



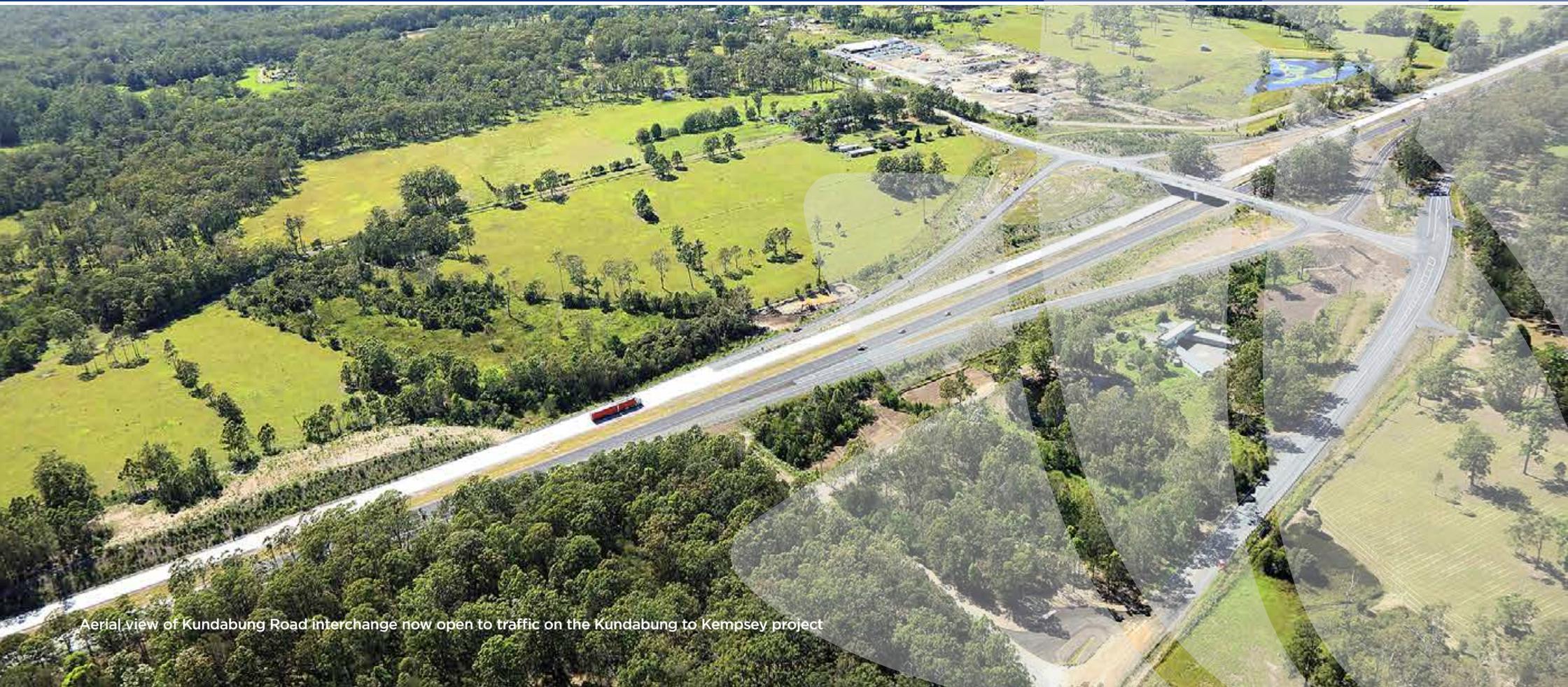
Australian Government

**BUILDING OUR FUTURE**



# Pacific Highway upgrade

Achievement report **February 2018**



Aerial view of Kundabung Road interchange now open to traffic on the Kundabung to Kempsey project

# Overview of the upgrade



## Pacific Highway upgrade

This report will provide you with information about Pacific Highway upgrade projects, including the current status and key activities.

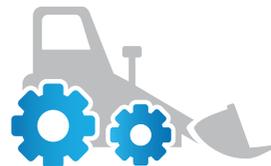
As of 28 February 2018, 523 kilometres are four lane divided road and about 134 kilometres are being built. The remaining sections of two lane highway are being prepared for major work. Fourteen kilometres of the Warrell Creek to Nambucca Heads section of the upgrade opened to traffic in December.

About 80 per cent of the final highway length is now four lane divided road.



about **80%** of highway length now four lane divided road

**3225** workers on site



**134km** of highway being built

The total number of workers includes workers on site for the Pacific Highway upgrade projects contained in this report, and workers on site preparing for work not yet reported on.

For more detailed information visit the project website at [www.rms.nsw.gov.au/pacific](http://www.rms.nsw.gov.au/pacific) or call the Pacific Highway office on **1800 653 092**

# Port Macquarie to Coffs Harbour

The remaining 11 kilometres of the Pacific Highway still to be upgraded to four lane divided road between Port Macquarie and Coffs Harbour are being built.

