



Australian Government

**BUILDING OUR FUTURE**



# Pacific Highway upgrade

Achievement report **September 2017**



Kundabung to Kempsey - Barrys Creek Rest Area looking north

# 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.

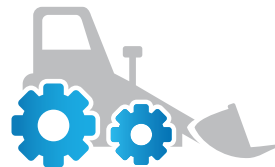
As of 30 September 2017, 483 kilometres are four lane divided road and about 135 kilometres are being built. The remaining sections of two lane highway are being prepared for major work.

About 74 per cent of the final highway length is now four lane divided road.



about **74%** of  
highway length now  
four lane divided road

**2970** workers  
on site



**135km**  
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 43 kilometres of the Pacific Highway still to be upgraded to four lane divided road between Port Macquarie and Coffs Harbour is 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 is being progressively opened to traffic from August 2017. The remaining two projects will open to traffic from late 2017 to 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:** 344

**Pieces of large machinery:** 66

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

**Expected completion date:** 17km to open in 2017, remaining 6km 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 during September 2017

- completed all earthwork for the project
- continued installing boundary fencing and fauna exclusion fencing
- completed concrete pavement south of Fernbank Creek
- completed concreting the approach to the Yarrabee Road bridge

- completed concreting the deck on the new southbound bridge over Cooperabung Creek
- continued acoustic treatments for houses affected by noise from the highway
- continued earthwork near Barrys Creek and at Cooperabung cutting
- completed shotcreting and rock bolting at Cooperabung Hill
- completed installing major signpost structures
- continued installing wire rope safety barriers
- completed final asphalt surface works on the Wilson river floodplain
- started concrete paving work at Cooperabung
- started installing electrical and communications pits for Point to Point speed cameras, near Blackmans Point Road.



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



Topsoil being placed in central median near Blackmans Point Road



Preparing topsoil to be used for finishing work and landscaping



New highway on the Wilson river floodplain, just north of Bill Hill Road



Installing electrical and communications pits for Point to Point speed cameras, near Blackmans Point Road



Preparing holes for concreting wire rope safety barrier posts, near Fernbank Creek



# Port Macquarie to Coffs Harbour

## Project snapshot

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

**Form of contract:** Build only

**Workers on site:** 179

**Pieces of large machinery:** 21

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

**Expected completion date:** staged opening from September 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 is being progressively opened to traffic from August 2017.

### Key activities/progress during September 2017

- opened northbound carriageway to traffic providing dual carriageway with single lane operation
- opened the southbound rest area at Barrys Creek (between Telegraph Point and Kundabung). Opening event attended by the Prime Minister, State Minister and Minister for Roads, Maritime and Freight.



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**

# Kundabung to Kempsey



Northbound carriageway opening looking North from Kundabung bridge



From left: Luke Hartsuyker MP, Prime Minister Malcolm Turnbull and Melinda Pavey MP meet McConnell Dowell-OHL Joint Venture Project Manager Eugene Du Plessis at the Barrys Creek rest area opening (*photo owner - Frank Redward Photo/Video*)



Northbound carriageway opening looking South from Kundabung bridge



# Port Macquarie to Coffs Harbour

## Project snapshot

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

**Form of contract:** Design and build

**Workers on site:** 330

**Pieces of large machinery:** 150

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

**Expected completion date:** Macksville to Nambucca Bypass to open late 2017, remainder to progressively 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 during September 2017

- continued concreting deck of Lower Warrell Creek bridge
- continued concreting deck of Upper Warrell Creek bridge
- completed concreting decks and continued concreting upright walls for the railway underpass
- completed concreting cross girders and started reinforcement work at Williamson Creek bridge
- completed concreting bridge decks and approach slabs of the quarry access bridge
- continued concrete and asphalt road paving
- continued kerbing, placing verge fill and installing wire rope barriers.

