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Transport
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Pacific Highway upgrade

Monthly achievement report **October 2012**



Pacific Highway upgrade

This report will provide you with information about Pacific Highway upgrade projects, including the current status and key activities carried out on construction projects in the past month.

As at 31 October 2012, 346 kilometres of four-lane divided road have been completed, about 73 kilometres are under construction, and about 105 kilometres have received planning approval and are being prepared for construction.

Planning is also being progressed on the remaining single-lane divided road sections of the highway.

About 52 per cent of the final highway length of 664 kilometres is now four-lane divided road.



73 km of highway under construction October 2012.



1370 construction workers on site.



For overall upgrading strategy refer to the second last page.



Contractors: Boulderstone Pty Ltd

Form of contract: Construction contract

Workers on site: 196

Pieces of large plant: 90

Start date of major construction:
August 2010

Expected completion date:
First half of 2013 (weather permitting)

Project value: \$315 million

Australian Government contribution:
\$303.6 million **

NSW State Government contribution:
\$11.4 million **

** Contribution amounts may vary from year to year.



Earthworks on the main alignment
near Bombah Point Road bridge

Bulahdelah upgrade

Background

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

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

It involves the construction of about 8.5 kilometres of four-lane divided road with an eastern bypass of the Bulahdelah township.

On 26 September 2012, the Minister for Roads and Ports announced the project had been delayed as a result of significant wet weather and the bypass would now be opening to traffic in March 2013 (subject to further fine weather).

Key construction activities during October 2012

No days were lost due to wet weather during this time.

- Asphaltting work started on ramps for the southern interchange.
- Placement of high quality pavement material continued across the project.
- Finishing work continued at the southern and northern interchanges including installation of barrier rails and safety screens.
- Finishing work also continued on the southern floodplain and Myall River bridges.
- Concrete paving of the final surface and saw cutting work continued.
- Rock bolting and shotcreting work continued in the main cutting north of Bombah Point Road.
- Drainage installation work continued on the main alignment.
- Treatment of basins for water quality continued.
- Hydroseeding and hydromulching carried out.

Bulahdelah upgrade under construction



Concrete pavement laid, looking north at the southern interchange



Earthworks under way on the main alignment, with Mountain Park bridge in the distance



Select materials laid on the main alignment at the northern interchange



Preparing for new pavement construction at Lee Street

Under construction



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Contractors: BMD Constructions Pty Ltd

Form of contract: Construction contract

Workers on site: 60

Pieces of large plant: 38

Start date of major construction:
March 2011

Expected completion date:
Second half of 2013 (weather permitting)

Project value: \$60 million

Australian Government contribution:
\$53 million **

NSW State Government contribution:
\$7 million **

** Contribution amounts may vary from year to year.



Traffic diversion in place for
the erection of super-T girders

Herons Creek to Stills Road upgrade

Background

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

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

It will upgrade 3.5 kilometres of highway between Herons Creek and Stills Road.

Key construction activities during October 2012

About three days were lost due to wet weather during this time.

- Earthworks continued north and south of Bago Road.
- Construction continued on the Herons Creek floodway, Herons Creek bridge and Bago Road interchange.
- Traffic detour constructed to allow for placement of super-T girders on the Bago Road bridge.
- Bobs Creek Road temporarily closed.
- Stills Road/Burrawan Forest Drive median crossovers closed.
- Foundation treatment work continued across the project.
- Establishment of site accesses continued.
- Preparation work carried out for concrete batch plant.
- Installation of cross drainage pipelines continued.
- Construction continued on stormwater drainage and clean water drains throughout the project.
- Construction of traffic diversion at Stills Road neared completion.

Incident investigation – site contamination

Roads and Maritime Services (RMS) has been remediating a suspected contamination area on the project which affected the health of a number of workers. This contamination area is where, in December 1980, a truck carrying a mixed load including radioactive waste, pesticide, food additives and other waste crashed on the Pacific Highway.

Results from the testing of two external sites and a roadside area near the Herons Creek School where fill from the site was used have confirmed this material has not been impacted by the former burial pit at the roadworks site and no further assessment, remediation or management is required.

