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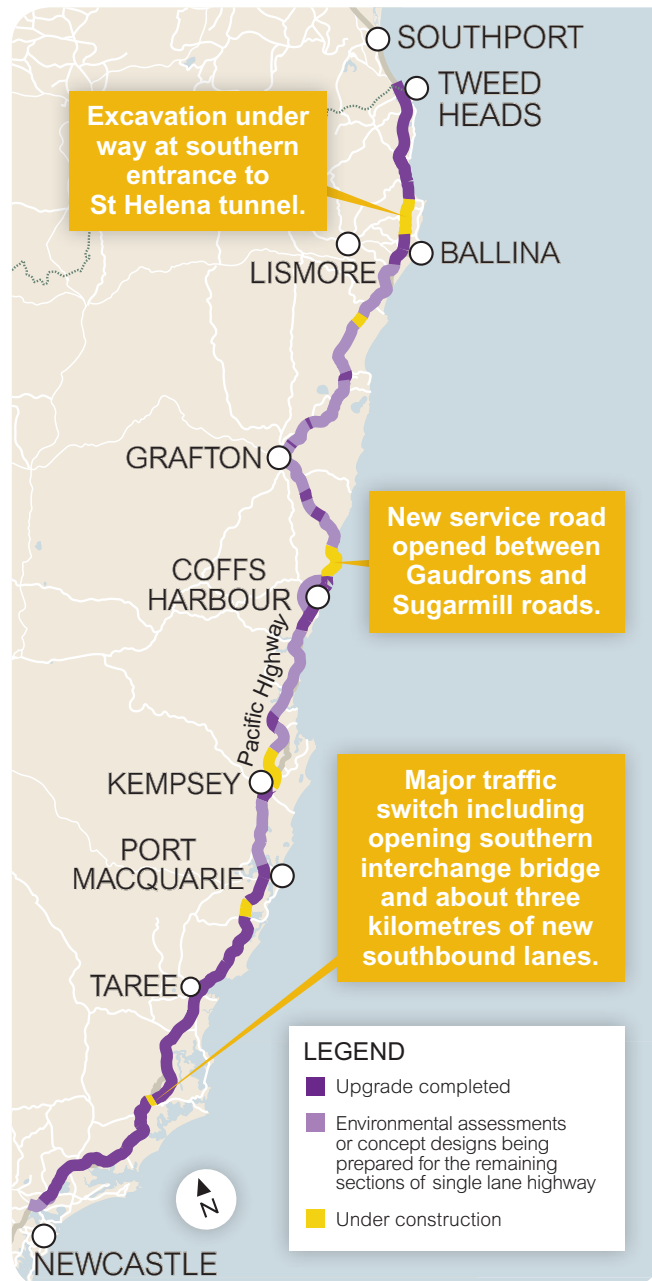
Nation Building Program



Transport
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Pacific Highway upgrade

Monthly achievement report **November 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 30 November 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 November 2012.



1356 construction workers on site.



For overall upgrading strategy refer to the second last page.

Under construction



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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.



The Absence of Three memorial screens
on the southern interchange 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 November 2012

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

- Major traffic switch completed that included opening the new southern interchange bridge and about three kilometres of the new southbound highway to traffic (with one lane travelling in each direction).
- Placement of high quality pavement material completed at southern end of the project.
- Concrete paving started at the northern end of the project.
- Shotcreting work started on the eastern lower road slope on the main alignment near Bombah Point Road.

Bulahdelah upgrade under construction



Asphalting work under way on the main alignment



Concrete paving on the main alignment underneath the northern interchange



Select material being placed on the main alignment near the southern floodplain works



Shotcreting work being carried out near Bombah Point Road



Under construction



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Contractors: BMD Constructions Pty Ltd

Form of contract: Construction contract

Workers on site: 62

Pieces of large plant: 43

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.



The new northbound carriageway
looking north towards Cutty Creek

Herons Creek to Stills Road upgrade

Background

The Herons Creek to Stills Road upgrade was approved to proceed on 5 October 2007 by the then Roads and Traffic Authority.