- completed bulk earthwork across the project
- continued installing pavement drainage lines
- continued installing parapets and steel rail barriers on Nambucca River bridge



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



Wire rope barriers being installed in the flood plain area south of Nambucca River bridge



Installing underbridge drainage at the southern Old Coast Road bridge



Building the acoustic wall between Bald Hill Road and Lower Warrell Creek



Bridge over Nambucca River, looking north

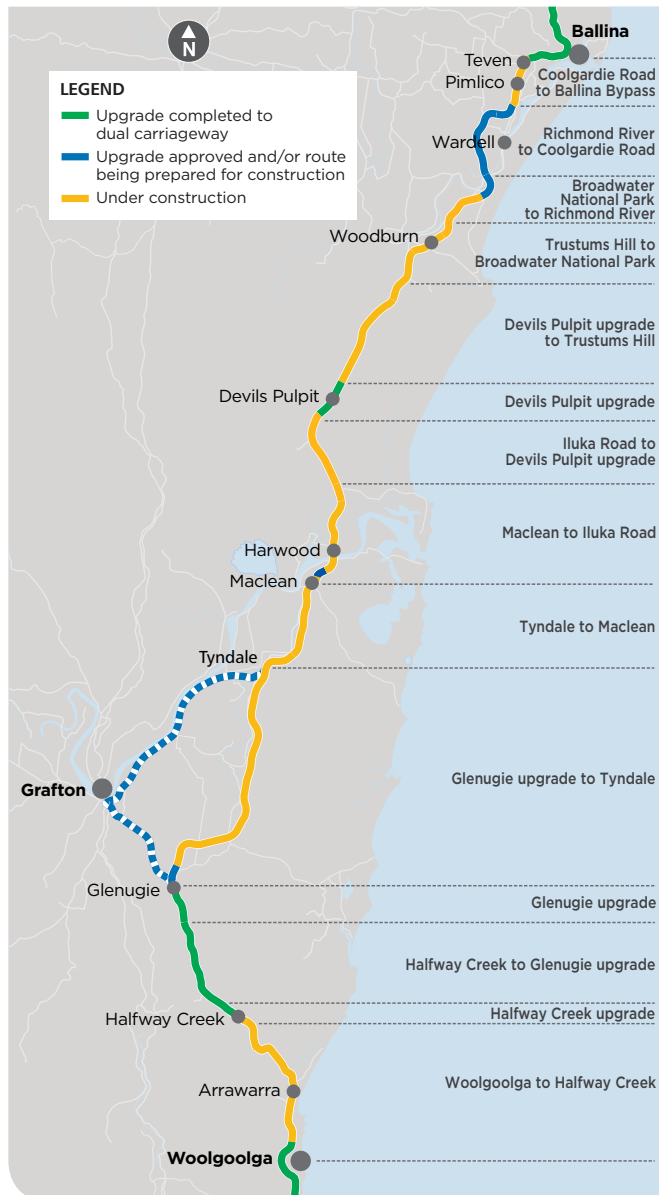
# Woolgoolga to Ballina

The 155 kilometre upgrade between Woolgoolga and Ballina is one of Australia's largest regional infrastructure projects and the last highway link between Hexham and the Queensland border to be upgraded to four lanes.

Roads and Maritime are partnering with Pacific Complete from the private sector to deliver the Woolgoolga to Ballina Pacific Highway upgrade. 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. The 155 kilometre project 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

- Koala Monitoring package awarded for Woolgoolga to Ballina project
- 124 work packages out of 129 have been tendered or awarded to date.

### Earthwork

- 8.7 million cubic metres of 14.3 million cubic metres total.

### Highway Construction

- completed building the project site compound at Broadwater
- completed the Avenue Road upgrade
- started land piling work for bridges between Tyndale and Iluka Road
- poured the first concrete bridge deck at Tabbimoble Creek.

- started removing existing bridges near Pimlico
- poured the first concrete marine pilecap for Harwood River bridge
- started work on the southern approach to Richmond River bridge.

### Environment

- successful relocation of 34 endangered Oxleyan Pygmy Perch fish in Broadwater National Park
- started building the Woodburn Service Road fauna culvert
- continued planting koala food trees near Wardell.

### Stakeholder and Community Engagement

- held three 'Jobs Roadshows' in Grafton, Ballina and Maclean with more than 330 people attending
- project display stalls set up at Iluka, Ashby, Maclean and Yamba Farmers markets and Yamba River Market were visited by around 450 people
- Harwood community praised the consistent effort made by the project team to keep them informed about upcoming work.

