

# Pacific Highway upgrade

## Monthly achievement report

AUGUST 2011



Looking south west at sheet piling installation, adjacent to the Macleay River at Frederickton, on the Kempsey bypass project



August 2011  
67 km of highway  
under construction  
1645 workers on site  
For overall upgrading  
strategy for the next  
five years, refer  
to the last page

This achievement report will provide you with information about Pacific Highway upgrade projects, including the current status and key activities carried out on construction projects over the last month. As at 31 August 2011, 337 kilometres are completed dual carriageway, 67 kilometres are under construction, and about 128 kilometres are being prepared for construction. Planning is also being progressed on the remaining single carriageway sections of highway. About 51 per cent of the final highway length of 664 kilometres is now dual carriageway.

# Bulahdelah upgrade

Upgrading the Pacific Highway

## UNDER CONSTRUCTION

**Contractors:** Boulderstone Pty Ltd.

**Form of contract:** Construction contract

**Workers on site:** 302

**Pieces of large plant:** 108

**Start date of major construction:** August 2010

**Expected completion date:** late 2012  
(weather permitting)

**Project value:** \$315 million

## Background

The Bulahdelah upgrade project was approved by the NSW Minister for Planning on 9 July 2007.

The Bulahdelah upgrade project is jointly funded by the Australian and NSW governments.

The upgrade of the Pacific Highway at Bulahdelah will involve the construction of about 8.6 kilometres of four lane divided road with an eastern bypass of the Bulahdelah township.

## Key construction activities during August 2011

- Bridge deck started to be poured at floodplain bridge.
- Piling was completed at Fry's Creek.
- Piles were completed for the northern side of Myall River bridge.
- Safety railings and screen were installed for Mountain Park bridge.
- Footings and piers for the Northern interchange bridge were continued.
- Rocky material continued to be processed immediately north of Bombah Point Road.
- The large fill adjacent to the northern interchange at Lee Street continues to be raised.
- The earthworks to allow that switch of traffic from the current highway to a part of the new highway are well advanced.
- Revegetation continued of the drains and batters throughout the project.
- Fauna fence installation continued.
- Construction of the sub-base pavement has started.
- Blasting continued at Bombah Point Road.
- Community interest group meeting was held on 24 August 2011.



Looking south from near the Mountain Park bridge

# Bulahdelah upgrade



Construction of sub-base pavement



Looking north at the northern interchange



Mountain Park bridge nearing completion



Piling rig for Fry's Creek

# Hérons Creek to Stills Road upgrade

Upgrading the Pacific Highway

## UNDER CONSTRUCTION

**Contractors:** BMD Constructions Pty Ltd.

**Form of contract:** Construction contract

**Workers on site:** 55

**Pieces of large plant:** 38

**Start date of major construction:** March 2011

**Expected completion date:** late 2012  
(weather permitting)

**Project value:** \$60 million



First concrete lift of centre pier blade columns for Bago Road interchange

## Background

The Herons Creek to Stills Road upgrade project was approved to proceed on 5 October 2007.

The Herons Creek to Stills Road upgrade project is jointly funded by the Australian and NSW governments.

The upgrade of the Pacific Highway between Herons Creek and Stills Road will upgrade 3.5 kilometres of highway. The majority of the existing northbound carriageway will become a two-way local service road, linking Bago Road, Burrawan Forest Drive, Herons Creek and local properties to the Bago Road interchange.

## Key construction activities during August 2011

- Removal of superfluous concrete at top of bored piles at Bago Road interchange to achieve design contract level.
- Western abutment at Bago Road overbridge is nearing completion.
- Central pier of Bago Road overbridge is progressing.
- Fish weirs and culverts at Cutty Creek is nearing completion.
- Pipe extension for the new northbound carriageway.
- Project site office has been established near Bago Road interchange.
- Access track and platform for piling operations at Herons Creek almost completed.
- Stormwater inlet construction continuing.
- Topsoil stripping continued.
- Installation of cross drainage pipelines continued.
- Construction continued of clean water drains throughout the project.
- Establishment of site accesses continued.