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 November 2012

About six 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.
- Newly aligned Bobs Creek Road re-opened.
- Boyds Road intersection with the Pacific Highway permanently closed.
- Work completed on temporary diversion for Stills Road.
- Foundation treatment work continued across the project.
- Preparation work continued for concrete batch plant.
- Installation of cross drainage pipelines completed.
- Construction continued on stormwater drainage and clean water drains throughout the project.
- Construction continued on traffic diversion for placement of super-T girders on the Bago Road bridge.

Incident investigation – site contamination

Roads and Maritime Services (RMS) has remediated 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.

The Pacific Highway website was updated in September 2012 to include copies of reports previously prepared by independent specialists. 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).

The final independent report from Mr Brian Gilligan is expected shortly.

Herons Creek to Stills Road upgrade under construction



Pouring a handrail on the Herons Creek floodway bridge



Concrete batch plant on site



Looking north at highway construction from Bobs Creek Road



The Herons Creek floodway

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: 533

Pieces of large plant: 140

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



Looking southwest at the levee built at the rear of the Butterfactory, Frederickton

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 November 2012

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

Major paving work continued across the project including:

- placement of fibre steel base concrete completed for both the eastern and western roundabouts for the southern interchange.
- base paving completed on the southbound lanes from the southern interchange to the North Coast Railway overbridge.
- base paving started on both sides of the main alignment from the northern end of the Macleay River and floodplain bridge to the old Pacific Highway at Frederickton.
- asphalt paving continued on the ramps at the southern interchange.

Major bridge work for the Macleay River and floodplain bridge continued, including:

- main superstructure for the bridge completed.
- pavement construction continued for the southern connection between the southbound lanes and the bridge.
- asphalt paving of the wearing surface for the deck of the bridge neared completion.
- Drainage installation progressed at the southern interchange.
- Drainage work continued and placement of select material started at the Frederickton interchange.

Kempsey bypass under construction



Drainage layer being installed under the northern interchange bridge



Looking north at completed finishing works toward the Inches Road overpass



Looking north at the construction of the western roundabout for the southern interchange



Looking north from pier 40 of the Macleay River and floodplain bridge



Contractors:

Leighton Fulton Hogan Joint Venture

Form of contract:

Design and construct contract

Workers on site: 363

Pieces of large plant: 270

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 continues on the new local service road between Wakelands Road and Maccues Road at Sapphire

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 November 2012

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

- Concrete paving continued.
- New service road opened between Gaudrons and Sugarmill roads.
- Construction continued on service roads between Wakelands and Maccues roads, between Hoys and Bucca roads and next to the Diamond Head Drive overbridge at Sandy Beach.
- Construction continued on the Hearnese Lake Road roundabout.
- Newmans Road underpass opened.
- 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 continued with residents to discuss property adjustments including fencing and access arrangements.
- Community information sessions held on construction progress.

Sapphire to Woolgoolga upgrade under construction



Work continues on the construction of the retaining wall at Hearn's Lake Road, south Woolgoolga



Paving under way on the southbound carriageway, south of Emerald Beach



Construction continuing on the southbound carriageway near Tiki Road, Moonee Beach



Earthworks looking south from Gaudrons Road, Sapphire Beach

Under construction



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Contractors: John Holland

Form of contract: Construct only contract

Workers on site: 90

Pieces of large plant: 45

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.



View of 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 November 2012

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

- Bulk earthworks 90 per cent completed.
- Fencing work 95 per cent completed.
- 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.
- Select and sub-base pavement material placement started.
- Stormwater pipe installation continued and open drain construction neared completion.
- 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



Earthworks under way



Looking north at road construction



Stabilising work being carried out



Contractors: Boulderstone Pty Ltd

Form of contract: Design and construct

Workers on site: 112

Pieces of large plant: 90

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.



Road widening work at St Helena Road

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 November 2012

No days were lost to wet weather during this time.