2117 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

## Project snapshot

**Contractors:** OHL and York joint venture

**Form of contract:** Build only

**Workers on site:** 89

**Pieces of large machinery:** 83

**Start date of major construction:** June 2015

**Expected completion date:** 2017 (weather permitting)

**Project value:** Forms part of the Woolgoolga to Ballina upgrade

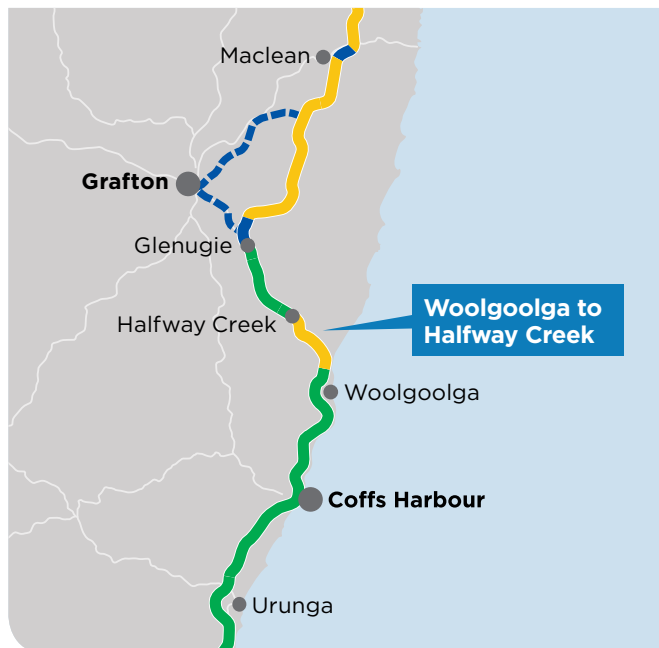
## Woolgoolga to Halfway Creek

### Background

The Woolgoolga to Halfway Creek project – the first section of the overall Woolgoolga to Ballina upgrade – will link the Sapphire to Woolgoolga project in the south and the existing Halfway Creek upgrade in the north, providing about 14 kilometres of divided road. The key features of the Woolgoolga to Halfway Creek upgrade include a 300 metre long twin bridge over the Corindi River floodplain to allow flood waters to pass under the highway and bridges over the highway at Sherwood Creek Road and Kangaroo Trail Road for local road access.

### Key activities/progress during September 2017

- started building the noise wall at Arrawarra rest area
- continued installing drainage, about 99 per cent complete
- continued paving, about 85 per cent complete
- started asphaltting emergency turn around bays
- continued installing wire rope safety barriers
- continued placing median and verge material
- continued landscape planting, seeding and watering.



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 Halfway Creek



Spraying grass and shrub seeds, south of Dirty Creek Range



Placing asphalt in emergency turn around area north of Kangaroo Trail Road



Installing noise wall panels, Arrawarra rest area



Drilling holes for noise wall posts, Arrawarra rest area



Placing topsoil in median at Dirty Creek Range

# Woolgoolga to Ballina

## Project snapshot

**Contractors:** Civil Mining & Construction

**Form of contract:** Build only

**Workers on site:** 188

**Pieces of large machinery:** 15

**Start date of major construction:** June 2015

**Expected completion date:** 2017 (weather permitting)

**Project value:** Forms part of the Woolgoolga to Ballina upgrade

## Halfway Creek to Glenugie

### Background

The Halfway Creek to Glenugie project – the second section of the overall Woolgoolga to Ballina upgrade – opened to traffic in August 2017 and links the completed Halfway Creek upgrade in the south and the existing Glenugie upgrade in the north, providing about 11 kilometres of new four lane divided road.

### Key activities/progress during September 2017

- opened both lanes of new southbound and northbound carriageway between Glenugie and Halfway Creek to traffic
- completed fauna connectivity work
- continued finishing works including resurfacing, signage, line-marking, traffic barrier installation, landscaping, property work and removing temporary work
- continued building the new heavy vehicle inspection station at Halfway Creek.



