If you live in New South Wales and enjoy holidays on the Mid-North or North Coasts, then you’re more than likely travelling along the Pacific Highway. Each and every year, tens of thousands of families holiday in and around our region. Along the length of the road to create their fond memories, I am proud to see that the Australian and New South Wales Governments are working together to remove 2½ months of travel time from the Queensland border. We are duplicating the entire 657km section making this important upgrade the largest road infrastructure project in the nation.

This report offers a bite-sized window into the complex schedule of projects, which, taken together, require a massive effort over a complex schedule of projects which, taken together, require a massive effort over a 30-year period as we aim to fix this road to create a road fit for purpose ahead of its second century. Just one statistic is needed to illustrate the ambition of the Woolgoolga to Ballina section, the end of this multi-generational project in sight. That’s 135 bridges, 170 bridges in total, and 82 per cent complete with safety and travel efficiency benefits being realised on completed sections.

It’s true – safer roads save lives. This report highlights how far we have come, the progress we have made across a number of areas and the remaining steps as we approach completion in late 2020. The Pacific Highway upgrade program for the six months to 30 June 2019, the Pacific Highway, connects Sydney and Brisbane and is a key link in the National Land Transport Network. The Australian and New South Wales governments have a shared commitment to completing the duplication of the Pacific Highway. In 2020, the upgrade is 82 per cent complete with safety and travel efficiency benefits being realised on completed sections.

I commend this report to you. It makes for interesting reading. It’s true – safer roads save lives. This project is just one of thousands we’re investing in right across the nation as part of our $100 billion pipeline of Infrastructure projects to get Australians to where they need to be sooner and safer.

Faster, safer and smoother travel means that businesses can move goods faster, which means more productivity and a growing economy. It means commuters get to work, to family and friends, to the shops, and back home safely and quickly. It means more tourism and more visitors each year, which means more money for local businesses, more opportunities for the many Australians who live along the route, who are occasional tourists or passers-by, and personal.

But for the many Australians who live along the route, who are occasional tourists or passers-by, and local communities. I look forward to monitoring progress and outcomes in my new role as Minister for Regional Transport and Roads. This report offers a bite-sized window into the complex schedule of projects, which, taken together, require a massive effort over a complex schedule of projects which, taken together, require a massive effort over a 30-year period as we aim to fix this road.

Transport and Regional Development.
As of 30 June 2019, building continues on the sections of highway between Woolgoolga and Ballina. About 530 kilometres of the final 657 kilometre length of the Pacific Highway are four lane divided road. The remaining kilometres are all in major construction and are on schedule to open before or during 2020. This excludes the Coffs Harbour bypass as the existing Pacific Highway is already dual carriageway through this area. The Coffs Harbour bypass is in planning and subject to all planning and environmental approvals is expected to start construction in 2020.

### Status of upgrade at June 2019

<table>
<thead>
<tr>
<th>Key project milestones achieved during the past six months</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
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### Upgrade outcomes

- **Key project milestones achieved during the past six months**
  - Glenugie to Ballina (June 2019):
    - Moved traffic onto more than 20 kilometres of new road between Glenugie and Ballina, one lane in each direction
    - Opened 14 overpass bridges providing safe and reliable access across the highway upgrade
    - Complete consultation for temporary concrete batch plant operations at Avenue Road, Lavadia and Coldstream Road, Tyndale
    - Completed consultation for a temporary asphalt batch plant to supply asphalt between Maclean and Devils Pulpit.

- **Completed four lane divided road**

- **Under construction**

- **Four lane divided road status**
  - About 82% of highway length now four lane divided road
  - 129km of highway being built

### Direct jobs created by the Pacific Highway upgrade

- **Forecast direct jobs to completion (based on 2.39 jobs per million dollars spent)**
- **Actual direct jobs**

### Where are we now

- **530 kilometres of the final 657 kilometre length of the Pacific Highway are four lane divided road.**
- **Remaining kilometres are under construction.**

### An average of about 3,762 people have been employed on the highway upgrade from January to June 2019.

This is compared to the 3,249 workers employed in the previous six months. During the last six months, the number of people employed on the Woolgoolga to Ballina upgrade has steadied. Meanwhile, work elsewhere on the highway has reduced as projects between Port Macquarie and Coffs Harbour have been completed.