The remediation of the cutting on the worksite where the contamination was found is complete. Interim advice from the third party auditor supports the findings the site has been successfully remediated.

Reports from independent specialists were placed on the Pacific Highway website on 21 September 2012. These and other detailed reports about the outcomes of these investigations to date are available on the project website (see address at the bottom of this page).

Hérons Creek to Stills Road upgrade



Arrival of a 50 tonne super-T girder for the Bago Road bridge



Looking south from Bago Road bridge along the new northbound carriageway



Placement of the first super-T girder



Pouring the deck at Herons Creek

Under construction



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Contractors: RMS 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: 475

Pieces of large plant: 124

Start date of major construction:
June 2010

Expected completion date:
Early 2013 (weather permitting)

Project value: \$618 million

Australian Government contribution:
Fully federally funded
(Building Australia Fund) \$618 million



Asphalting of temporary crossover for the south Kempsey interchange traffic switch

Kempsey bypass

Background

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

As part of the Building Australia Fund, the Australian Government is providing \$618 million for construction of the bypass. The 14.5 kilometre project is part of the larger 40 kilometre Kempsey to Eungai upgrade, which extends from the existing four lane divided road south of Kempsey to the existing four-lane divided road at Eungai Rail.

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

Key construction activities during October 2012

About one day was lost due to wet weather during this time.

- Traffic switched at the South Kempsey interchange between Stumpy Creek and the squash courts to allow for the completion of the interchange ramps.
- Superstructure completed for the Macleay River and floodplain bridge and asphalt paving started for the wearing surface for the deck of the bridge.
- Preparation work under way for the start of concrete paving for the connection between the southbound carriageway and the southern end of the Macleay River and floodplain bridge.
- Base concrete paving completed on the eastern roundabout of the South Kempsey interchange.
- Lean mix concrete paving work completed on both carriageways for the full length of the project.
- Reinforced concrete base paving completed and shoulder paving continued between Crescent Head Road and south of Pola Creek.
- Backfilling of the dam north of Yarrabandinni Road completed and earthworks progressed for the north facing ramps of the Frederickton interchange.
- Paving work under way on the south facing ramps for the Frederickton interchange.
- Finishing work, including topsoiling and barrier installation, between Pola Creek and the southern end of the Macleay River and floodplain bridge.

Kempsey bypass under construction



Asphalt surfacing of the bridge deck on the Macleay River and floodplain bridge



Final preparations for traffic switch at the South Kempsey interchange looking south



Looking south from the Frederickton interchange towards the Macleay River and floodplain bridge



Looking south from pier 79 on the Macleay River and floodplain bridge



Drainage installation at the Frederickton interchange



Contractors:

Leighton Fulton Hogan Joint Venture

Form of contract:

Design and construct contract

Workers on site: 324

Pieces of large plant: 260

Start date of major construction:

August 2010

Expected completion date:

2014 (weather permitting)

Project value: \$705 million

Australian Government contribution:

\$632 million **

NSW State Government contribution:

\$73 million **

** Contribution amounts may vary from year to year.



Work continuing on the
south Woolgoolga interchange

Sapphire to Woolgoolga upgrade

Background

The NSW Minister for Planning approved the Sapphire to Woolgoolga upgrade on 13 January 2009. The project is jointly funded by the Australian and NSW governments.

It will provide a four-lane divided highway extending about 25 kilometres from Campbell Close (at Sapphire) to Arrawarra Beach Road (at Arrawarra).

Key construction activities during October 2012

About four days were lost due to wet weather during this time.

- Concrete paving started and other paving work continued.
- Construction continued on the service roads between Gaudrons and Sugarmill roads, between Maccues and Wakelands roads and between Hoys and Bucca roads.
- Construction continued on local roads next to the Diamond Head bridge at Sandy Beach.
- Construction continued on the Hearnese Lake Road roundabout.
- Palmer and Bark Hut roads intersection reopened.
- Backfilling work continued at the Newmans Road underpass.
- Controlled blasting continued about two kilometres northwest of Woolgoolga.
- Bridge work and retaining wall construction continued.
- Public utility relocations continued.
- Bulk earthworks and drainage work continued across the project.
- Meetings held with residents to discuss property adjustments including fencing and access arrangements.