# Heron's Creek to Stills Road upgrade



Reinforcement wire for abutment at Bago Road interchange



Western abutment of Bago Road overbridge



Precast octagonal piles for Heron's Creek floodway bridge



Pile integrity testing of abutment piles at Bago Road interchange



Pipe extension for the new northbound carriageway

# Kempsey bypass

## Upgrading the Pacific Highway

### UNDER CONSTRUCTION

**Contractors:** The RTA has formed an alliance with Leighton Contractors, AECOM and Coffey Geotechnics to build the Kempsey bypass.

The bridge over the Macleay River is being built by Abigroup Contractors under a separate design and construct contract.

**Form of contract:** Alliance and design and construct contract

**Workers on site:** 571

**Pieces of large plant:** 155

**Start date of major construction:** June 2010

**Expected completion date:** by mid 2013  
(weather permitting)

**Project value:** \$618 million



Looking south east at northern abutment construction for the bridge over the Macleay River at Frederickton

## Background

The Kempsey bypass project was approved by the NSW Minister for Planning on 10 July 2008.

As part of the Building Australia Fund, the Australian Government announced that it would provide \$618 million for the construction of the Kempsey bypass.

The 14.5 kilometre Kempsey bypass project is part of the 40 kilometre Kempsey to Eungai project, which extends from the existing dual carriageway south of Kempsey to the existing dual carriageway at Eungai Rail.

The bridge over the Macleay River and Floodplain will be 3.2 kilometres long and on completion, making it the longest bridge in Australia.

## Key construction activities during August 2011

- General earthworks, foundation layers and transverse drainage installation are in progress between the South Kempsey interchange and the Macleay River floodplain at Frogmore and also between the northern bank of the Macleay River and the Frederickton interchange.
- Piling works at Boat Harbour Creek has been completed.
- Noise mound construction is continuing north of Crescent Head Road. Approach embankments for Old Station Road overpass has also progressed.
- The reinforced earth retaining wall for the southern abutment of the bridges over the main Northern Railway Line is ongoing.
- The Crescent Head Road overbridge is nearing completion with the construction of the road approaches nearing completion.
- Work is progressing on the overpass bridges for both the South Kempsey interchange and the Frederickton interchange.
- Wick drain installation was completed on the northbound ramp of the Frederickton interchange.
- Construction on the Macleay River and Floodplain bridge is progressing to schedule.
- Flood mitigation works in the form of house raising and stock mound construction continued on the floodplain at Frogmore, 15 house raisings are complete, 3 houses are in progress with 1 remaining. 20 stock mounds have been built with 2 mounds underway.
- Controlled blast is ongoing at South Kempsey near the southern interchange with blasting at south of Crescent Head Road completed.
- Water and sewer relocations are continuing at the Northern interchange. Telstra and power installations are ongoing at the Southern interchange. Optic fibre from Sydney to Brisbane, relocation cut in has been completed.
- Construction of the levee bank at Frederickton along the Macleay River is ongoing and the installation of sheet piling has been completed.

# Kempsey bypass

Looking south east at earthwork construction at the Northern interchange looking north over existing Pacific Highway, north of Frederickton, through to the Northern Bridge Abutment for the Bridge over the Macleay River



Concrete pour for substructure of abutment for the bridge at the Northern interchange



Start of construction of Northern rock platform in Macleay River

# Sapphire to Woolgoolga upgrade

## Upgrading the Pacific Highway



**UNDER CONSTRUCTION**

**Contractors:** Leighton Fulton Hogan Joint Venture

**Form of contract:** Design and construct contract

**Workers on site:** 302

**Pieces of large plant:** 209

**Start date of major construction:** August 2010

**Expected completion date:** early 2014  
(weather permitting)

**Project value:** \$705 million

## Background

The NSW Minister for Planning approved the project on 13 January 2009 which did not include a rest area. The RTA's rest area strategy for the Pacific Highway aims to provide rest areas at about 50 kilometre intervals.