Apart from some finalisation activities between Warrell Creek and Nambucca Heads, construction is focused between Glenugie (south of Grafton) and Ballina. Transport for NSW and its contractors, wherever possible, use local products and services for infrastructure construction projects. The graph to the right shows actual and predicted direct jobs. Future predictions have been estimated on the basis of 2.39 direct jobs per million dollars forecast to be spent. It is anticipated that the number of indirect jobs would be three times the number of direct jobs.
Upgrade outcomes

Safety update
All road users in New South Wales should be able to arrive safely at their destinations. Safety continues to be a key driver of the upgrade program.

Crashes reduced
Fatal crashes have halved, down from around 50 each year to less than 25 and most recently to 8 in 2018. In 2018, 9 people died in 8 fatal crashes. This compares with the previous five year average of 21 fatalities in 17 crashes. In the first half of 2019, 8 people died in 7 fatal crashes.

The Arrawarra rest area forms part of the overall rest area strategy for the Pacific Highway, encouraging and ensuring motorists have a place to rest on long trips.

Upgrade outcomes

Travel time
Since the start of the Pacific Highway upgrade program in the mid-1990s, travel time between Hexham and the Queensland border was usually tracked through a survey conducted in late November or early December each year. Since 2015, Google travel time data has been used instead of this manual method, almost eliminating work health and safety risks previously associated with collecting the data. Google travel time data is relatively easy to collect and analyse, and is reliable. It is calculated based on large numbers of individual speed readings along a particular route (in this case, the Pacific Highway north of Hexham). Annual travel time surveys have used the same start and end points to ensure the results over time can be compared.

Since the precious travel time survey in 2017 new sections of the highway have opened to traffic (Oxley Highway to Kundabung, Warrell Creek to Nambucca Heads) and speed limit has increased on other sections. The average travel time between Glenugie to Ballina has reduced from 123.2 minutes to 114.7 minutes in the first half of 2019.

It should be noted that actual travel time on the Pacific Highway can vary from the survey results. It can be affected by the amount of traffic on the highway, weather conditions, permanent changes in speed limit and work zone delays. Actual travel time is also dependent on the number of and time taken for recommended or mandatory rests to manage fatigue.

Saving time
Motorists travelling the length of the Pacific Highway between Hexham and the Queensland border are now saving about two hours in travel time compared to 1996. When complete, the upgrade will cut travel time between Hexham and the Queensland border by between two and a quarter and two and half hours.

Travel time trends on the Pacific Highway, Hexham to Queensland border (adjusted for work site delays but not adjusted for recommended or mandatory rest stops).

Average of northbound and southbound travel times (hours)

Upgrade outcomes

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Average of NB&SB travel time

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Transport for NSW Services recently trialled a number of barrier systems at the St Helena Tunnel to prevent access of unauthorised vehicles entering the tunnel during planned maintenance closures. The St Helena Tunnel was opened to traffic in December 2015, and has since become an iconic feature of the Pacific Highway.

The St Helena Tunnel is closed to traffic for two nights every three months for routine maintenance to ensure the tunnel systems are safe and operational for the travelling public. The closure is coordinated from the Regional Traffic Operation Centre, located above the tunnel.

Every aspect of maintaining the tunnel is carefully planned to ensure the time is used efficiently. We carry out systems testing, including the fire suppression and traffic management systems. Other key activities include lighting repairs, maintenance of jet fans and electronic signs, wire rope repairs, vegetation management and general maintenance including cleaning of traffic cameras.

During one of these closures earlier this year a vehicle entered the tunnel compromising the safety of workers and the road user.

In response, the project team trialled a number of measures to protect workers and motorists, including portable boom gates, empty water-filled barriers to provide a visual deterrent at on/off ramps and vehicle mitigation barriers to disable high speed unauthorised vehicles on the motorway.