0 days  
lost to wet  
weather



188 workers  
on site



15 pieces of large  
machinery on site



about  
90%  
complete



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



# Halfway Creek to Glenugie



Median finishing work south of Lemon tree Road



Installing traffic safety barriers south of Lemon Tree Road



Fauna furniture installed in a fauna connectivity underpass



Resurfacing work on existing highway, north of Wells Crossing

# 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 September 2017

- completed soft soil fill placement between Tyndale and Maclean
- continued topsoil and revegetation work between Tyndale and Maclean
- started set up on site by the contractor for the main civil work
- continued implementing safety initiatives on the project
- started flood management strategies for Coldstream and Chaffin area.



0 days  
lost to wet  
weather



240 workers  
on site



96 pieces of large  
machinery on site



about  
16%  
complete



5  
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 piling pads at Shark Creek, near Tyndale



Hydromulching at Shark Creek, near Tyndale



Land piling work at Shark Creek



Concreting the centre pier of a bridge at Tyndale



Bridge construction work at Tyndale, looking north



Bridge construction work at Tyndale, looking north

# 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 during September 2017

- continued building temporary and permanent diversion lanes
- continued removing existing buildings along the new alignment

- continued piling and bridge construction activities
- implemented lane closure through Chatsworth island to enable work
- used yellow line marking on parts of the project to improve safety
- continued installing wire rope barriers
- completed pouring concrete deck on Tabbimoble Creek bridge
- opened Chatsworth south local road diversion to traffic
- opened Garretts Lane south local road realignment to traffic.



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



Chatsworth South local road diversion opened to traffic



Concreting the bridge deck at Tabbimoble Creek



Installing pre-cast concrete drainage culverts at Banana Road



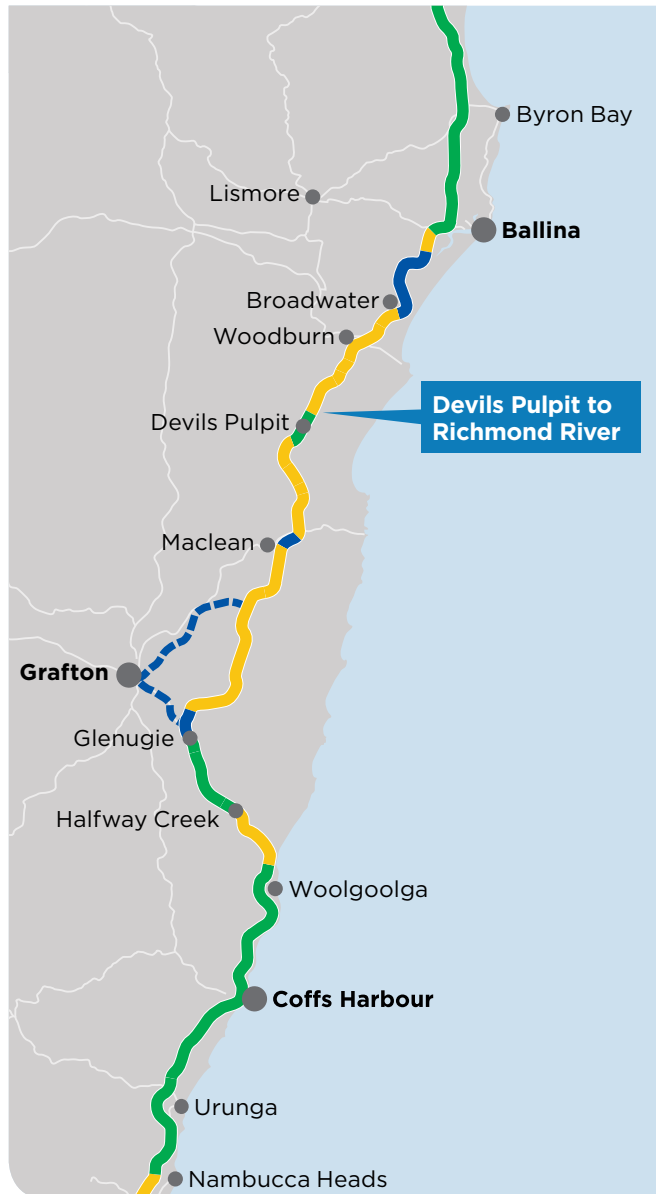
Preparing the bridge deck for the first concrete pour, at Tabbimoble Creek



