



Australian Government

BUILDING OUR FUTURE



Pacific Highway upgrade

Six month report card January to June 2018

Roads and Maritime Services



Aerial view of the new bridge over Clarence River at Harwood, June 2018

Ministerial Foreword

Deputy Prime Minister and Minister for Infrastructure,
Transport and Regional Development.

Drivers only need to look outside their car window to see the progress being made on the Pacific Highway upgrade and this report card, for the first six months of 2018, confirms the Australian and NSW Government-funded project continues to track well towards its planned completion in 2020. The past six months have seen the project reach 81 per cent completion, which is a fantastic achievement by all involved. With the Oxley Highway to Kundabung and Warrell Creek to Nambucca Heads projects open to traffic, the Pacific Highway is now a four-lane divided road between Coffs Harbour and Port Macquarie. Work on the final link, from Woolgoolga to Ballina, is progressing well.

All sections of the Woolgoolga to Ballina project are under construction and will progressively open through to 2020, building on the Government's strong record of delivering road investment nationwide that eases congestion, saves lives and better connects businesses and communities. The upgrade of the Pacific Highway is one of the most significant investments the Australian Government is making as part of its \$75 billion pipeline. When complete, this upgrade will deliver a four-lane divided highway between Hexham, north of Newcastle and the Queensland border.

This project is a key part of our commitment to help Australians get home sooner and safer, for truckies and holidaymakers, as well as those who use it every day. Together with the NSW Government, we are building a modern, dual-carriageway highway, safer intersections and other improvements. We are now seeing far fewer accidents on the highway and expect further road safety gains as the upgrade continues to progress.

Drivers travelling between Sydney and Brisbane are already saving more than two hours, with travel time savings tipped to reach two and half hours by the time the upgrade is complete. This improved travel time also increases business productivity and helps create local jobs along the length of the highway. With Australia's freight task doubling in the next 20 years, the new Pacific Highway is an investment in better freight and logistics links, boosting regional growth between the major economic centres of Brisbane and Sydney. Communities up and down the North Coast continue to feel benefits as the upgrade progresses, as do the many thousands of international and domestic visitors visiting this beautiful region each year. The project is also a win for jobs and investment in the communities it connects. At the end of June, the project was supporting more than 3,700 workers, including many local suppliers and contractors who are delivering the project.

In addition to our ongoing investment outlined in this report, the Australian Government has committed to partner with the NSW Government to deliver the long-awaited Coffs Harbour Bypass. Construction is expected to kick off in 2020, planning and environmental approvals permitting. I look forward to seeing the continued progress of this fantastic project, being delivered in close partnership with the NSW Government and contractors, as we track steadily towards the completion of the 155-kilometre Woolgoolga to Ballina section, which will finalise this critical investment in the Pacific Highway and the communities and businesses it serves.

Michael McCormack

Deputy Prime Minister and Minister for Infrastructure, Transport and Regional Development.



Michael McCormack, DPM

Ministerial Foreword

Minister for Roads, Maritime and Freight

The Pacific Highway upgrade reached a significant milestone in this six month period, with the completion of the 145km section of highway between Port Macquarie and Coffs Harbour. The completion of this section is already reaping benefits, not only for motorists but local communities, with reduced travel times, increased safety and improved amenities of local towns. I congratulate everyone for their dedication to improve the travel experience for road users.

The completion of this section means the focus shifts to the remaining section of the upgrade, Glenugie to Ballina. Only 129kms of the entire upgrade is left, and with work having started on all sections, we remain on track to finish in 2020. When done, the 657 km highway between Hexham and the Queensland border will be four lane divided road.

Another significant milestone in this period was the announcement of Australian Government funding for the Coffs Harbour bypass. I have worked hard with my Federal Coalition colleagues to ensure this project is funded and I thank the Coalition Government for the \$971 million commitment. Together with the \$200 million previously announced by the NSW Government, the Coffs Harbour bypass project is fully funded and ready to begin once all relevant planning approvals are granted. I know the team has been working hard in the background, and I look forward to construction starting in 2020.

With the vast majority of the Pacific Highway upgraded, Roads and Maritime Services is looking at how they best manage and maintain this vital road corridor. It's not just the road that requires maintenance, but animal fences, rest areas, vegetation and bridges which need to be looked after. Roads and Maritime continually reviews their policies and procedures to ensure they are providing the required care to keep the road functioning as intended.

As we move closer to the upgrade completion date, many communities are planning for life after construction. Many, including Kempsey and Macksville, show the positive benefits of moving the highway away from the town centre, but it takes planning to reap the benefits. Roads and Maritime is trialling a bypassed town signage strategy to help communities after the highway. This strategy aims to encourage motorists to visit bypassed towns. Macksville, which was bypassed in December 2017, is part of the trial and I look forward hearing the results of the trial in the second half of 2018.

