bartholomew said it was sad Kirra could only be surfed during cyclonic swells now. "It'll be exciting to see the Quiksilver Pro there but it'd be more exciting to see it there when Kirra is proper Kirra," he said."

Gold Coast Bulletin, 10 March, "Coast told to prepare for severe weather"

"TC Hamish is expected to slow down and gradually weaken but damaging wind gust to 90km/h, dangerous surf conditions and abnormally high tides are expected over coast and island communities between Sandy Cape and Coolangatta over the next few days."

Gold Coast Bulletin, 10 March, "Quiksilver Pro moved north"

"Due to an increased swell and strong winds as a result of Cyclone Hamish, competition has been moved north from the primary contest site at Snapper Rocks to more protected surf in between Coolangatta and Kirra."

Gold Coast Bulletin, 11 March, "Disaster team warns Coast to prepare"

"Dangerous surf and bar conditions and abnormally high tides are expected along the coast over the next few days. Damaging wind gusts are possible on the exposed coast."

Tweed Daily News, 11 March, "Cyclone Hamish winds pound coast"

"Severe TC Hamish continues to produce gale force winds and large waves along the southeast Queensland coast."

Gold Coast Bulletin, 11 March, "Fanning mourns vintage Kirra"

"Former world champion Mick Fanning said it was frustrating Kirra was now nothing like when the last ASP World Tour even was held there in 1996. "If Kirra had its banks right now it would be the best contest ever," he said. "There are the odd glimpses but it's not the real Kirra. That's why the Government should really have a look at what they're doing to Mother Nature."

Tweed Daily Mail, 11 March, "Fundraiser to help Kirra push"

"The Bring Back Kirra campaign will get a financial boost from a charity auction and dinner on tonight. Wayne "Rabbit" Bartholomew, academic Neil Lazarow and lawyer Chirs Nyst will form an expert panel at the Shifting Sands dinner."

Gold Coast Bulletin, 12 March, "Beaches closed: Crazies risk lives"

"Every beach was closed all day on the Gold Coast yesterday as severe weather warnings were issued for 2m swells, high tides and severe winds."

Gold Coast Bulletin, 12 March, "Parkinson calls for Kirra's resurrection"

"Joel Parkinson, the newly crowned 'King of Kirra' following his win at the Quiksilver Pro yesterday, has made an impassioned plea to revive the sand-choked point. Accepting his trophy on the podium, Parkinson added his voice to the thousands demanding the return of the world's best barrelling wave."

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Tweed Daily News, 12 March "Parko's king of Kirra"

"Fresh from the water after an epic Quiksilver Pro victory at Kirra yesterday, Coolangatta's Joel Parkinson used his speech to point out that Kirra still "sucks"...Both sides of Queensland politics have made election promises to spend at least \$1.5 million to save Kirra."

Gold Coast Bulletin, 13 March, "No shift in Kirra desert sands"

"Savage seas whipped up by ex-tropical cyclone Hamish might have shucked sand away from several Gold Coast beaches, but they did little to dent the Kirra desert."

Tweed Daily News, 13 March, "Parkinson on top of the world with win"

"In his winning speech, Parko stated "Kirra sucks in its present state" and encouraged the community to get behind the campaign to Bring Back Kirra."

Gold Coast Bulletin, 19 March, Surfing Column "Making waves"

"You see, it took two of the absolute best surfers in the world, ferried around by best-of-breed jet ski operators, to make the place [Kirra] surfable. That reality is not available to the every day punter who wants to ride Kirra again, so it was a sobering reflection by the two times Quiksilver Pro champ," [said Rabbit Bartholomew]."

Tweed Daily News, 19 March, Letter to the Editor "The great Kirra cover-up" from John Standing

"Under the 'contracted' system, large-scale pumping events have compromised designated southern Gold Coast swimming beaches for up to six months annually. Duranbah Beach in NSW now requires an average daily 150m³ of sand pumped to maintain the beach dune zone. The Letitia Spit and Fingal areas are now rapidly being eroded."