- Major clearing and earthworks continued.
- Excavation work under way at the southern entrance to the St Helena tunnel.
- Detailed design work continued.
- Bridge work continued at Emigrant and Byron creeks.
- Drainage construction work continued.
- Erosion and sedimentation control installation continued across the project.
- Local road upgrades under way at Ivy Lane and St Helena Road.
- Community information sessions held on construction progress.

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 four-lane divided road between Port Macquarie and Raleigh (south of Coffs Harbour). Progress is already being made on this section 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. They include:

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.

Activities under way in November 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 Sancroix interchange.
- Preparation of tender documents continued for design and construction contract for the Oxley Highway to Kundabung section.
- Work continued on preparing additional information for the referral to the Department of Sustainability, Environment, Water, Population and Communities.

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 November 2012

- A Thiess Macmahon joint venture was identified as the preferred tenderer for the design and construction of this section of the upgrade.
- A contract is expected to be awarded in December.
- 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.

Preconstruction projects



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Geotechnical investigations



Field investigations

Warrell Creek to Urunga

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.

Nambucca Heads to Urunga

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

Activities under way in November 2012

- Tenders received and are being assessed from three shortlisted contractors, Abigroup, Boulderstone and Thiess, for the design and construction contract.
- 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.

Warrell Creek to Nambucca Heads

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

Activities under way in November 2012

- Preconstruction activities under way, including land acquisitions, survey, geotechnical and environmental work.
- Preparation of tender documents continued 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 Raleigh) are currently being prepared for major work to start.

Priority three involves completing the remaining single-lane 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 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 November 2012

- Land acquisitions continued.
- Work continued on an environmental impact statement which 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 road surfaces.
- Survey investigations continued to gather data for design purposes.
- Pilot study for tracking emu movements started.
- Placement of fill material continued between Pimlico and Teven 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 improvements work has been developed as part of the Australian and NSW governments commitment to upgrade the Pacific Highway to mid 2014.

