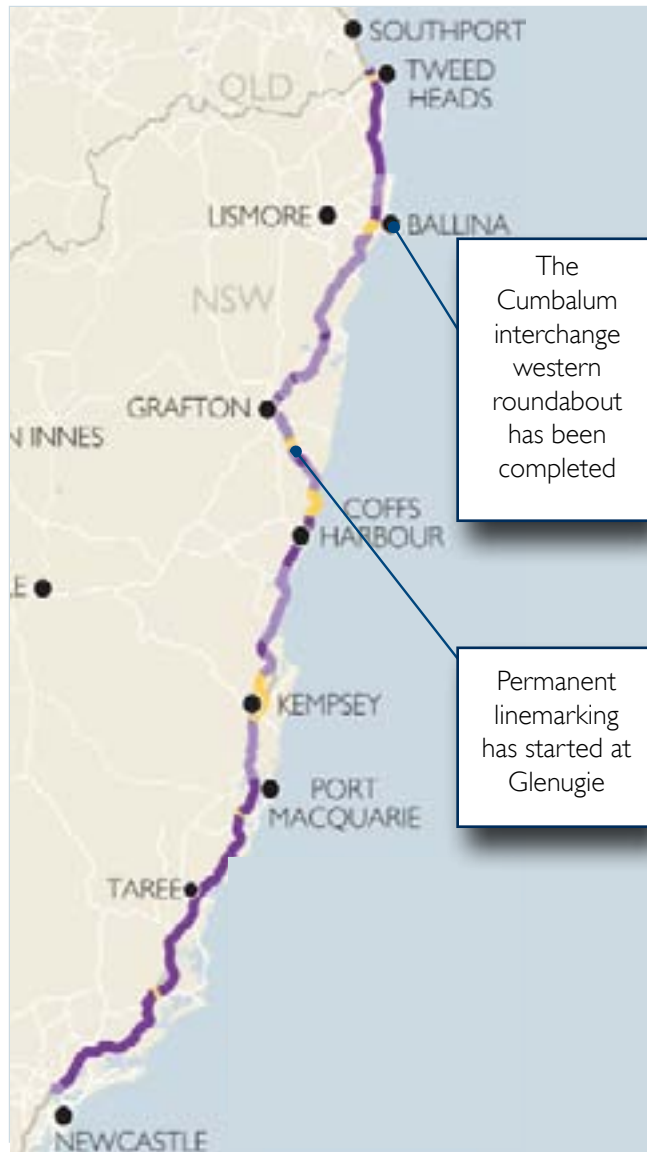


Pacific Highway upgrade

Monthly achievement report

SEPTEMBER 2011



Preparation for girder installation at the Northern interchange, on the Kempsey bypass project



September 2011
67 km of highway
under construction
1697 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 30 September 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: 319

Pieces of large plant: 118

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 September 2011

- Base pavement trial north of Fry's Creek using paver.
- Excavation and placement of material continued.
- Crushing of hard rock continued.
- Treatment of acid sulphate rock and soils continued.
- Bridge deck concrete pours continued at Fry's Creek, Myall River and Floodplain Bridges.
- Started piling at the Southern interchange.
- Started construction of reinforced soil walls at the Southern interchange.
- Construction of the Myall river bridge piers continued.
- A community interest group meeting was held on 28 September 2011.
- Controlled blasting continued in the main cutting.



Scaffolding and bridgeworks for the Myall River bridge piers

Bulahdelah upgrade



Looking south from the Mountain Park bridge into the main source of material for earthworks



Looking north from the Northern interchange on the western side



Looking to the east from the Northern interchange ramp



Looking through the new steel truss of the Mountain Park bridge



Bombah Point Road Bridge

Herons Creek to Stills Road upgrade

Upgrading the Pacific Highway



UNDER CONSTRUCTION

Contractors: BMD Constructions Pty Ltd.

Form of contract: Construction contract

Workers on site: 94

Pieces of large plant: 43

Start date of major construction: March 2011

Expected completion date: late 2012
(weather permitting)

Project value: \$60 million

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 September 2011

- Erection of wingwalls at both abutments of the Bago Road interchange is completed.
- All concrete work for the central pier at Bago Road overbridge is completed.
- Both abutments of Bago Road overbridge are nearing completion.
- Pipe extension for the new Bobs Creek Road.
- Earthworks - cut to fill operations underway near Bago Road.
- Access track and platform for piling operations at Herons Creek is continuing.
- Arrival of Super-T girders for Herons Creek bridge onsite.
- All concrete planks for Herons Creek floodway bridge have arrived onsite.
- Manufacturing of precast concrete units offsite is continuing.
- Stormwater inlet construction is continuing.
- Installation of cross drainage pipelines is continuing.
- Construction continued of clean water drains throughout the project.
- Establishment of site accesses continued.
- Letterbox drop for a possible batch plant locations has been issued to the Johns River community.
- Consultation with landowners about piling operations is continuing.