The trial found that the portable boom gates allowed easy entrance and exit into the site through designated access points. The empty water-filled barriers filled gaps at the on/off ramps and provided a good visual barrier to prevent the entry of unauthorised vehicles.

But the stand-out was the vehicle mitigation barriers. The barriers are used as the last line of defence and stop unauthorised vehicles before it enters a site where people are working. The barriers can be set up over the full width of the road in 15 minutes with no special machinery or lifting equipment. The deployment trailer developed by the Critical Infrastructure and Security Branch, lowers to the ground reducing manual handling issues when lifting the barriers in and out of the trailer. It’s anticipated the barriers will be used again during tunnel maintenance in the future.

Expenditure update

The total expenditure for the upgrade program for the period January to June 2019 was $614 million, with continued strong delivery in Woolgoolga to Ballina construction with an average monthly spend of $95 million. Additional significant expenditure has been incurred on southern projects within the program and Coffs Harbour bypass. Expenditure on the program for the full year was $1.32 billion.

Wet weather

Weather patterns in the period January to June 2018 included an average of 52 days of work lost across the upgrade projects to weather events. This compares to 51.5 days between July to December 2018. June was the month with most days lost to wet weather, losing 17 out of a planned five days of wet weather in sections between Glenugie and Ballina.

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Case study: Celebrating 30 years of Port Macquarie-Hastings Driver Reviver

The Driver Reviver program operates throughout Australia during school holidays and over long weekends to reduce fatigue-related crashes on our roads. The sites offer toilet facilities, shade, seating and water. Some offer activities for children, baby change tables and pet bowls. This year, the Port Macquarie-Hastings Driver Reviver celebrated 30 years of operation. Since 1989, the site has catered to many thousands of visitors from across Australia and overseas, encouraging drivers to stop and take a break while travelling up and down the east coast using the Pacific Highway.

Transport for NSW recognised the contribution of the Port Macquarie-Hastings volunteers with a morning tea attended by over 100 people, including members of the SES and NSW Police. While the event marked the closure of the facility due to the completion of the upgraded highway, the efforts of volunteers over the years to assist those regularly stopping to take a break will be remembered.

Case study: Crash cars on show

Transport for NSW and Police Highway Patrol joined forces to discuss road safety at the Coffs Harbour Show, held in May.

The collaborative partnership offered the opportunity to educate road users about the ways they can change their behaviour and make better driving choices.

With a focus on speed, fatigue anddrink driving, the event showcased the Crash Car display, which featured two vehicles crashed at speed in a crash lab. These crash tests duplicate a head-on crash with a vehicle of a similar size travelling at the same speed – one crash test taking place at 60km/h and the other crash test at 100km/h – resulting in very different outcomes.

The outcomes show that drivers travelling at higher speeds are more at risk of serious head, neck and right femur injuries.

Visitors to the event were also encouraged to explore the Transport for NSW Used Car Safety Ratings review and buy the safest vehicle they can afford.

Newer vehicles provide more protection in a crash as they use high-strength materials and have features like improved impact crumple zones and collapsible steering columns.

The average risk of death or serious injury to the driver in a crash in a 2016 car is nearly 50 per cent less than in a 1996 car.
Safety is a core value for Transport for NSW and our contract partners. We are focused on the safety of all road users and our workers. As the agency responsible for enabling safe and efficient journeys throughout NSW, Transport for NSW has a moral, legal and shared duty to ensure the health and safety of all our workers and others who may be affected by our activities. We consult and collaborate with our industry partners to eliminate risks and put safety first across the Pacific Highway upgrade.

Managing risk and sharing knowledge

A ‘traffic light’ reporting system is used to identify performance against prescribed safety targets. During the period, all activities included potential collision between plant, plant striking plant and contact with fixed plant were the second most common, with 11 medical treatment injuries. Manual Handling 34 per cent includes incorrect documentation or approvals. Amongst other innovations, the team re-engineered the bridge design to target key safety, quality and environmental risks through the innovative design of a single precast headstock shell. This innovation minimised the amount of work required to be completed at height, enabling the team to eliminate a critical safety risk.

This innovation represents the first time in Australia that a bridge of this width has been constructed with a single precast headstock shell eliminating over 20,000-man hours of working at height as well as the need for temporary construction works.