Five projects worth more than \$3.3 billion are either being built or opened to traffic. The 26 kilometre Frederickton to Eungai project opened to traffic in May 2016 and the Nambucca Heads to Urunga project in July 2016. The 14 kilometre Kundabung to Kempsey project opened to four lanes in October 2017, 18 kilometres of the Oxley Highway to Kundabung section opened in November and 14 kilometres of the Warrell Creek to Nambucca Heads section opened in December. The remaining sections will open to traffic from mid 2018, weather permitting.

The summaries on the following pages outline progress in completing this section of the Pacific Highway upgrade, including key building activities.

# Port Macquarie to Coffs Harbour

## Project snapshot

**Contractors:** Lendlease

**Form of contract:** Design and build

**Workers on site:** 172

**Pieces of large machinery:** 30

**Start date of major construction:** October 2014

**Expected completion date:** 18km opened in 2017, remaining 5km to open to dual carriageway in early 2018

**Project value:** \$820 million

**Australian Government contribution:** \$542.4 million\*

**NSW State Government contribution:** \$277.6 million\*

\*Contribution amounts may vary from year to year

## Oxley Highway to Kundabung

### Background

The Oxley Highway to Kundabung project is the southern section of the Oxley Highway to Kempsey upgrade, which was approved by the NSW Minister for Planning and Infrastructure in 2012 and the Federal Department of the Environment in January 2014. The project is jointly funded by the Australian and NSW governments. It involves building 23 kilometres of four lane divided road, including bridges over the Hastings and Wilson rivers.

### Key activities/progress in February 2018

- placed the final sections of concrete pavement at Cooperabung Range
- continued boundary fencing and fauna fencing
- completed all bridge work for the project
- completed treatment for properties affected by highway traffic noise
- continued installing new safety barriers at Cooperabung
- continued earthwork under the highway bridges for the Yarrabee Road interchange
- continued placing topsoil and landscape work at Cooperabung Range
- started removing temporary concrete barriers to prepare for the traffic switch onto both carriageways through Cooperabung Range in March.



For more detailed information visit the project website at [www.rms.nsw.gov.au/pacific](http://www.rms.nsw.gov.au/pacific) or call the Pacific Highway office on **1800 653 092**

# Oxley Highway to Kundabung



Installing the final concrete traffic barrier just north of Barrys Creek bridge



Earthwork for the Yarrabee Road interchange, at Cooperabung



Installing the concrete gutter along the southbound lanes, at Cooperabung



Placing a drainage layer on the Yarrabee Road interchange, under the highway bridges



Water proofing the deck of Yarrabee Road bridge

# Port Macquarie to Coffs Harbour

## Project snapshot

**Contractors:** McConnell Dowell-OHL Joint Venture

**Form of contract:** Build only

**Workers on site:** 87

**Pieces of large machinery:** 10

**Start date of major construction:** November 2014

**Expected completion date:** fully open from October 2017

**Project value:** \$230 million

**Australian Government contribution:** \$115 million\*

**NSW State Government contribution:** \$115 million\*

\*Contribution amounts may vary from year to year

## Kundabung to Kempsey

### Background

The Kundabung to Kempsey project is the northern section of the Oxley Highway to Kempsey upgrade, which was approved by the NSW Minister for Planning and Infrastructure in 2012 and the Federal Department of the Environment in January 2014. The project is jointly funded by the Australian and NSW governments. The 14 kilometre Kundabung to Kempsey project was fully opened to traffic in October, 2017.

### Key activities/progress in February 2018

- completed property adjustments
- rehabilitation of temporary stockpile sites and compound sites
- completed property fencing and fauna fencing
- completed minor finishing work.