Tweed Sun, 19 March, "Early sand plan to rescue beach"

"Cyclone Hamish may force the TRESBP to bring forward next month's planned 'drop of sand' on Duranbah Beach."

Gold Coast Bulletin, 24 March. "Super swell fever set to hit workplaces"

"Everywhere has got good waves, the points, the beach breaks and the reefs, all the way south to Coffs Harbour. It's going to be a really good period of surfing." Mr Matson said the spread of waves should help to reduce surf rage..."The more consistent the swell the more it spreads out the surfers, especially at places like Snapper where you are going to get a few hundred."

Tweed Border Mail, 26 March, "Re-elected Stuckey vows to support "Bring Back Kirra"

"Ms Stuckey has now vowed to pressure the government to fix the Kirra surf break, swamped under an excess of sand pumped from the Tweed River Sand Bypass."

Courier Mail, 27 March, "Surfers enjoy barrels of fun; Kirra returns to its best"

"Surfers are salivating at the prospect of a super Saturday with near perfect conditions across the southeast. The bumper swell has seen Kirra on the Gold Coast return to its former glory."

Gold Coast Bulletin, 28 March, "Swell getting sweeter"

"This is a perfect groundswell," said Swellnet surf forecaster Ben Matson. "The best thing about it is the consistency and quality, it's a real A-grade swell. It's what every Queensland surfer dreams of."

Gold Coast Bulletin, 31 March, "More big seas and dangerous surf"

"There is a strong sweep and big swell attracting many boardriders down the south end of the Coast. Boardriders are having a ball at Kirra and Snapper. It would be a great spectacle for beachgoers to watch some of the world's best surfers hit the waves down there."

