

Pacific Highway upgrade

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

As of 31 July 2015, 397 kilometres are four lane divided road and about 149 kilometres are being built. The remaining sections of two lane highway are being prepared for major work.

About 60 per cent of the final highway length is now four lane divided road.



149 km of highway under construction during June/July 2015.



About 3000 construction workers on site.



For overall upgrading strategy refer to the second last page.

Contractors:

Lend Lease

Form of contract:

Design and build

Workers on site: 553**

Pieces of large machinery: 130**

Start date of major construction:

October 2014

Expected completion date:

2017 (weather permitting)

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.
- ** Two-month average



Oxley Highway to Kundabung upgrade

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 Minister for the Environment in January 2014.

It involves building 23 kilometres of four lane divided road, including bridges over the Hastings and Wilson rivers.

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

Key activities during June/July 2015



11 days were lost to wet weather during this time.



- · Sheet-piling continued at the Wilson River Bridge site and the cofferdam was completed. The cofferdam provides a working platform for bridge building equipment
- Piling started for the bridge over the Wilson River, with about 10 per cent of piles completed
- Piling for the bridge over the Hastings River started in June, with good progress achieved during July. Twenty eight large steel tube piles were installed for piers that are in the floodplain and Hastings River at Glen Ewan Road. Two large barges are now in the river. The barges enable steel piles to be driven into the river bed to support the piers that are located in the water
- Bridge piling was completed on the floodplain bridge just north of the Hastings River
- Clearing and mulching continued at Cooperabung and Sancrox Road. Across the project clearing was 95 per cent complete
- Consultation with affected property owners continued
- Earthworks continued across the project and were about 35 per cent complete. While June was very wet and earthworks

- volumes were lower than planned, dry weather in July contributed to a significant increase in earthworks volumes for the month. About 400.000 cubic metres was removed from cuttings and placed within fill areas during July
- Controlled blasting in the Cooperabung Range cuttings continued. Each blast yielded about 8000-10,000 cubic metres of rock. The large cuttings at Cooperabung Hill are comprised of very hard rock and require controlled blasting to remove the material efficiently. Controlled blasting for stage one work will continue until late September 2015
- Boundary fencing continued
- Utility (phone and electricity) relocation work continued
- · Installation of drainage and animal culverts continued between the Hastings River and Barrys Creek
- A diversion road was built to the west of the new Blackmans Point interchange, and opened to traffic in July. This allows the new Blackmans Point interchange to be built free from traffic
- · The work area under the new highway overbridge at Sancrox was handed over to the Oxley Highway to Kundabung project in July to allow construction to start.

Oxley Highway to Kundabung under construction















Contractors:

Ferrovial Agroman

Form of contract: Build only

Workers on site: 136**

Pieces of large machinery: 22**

Start date of major construction:

August 2014

Expected completion date:

Second half of 2015

Project value: forms part of the Oxley

Highway to Kempsey upgrade

** Two-month average



Sancrox interchange

Background

The Sancrox interchange is early work for the Oxley Highway to Kempsey upgrade.

It includes building local service roads and a bridge over the Pacific Highway at Sancrox about 600 metres south of the existing Sancrox Road intersection.

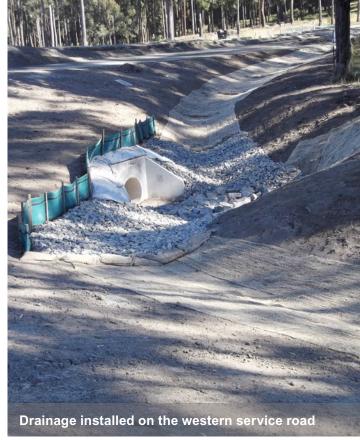
Key activities during June/July 2015 🛝



12 days were lost to wet weather during this time.

- Earthworks continued with good progress in July following significant wet weather in previous months
- Lime was used to dry out the earthworks and allow work to progress
- Stormwater and sub-surface drainage work continued and was 80 per cent complete
- Sancrox overbridge nearing completion with just the approach slabs remaining to be poured. The bridge was completed to sufficient standard to allow the Oxley Highway to Kundabung project team to start building near the bridge
- Subbase and base concrete paving continued for south-eastern roundabout
- The first section of crushed rock road pavement was placed on the eastern service road.
- Removed a large quantity of excess material from site.