**OPEN TO TRAFFIC**

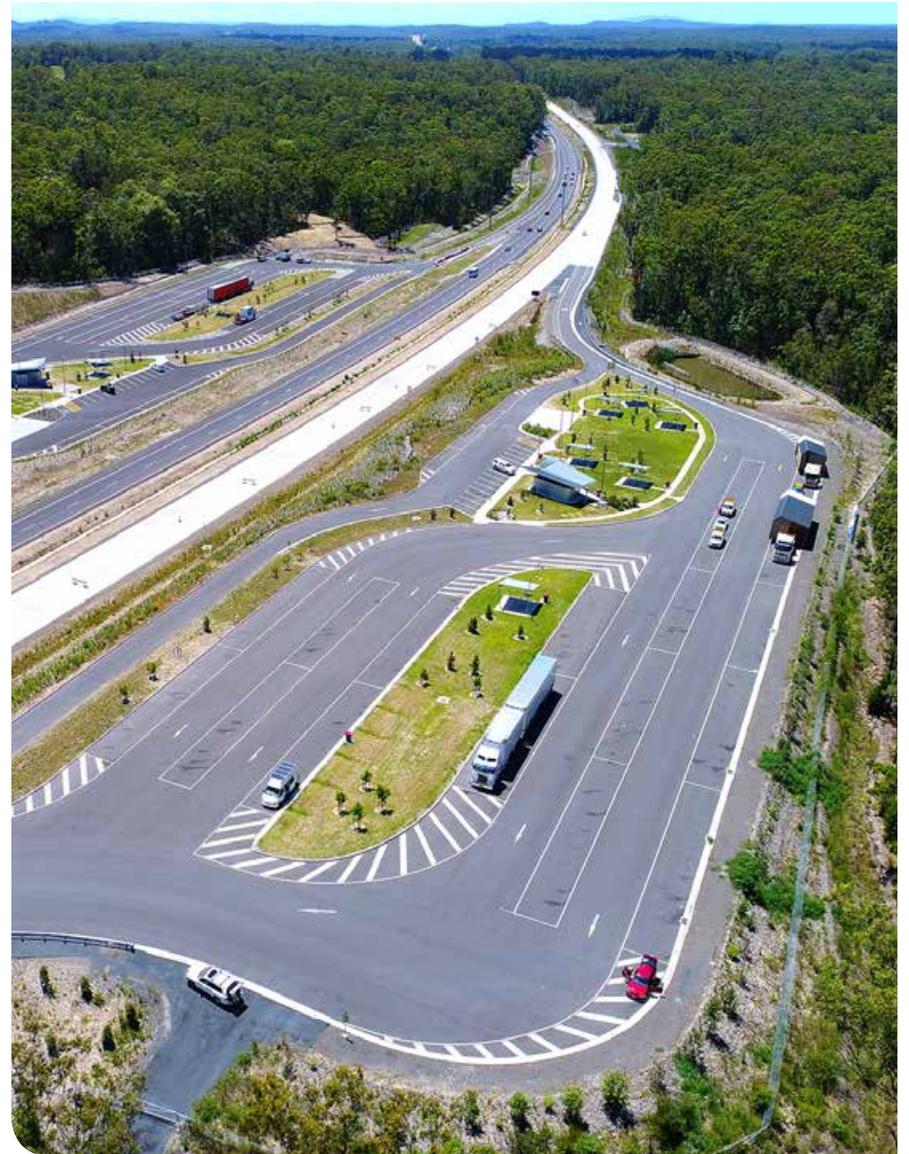


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# Kundabung to Kempsey



Aerial view of the Kundabung Road interchange, looking south



Barrys Creek rest areas looking north

# Port Macquarie to Coffs Harbour

## Project snapshot

**Contractors:** Pacifico (Acciona Ferroviaria joint venture)

**Form of contract:** Design and build

**Workers on site:** 196

**Pieces of large machinery:** 45

**Start date of major construction:** December 2014

**Expected completion date:** 14 km Macksville and Nambucca Heads bypass opened late 2017, remaining 6 km to open by mid 2018 (weather permitting)

**Project value:** \$830 million

**Australian Government contribution:** \$415 million\*

**NSW State Government contribution:** \$415 million\*

\*Contribution amounts may vary from year to year

## Warrell Creek to Nambucca Heads

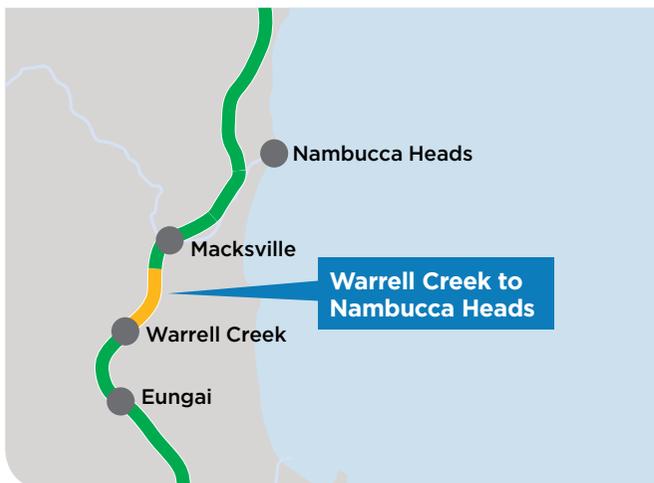
### Background

The Warrell Creek to Nambucca Heads project is the second stage of the Warrell Creek to Urunga upgrade, which was approved by the NSW Minister for Planning and Infrastructure in 2011. The Federal Department of the Environment approved this upgrade in December 2014. The project is jointly funded by the Australian and NSW governments. The 20 kilometre project involves upgrading the existing highway to a four lane divided road between the Allgomera deviation, south of Warrell Creek and Nambucca Heads, just south of the North Coast railway line where it will join the Nambucca Heads to Urunga upgrade.