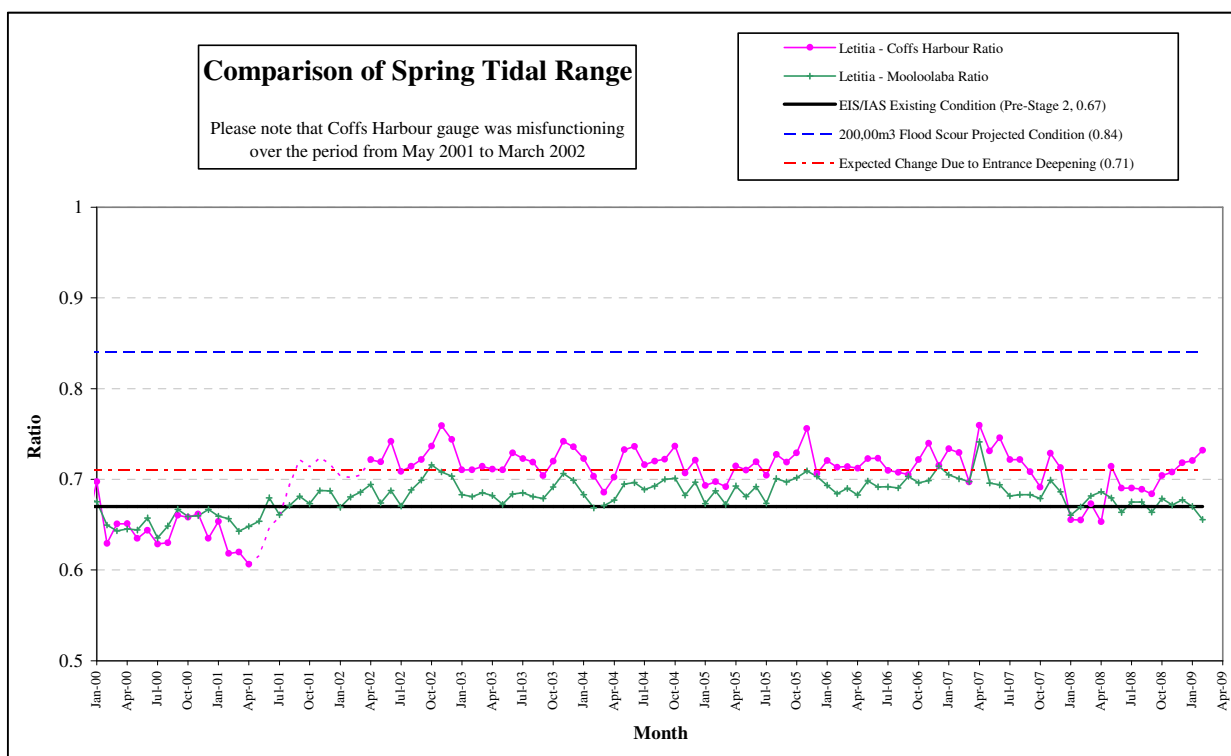
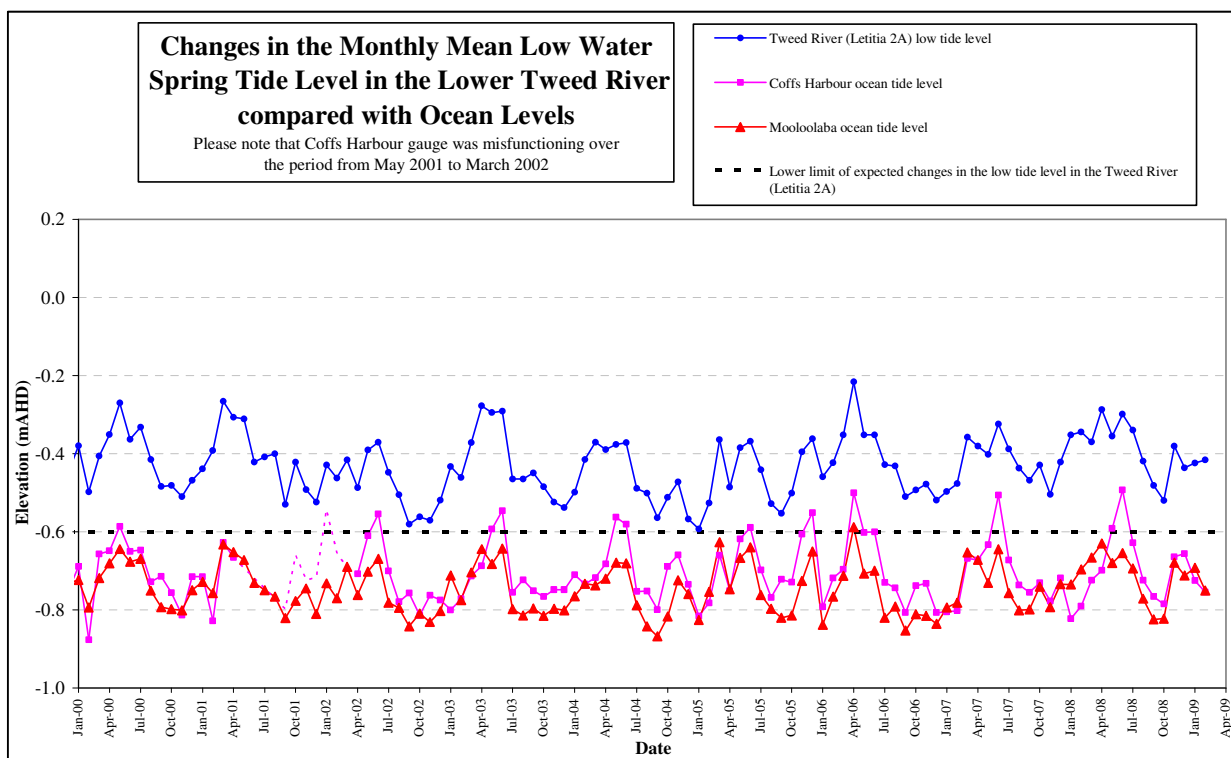
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7. TWEED LOWER ESTUARY TIDE CONDITIONS

Tweed River tide data for March 2009 is currently being analysed. Results will be presented in the project's April 2009 Environmental Monitoring Summary.