The Hon. Melinda Pavey, MP

Minister for Roads, Maritime and Freight



Melinda Jane Pavey, MP

Contents

Overview	1
Status at December 2017	2
Upgrade outcomes	3
Community	6
Workplace health and safety	8
Traffic management	10
Environment	12
Port Macquarie to Coffs Harbour overview	14
Case study - Kempsey.....	14
Woolgoolga to Ballina overview	18
Glenugie to Maclean.....	20
Maclean to Devils Pulpit.....	22
Devils Pulpit to Richmond River.....	24
Richmond River to Ballina Bypass.....	26
New bridge over Clarence River at Harwood.....	28
New bridge over Richmond River at Broadwater.....	29
Projects in Planning - Coffs Harbour bypass	30
Building to maintaining	32

Overview

This report provides a progress update on the Pacific Highway upgrade program for the six months to 30 June 2018. The Pacific Highway connects Sydney and Brisbane and is a major contributor to Australia's economic activity. The road is a vital piece of the nation's infrastructure 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 by 2020. The upgrade is now 81 per cent complete and with all remaining sections in major construction

and expected to progressively open to traffic in 2020, focus has now turned to the bypass of Coffs Harbour. The Coffs Harbour bypass is expected to start construction in 2020, subject to all relevant planning and environment approvals being received.

An upgraded Pacific Highway must continue to service the needs of the travelling public and achieve transport efficiencies, while also ensuring ecological sustainability and meeting the needs of the coastal communities that live along the highway.



Bald Hill Road interchange looking south (April 2018)

3300 workers
on site



about **81%** of highway
length now four lane
divided road



Status of upgrade at June 2018



As of 30 June 2018, 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 during 2020. This excludes the Coffs Harbour bypass as dual carriageway already exists on the existing highway. The Coffs Harbour bypass is in planning and subject to all planning and environmental approvals will start construction in 2020.

Key project milestones achieved during the past six months

From Port Macquarie to Coffs Harbour:

- ✓ Opened to traffic the final five kilometres between Haydons Wharf Road and Barrys Creek as part of the Oxley Highway to Kundabung upgrade project
- ✓ Opened to traffic the final six kilometres between Warrell Creek and Bald Hill Road as part of the Warrell Creek to Nambucca Heads upgrade project
- ✓ Completed the Pacific Highway upgrade between Port Macquarie and Coffs Harbour.

Glenugie to Ballina (June 2018):

- ✓ Under construction
- ✓ 9.9 m³ of earthworks placed out of revised total of 14.9 m³
- ✓ Traffic diversions in place including Broadwater service road
- ✓ 7* bridges complete, 100 under construction out of total of 155** bridges with signature bridges over Clarence River and Richmond River well advanced.

*This applies only to the G2B section. Since the last report an additional two bridges have been completed

**Total number of bridges in packages for G2B

Upgrade outcomes

Where are we now as at 30 June 2018?

530 kilometres of the final 657 km length of the Pacific Hwy are four lane divided road

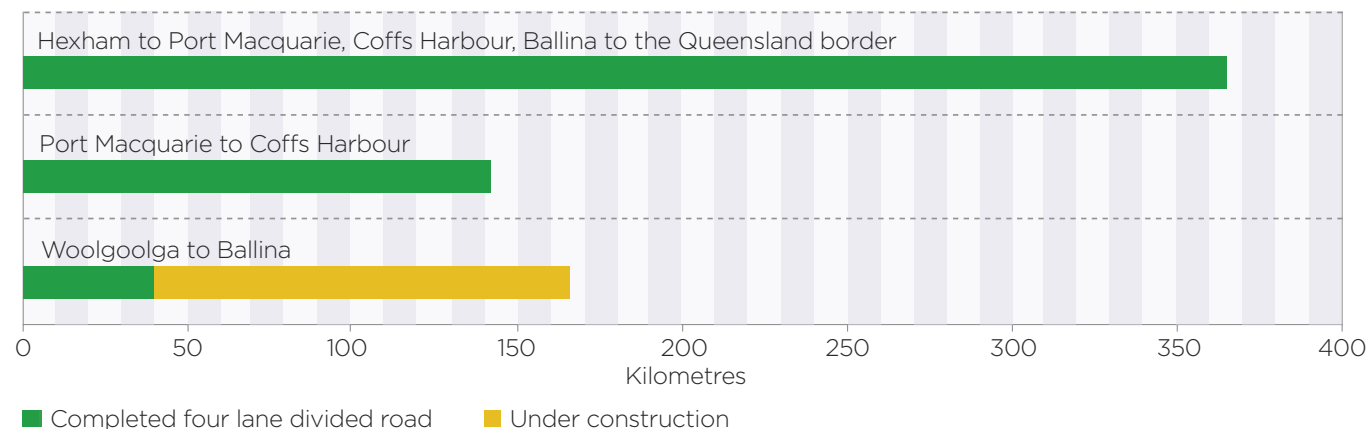
The remaining kilometres are under construction.