Sapphire to Woolgoolga upgrade under construction



Aerial view of earthworks looking north from Bucca Road, Moonee



Aerial view of earthworks looking north from Woolgoolga Creek Road



Aerial view of work continuing on Headlands Road bridge



Work continuing on Poundyard Creek bridge on the Woolgoolga bypass



Aerial view of the Arrawarra interchange



Contractors: John Holland

Form of contract: Construct only contract

Workers on site: 90

Pieces of large plant: 40

Start date of major construction:
December 2011

Expected completion date:
Mid 2013 (weather permitting)

Project value: \$77 million

Australian Government contribution:
\$62 million **

NSW State Government contribution:
\$15 million **

** Contribution amounts may vary from year to year.



Earthworks for the new
southbound carriageway

Devils Pulpit upgrade

Background

The Devils Pulpit upgrade was approved by the NSW Minister for Planning on 1 February 2011. The project is jointly funded by the Australian and NSW governments.

It includes the upgrading of about seven kilometres of highway between Grafton and Ballina. It forms part of the larger Woolgoolga to Ballina project.

Key construction activities during October 2012

About two days were lost due to wet weather during this time.

- Bulk earthworks 80 per cent completed.
- Fencing work 90 per cent completed.
- Bridging rock completed for foundation treatments in fill areas.
- Construction continued on a number of major box culvert structures with four structures completed.
- Work on two bridges at Tabbimoble neared completion except for walls and approach slabs.
- Work on open drains neared completion and stormwater pipe installation continued.
- Trial concrete pavement mixing continued.
- Sedimentation and erosion control measures established and being adjusted.
- Sedimentation basin construction continued with several permanent basins completed including topsoiling and hydromulching.

Devils Pulpit upgrade under construction





Contractors: Boulderstone Pty Ltd

Form of contract: Design and construct

Workers on site: 181

Pieces of large plant: 100

Start date of major construction:
September 2012

Expected completion date:
Second half of 2014 (weather permitting)

Project value: \$862 million

Australian Government contribution:
\$566.1 million **

NSW State Government contribution:
\$295.9 million **

** Contribution amounts may vary from year to year.



Temporary site access gate works

Tintenbar to Ewingsdale upgrade

Background

The NSW Minister for Planning approved the project on 29 January 2010.

The Tintenbar to Ewingsdale upgrade is jointly funded by the Australian and NSW governments.

It will provide 17 kilometres of four-lane divided road from the northern end of the Ballina bypass at Ross Lane to the existing Ewingsdale interchange.

Key construction activities during October 2012

No days were lost to wet weather during this time.

- Clearing work under way.
- Detailed design work continued.
- Bridge work started at Emigrant Creek and Byron Creek.
- Drainage construction work continued.
- Erosion and sedimentation control installation continued across the project.
- Trial blasting carried out at St Helena Hill and in Tinderbox Valley.
- Community information sessions held on construction noise and urban design and landscaping for the Bangalow interchange.

Tintenbar to Ewingsdale upgrade under construction



Preconstruction projects



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Priority two

(Port Macquarie to Raleigh)

The completion of the Pacific Highway upgrade has been divided into three key priorities. Priority one projects will be completed by the end of 2014. Priority two projects will complete the four-lane divided road between Port Macquarie and Coffs Harbour. Progress is already being made on this with the construction of the Kempsey bypass.

Following completion of the Kempsey bypass, there are 105 kilometres left to be upgraded to four-lane divided road, in order to complete priority two. These projects are being prepared for major work to start.

Frederickton to Eungai

The NSW Minister for Planning approved the total Kempsey to Eungai upgrade in 2008. The Frederickton to Eungai section is the second stage of this upgrade and will provide about 26.5 kilometres of four-lane divided road from the Kempsey bypass (now being built) to Eungai Rail.