Tweed River February 2009 Mean Low Water Spring (MLWS) tide level: -0.416 m AHD

Letitia 2A tide patterns for February 2009 were similar to ocean tidal trends (though slightly elevated due to consistent catchment rain over January and February) indicating that the TRESBP had not had a significant impact on the Lower Tweed River tidal range.



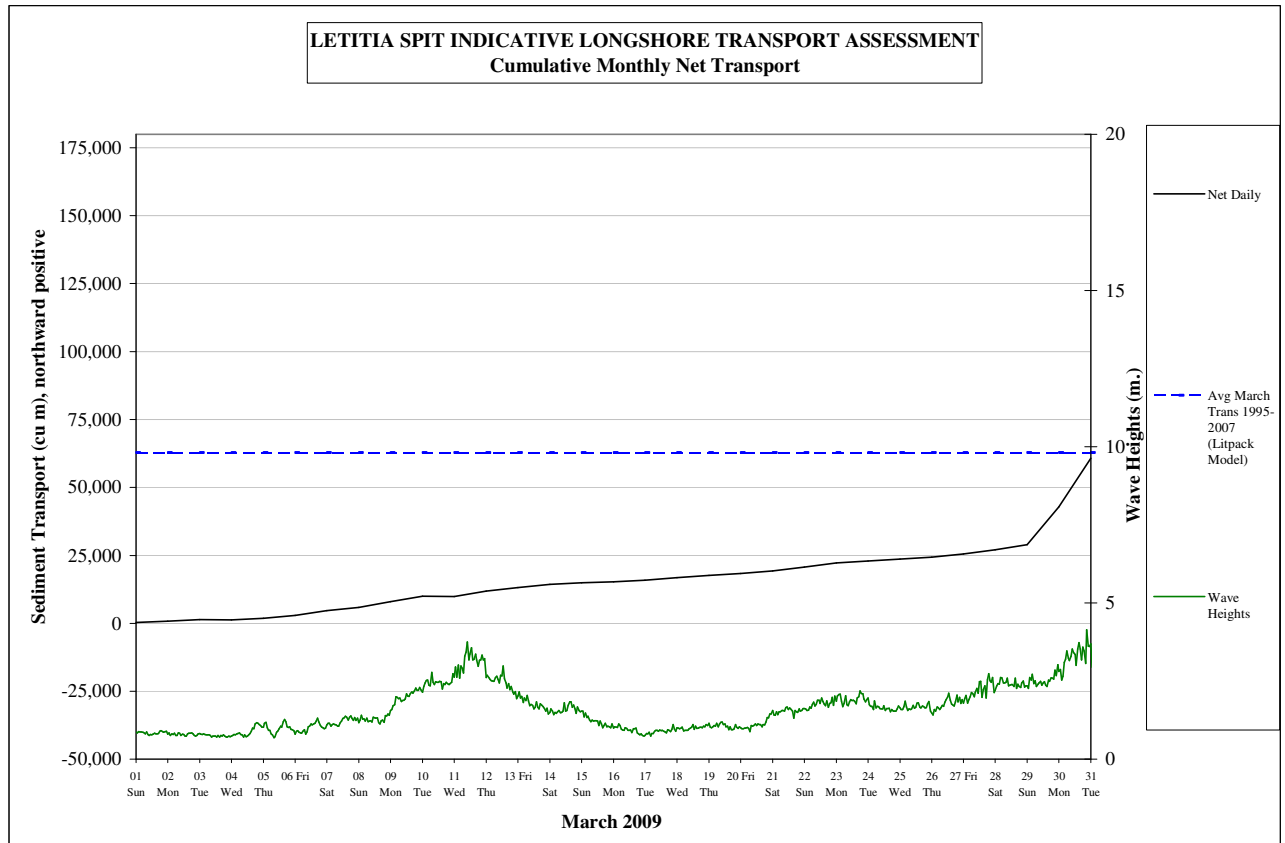
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8. INDICATIVE LONGSHORE TRANSPORT

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.