Sancrox interchange under construction













Contractors:

McConnell Dowell OHL joint venture

Form of contract:

Build only

Workers on site: 267**

Pieces of large machinery: 132**

Start date of major construction:

November 2014

Expected completion date:

2017 (weather permitting)

Project value: \$230 million

Australian Government contribution:

\$115 million *

NSW State Government contribution:

\$115 million *

* Contribution amounts may vary from year to year

** Two-month average



Kundabung to Kempsey upgrade

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 Minister for the Environment in January 2014.

It involves building 14 kilometres of four lane divided road, including a new interchange at Kundabung and new rest areas.

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

Key activities during June/July 2015 🛝





- · Mulching of cleared vegetation continued
- · General earthworks, including bridging and drainage layers continued
- · Property adjustment work and installation of stock fencing continued
- Installation of frog, animal and boundary fencing continued
- · Installation of drainage continued
- Ten culverts complete and 20 culverts being built
- 43 bridge piles installed
- Controlled blasting continued south of Mingaletta and Mobbs roads and in Maria River State Forest
- Building the concrete batching plant continued
- · Relocation of utilities (electricity and phone lines) continued
- Northern crossover completed.

Kundabung to Kempsey under construction









Contractors:

Thiess Ptv Ltd

Form of contract:

Design and build

Workers on site: 369 **

Pieces of large machinery: 151 **

Start date of major construction:

August 2013

Expected completion date:

Mid 2016 (weather permitting)

Project value: \$675 million

Australian Government contribution:

\$337.5 million *

NSW State Government contribution:

\$337.5 million *

- * Contribution amounts may vary from year to year.
- ** Two-month average



Frederickton to Eungai upgrade

Background

The Frederickton to Eungai project is the second stage of the Kempsey to Eungai upgrade, which was approved in 2008. The Kempsey bypass was the first stage and opened to traffic in March 2013.

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

It will provide about 26.5 kilometres of four lane divided road from the completed Kempsey bypass to Eungai Rail.

Key activities during June/July 2015





- Concrete paving continued at various locations throughout the project. About 45 per cent of the total amount of 213,000 cubic metres had been placed as of 31 July
- Bridge building continued and was about 85 per cent complete. Bridge planks and decks were completed for the twin bridges over Collombatti Creek, Seven Oaks Drain and Collombatti floodplain. Bridge deck pours for the Johnsons Creek twin bridges were also completed.
- Girders for the Stuarts Point Road overbridge were erected

- Transverse (cross) drainage was completed
- Pacific Highway traffic was switched onto the new bridge over the North Coast Railway in June. This was a major milestone for the project. This switch enabled recycling of the old Pacific Highway to start
- Landscaping work started in the median areas of the southern section of the project
- · Installation of boundary and animal fencing continued.

Frederickton to Eungai under construction













Contractors: Acciona Ferrovial joint venture

Form of contract: Design and build

Workers on site: 305**

Pieces of large machinery: 152**

Start date of major construction:

December 2014

Expected completion date:

Late 2017 (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
- ** Two-month average



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 Minister for 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 during June/July 2015 🛝



16 days were lost to wet weather during this time.



- Detailed design work continued, including refinements to the overall design
- Detailed site survey to support design continued
- Additional geotechnical investigations continued
- Consultation with affected property owners continued
- Installation of boundary and clearing limit flagging continued
- Installation of boundary fencing continued
- Vegetation clearing north of the Nambucca River continued
- Building erosion and sedimentation controls continued
- · Surface water monitoring continued
- Earthworks south of the Nambucca River continued
- Building of the working platform for the Nambucca River bridgework continued
- Process to install at-resident noise treatments continued

- Drainage work in the southern section of the project continued
- Pacific Highway diversion near the south entrance of Nursery Road started
- Work started to build the bridge over the Nambucca River. including piling near Nursery Road
- · Controlled blasting started at one location north of the Warrell Creek bridge (south Macksville)
- Relocation of the Goswell Memorial tree completed
- Permanent closure of Bellwood Road, north Macksville, completed
- Clearing of the corridor through the flying fox area near Bald Hill Road completed
- Preparation of urban design and landscape drawings continued.

Warrell Creek to Nambucca Heads under construction



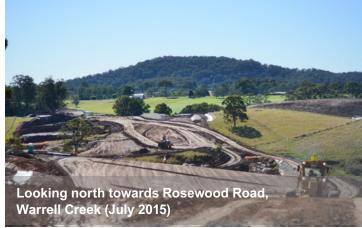














Contractors:

Lend Lease

Form of contract:

Design and build

Workers on site: 833 **

Pieces of large machinery: 267**

Start date of major construction:

November 2013

Expected completion date:

Second half 2016 (weather permitting)

Project value: \$780 million

Australian Government contribution:

\$390 million *

NSW State Government contribution:

\$390 million *

* Contribution amounts may vary from year to year

** Two-month average



Nambucca Heads to Urunga upgrade

Background

The Nambucca Heads to Urunga project is the first stage of the Warrell Creek to Urunga upgrade, which was approved by the NSW Minister for Planning and Infrastructure in 2011. The Federal Minister for the Environment approved this upgrade in November 2013.