Driving land piles for the bridge north of Maclean



# Woolgoolga to Ballina



## Devils 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 during September 2017

- continued preconstruction and mobilisation activities to prepare the site for main civil work
- continued construction for bridges near Broadwater National Park
- completed all property access work around Woodburn town drain
- completed early work north and south of Tuckombil canal
- completed priority soft soil work near Broadwater National Park
- continued bank stabilisation work in endangered fish habitat to protect the Oxleyan Pygmy Perch.



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



Installing a concrete drainage culvert on a service road



Using crane to place concrete bridge girders on a service road



Preparing for scour rock installation



Bridge work in the Broadwater National Park



Bank stabilisation work in endangered fish habitat to protect the Oxleyan Pygmy Perch

# 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 during September 2017

- started preparation for major work between Richmond River and Pimlico
- started removal of decommissioned bridge over Emigrant Creek
- started intersection enhancements in Wardell
- continued koala food tree revegetation work by fencing new planting areas
- continued installing fauna exclusion fencing on the existing Pacific Highway
- continued utilities diversion work in various locations
- consulted with Sunshine Sugar and Ballina Shire Council.



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



Fauna exclusion fencing being installed along the existing Pacific Highway Coolgardie Road



Fencing new planting areas for koala food tree revegetation



Start of demolition work at decommissioned bridge over Emigrant Creek

# 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 during September 2017

- continued pouring concrete, pre-cast bridge girders, six completed to date
- started land piling work on the southern approach to the bridge
- continued pouring concrete bridge headstocks, five completed to date
- continued building bridge columns on the northern bank of the river
- poured concrete for the first marine pile cap
- continued driving bridge pile casings into the ground, southern side
- started civil work on the Harwood Link Road.



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



Using straddle carriers to remove the pre-cast girder from the formwork



Concreting the first marine bridge pile cap



Using a crane to position the frame for bridge headstock



View of pile reinforcement inside the pile casing



Concreting the bridge headstock



Preparing the formwork for pre-cast bridge girders



# 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. Activities underway include drilling and investigation work so that ground condition information can be considered in the detailed design. The main construction work will progress from the northern side of the Richmond River towards the southern bank.

### Key activities/progress during September 2017

- piling rig mobilised to site to prepare for bridge piling work
- started earthwork for the southern bridge abutment
- completed building the site compound
- completed crane and piling pad earthworks and cane drain crossings
- completed relocating power services adjacent to the Pacific Highway and Richmond River
- distributed a community notification for the start of piling work.



0 days  
lost to wet  
weather



68 workers  
on site



6 pieces of large  
machinery on site



about  
19%  
complete



1  
contractor  
company  
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

# New bridge over the Richmond River at Broadwater



Using a crane to position site office buildings



Delivery of precast concrete headwalls for cane drain crossings



Relocating power services adjacent to the Pacific Highway at Broadwater



Crane in place to lift the piling rig in place



Fitting out the site office



# Environment

## Koalas – vehicle activated safety signs

Research has indicated that koala populations across NSW are declining. The Ballina koala population that lives in habitat near Wardell is small, and we are doing our part to help stabilise koala numbers, and improve their safety and habitat as part of the Woolgoolga to Ballina Pacific Highway upgrade.

To help improve drivers' awareness of koalas, and reduce koala road strikes, we are using electronic and static safety signs. Already six permanent koala warning vehicle activated signs (VAS) and seven koala static signs have been installed on known koala road strike hotspots on local and state roads.

This demonstrates our commitment to mitigate one of the key threats to the Ballina koala population identified in the Ballina Koala Plan. If koala deaths can be reduced by four to eight koalas each year we can help koala numbers to stabilise and increase in the future.

The vehicle activated signs combine a static sign and radar activated LED sign that lights up when a vehicle is travelling faster than the speed limit. The signs aim to alert road users of koalas and their travel speed. Each sign has flashing amber lights in the top corners of the sign and SLOW DOWN in white LED at the bottom. Using VAS in conjunction with the regular static koala signs helps to make sure drivers do not miss the important message.