### Key activities/progress in February 2018

- started decommissioning the northern and southern concrete batch plants
- removed the main northern site compound and some southern site facilities

- continued work on the service road near Browns Crossing Road to prepare for the traffic switch in March
- continued earthwork on the northern tie in ramp to prepare for planting vegetation
- completed pouring the concrete decks of Upper Warrell Creek bridge
- continued stitch pours, approach slabs, and installing parapets
- continued finishing work on the rail overpass near Cockburns Lane
- continued installing verges, batter treatment works, topsoiling, tree planting, fauna fencing and revegetation in the southern project area
- continued deck reinforcing, steel fixing, formwork and approach slabs on the Williamson Creek bridge
- completed around 2000 tonne of asphalt paving during February.



For more detailed information visit the project website at [www.rms.nsw.gov.au/pacific](http://www.rms.nsw.gov.au/pacific) or call the Pacific Highway office on **1800 653 092**

# Warrell Creek to Nambucca Heads



Installing drainage pipes near the railway overpass, looking south



Topsailing the batter at the railway overpass



Earthwork at the railway overpass, looking south



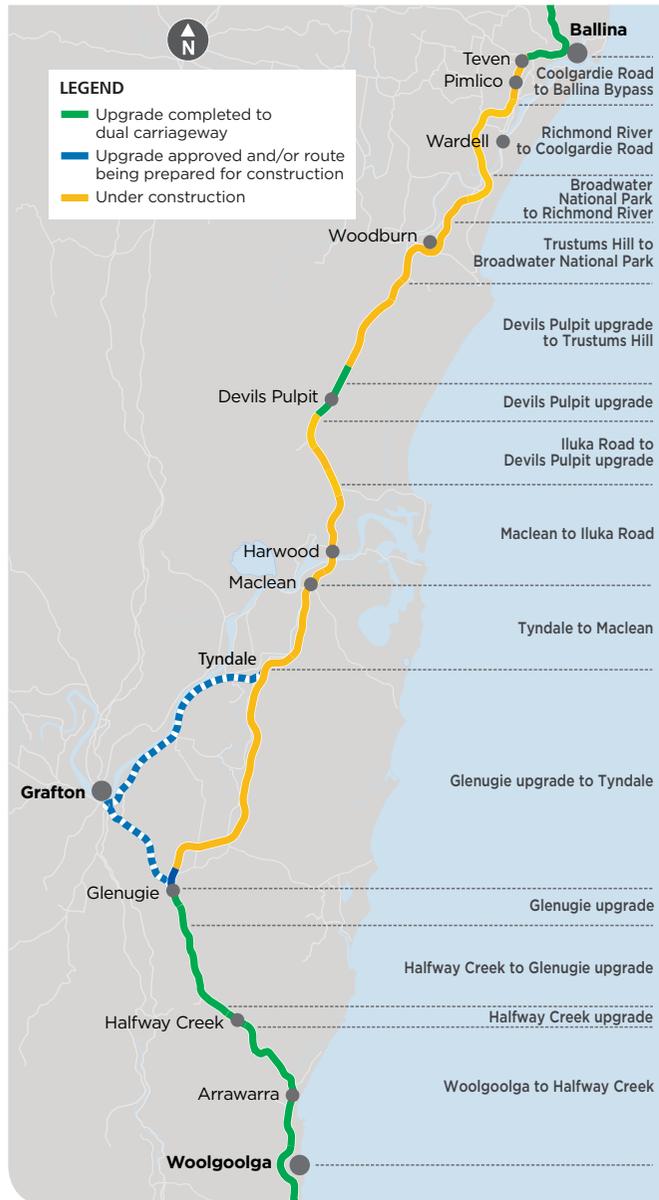
Patching and finishing work on the Upper Warrell Creek bridge

# Woolgoolga to Ballina

The 155 kilometre upgrade between Woolgoolga and Ballina is the last highway link between Hexham and the Queensland border to be upgraded to four lanes.

Roads and Maritime Services' Pacific Highway Project Office, Pacific Complete and its contractor partners are working together to deliver the project. The delivery partner model is based on the approach used to oversee construction of infrastructure for the London Olympics and supports collaboration and innovation by bringing businesses, workers, consumers and suppliers together. It encourages the best ideas and solutions from the private sector while also drawing on Roads and Maritime's knowledge to ensure better engineering and design, customer outcomes and public value.

# Woolgoolga to Ballina



## Woolgoolga to Ballina

### Background

The \$4.36 billion Woolgoolga to Ballina upgrade was approved by the NSW Minister for Planning in June 2014 and the Federal Minister for the Environment in August 2014. Of the 155 kilometre project, 26 kilometres is open to traffic, and when complete will provide a four lane divided road from the northern end of the Woolgoolga Bypass to the southern end of the Ballina Bypass. The project is jointly funded by the Australian and NSW governments.

### Procurement

- street lighting and foamed bitumen packages released for tender in February.

### Highway Construction

#### Overview

- construction work is underway along the entire Woolgoolga to Ballina alignment (with the exception of 3 kilometres at Glenugie)
- 60 highway bridges are currently under construction
- around 1.1 million cubic metres of earthwork was completed in February.