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

It will provide about 22 kilometres of four lane divided road from Nambucca Heads to the existing Waterfall Way interchange at Raleigh.

Key activities during June/July 2015



14 days were lost to wet weather during this time



- General earthworks continued south of North Coast Railway overbridge and between Boggy and Deep creeks
- Earthworks continued between North Coast Railway overbridge and Boggy Creek, between Deep Creek and Burkes Lane and between McGraths Creek and north of **Ballards Road**
- Stabilising rock, using bolts, on the slopes in the largest cut on the project in the Newry State Forest
- Work well progressed on all 37 bridges on the project, with girders now installed on 36
- Concrete sub base paving north of Burkes Lane to south of Ballards Road completed, with mainline base paving starting in this section

- Local road work continued. Building of the East West Road approach to Burkes Lane continued
- Martells Road overbridge opened to traffic
- Work on intersections with Pacific Highway and Fast West Road continued
- Work continued to upgrade the Waterfall Way interchange, with Pacific Highway traffic shifted to the east to allow removal and rebuilding of the new lanes
- Environmental work, including installation of animal fencing and top soiling of slopes, continued across the project.

For more detailed information visit the project website at www.rms.nsw.gov.au/pacific or call the project information line on 1800 668 240

Nambucca Heads to Urunga under construction



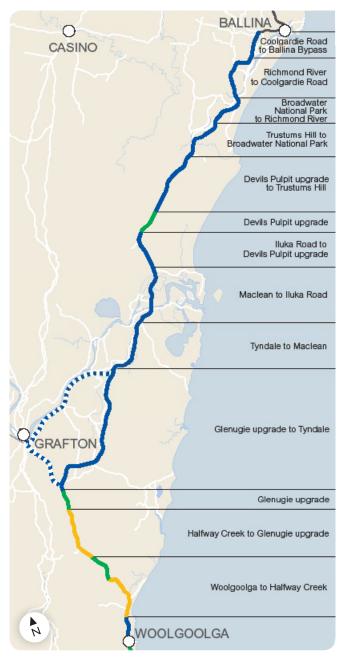








Woolgoolga to Ballina - projects being prepared for major work



Woolgoolga to Ballina

Background

The 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.

Roads and Maritime Services has selected Pacific Complete from the private sector as its delivery partner for the Woolgoolga to Ballina Pacific Highway upgrade, Pacific Complete will work closely with Roads and Maritime's Pacific Highway Office to manage multiple contracts in delivering the design and construction of the Woolgoolga to Ballina upgrade.

Activities underway during June/July 2015 1



Contracts

- Officially opened the Pacific Complete office in Grafton next door to the Pacific Highway Office
- Started dialogue with local businesses and contractors by holding local industry briefings in Sydney, Grafton and Ballina
- Held detailed design industry briefing in Sydney to discuss packaging strategy for detailed design for the Glenugie to Ballina section
- Continuing to assess registrations of interest for the design and build contract for the bridge over the Clarence River at Harwood.

Design

- Continued to refine the concept design
- Continued to work on design for soft soil early work Wave 3 (Shark Creek, Maclean)

Environment

- Carried out a contamination assessment between Maclean and Iluka Road
- Continued with threatened species baseline surveys including frogs, koalas, emus, long-nosed potoroos and gliders
- · Work on biodiversity offset strategy continued

- Continued to submit threatened species management plans to Department Planning and Environment and federal Department of the Environment for approval
- Completed capture and release koalas near Wardell for the population viability analysis required under the conditions of approval
- Independent expert panel meetings held to provide advice and feedback to the project team regarding koalas
- Started to develop strategy for planting koala feed trees
- Aboriginal salvage work finished in section 1 (Woolgoolga to Halfway Creek) and continuing in sections 8 and 9 (Trustums Hill to Richmond River)
- Continued to carry out non-Aboriginal archival recording and historical research
- Continued to develop base case for water quality and ground water for sections 3 to 11 (Glenugie to Ballina)
- Continued to develop the Construction Environmental Management Plan for the Glenugie to Ballina section

Stakeholder engagement

 Project team members attended community meetings to provide an update on the project and introduce the Pacific Complete team.