Activities under way in October 2012

- Tender assessment nearing completion for the design and construction of this section of the highway upgrade.
- A preferred tenderer is expected to be selected in November.
- Land acquisitions and field investigations continued in preparation for the start of major work in 2013.
- Weather permitting, the project will open to traffic by the end of 2016.

Nambucca Heads to Urunga

(forms part of the larger
Warrell Creek to Urunga project)

The NSW Minister for Planning approved the total Warrell Creek to Urunga upgrade in 2011. Planning for the project is jointly funded by the Australian and NSW governments. The 42 kilometre project involves an upgrade of the existing highway from the existing Allgomera deviation, south of Warrell Creek, to the existing Waterfall Way interchange at Raleigh. The project will be built in two sections from Nambucca Heads to Urunga and from Warrell Creek to Nambucca Heads.

Activities under way in October 2012

- Tenders received and are being assessed from three shortlisted contractors, Abigroup, Boulderstone and Thiess, for the design and construction.
- The preferred tender is expected to be announced by the end of this year.
- Land acquisitions continued.
- Utility relocations under way.
- Field investigations (including plant and animal, geotechnical, survey, water quality, environmental and Aboriginal heritage) continued to prepare for the start of major work in 2013.
- Weather permitting, the project will open to traffic by the end of 2016.

Preconstruction projects



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Geotechnical investigations



Field investigations

Oxley Highway to Kempsey

The NSW Minister for Planning and Infrastructure approved the Oxley Highway to Kempsey upgrade on 8 February 2012. It will provide about 37 kilometres of four-lane divided highway between the Oxley Highway at Port Macquarie and the Kempsey bypass.

Planning for the project is jointly funded by the Australian and NSW governments. The project will be built in two sections, from Oxley Highway to Kundabung and from Kundabung to Kempsey.

Activities under way in October 2012

- Geotechnical investigations and ground survey work continued.
- Aboriginal archaeological investigations and plant and animal investigations carried out.
- Land acquisitions continued.
- Work continued to finalise the concept design for the whole Oxley Highway to Kempsey project.
- Detailed design work continued for the Kundabung to Kempsey section and the Sancrox interchange.
- Preparation of tender documents for design and construction contract started for the Oxley Highway to Kundabung section.
- Preparation continued on referral submission to the Department of Sustainability, Environment, Water, Population and Communities.

Warrell Creek to Nambucca Heads

(forms part of the larger
Warrell Creek to Urunga project)

The NSW Minister for Planning approved the total Warrell Creek to Urunga upgrade in 2011. Planning for the project is jointly funded by the Australian and NSW governments.

The 42 kilometre project involves an upgrade of the existing highway from the existing Allgomera deviation, south of Warrell Creek, to the existing Waterfall Way interchange at Raleigh. The project will be built in two sections from Nambucca Heads to Urunga and from Warrell Creek to Nambucca Heads.

Activities under way in October 2012

- Preconstruction activities under way, including land acquisitions, survey, geotechnical and environmental works.
- Work started on the preparation of tender documents for a design and construction contract.

Preconstruction projects



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Priority three

(Woolgoolga to Ballina)

The completion of the Pacific Highway upgrade has been divided into three key priorities.

Priority one projects will be completed by the end of 2014, weather permitting.

Priority two projects (to complete four-lane divided road between Port Macquarie and Coffs Harbour) are either being built or being prepared for major work to start.

Priority three involves completing the remaining single carriageway sections of the Pacific Highway between Woolgoolga and Ballina.

Woolgoolga to Ballina

Background

The Woolgoolga to Ballina project will upgrade about 155 kilometres of highway to a four-lane divided road. It is made up of four previous planning projects:

- Woolgoolga to Wells Crossing.
- Wells Crossing to Iluka Road.
- Iluka Road to Woodburn.
- Woodburn to Ballina.

This project does not include the recently completed Glenugie upgrade or the Devils Pulpit upgrade (which is currently being built).