#### Successes / Achievements for February 2018

- completed piling for bridges from Glenugie to Maclean and poured the first concrete bridge deck

- Harwood temporary highway diversion opened to traffic
- first deck units placed on the new bridge over the Clarence River at Harwood
- started marine piling work for the new bridge over the Richmond River.

### Environment

- The NSW Department of Planning and Environment approved the modification of a 3km section of the alignment between Glenugie and Eight Mile Lane. The changed alignment will avoid a sensitive heritage area and result in better environmental outcomes.
- The Hon Ben Franklin MLC, Parliamentary Secretary for North Coast, and Ballina Mayor David Wright, attended a media event to launch 13 new koala awareness signs in the Wardell area
- koala habitat and food trees have been planted on 110 hectares of land.

### Stakeholder and Community Engagement

- held eleven sessions for the Work Ready Program across Grafton, Ballina and Maclean
- launched a road safety campaign with the NSW Police highway patrol aimed at improving project worker driving behaviour
- hosted community information stalls at Sportsman's Creek bridge open day and Lennox Heads markets.

2,770 total workers\*  \* including workers not on site working across the whole Woolgoolga to Ballina project

For more detailed information visit the project website at [www.rms.nsw.gov.au/pacific](http://www.rms.nsw.gov.au/pacific) or call the Pacific Highway office on 1800 653 092

# Woolgoolga to Ballina



## Glenugie to Maclean

### Background

The Glenugie to Maclean section of the Woolgoolga to Ballina Pacific Highway upgrade extends more than 48 kilometres. Diverging from the existing Pacific Highway at Glenugie the new alignment heads east passing through Pillar Valley joining the existing Pacific Highway at Maclean. The upgrade in this location includes the Glenugie, Tyndale and Maclean interchanges.

### Key activities/progress during February 2018

- continued building 23 bridges across the project
- continued installing culverts for drainage
- completed Old Six Mile Lane deviation works
- started work on the McIntyres Lane deviation
- completed 160,419 cubic metres of bulk earthworks in February.



5 days  
lost to wet  
weather



656 workers  
on site



181 pieces of large  
machinery on site



about  
24%  
complete



15  
contractor  
companies  
on site

For more detailed information visit the project website at [www.rms.nsw.gov.au/pacific](http://www.rms.nsw.gov.au/pacific) or call the Pacific Highway office on **1800 653 092**

# Glenugie to Maclean



Bridge construction in the Coldstream area



Open drain shotcreting at the Tyndale off ramp



Building a concrete pile pad near Crackers drain



Piling work for a bridge over Champions Creek

# Woolgoolga to Ballina



## Maclean to Devils Pulpit

### Background

The Maclean to Devils Pulpit section of the Woolgoolga to Ballina Pacific Highway upgrade extends about 27 kilometres. The upgrade in this location generally follows the existing Pacific Highway and includes Yamba, Harwood and Iluka interchanges.

### Key activities/progress in February 2018

- temporary highway diversion at Harwood opened to traffic
- completed the removal of the Beekeepers rest area
- started work between Iluka Road and Devils Pulpit
- started piling works at the bridge over the Clarence floodplain
- started removing the existing highway at Yamba to prepare for soft soil treatment.



10 days lost to wet weather



311 workers on site



86 pieces of large machinery on site



about 21% complete



10 contractor companies on site

For more detailed information visit the project website at [www.rms.nsw.gov.au/pacific](http://www.rms.nsw.gov.au/pacific) or call the Pacific Highway office on **1800 653 092**