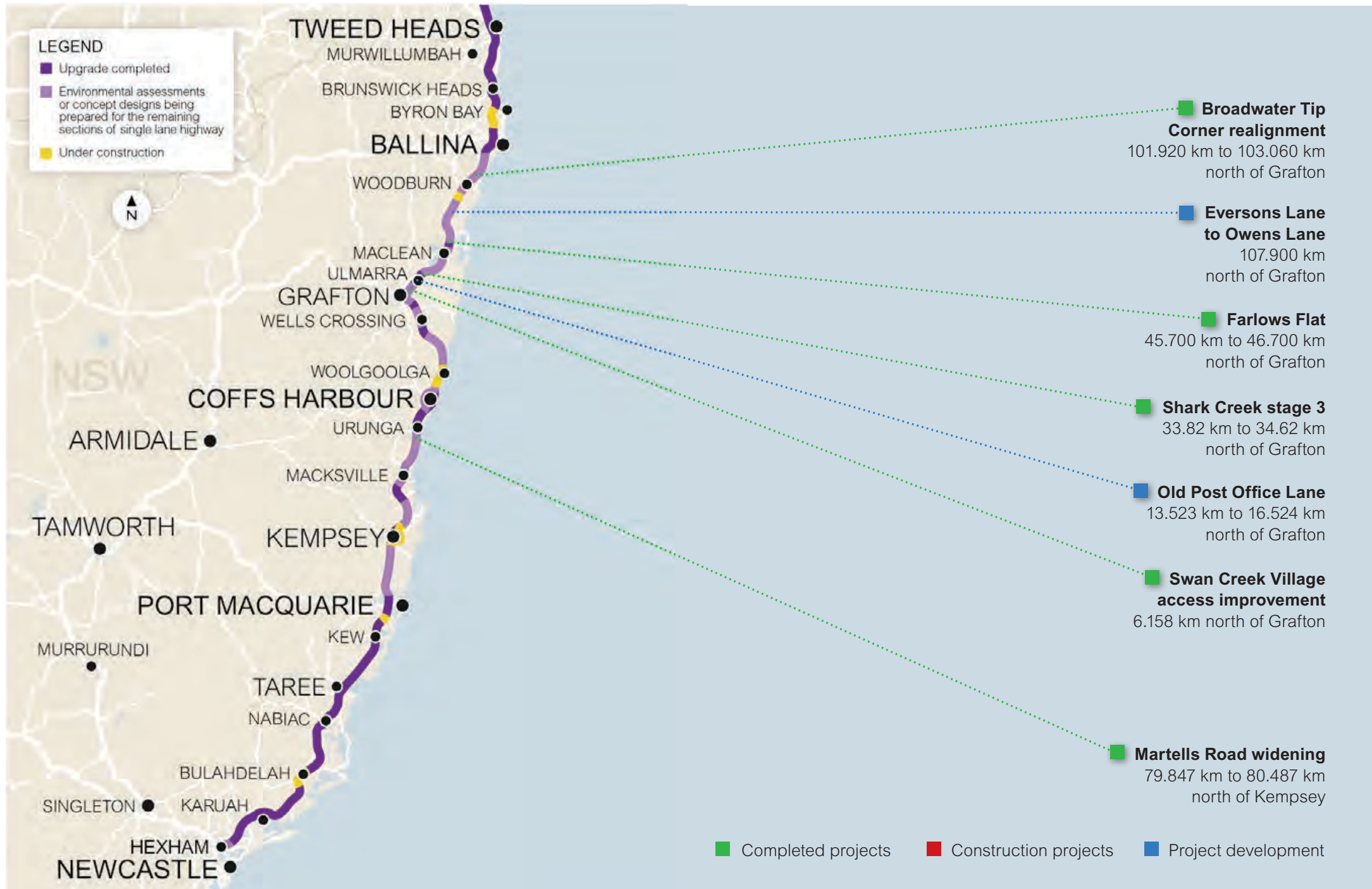
While most of the funding will be directed to upgrading the highway to a four-lane divided road, there is a need to address road safety and traffic issues on sections of the two-lane highway.

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 November 2012

- Development work continued 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 and completed at Farlows Flat as part of the Pacific Highway safety improvement work program. Separate resurfacing work is continuing in the area.

Safety improvement works under construction





Environment

Myotis macropus is known as the “fishing bat” due to its habit of feeding on air-breathing aquatic invertebrates and fish along creeks and rivers. They are known to forage over areas of between 10 and 20 kilometres.

Myotis prefer to roost over water and thus the demolition of bridge and culvert structures can result in a significant loss of habitat for the species.



Myotis macropus found on the Tintenbar to Ewingsdale upgrade

Tintenbar to Ewingsdale Microbats find new home

A breeding colony of the threatened microbat species, *Myotis macropus*, has been successfully relocated on the Tintenbar to Ewingsdale upgrade.

The bats had been roosting in a cavity caused by water erosion above a pipe culvert on the existing Pacific Highway. The colony was discovered during an inspection of existing bridge and culvert structures along the project length in 2010, to meet a condition of approval for the project.

The discovery of the colony early in the preconstruction phase of the project meant the project team was able to develop a strategy for the management and ultimate relocation of the colony, which was prepared in consultation with the then Department of Environment, Climate Change and Water.

Part of the strategy involved placing additional habitat outside of the area of impact. Artificial nesting boxes were installed in other culverts and in trees next to waterways in the vicinity of the known colony.

The artificial roosts were established 18 months in advance of the time when it would be necessary to relocate the colony. This allowed the bats to have two more breeding seasons in their original location, in the hope that this would increase the overall *Myotis* population in the area. At the same time, it also gave the bats an opportunity to familiarise themselves with the newly installed nesting boxes.

Regular monitoring of the colony and the new nesting boxes over that period showed that there was a gradual increase in the use of the nesting boxes under culverts by small numbers

of bats, most likely males who unless they have a “harem” of females, tend to live fairly solitary lives.