Woolgoolga to Ballina - soft soil work





Background

Soft soils are an important design consideration for the Woolgoolga to Ballina upgrade as there are deep soft soils in floodplain areas along the upgrade. Key features of soft soils include high water content, low capacity for allowing water to pass through and low strength. Without soft soil treatment there is the potential for highway foundations and main alignment to sink and damage. This is because the bearing capacity of the soil is not strong enough to support the highway.

The soft soil work, which includes installing vertical wick drains into the soft soils and building road embankments, will prepare the foundation and allow the road base to settle before concrete paving is carried out. This will reduce the overall time and cost of the project.

It may take some sections up to two and a half years for the soil to consolidate, which is why soft soil work is starting early. Soft soil work will occur in four waves:

Wave 1: Farlows Lane to Chatsworth Road

Wave 2: Whytes Lane to Pimlico

Wave 3: Shark Creek to Maclean

Wave 4: Tuckombil Canal

Preparation has started for the first phase of early work activities on Waves 1 and 2, including:

- · Mobilising staff to site
- Preparing and establishing the main site compound
- Installing nest boxes
- Installing dust gauges
- Carrying out building condition inspections
- Building fences
- Installing environmental controls and surveying and removing weeds
- Carrying out survey work along the road corridor

The soft soils work is jointly funded by the Australian and

New South Wales governments.

Wave 1

Golding Contractors has been engaged to carry out soft soil work at selected sites between Farlows Lane and Chatsworth Road.

It is expected the main embankment will be finished in late 2016, weather permitting.

Following the settlement period, this early work will enable building to start on the main highway road pavement.

Activities underway during June/July 2015



- Development of construction environmental management plans continued and were nearing completion.
- A community update was distributed and advertisements placed in local media informing the community and key stakeholders about the early work required to prepare for major work in the coming months.

Wave 2

SEE Civil Pty Ltd has been engaged to carry out soft soil work between Whytes Lane and Pimlico Road.

It is expected the main embankment will be finished in the second half of 2016, weather permitting.

Following the settlement period, this early work will enable building to start on the main highway road.

Activities underway during June/July 2015



- Continued to develop construction environmental management plans
- · Provided an update to the community about the early work required to prepare for major work in the coming months.

Woolgoolga to Halfway Creek – projects being prepared for major work

Contractors: OHL and York joint venture

Form of contract: Build only

Workers on site: 100**

Pieces of large machinery: 45**

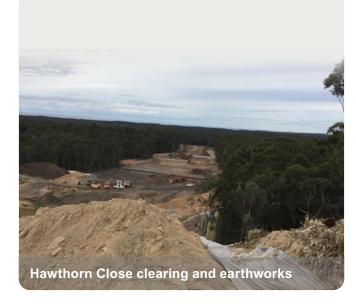
Start date of major construction:

June 2015

Expected completion date: 2017 (weather permitting)

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

** Two-month average



Woolgoolga to Halfway Creek section

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 project is jointly funded by the Australian and NSW governments.

The key features of the Woolgoolga to Halfway Creek upgrade include a 300 metre long twin bridge over the Corindi 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 during June/July 2015 🛝

Five days were lost to wet weather during this time.



- Turned the first sod to mark the start of major work
- Continuing intersection upgrades at various locations
- Started clearing and earthworks
- Continued to liaise with stakeholders to finalise property adjustments
- Started installing roadwork signage at the southern end of the project
- · House removals continued
- Surveying for clearing and project boundary limits continued.

Woolgoolga to Halfway Creek under construction









Halfway Creek to Glenugie – projects being prepared for major work

Contractors: Civil Mining and Construction

Form of contract: Build only

Workers on site: 63**

Pieces of large machinery: 20**

Start date of major construction:

June 2015

Expected completion date: 2017 (weather permitting)

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

** Two-month average



Halfway Creek to Glenugie section

Background

The Halfway Creek to Glenugie project – section two of the overall Woolgoolga to Ballina upgrade – will link the completed Halfway Creek upgrade in the south and the existing Glenugie upgrade in the north, providing about 12 kilometres of new road.

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

Key features of the Halfway Creek to Glenugie section include twin bridges over Halfway Creek and Wells Crossing Creek, as well as a wide median to assist animals crossing at Newfoundland State Forest.

Key activities during June/July 2015 A

Four days were lost to wet weather during this time.



- Turned the first sod to mark the start of major work
- · Building site compound completed
- Started intersection upgrades at various locations. including Kungala and Franklins Road
- Project team members attended community display at local markets in Kungala
- Continued liaising with stakeholders to finalise property adjustments and clearing

- Closed the northbound truck rest area at Halfway Creek
- Carried out consultation with key stakeholders in preparation for building concrete batch plants near Parker Road
- Installation of environmental controls, including temporary frog exclusion fencing and sediment basins continued
- Started fencing, tree clearing and relocating utilities.