# Maclean to Devils Pulpit



Earthwork to build the Castles stockpile pad



The Harwood diversion road ready for line marking

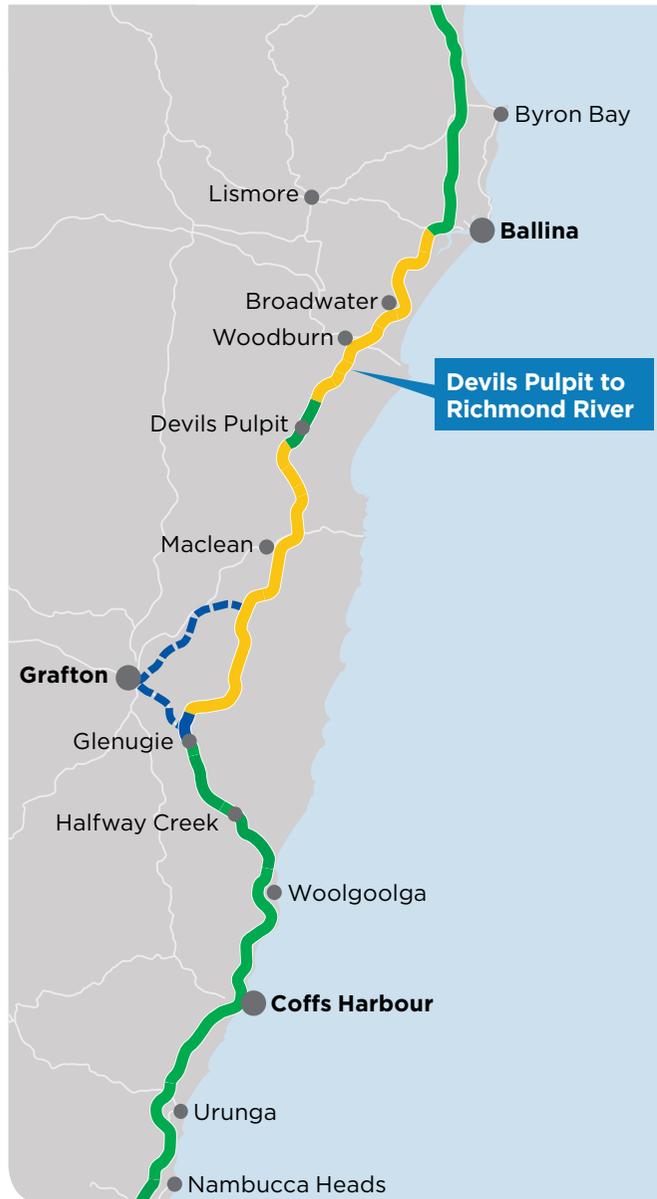


Jetty piling for the bridge over the Clarence floodplain



Preparing for soft soil, wick drain treatment at Yamba

# Woolgoolga to Ballina



## Devis Pulpit to Richmond River

### Background

The Devils Pulpit to Richmond River section of the Woolgoolga to Ballina Pacific Highway upgrade begins about 13 kilometres north of Mororo Road and extends about 34 kilometres north to Richmond River bridge. In this area the upgrade bypasses Woodburn, Broadwater and Wardell and includes Broadwater and Wardell interchanges.

### Key activities/progress in February 2018

- started work on the Woodburn interchange
- started work on the Woodburn-Evans Head Road overpass
- completed the Woodburn to Broadwater service road ready for the traffic switch
- continued vegetation removal between Devils Pulpit and Trustums Hill.



For more detailed information visit the project website at [www.rms.nsw.gov.au/pacific](http://www.rms.nsw.gov.au/pacific) or call the Pacific Highway office on **1800 653 092**

# Devils Pulpit to Richmond River



Vegetation removal near Woodburn interchange



The Woodburn to Broadwater service road ready for traffic



Rock foundation being laid for the highway near Trustums Hill

# Woolgoolga to Ballina



## Richmond River to Ballina Bypass

### Background

The Richmond River to Ballina bypass section of the Woolgoolga to Ballina Pacific Highway extends more than 18 kilometres from the Richmond River bridge to just south of the Teven Road interchange at Ballina.

### Key activities/progress in February 2018

- continued bulk earthwork between Richmond River and Coolgardie Road, around 50 percent complete
- completed the traffic switch onto Kays Road
- started installing drainage pipes and culverts
- continued bridge piling, around 25 percent complete
- launched the “Good Neighbour” campaign to engage better with the community.



For more detailed information visit the project website at [www.rms.nsw.gov.au/pacific](http://www.rms.nsw.gov.au/pacific) or call the Pacific Highway office on **1800 653 092**

# Richmond River to Ballina Bypass



Preparing the cross drainage culvert for concreting



Casting a superstructure element at Emigrant Creek



Earthwork around 50 percent complete

# Woolgoolga to Ballina



## New bridge over Clarence River at Harwood

### Background

The bridge over the Clarence River at Harwood project is part of the Woolgoolga to Ballina Pacific Highway upgrade. It involves building a 1.5 kilometre long, four lane divided bridge, about 20 metres east of the existing Harwood bridge.

### Key activities/progress in February 2018

- completed around 50 percent of the pre-cast concrete bridge girders
- started construction on the southern side of the river bank
- prepared the 750 tonne crawler crane to be dismantled and relocated to the southern bank
- continued building marine columns and headstock.



For more detailed information visit the project website at [www.rms.nsw.gov.au/pacific](http://www.rms.nsw.gov.au/pacific) or call the Pacific Highway office on **1800 653 092**