The preferred location for the rest area is proposed at the Arrawarra interchange. An environmental assessment of the proposed rest area location was on display in April 2011 and a submissions report is currently being prepared.

The Sapphire to Woolgoolga Pacific Highway upgrade project is jointly funded by the Australian and NSW governments.

This project will provide a four-lane divided highway extending approximately 25 kilometres from Campbell Close, Sapphire, to Arrawarra Beach Road, Arrawarra.

## Key construction activities during August 2011

- Piling for bridges continued.
- Public utility relocation works continued.
- Fence line clearing and fencing to the east and west of the existing Pacific Highway continued.
- Continued installation of erosion and sediment controls.
- Property adjustments continued. Meetings were held with residents to discuss property adjustments including fencing and access arrangements.
- Bulk earthworks and installation of transverse drainage structures continued on the upgrade section.
- Earthworks and drainage continued between Unwins Road and Bark Hut Road on the bypass.
- Clearing north of Bark Hut Road to the Arrawarra interchange on the bypass continued.
- Trial blasting started about 1 kilometre north of Bark Hut Road, Woolgoolga in the Wedding Bells State Forest.
- Presentations on possible controlled blasting were held on 17 and 20 August 2011.
- A community information session was held on 27 August 2011 at Woolgoolga and Moonee Beach.



Skinners Creek Bridge under construction

# Sapphire to Woolgoolga upgrade



Piling operations at Greys Road



Earthworks south of Greys Road



Sheet piling at Double Crossing Creek near Woolgoolga



Earthworks south of Bark Hut Road

# Glenugie upgrade

## Upgrading the Pacific Highway

### UNDER CONSTRUCTION

**Contractors:** The RTA has formed an alliance with Macmahon Contractors and Arup

**Form of contract:** Alliance design and construct contract

**Workers on site:** 64

**Pieces of large plant:** 40

**Start date of major construction:** March 2010

**Expected completion date:** late 2011  
(weather permitting)

**Project value:** \$60 million



Air cleaning of the rock cuts

## Background

The NSW Minister for Planning approved the Glenugie upgrade project on 17 December 2009.

The Glenugie upgrade project is jointly funded by the Australian and NSW governments.

The seven kilometre Glenugie upgrade forms part of the larger Woolgoolga to Ballina project. This section extends from Franklins Road to Eight Mile Lane, approximately 15 kilometres south of Grafton.

## Key construction activities during August 2011

- Northern end tie in works continued.
- Select material zone placement works were completed.
- Drainage kerb and guttering installation was completed.
- Subsoil drainage was completed.
- Manufacturing of heavy duty base pavement material (offsite) continued.
- Placing base layer granular pavement material continued.
- Final trimming continued on the base course layers.
- Landscaping and topsoiling of the completed batters and medians continued.
- Fauna and stock fencing continued and 80% of fauna and stock fencing was completed at various creek crossings.
- Installation of steel wire rope barrier posts continued.
- Installation of the permanent signage has started.
- Slope stability assessment to all site batters has started.
- Installation of the sedimentation controls for the permanent sed basins has started.

\* The road is broken up into a number of specified layers. The top layers are classified as 'base' and 'sub base' layers. The next level down is classified as a 'select material zone' (SMZ), which is a selection of material from the site that has higher strength qualities. The 'upper zone of formation' (UZF), includes the 'select material zone' and the next layer below, which is often called the 'capping layer'.