Halfway Creek to Glenugie under construction





Woolgoolga to Ballina – projects being built

Contractors: Leighton Contractors

Form of contract: Build only

Workers on site: 73**

Pieces of large machinery: 7**

Start date of major construction:

November 2013

Expected completion date:

Mid 2016

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

** Two-month average



Pimlico to Teven early work

Background

The Pimlico to Teven project will upgrade about two kilometres of the Pacific Highway between Pimlico Road and Teven Road. This enabling work will facilitate the next phase of the highway upgrade, which is part of the overall Woolgoolga to Ballina project.

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

The Pimlico to Teven project involves building bridges over Duck and Emigrant creeks and more than one kilometre of new road on the Bruxner Highway.

The project is being carried out in three stages. Stage one was completed by the Ballina Bypass Alliance.

Stage two is now under construction.

Stage three, which provides a four lane divided road, will be completed as part of the larger Woolgoolga to Ballina upgrade.

Key activities during June/July 2015 🛝

No days were lost to wet weather during this time.



- Completed Emigrant Creek bridge
- Placing pavement on the Bruxner Highway completed
- Landscaping for the Bruxner Highway completed
- Work continued on Duck Creek bridge, including completion of deck pours.

For more detailed information visit the project website at www.rms.nsw.gov.au/pacific or call the project information line on 1800 639 842

Pimlico to Teven under construction











Projects being built

Contractors: Lend Lease

Form of contract: Design and build

Workers on site: 170**

Pieces of large machinery: 138**

Start date of major construction:

September 2012

Expected completion date: Late 2015 (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
- ** Two-month average



Tintenbar to Ewingsdale upgrade

Background

The Tintenbar to Ewingsdale project was approved on 29 January 2010.

The project 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 activities during June/July 2015

21 days were lost to wet weather during this time.



- Sub-base concrete paving continued and was 94 per cent complete
- Base concrete paving continued and was 82 per cent complete
- Paving inside the St Helena tunnels continued and was 65 per cent complete
- Environmental rehabilitation work under the bridges was well advanced
- Electrical and mechanical fit out in the St Helena tunnels continued

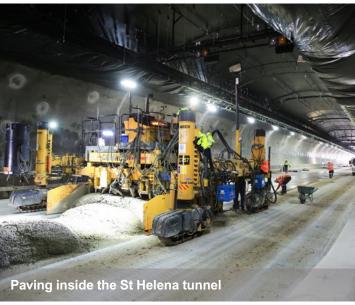
- Landscaping was more than 80 per cent complete
- Completed last structural concrete pours at Emigrant Creek, Bangalow Road, Byron Creek and Tinderbox Creek bridges
- Switched southbound Pacific Highway traffic through the roundabout at Bangalow
- Opened residential access bridge south of Bangalow.

Tintenbar to Ewingsdale under construction











Environment





Squirrel glider family finds new home at Corindi Beach

Roads and Maritime Services takes seriously the safety of animals of all shapes and sizes, as was shown on the Woolgoolga to Halfway Creek upgrade recently.

A squirrel glider family was safely relocated to a new home at Corindi Beach by expert ecologists after the female and its young were found in a hollow tree near the upgrade.

The squirrel gliders were found at Hawthorn Close at Corindi Beach by workers carrying out vegetation clearing for the 14 kilometre upgrade.

Roads and Maritime Services has engaged fauna specialists to carry out inspections during clearing for the new Pacific Highway alignment.

Roads and Maritime makes every effort to minimise impact on the environment, which is why the clearing is carried out in a two-step process.

Firstly hollow-bearing trees are identified and marked in the area to be cleared and vegetation around these trees is removed.

Then each hollow-bearing tree is checked for animals as hollows can contain wildlife such as possums and gliders.

The squirrel glider and her young were discovered by the specialists on site and were carefully removed from the tree before clearing and released outside the project where there are hollow trees and next boxes.

About 13 structures are being built as part of the Woolgoolga to Halfway Creek upgrade to ensure animals such as the native squirrel glider can safely cross the highway when it is complete.

And the squirrel glider isn't the only animal to have been relocated on the project.

During drainage of a farm dam within the project area native aquatic species were collected and relocated to a nearby dam on a private property at Corindi Beach.

This included hundreds of bugs, a freshwater yabby and some eels.



Four-lane divided road status