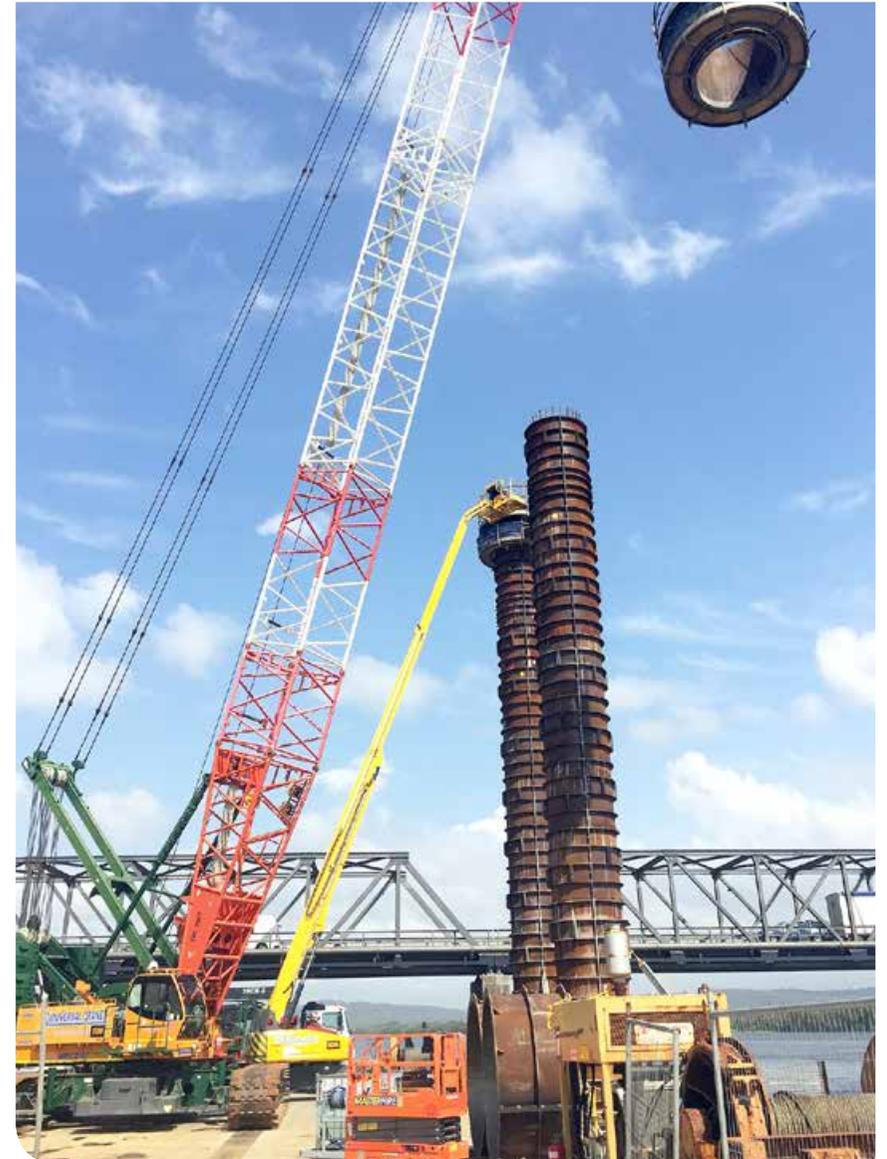
# New bridge over Clarence River at Harwood



Celebrating - 50 percent of concrete bridge girders have been made



The 750 tonne crane in operation



Building marine bridge columns

# Woolgoolga to Ballina



## New bridge over the Richmond River at Broadwater

### Background

The bridge over the Richmond River at Broadwater will be one of two major bridges for the Woolgoolga to Ballina Pacific Highway upgrade.

The project involves building a one kilometre long, four lane divided bridge, about 500 metres north of Broadwater.

### Key activities/progress in February 2018

- installed the first precast bridge headstock
- started marine bridge piling in the Richmond River
- completed vegetation removal for the northern bridge abutment
- continued making concrete bridge parts in the Macksville precast facility.



For more detailed information visit the project website at [www.rms.nsw.gov.au/pacific](http://www.rms.nsw.gov.au/pacific) or call the Pacific Highway office on **1800 653 092**

# New bridge over the Richmond River at Broadwater



View of construction from the south abutment looking north

# Monitoring fauna structures

As part of the Pacific Highway upgrade Roads and Maritime has been building and monitoring fauna connectivity structures to protect wildlife and allow them to move freely through habitats to access food, water and mates. When highways are built, we must provide opportunities that allow wildlife to safely cross the highway to minimise impacts on access to foraging and breeding habitat.

As part of our connectivity strategy we have been monitoring and collecting data for more than 16 years to understand what species are using the crossing structures. This research informs the measures used in our current and future highway upgrade projects. The road crossing structures that have been implemented and continue to be monitored are being used by a variety of threatened species right along the Pacific Highway corridor. Monitoring of fauna connectivity structures to date have shown that they are used by a wide variety of native fauna including threatened species such as the Long-nosed potoroo at Tugun Bypass, the brush tailed phascogale at Glenugie, Squirrel gliders and Yellow-bellied gliders north of Coffs Harbour and koala populations at various locations along the highway between Karuah and Chinderah. The crossing structures have been specifically designed and built to suit the range of wildlife living in habitats either side of the road, or under bridges in the case of fish and amphibians. Our monitoring program is showing the success of glider poles, rope crossings, dedicated fauna culverts fitted with climbing logs, fish underpasses and fauna overpasses.