March 2009 estimated natural sand transport (moving N towards Tweed entrance): 61,000 m³.

This result is roughly the average sand transport for the month of March.



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.

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DURANBAH BEACH

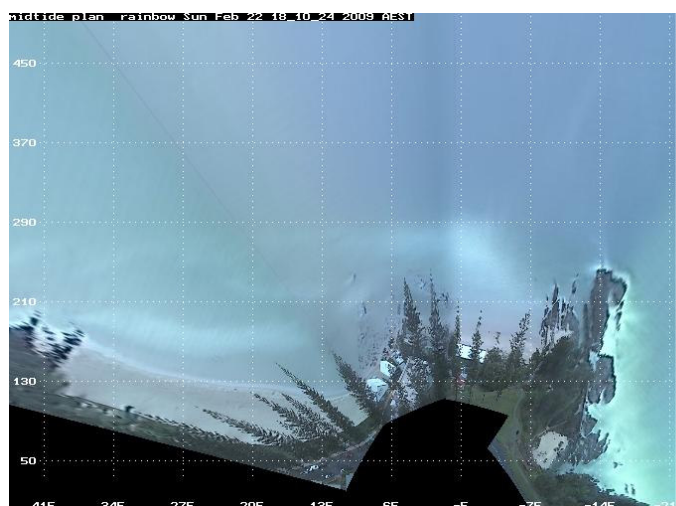


22 February 2009

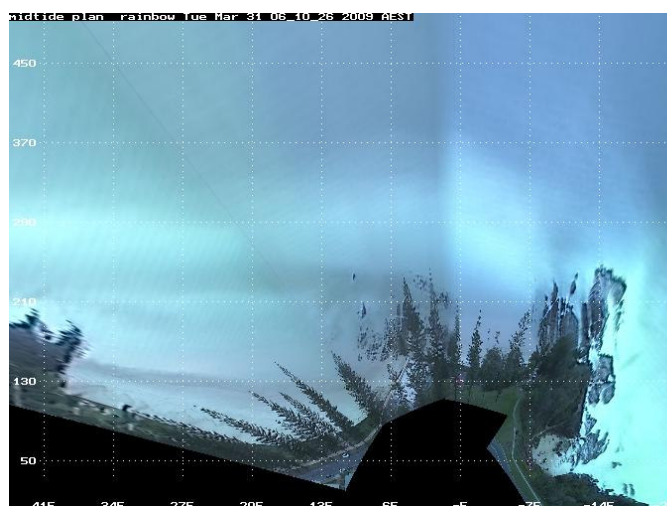


31 March 2009

RAINBOW BAY

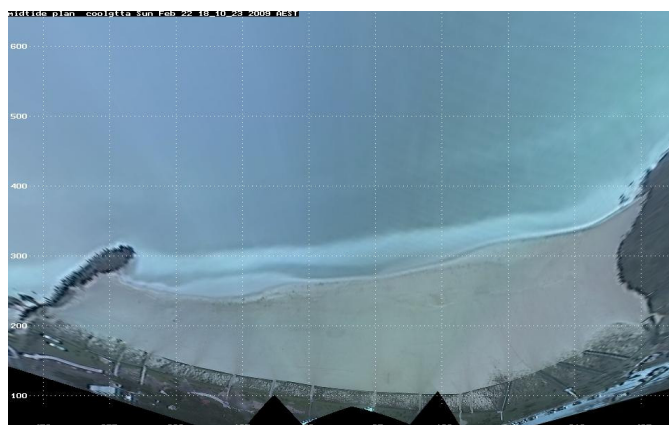