# Glenugie upgrade



Concrete lining of swale drains



Compaction of the granular pavement layer using smooth drum rollers



Granular pavement base course initial trimming at southern end near Franklins Road



Site labour using GPS rover to set out excavation works

# Ballina bypass

## Upgrading the Pacific Highway

### UNDER CONSTRUCTION

**Contractors:** The RTA has formed an alliance with Leighton Contractors, AECOM, SMEC and Coffey Geotechnics

**Form of contract:** Alliance design and construct contract

**Workers on site:** 157

**Pieces of large plant:** 59

**Start date of major construction:** May 2008

**Expected completion date:** mid 2012  
(weather permitting)

**Project value:** \$640 million



## Background

The NSW Minister for Planning approved the Ballina bypass project on 22 May 2003.

The \$640 million Ballina bypass project is jointly funded by the Australian and NSW governments.

The project will provide 12 kilometres of dual carriageway, extending from south of Ballina at the intersection of the Bruxner and Pacific highways to north of Ballina at the intersection of Ross Lane at Tintenbar. The project is being opened in two stages. The first stage from Cumbalum to Ross Lane was opened on 1 March 2011. The second stage from the Bruxner Highway to Cumbalum interchange will be open by Christmas (weather permitting). It was announced that the project would be opened 6 months earlier by Christmas 2011.

## Key construction activities during August 2011

- Low Embankment pavement works between Teven Road Bridge and Emigrant Creek Central Bridge continued.
- Piling continued for the McLeay box culverts south of Teven Road.
- Continued removal of surcharge south of Emigrant Creek adjacent to the Bruxner Highway and temporarily stockpiled north of Teven Road.
- Placement of materials on the side of the road south of Cumbalum continues.
- Deck construction in progress for the Cumbalum plank bridge.
- Installation of precast parapets for plank bridge on the Old Pacific Highway at Sandy Flat.
- Completed construction of the Teven Road Tie-in.
- Widening works of the road formation at the Bruxner Tie-in is continuing.
- Ballina rest area Review of Environmental Factors was set up at the Ballina Shire Council, RTA Motor registry and Ballina Bypass Alliance community information centre for community comment.

# Ballina bypass



Bridges over Emigrant Creek Central



Placement of asphalt on the Emigrant Creek South Bridge Deck



McLeay flood relief culverts

Ross Lane interchange

# Banora Point upgrade

## Upgrading the Pacific Highway



### UNDER CONSTRUCTION

**Contractors:** The RTA has formed an alliance with Abigroup Contractors, Seymour Whyte and SMEC.

**Form of contract:** Alliance design and construct contract

**Workers on site:** 172

**Pieces of large plant:** 109

**Start date of major construction:** December 2009

**Expected completion date:** Late 2012  
(weather permitting)

**Project value:** \$359 million

## Background

The NSW Minister for Planning approved the Pacific Highway upgrade at Banora Point on 26 February 2009.

The Banora Point upgrade project is jointly funded by the Australian and NSW governments.

The upgrade extends over approximately 2.5 kilometres from the northern end of Barney's Point bridge to the southern end of the Tweed Heads bypass.

## Key construction activities during August 2011

- Lake Kimberly culvert drainage works completed.
- Started local roadworks on Minjungbal and Darlington Drive.
- Construction of rock retaining wall at the southern interchange is continuing.
- Drill and blasting of rock at the main cutting through Sexton Hill is continuing.
- General fill has been completed for the southbound embankment of Northern interchange.
- Reinforced concrete retaining wall at the Northern interchange is continuing.
- Concrete deck on the temporary bridge over old Darlington Drive has been completed.
- Substructure of the main southern viaduct has been completed.
- Super-T girders have been erected on the bridges over the new Darlington Drive connection.