We also have developed and implemented various threatened species management plans and a biodiversity mitigation framework to ensure biodiversity impacts

of the Pacific Highway upgrade are minimised, and the project's conditions of approval are met. The management plans include monitoring the connectivity structures to show how we are managing and mitigating impacts on threatened species before, during and after building the upgrade.

In 2017, in an Australian-first, the ecological monitoring program for the Sapphire to Woolgoolga project captured an image of a Giant Barred Frog using a dedicated underpass to pass under the highway. These frogs are very difficult to detect and can be seen using the structure made of a pipe culvert with a mulch bed. We are building highways that are safer for animals and people by separating traffic and wildlife with fauna crossings and fences.



A brush tailed phascogale using an aerial crossing at Glenugie



A squirrel glider at Karuah bypass using an aerial crossing



A possum at Karuah bypass



A fauna underpass



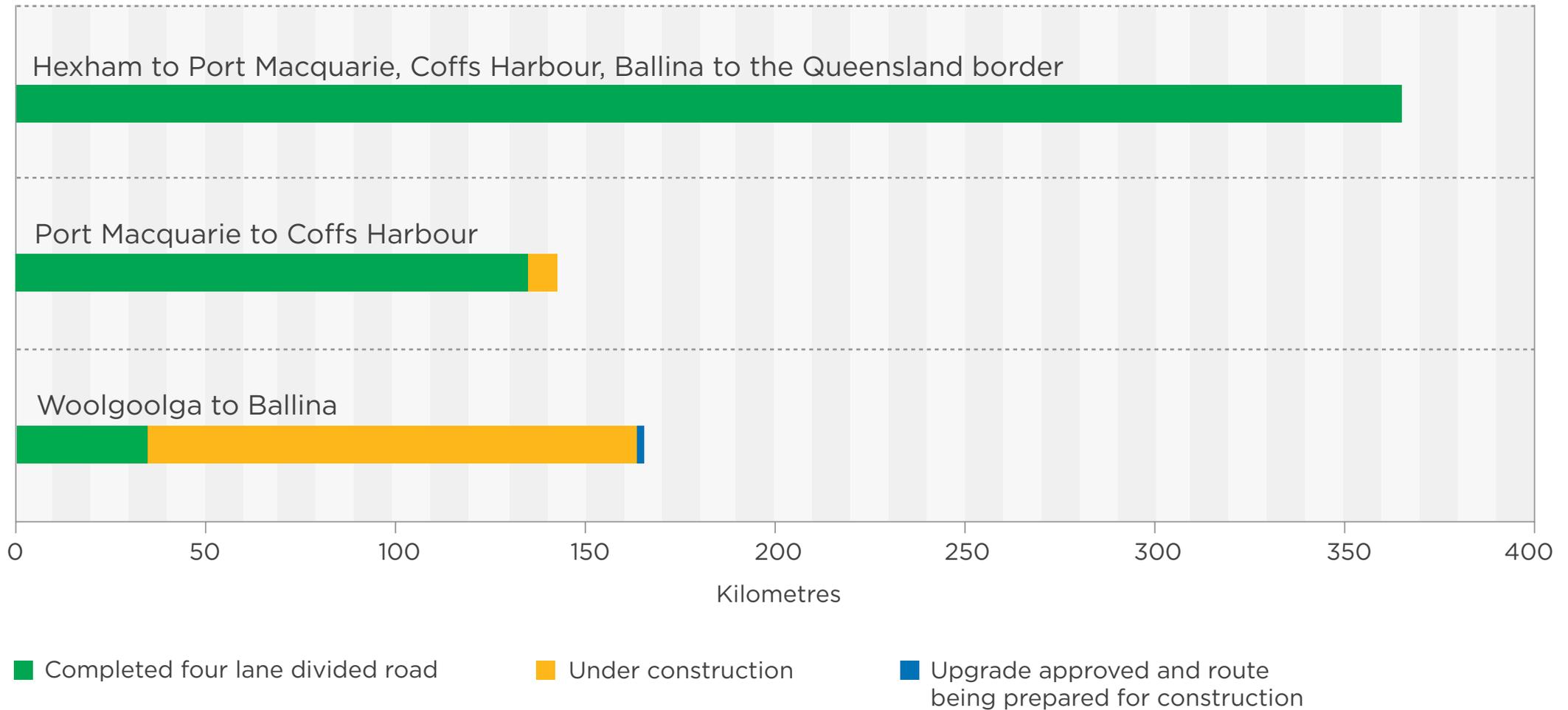
Koala on biodiversity offset property



Giant Barred Frog on biodiversity offset

For more detailed information visit the project website at [www.rms.nsw.gov.au/pacific](http://www.rms.nsw.gov.au/pacific) and environment news at [www.rms.nsw.gov.au/projects/pacific-highway/environment/news.html](http://www.rms.nsw.gov.au/projects/pacific-highway/environment/news.html) or call the Pacific Highway office on 1800 653 092

# Four lane divided route status





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