Aerial view of the new Bago Road interchange

For detailed information about any of the projects, visit the project website at www.rta.nsw.gov.au/pacific or call the Pacific Highway office on 1800 653 092 or 02 6640 1000.

Hérons Creek to Stills Road upgrade



Backfilling twin cell culverts at Cutty Creek



The completed central pier at the Bago Road bridge



Stormwater line at the new Bobs Creek Road



Placement of concrete at the abutment of Bago Road bridge



Final concrete pour for the central pier at the Bago Road bridge

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: 573

Pieces of large plant: 183

Start date of major construction: June 2010

Expected completion date: by mid 2013
(weather permitting)

Project value: \$618 million



Installation of turf on the constructed levee embankment along 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 September 2011

- Flood mitigation works in the form of house raising and stock mound construction is continuing across the floodplain at Frogmore, with 16 house raisings completed and 3 remaining, and 20 stock mound constructions completed with 3 remaining.
- Production of various earthworks products from within cuttings for use as general fill, rockfill, drainage and select material, is continuing using several crushers and screens.
- The centre pier at Pola Creek is completed.
- Construction of the reinforced earth retaining wall for the southern abutment of the bridges over the North Coast rail is nearing completion.
- Production blasting has completed at south of Crescent Head Road.
- Girders have been installed over Pattersons Lane, with the girders over the North Coast Rail remaining.
- Crescent Head Road overbridge is almost completed with pavement materials being placed on the approaches. Concrete base slabs for the Bingus Lane fauna underpass have been completed.
- Select material pavement trial has commenced north of Old Station Road.
- Earth levee embankment construction completed including topsoil at Frederickton.
- Girders installed on the Northern interchange over bridge.
- Installation of piles is continuing for Macleay river and Floodplain bridge.
- Rock platform completed in Macleay River for construction of piles and piers for the northern half of Macleay River bridge.

Kempsey bypass



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: 317

Pieces of large plant: 229

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 September 2011

- Piling and construction of substructures and superstructures for bridges continued.
- Public utility relocation works continued.
- Meetings were held with residents to discuss property adjustments including fencing and access arrangements.
- Bulk earthworks and drainage continued.
- Controlled blasting started about 1 kilometre north of Bark Hut Road at Woolgoolga.



Construction of the central bridge support for the Moonee Beach interchange

Sapphire to Woolgoolga upgrade



Moonee Beach interchange under construction



Earthworks and clearing north of Bark Hut Road to the Arrawarra interchange



Earthworks near Gaudrons Road



Powerline relocations near Sapphire

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: 62

Pieces of large plant: 36

Start date of major construction: March 2010

Expected completion date: late 2011
(weather permitting)

Project value: \$60 million

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 September 2011

- Northern end tie in works continued.
- Placement of base layer granular pavement material continued.
- Final trimming continued on the base course layers.
- Landscaping and topsoiling of the completed batters and medians continued.
- Continue fauna/stock fencing, with 90% completed.
- Installation of steel wire rope barrier posts continued.
- Installation of the steel wire rope barrier cables has started.
- Installation of the permanent signage has started.
- Prime sealing is continuing.
- Permanent line marking has started.
- Installation of the raised pavement markers 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'.



Asphalting of the Southern end tie in

Glenugie upgrade



Trimming of the granular pavement material for level and ride quality



Application of the double seal bitumen



Applying the first coat of line marking

Ballina bypass

Upgrading the Pacific Highway

UNDER CONSTRUCTION

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

Form of contract: Alliance design and construct contract

Workers on site: 135

Pieces of large plant: 83

Start date of major construction: May 2008

Expected completion date: mid 2012
(weather permitting)

Project value: \$640 million



Cumalun area under construction

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 Cumalun to Ross Lane was opened on 1 March 2011. The second stage from the Bruxner Highway to Cumalun 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 September 2011