In developing this single precast headstock, the following positive outcomes were achieved:

- Project completed with no lost time injuries (LTI) and with two medical treatment injuries (MTI) during 26 months of construction
- Eliminated more than 20,000-man hours working at height, greatly reducing exposure to a critical incident or a fatal risk
- Eliminated the need to construct headstock falsework towers and formwork at heights over water and live traffic as well as many lifting activities
- Eliminated the need for temporary supports by designing them into the columns themselves
- Increased productivity and efficiency because of reducing this program-critical task from three weeks to two days

The equipment was developed and trialled during construction on the Woolgoolga to Ballina project at various locations north of Devils Pulpit and south of the Richmond River. Following the success of the trial use construction on the Woolgoolga to Ballina project at various locations north of Devils Pulpit and south of the Richmond River. Following the success of the trial use

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Transport for NSW, Pacific Complete and its contract partners recently hosted 15 delegates from South Asia on an educational tour of the Woolgoolga to Ballina Pacific Highway upgrade. As part of the project, more than 350 structures will be placed to facilitate the movement of wildlife across the road while reducing the risk of wildlife-vehicle collision. These include fauna culverts and glider poles.

As leaders in Australian fauna-sensitive road design, the Woolgoolga to Ballina upgrade project has over 300 kilometres of fauna fencing and over 300 fauna crossing structures. Unlike any other state, New South Wales now has the fauna land bridges, with two more in the design/planning stages.

Development and implementation of the fauna connectivity structures has been based on results from ecological monitoring over the last 18 years. Transport for NSW continues to work with ecologists, designers and engineers to adapt and improve fauna connectivity design and implementation.

The organisation remains committed to improving outcomes, not only in terms of safety for the public, but also local wildlife.

**Construction management actions proving to be successful in protecting populations and habitat**

Transport for NSW is monitoring Oxleyan Pygmy Perch (OPP) populations in accordance with the Woolgoolga to Ballina Threatened Fish Management Plan. The results to date indicate the threatened fish populations across the region are successfully protecting OPP populations and habitat. OPP have been captured at known sites including within the construction boundary where streams have been realigned and rehabilitated along the upgrade. The numbers captured of OPP during the 2018 surveys demonstrate populations remain strong.

**Strategic biodiversity offsets achieves regional conservation and community benefits**

Achieving offsets for large infrastructure projects presents complex challenges and the focus on like-for-like offsets can result in missed opportunities. One such opportunity is to deliver regional benefits to biodiversity and local communities.

The Woolgoolga to Ballina Pacific Highway upgrade project was approved in 2015 with conditions to secure like-for-like offsets for biodiversity impacts. Transport for NSW developed a strategy centred on engaging with the local community to secure a network of offset sites conserving over 4,000 hectares of other large mammals. Shifting the focus to regional conservation allows for like-for-like offsets plus a range of other benefits.

We worked with the landowners to develop multiple initiatives and funding plans to maximise conservation outcomes.

The strategy has been successful in meeting the conditions of approval and avoiding loss of biodiversity. To date, 30 properties form a regional network of offset sites conserved over 4,000 hectares of private and public land. Importantly, positive regional benefits were realised through locating landscape connectivity, conservation of threatened species, funding revegetation and koala habitat restoration, and engaging with the community in conservation actions.

Involving the community to deliver a large offset program with regional benefits, provided a positive model for future offset programs with consideration of issues and solutions. Shifting the focus to regional conservation allows for like-for-like offsets plus a range of other benefits.

**Threatened fish management and stream rehabilitation site at McDonalds Creek south of Broadwater, Woolgoolga upgrade, where Oxleyan Pygmy Perch have been found**

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Case study: Paving the way with recycled glass on the Woolgoolga to Ballina upgrade

The Woolgoolga to Ballina Pacific Highway upgrade project team is finding new ways to improve sustainability during the building of Australia’s largest regional infrastructure project. Two successful pavement trials were recently carried out on the upgrade between Broadwater and Pimlico with recycled glass added into the concrete mix.