Activities under way during October 2012

- Land acquisitions continued.
- Work continued on an environmental impact statement that is expected to be placed on display for public comment in December 2012.
- Bore hole drilling, test pits, excavator pits and seismic work continued, with geotechnical site investigations completed on the Devils Pulpit to Ballina section. This work will provide design input for cuttings, embankments, bridges, drainage structures, material sources and pavement reuse.
- Survey investigations continued to gather data for design purposes.
- Placement of fill material continued between Pimlico and Tiven roads.



Meeting with the community

Under construction



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Safety improvement work

Contractors:

RMS, Road and Fleet Services

Workers on site: 0

Pieces of large plant: 0

Start date of major construction:

November 2009

Expected completion date:

Mid 2014 weather permitting

Project value: \$55 million



General fill over the bridging layer next to the existing highway at Farlows Flat

Background

A program of safety improvement work has been developed as part of the Australian and NSW governments commitment to upgrade the Pacific Highway in the next five years to mid 2014.

While most of the funding will be directed to upgrading the highway to a four-lane divided road, there is a need to address road safety and traffic issues on sections of the two-lane highway.

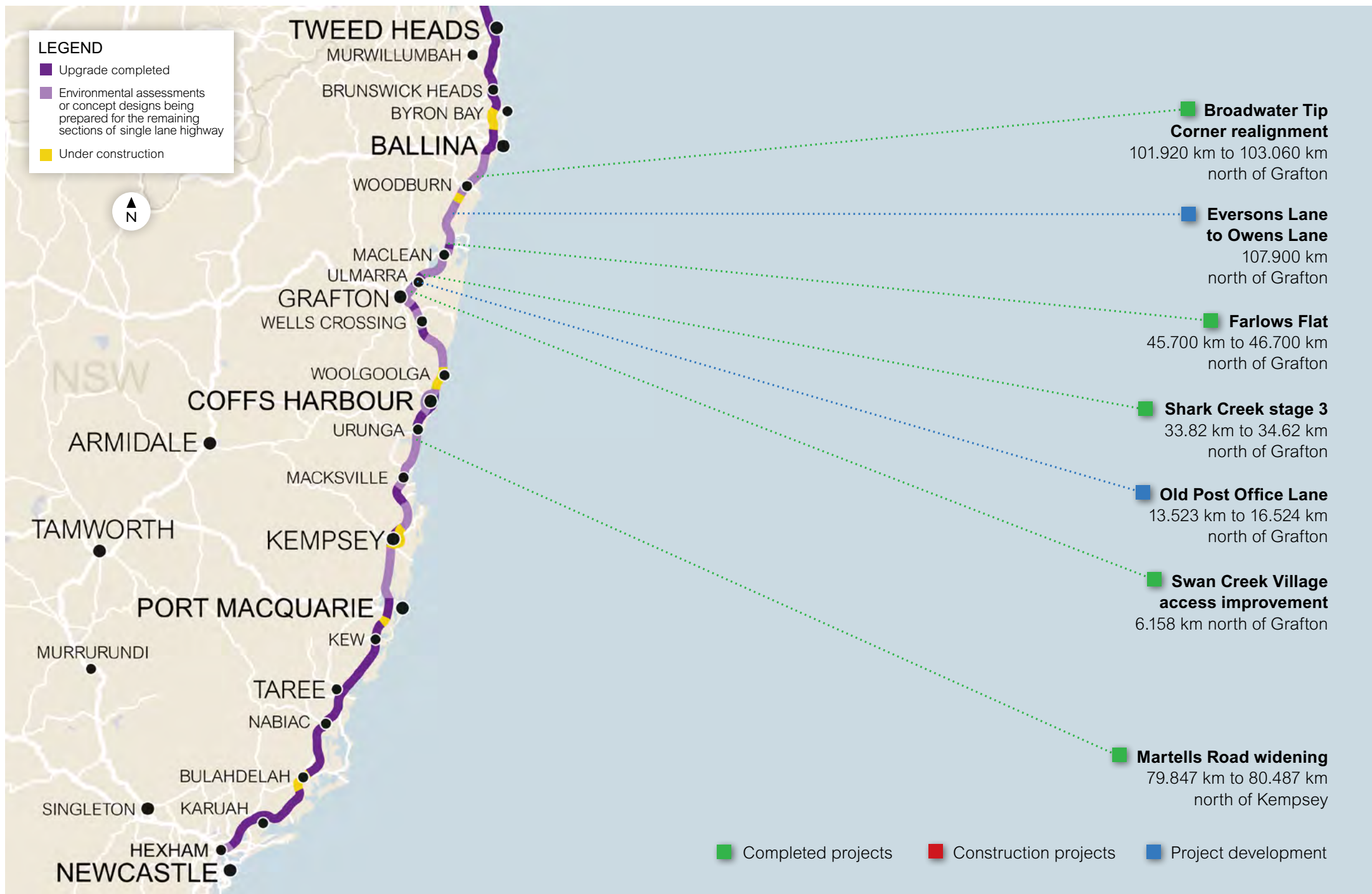
A package of smaller work is being delivered to keep these sections safe and serviceable until upgrades can be completed. This work is also aimed at reducing the delays caused by local and major flood events.