22 February 2009

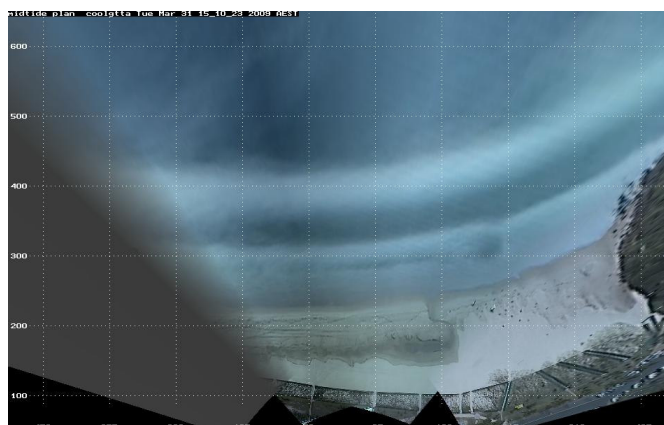


31 March 2009

COOLANGATTA - GREENMOUNT



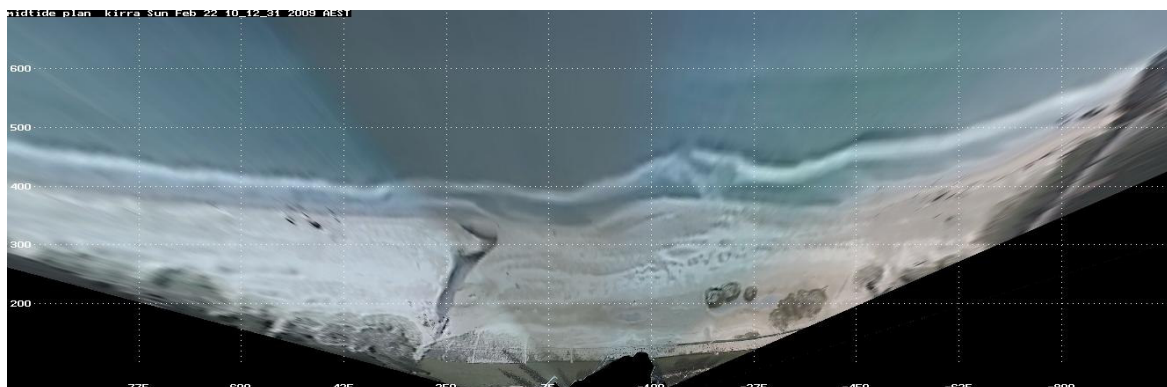
22 February 2009



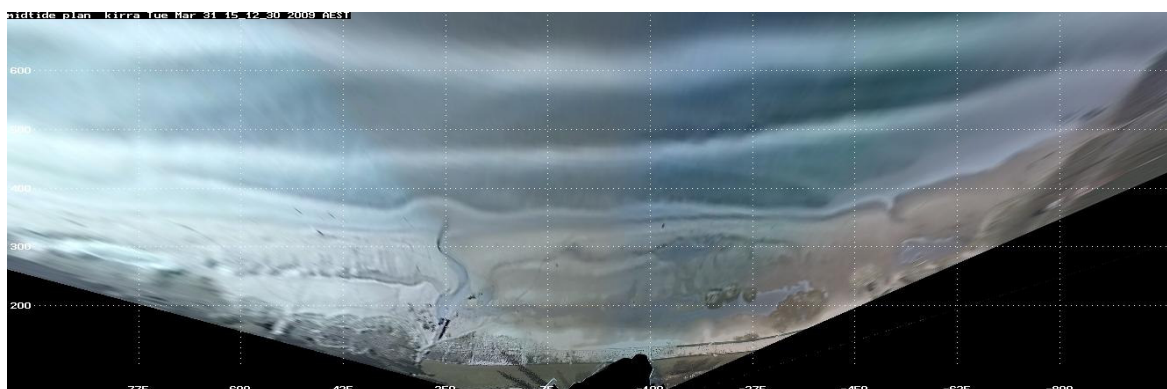
31 March 2009 (camera malfunction under repair)

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NORTH KIRRA – KIRRA



22 Feb
2009



31 Mar
2009

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:

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