Recycled glass has previously been used for ramps and drainages, but this is the first time it has been used on the main road of the Pacific Highway. The glass was collected locally from Lismore City Council’s waste collection system, which includes household recycling bins and Return and Earn stations. After being sorted, the glass was crushed into sand at Council’s material recovery facility, delivered to onsite batching plants for mixing as a replacement for sand, and used in the normal concrete mixing process.

The recycled glass sand was used in place of sand quarried for this purpose, reducing material consumption and waste at the same time. The mix meets Transport for NSW’s specifications for concrete pavement and will be tested for quality in the same way as traditional concrete pavement. The mix will not require any additional maintenance.

A grant for the trials was awarded by the NSW Environment Protection Authority through the ‘Waste Less, Recycle More’ program, which aims to stimulate new investment and transform waste and recycling across the state.

The trial created great opportunities to reduce landfill and support new markets and opportunities for recyclable materials, reducing the impact of changes in the global recycling market. The recycled glass pavement trials completed in May are one of many environmental initiatives on the project. Others include harvesting waste water from work sites to suppress dust; using cleared mulch for sediment controls; creating new and filling with green waste; and reusing over 500 root systems and 800 timber pins recovered from the vegetation removal process to stabilise local river banks and restore fish habitats.

Case study: Riverbank remediated using logs from Pacific Highway upgrade

Tree root-balls are a common waste product from clearing vegetation because they are too large to mulch. Transport for NSW worked with local regulatory and community stakeholders to facilitate and provide logs and root-balls cleared from the Woolgoolga to Ballina Pacific Highway upgrade to be used to reduce bank errosion and restore aquatic habitat in local rivers. The logs and root-balls are pinned to the river banks for stabilisation and placed in streams to re-establish fish habitats.

In addition, Transport for NSW has been coordinating the Clarence River erosion management project from 2014 to help mitigate the impact of high-wash boating as well as land use, flooding, loss of vegetation, stock and natural factors. This project involves growing a large number of saplings to form the foundation of the revegetation work and cultivation of a tough aquatic grass as an adjunct to the land work. Boating restrictions have already been introduced on sensitive sections of the upper Clarence River including a trial of barge work that has proven successful results.

The Oxley River with severe riverbank erosion

The Oxley River following riverbank remediation.
Coffs Harbour bypass

The Australian and NSW governments are funding the Coffs Harbour bypass. The project includes a 14 kilometre upgrade from Englands Road in the south to Sapphire in the north. The existing highway through Coffs Harbour forms part of the Sydney-Brisbane freight corridor and carries up to 35,000 vehicles per day. The area is already experiencing high levels of congestion and traffic volumes are expected to increase over time in line with population growth. Once complete, the bypass will remove thousands of vehicles from the centre of town, making Coffs Harbour an even better place to live, work and visit. Significant benefits to Coffs Harbour and the region once it is open to traffic include:

- reducing travel times - motorists are expected to save around 11 minutes travel time
- travel efficiency - bypassing 12 sets of traffic lights will enable more consistent, reliable travel, particularly for heavy vehicles
- safety - the existing highway has a casualty crash rate three times higher than the network average. By reducing traffic on the existing highway we make it much safer for all road users
- improved CBD amenity - removing thousands of vehicles from the Coffs Harbour CBD will make it a more attractive place to visit, shop and work.

The Coffs Harbour region will receive extensive benefits during the building of the bypass, with thousands of direct and indirect jobs created during construction.

Transport for NSW will work with the relevant authorities to finalise the relevant planning approvals so construction can begin in late 2020 and will take four to five years to build, weather permitting.

January to June 2019

- Reviewed submissions received during the Preferred concept design display
- Investigated design refinements in response to community feedback
- Finalised the environmental impact statement (EIS)

Community consultation

- Held the first meeting of the project’s Community Consultative Committee
- Met with directly impacted property owners
- Met with individual residents to discuss their questions and concerns about the project.

Community issues

- Concerns over the noise, visual, Aboriginal heritage and construction impacts
- Community has stated a preference for tunnels rather than land bridges and cuttings
- Design of the Korora Hill interchange and the need for Coramba Road interchange
- Impacts to agriculture as a result of property acquisition.