The main southern viaduct

# Banora Point upgrade



Kimberly Canal culverts



Haul road underneath Laura Street bridge



Substructure under the main southern viaduct



Looking north from Laura Street bridge

# Safety improvement works

## Upgrading the Pacific Highway

### UNDER CONSTRUCTION

**Contractors:** RTA Road and Fleet Services

**Workers on site:** 22

**Pieces of large plant:** 9

**Start date of major construction:**  
November 2009

**Expected completion date:** mid 2014

**(weather permitting)**

**Project value:** \$55 million

## Background

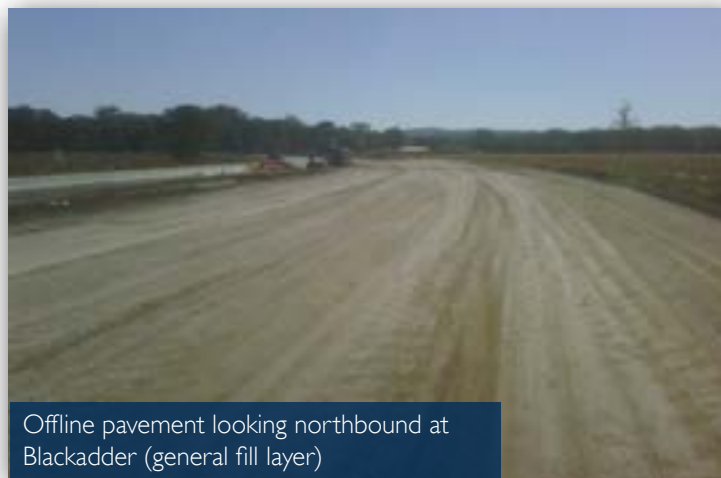
A program of safety improvement works has been developed as part of the Australian and NSW governments \$3.65 billion commitment to upgrade the Pacific Highway over the next five years to mid 2014 as part of the Nation Building Program and the Building Australia Fund.

While most of this funding will be directed to upgrading the highway to dual carriageway, there is a need to address road safety and traffic issues on sections of two-lane highway that is not being upgraded to dual carriageway as part of the current five year program.

A package of smaller works is being delivered to keep these sections safe and serviceable until upgrades can be completed. This work is also aimed at reducing the delays caused by local and major flood events.

## Key construction activities during August 2011

- Offline pavement works is continuing. Haul and place of subbase has started. General fill and select fill layers were completed at Blackadder.
- Construction has completed for Martells Road and is open to traffic.



Offline pavement looking northbound at Blackadder (general fill layer)



Offline pavement looking southbound at Blackadder (general fill layer)



## Safety improvement works

As of 31 August 2011, two safety improvement projects under this program have been completed, one is under construction and a further five are in various stages of development.

# Environment

## Upgrading the Pacific Highway

### REPLENISHING THE KEROSENE BAY INLET ON THE BANORA POINT UPGRADE

**Contractors:** The RTA has formed an alliance with Abigroup Contractors, Seymour Whyte and SMEC.

**Form of contract:** Alliance design and construct contract

**Workers on site:** 172

**Pieces of large plant:** 109

**Start date of major construction:** December 2009

**Expected completion date:** Late 2012  
(weather permitting)

As part of the project's conditions of approval, the project team were required to replenish twice the amount of habitat than the 600 square metres of mangroves which were removed during the upgrade work.

However a joint initiative has seen more than 200,000 square metres of natural habitat at the Kerosene Bay Inlet on the Fingal Peninsula being replenished.

The Kerosene Bay inlet is Aboriginal owned land and sits near the mouth of the Tweed River; required significant regeneration.

A number of factors have negatively impacted on the local environment. Sand dredging has caused silting in the inlet which has resulted in a decline in water quality and the demise of large areas of sea grass, salt marsh and mangroves. Other factors include the public illegally accessing the area by car and by foot and leaving rubbish.

The project team are countering this impact with a number of environmental initiatives, including building a barrier; which will stop vehicles accessing the wetland, using rock recycled from work on the highway upgrade.

The Banora Point upgrade project team has worked closely with Tweed Shire Council, the NSW Department of Industry and Investment and Tweed Byron Local Aboriginal Land Council on the environmental initiatives.



The barrier stopping vehicles accessing the wetland



Kerosene Bay northern inlet



Kerosene Bay western inlet

# The \$3.65 billion plan (2009/10 to 2013/14)

## Upgrading the Pacific Highway