In early April last year, when it was deemed that the previous breeding season’s offspring would be sufficiently mature to be leaving the roost each night with their mothers, the project ecologist chose an evening to carry out the formal relocation.

A count of bats in the culvert was done during the day, and then the team waited at the site at dusk and into the evening until all the bats had left for the evening’s foraging. The team then sealed up all small cracks and installed one-way flaps over the holes where bats were known to roost to prevent bats coming back in but to allow any bats that may still have been inside to escape.

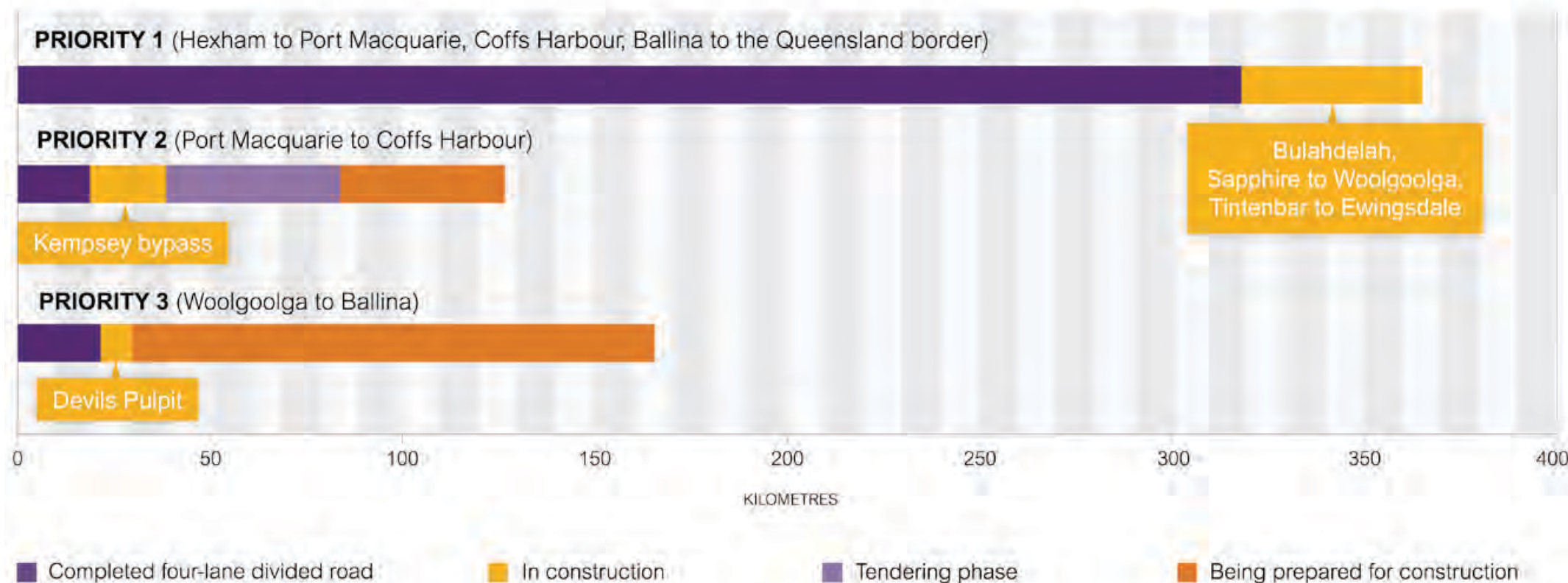
The next morning a check of the culvert was done and no bats were visible. A check was also undertaken of the bat boxes in the vicinity, with the colony appearing to have relocated to the bat box in the culvert over a drainage line a short distance away. The population in that bat box was found to have increased by the same number recorded in the old culvert that had been sealed off the day before.

Regular monitoring over the winter months showed that bats were persisting within the project area, as hoped. Recent monitoring carried out revealed that the bats had bred in their new location, with a population of females and juvenile bats present.

Monitoring will continue over the course of the project and it is hoped that the population will continue to expand.



Dual carriageway status





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