June to December 2019

- Finalise and exhibit EIS
- Review submissions and start preparation of the Response to Submissions and Amendment reports.

Aerial view looking south of Coffs Harbour

Artist impression of the Coramba Road interchange. Design is subject to further refinement.

Aerial view looking south of Coffs Harbour

Save up to 11 minutes travel time

Better and more reliable trips for motorists, pedestrians and freight

Up to 12 traffic lights bypassed

Reducing traffic from existing Pacific Highway key objective

Improve motorist and pedestrian safety

Save up to 11 minutes travel time

Better and more reliable trips for motorists, pedestrians and freight

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Reducing traffic from existing Pacific Highway key objective

Improve motorist and pedestrian safety
Woolgoolga to Ballina overview

The Australian and NSW governments are jointly funding the Woolgoolga to Ballina Pacific Highway upgrade. Transport for NSW, Pacific Complete and contractor partners are working together to deliver the project.

- 52 days were lost to wet weather in the past six months.

January to June 2019, work progress:
- Complete manufacture of precast units
- More than 50 per cent of bridges built
- Release 2018 Woolgoolga to Ballina workforce survey

Key features of the Woolgoolga to Ballina upgrade:
- 155 kilometres of dual carriageway
- 14.9 million cubic metres of earthwork
- Nine interchanges
- Five towns/villages bypassed

July to December 2019, expected work progress, weather permitting:
- Open northbound lanes between Devils Pulpit and Woodburn in three stages, one lane each direction, weather permitting
- Complete delivery of precast units

Looking south-east at the new bridge over the Richmond River

Woolgoolga to Ballina overview

Bridges

- Total requirement: 14.9 million cubic metres. Total remaining: 745,000 cubic metres (5%)
- 170 Total bridges
- 14 Under construction (20%) 135 Completed (75%) 1 Not started (1%)

Earthwork

- Road surface (road carriageway kilometres)
- Total: 216.2 km total pavement about complete 74.5%

Road surface (road carriageway kilometres)

*Wet weather days – impacts to work vary depending on rainfall event and activities being carried out.
Projects being built

Glenugie to Maclean

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.

120 days were lost to wet weather in the past six months.

January to June 2019, work progress:

- Finish bridge construction between Glenugie and Shark Creek
- Complete the Byrons Lane overpass bridge
- Complete Somervale Road overpass bridge
- Complete the bridge over Champions Creek south
- Open to traffic McIntryes Lane overpass bridge
- Open new northbound lanes at Glenugie, one lane in each direction.

July to December 2019 expected work progress, weather permitting:

- Complete concrete paving between Tyndale and Maclean
- Complete bridge work between Glenugie and Maclean
- Start work on Pinebrush rest area

*Wet weather days - impacts to work vary depending on rainfall event and activities being carried out.

Main contract partners on site
- Seymour Whyte Constructions
- BGC Contracting Pty Ltd
- BMD Construction

Aerial view at Gulmarrad

Aerial view looking south of construction at Tyndale

on average 837 workers on site per month
on average 225 pieces of large machinery on site
about 61% complete

*Wet weather days - impacts to work vary depending on rainfall event and activities being carried out.
Projects being built

**Maclean to Devils Pulpit**

The Maclean to Devils Pulpit section of the Woolgoolga to Ballina Pacific Highway upgrade extends more than 29 kilometres. The upgrade in this location generally follows the existing Pacific Highway and includes Yamba, Harwood and Iluka interchanges.

*32 days were lost to wet weather in the past six months.*

**January to June 2019, work progress:**
- Complete the southbound off ramp and east roundabout at the Iluka interchange
- Install the final girders for the overpass bridges at Chatsworth, Iluka and Serpentine Channel (north) roads
- Open northbound lanes between Maclean and Yamba interchange, one lane in each direction
- Open southbound lanes between Iluka and Mororo Road, one lane in each direction
- Open northbound lanes between Mororo and Devils Pulpit, one lane in each direction.