- A community information session was held on Wednesday 14 September 2011 with 47 attendees. Two community site tours were held on Tuesday 20 September 2011 with 57 attendees.
- Ballina Rest Area Review of Environmental Factors was on public display until 12 September 2011. Six comments were received and a submissions report is being finalised.
- Ballina bypass proposed signage was on display for community comment until 2 September 2011. Six comments were received and a submissions report is currently being developed.
- An interim noise monitoring report has been distributed to the section from Cumalun to Ross Lane to residents.
- Installation of precast parapets for the plank bridge on the Old Pacific Highway at Sandy Flat has been completed.
- Placement of materials on the side of the road and sealing works south of Cumalun continues.
- Piling works is continuing for the McLeay box culverts south of Teven Road.
- Asphaltting of Bruxner Highway and the Teven Road intersection has been completed.
- Spray sealing has been completed for all bridge decks.
- Installation of wire rope is continuing.
- The Cumalun interchange western roundabout has been completed.
- Stockpiling of 95,000m³ of general fill has been completed for the Southern tie in enabling works.
- Landscaping works is continuing on the southern section.

Ballina bypass



Production of chert base pavement material at Eatons Quarry



Grading chert base pavement material



Construction of McLeay culverts southbound base

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 September 2011

- Complete installation of superT girders on the main viaduct bridge over the central valley.
- Completion of rock wall installation in the cutting at Sexton Hill.
- Ongoing landscaping of the southern interchange and complete landscaping on the northern interchange.
- Ongoing construction of retaining walls and noise wall footing and panelling.
- Relocation of the Darlington Drive roundabout to allow for pavement works on Darlington Drive.
- Start installation of noise walls, drainage and pavement works along the alignment.
- Completion of pavement, kerb and gutter works along southbound lanes of Minjungbal Drive.
- Completion of temporary bridge over Darlington Drive.
- Ongoing earthworks in the main cutting including installing ground anchors, bulk excavation, ongoing controlled blasting, noise wall footing installation, installing sign footings, shotcrete installation, soil support installation and girder deliveries.



Laura Street bridge construction works

Banora Point upgrade



Landscaping works at the Northern interchange



Southern valley viaduct



Excavation works



Northern interchange construction works



Concrete deck pour at the Northern interchange

Safety improvement works

Upgrading the Pacific Highway

UNDER CONSTRUCTION

Contractors: RTA Road and Fleet Services

Workers on site: 25

Pieces of large plant: 13

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 \$4.84 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 September 2011

- Select and subbase material on the offline section of new alignment has been completed at Blackadder.
- Concrete pavement widening works, north of Kempsey at Clybucca is progress.



Concrete widening works at Clybucca



Western batter progress, southbound at Blackadder

Safety improvement works

As of 30 September 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.



Laying subbase material, mid alignment looking southbound at Blackadder



Western batter progress, northbound at Blackadder

Environment

Upgrading the Pacific Highway

SYPHONS USEFUL IN MANAGING BASIN DISCHARGES ON THE SAPPHIRE TO WOOLGOOLGA UPGRADE

Contractors: Leighton Fulton Hogan Joint Venture

Form of contract: Design and construct contract

Workers on site: 317

Pieces of large plant: 229

Start date of major construction: August 2010

Expected completion date: early 2014
(weather permitting)

Project value: \$705 million

Project value: \$359 million

The Sapphire to Woolgoolga project team is seeing benefits from using syphons to release treated water from sediment basins.

The Sapphire to Woolgoolga project is a 25 kilometre upgrade of the Pacific Highway to a four lane divided highway from Sapphire to Woolgoolga on the NSW North Coast.

The project currently has large sediment basins under licence to help manage sediment from the site. Sediment basins are used to store 'dirty', sediment-laden water from the construction site so that the water can be treated to meet Environment Protection Licence requirements before being discharged into receiving waters.

Several basins on the Sapphire to Woolgoolga project have now been equipped with a syphon. According to Pacific Highway Environmental Advisor, Janelle Bancroft, syphons have the advantage of requiring less fuel to manage basin releases as the only fuel energy needed is when priming the syphon, usually by pump.

"The important thing with syphons is to ensure that they are set up correctly so that they don't suck in the muddy and sediment laden water which has settled to the bottom of the basin," said Janelle. "The Sapphire to Woolgoolga project use floats to ensure the inlets don't reach into basin sediments."

Anecdotal evidence is that the syphons are a good method to reduce green house generation on construction projects.



The \$4.84 billion plan (2009/10 to 2013/14)

Upgrading the Pacific Highway



The \$4.84 billion plan (2009/10 to 2013/14)