We have worked closely with the Environmental Protection Authority, Ballina Shire Council and Friends of the Koala to decide the sign locations. Ballina Council's Koala Plan of Management also includes road and traffic management measures targeting vehicle strike black spots and signage in key koala habitat areas.

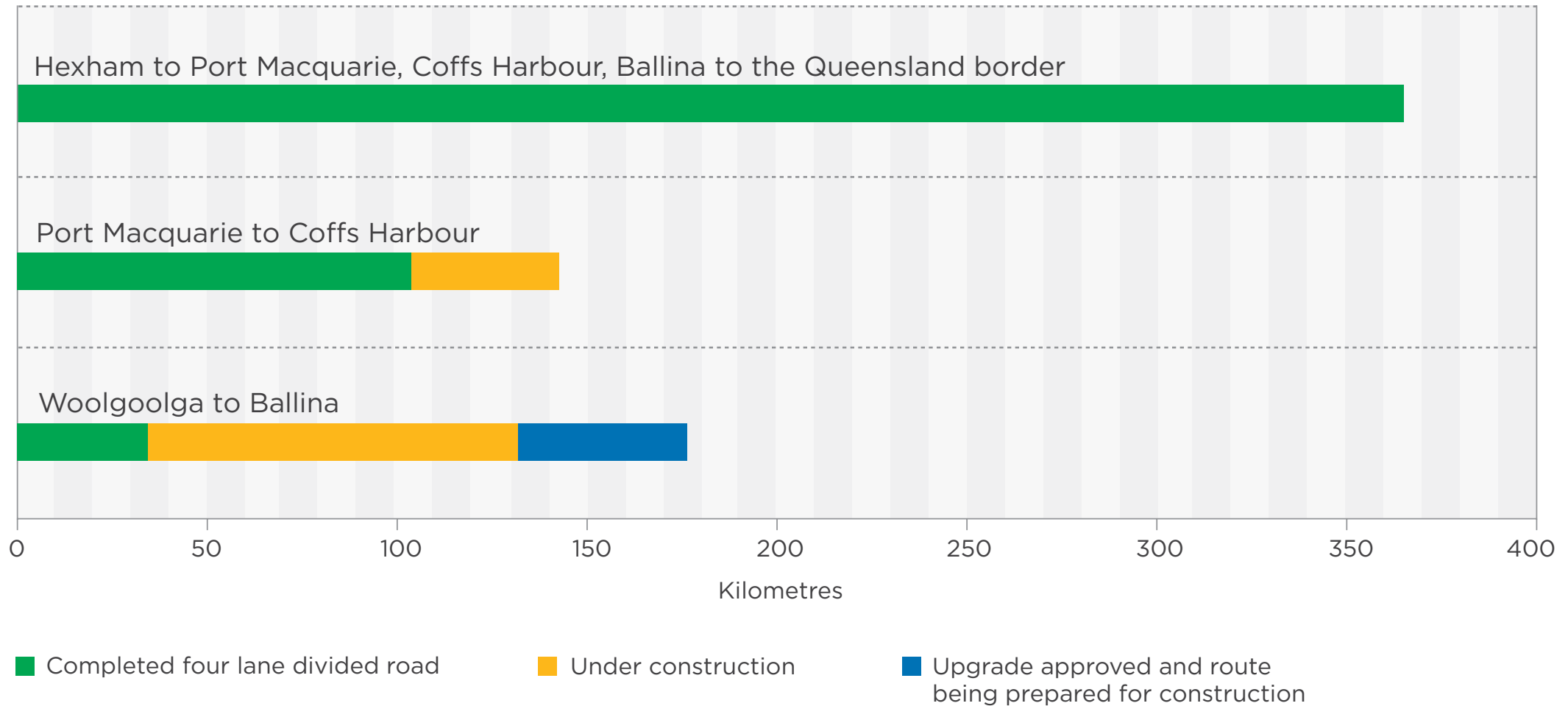


Vehicle activated koala safety sign

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## Four lane divided route status





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