**July to December 2019, expected work progress, weather permitting:**
- Open to traffic Chatsworth Road north and south overpass bridges
- Open to traffic Maclean north to Serpentine including the new bridge over the Clarence River at Harwood
- On average on site per month 417 workers
- On average 116 pieces of large machinery on site
- About 70% complete

Main contract partners on site
- SEE Civil
- Shamrock Construction
- Bielby Hull Albem Joint Venture
- Davbridge
- AFS

*Wet weather days – impacts to work vary depending on rainfall event and activities being carried out.*

Aerial view of Chatsworth Road north overpass bridge being built

Aerial view of Iluka interchange being built

Aerial view of Chatsworth Road north overpass bridge being built

Aerial view of Iluka interchange being built
Projects being built

**Devils Pulpit to Broadwater**

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

- 47.5 days were lost to wet weather in the past six months.

*January to June 2019, work progress:
- Complete bridge on Woodburn interchange
- Open to traffic Woodburn Evans Head Road overpass bridge.

*July to December 2019, expected work progress, weather permitting:
- Open to traffic a nine kilometre section of northbound carriageway between Devils Pulpit and New Italy, one lane each direction
- Complete Oxylan Pigmy Perch structures.

**Aerial view of Woodburn interchange**

*Wet weather days — impacts to work vary depending on rainfall event and activities being carried out*
Projects being built

Broadwater to Ballina bypass

The Broadwater to Ballina bypass section of the Woolgoolga to Ballina, Pacific Highway upgrade, extends more than 16 kilometres from the new bridge over the Richmond River at Broadwater to just south of the Ballina interchange.

41 days were lost to wet weather in the past six months.

January to June 2019, work progress:

- Finish fauna crossing culvert at Wardell Road
- Finish building more than half of the bridges in this area
- Finish building Old Bagotville and Montis’ roads
- Complete general earthwork on southbound alignment north of Whytes Lane bridge
- Start psevent installation on Whytes Lane bridge
- Carry out about 14.8 hectares of revegetation work between Broadwater and Ballina

July to December 2019, expected work progress, weather permitting:

- Open to traffic Whytes Lane overpass bridge
- Open to dual carriageway section between Coolgardie and West Ballina
Projects being built

New bridge over Clarence River at Harwood

The new bridge over the Clarence River at Harwood will be the longest of 170 bridges to be built as part of the Woolgoolga to Ballina Pacific Highway upgrade. The project involves building a 1.5 kilometre long, four lane divided bridge, about 20 metres east of the existing Harwood Bridge.

January to June 2019, work progress:
✓ Completion of northern bridge approach slab and associated drainage.

✓ 26 days were lost to wet weather in the past six months.

Project snapshot
Contractors: Pacifico
Form of contract: Design and build
Start date of major construction: August 2016
Completion date: Open to traffic before or during 2020
Project value: Forms part of the Woolgoolga to Ballina upgrade

on average 45 workers on site per month
on average 15 pieces of large machinery on site
about 99.7% complete
1 contractor company on site

November 2020

Aerial view of the new bridge over the Clarence River at Harwood

New bridge over Richmond River at Broadwater

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

*18 days were lost to wet weather in the past six months.

Project snapshot
Contractors: Lendlease Engineering
Form of contract: Design and build
Start date of major construction: June 2017
Completion date: Open to traffic before or during 2020
Project value: Forms part of the Woolgoolga to Ballina upgrade

on average 86 workers on site per month
on average 8 pieces of large machinery on site
about 99% complete
1 contractor company on site

View of the new bridge over the Richmond River at Broadwater at sunset

January to June 2019, work progress:
✓ Completion of northern bridge approach slab and associated drainage.

✓ 18 days were lost to wet weather in the past six months.

Project snapshot
Contractors: Pacifico
Form of contract: Design and build
Start date of major construction: August 2016
Completion date: Open to traffic before or during 2020
Project value: Forms part of the Woolgoolga to Ballina upgrade

on average 15 workers on site per month
on average 8 pieces of large machinery on site
about 99.7% complete
1 contractor company on site

*Wet weather days – impacts to work vary depending on rainfall event and activities being carried out