Key construction activities during October 2012

No days were lost due to wet weather during this time, as no work was being carried out on site.

- Development work in progress on improvements at Old Post Office Lane, near Ulmarra, including survey work and property acquisitions under way.
- Work is expected to start in December 2012.
- Safety work carried out at Farlows Flat as part of the Pacific Highway safety improvement work program is complete. Separate resurfacing work is continuing in the area.

Safety improvement works under construction





Environment

Important research into threatened orchid species on the Pacific Highway near Bulahdelah has shed a revealing light on the plants' very secret lifecycle.



Rhizanthella slateri - underground orchid species starting to flower

Bulahdelah upgrade

Research reveals secret life of threatened orchids

The Bulahdelah upgrade could potentially affect several populations of three threatened orchid species. Roads and Maritime Services (RMS) has been working since 2000 to ensure the survival of these orchids. RMS contracted the Commonwealth Scientific and Industrial Research Organisation (CSIRO) to research their propagation and translocation.

As a result of this research, CSIRO has discovered a wide range of new information about the species relating to pollination, germination, growth, morphology and life cycle, as well as propagation and translocation techniques. To date, however, there has been no evidence, only theories of how its seed is distributed.

One of CSIRO's theories is that the seed of the *Rhizanthella slateri* (Eastern underground orchid) is spread by animals such as the bandicoot, who forage in leaf litter and topsoil for food and possibly eat the orchid flowerhead. The orchid exists entirely underground, with only its inflorescence emerging seasonally and remaining completely out of sight beneath a thick layer of leaf litter. As such, the CSIRO believed these animals were attracted to the strong vanilla-like scent given off when the orchid seed head matures, 11 months after flowering.

In October 2011, the RMS site team suggested an infra-red triggered surveillance camera be installed in an attempt to identify any animals that may be distributing the seed of the threatened orchid.

Wallabies, foxes, possums and a magpie were spotted passing through the area without stopping. However, images downloaded from these cameras in July 2012, when the orchid scent was being emitted, revealed over 220 pictures of a swamp wallaby and a long nosed bandicoot attracted to the site to forage and feed, staying for up to half an hour and returning on several days.

The orchid fruit mimics fungi, which forms a significant part of the diet for both of these animals. CSIRO are now convinced that bandicoots and possibly wallabies are attracted to the underground orchid by the scent and, in turn, provide a means of dispersing its seeds.

Two box culverts being built as part of the upgrade project will allow safe passage for both bandicoots and wallabies who potentially distribute the seed. In addition, an Orchid Management Plan will continue to be implemented and the CSIRO will continue monitoring for a minimum of ten years to progress this and other orchid research.

The 8.5 kilometre Bulahdelah upgrade project includes the construction of 12 new bridges and is jointly funded by the Australian and NSW governments.

Environment Bulahdelah upgrade – research reveals secret life of threatened orchids

Swamp wallaby photographed foraging near the orchids



Long-nosed bandicoot photographed foraging near the orchids



Rhizanthella slateri a threatened orchid species which predominantly lives underground



Dual carriageway status