An average of just over 3300 people have been employed on the highway upgrade and its various projects from January to June 2018.

Over the last six months, the amount of work has increased on the Woolgoolga to Ballina upgrade as major work on the last remaining sections of that project has started. While work elsewhere on the highway has reduced as projects between Port Macquarie and Coffs Harbour are completed. Apart from some finalisation activities on recently opened projects, from now onwards construction will be focussed between Glenugie (south of Grafton) and Ballina. On that length the worker numbers are around 3300 for the coming six months, which is expected to be the peak.

Roads and Maritime Services 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.

Four lane divided road status



Direct jobs created by the Pacific Highway upgrade



Upgrade outcomes

Expenditure update

The total expenditure for the upgrade program for the period January to June 2018 was \$721.8 million. Expenditure forecasts and actual spend have generally been closely matched over the period.

Expenditure for the full financial year ending June 2018 was \$1.466 billion, which is slightly more than the budget for the year. This outcome is mainly attributable to drier than expected weather which allowed more work to be done between July and September 2017 and April to June 2018.

While work on projects that opened to traffic through the financial year has wound down, expenditure has increased on the Woolgoolga to Ballina project as all main contracts have been let and major work over the remaining length has started.



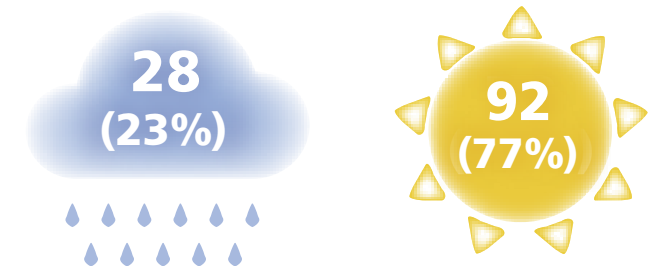
Aerial view of the Phillip Hughes Bridge bypassing Macksville

Wet weather

Weather patterns in the period January to June 2018 included an average of 28 days of work lost across the upgrade project to weather events. This compares to 15 days in the preceding six months.

February was the month with most days lost to wet weather, with more than half of working days lost on the sections between Woolgoolga and Ballina.

Average work days - January to June 2018 from 120 available working days*



* based on average number of work days across all projects under construction

Upgrade outcomes

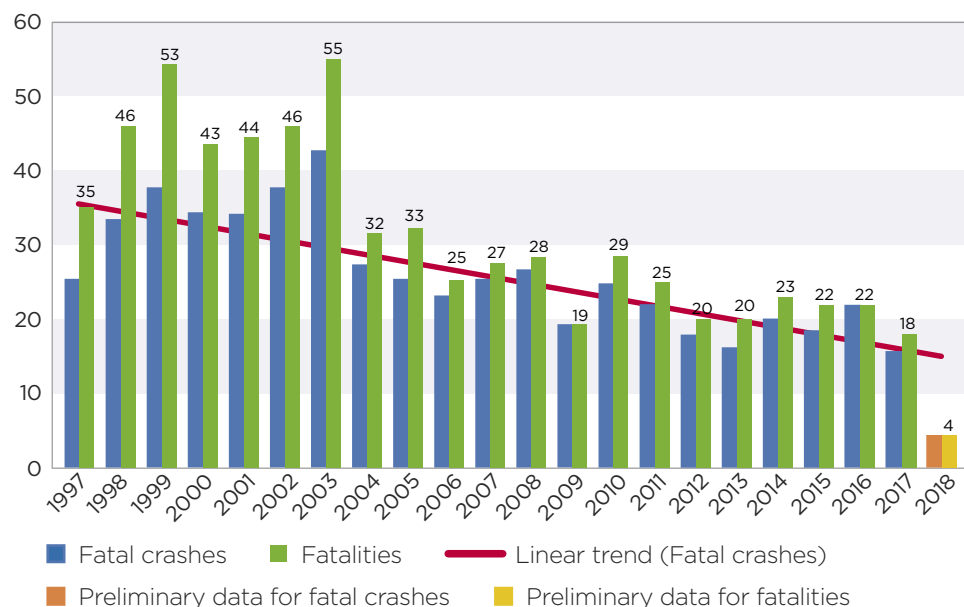
Crashes

Fatal crashes have halved, down from around 50 each year to less than 25 and most recently to 18 in 2017. In 2017, 18 people died in 16 fatal crashes. This compares with the previous five year average of 23 fatalities in 19 crashes. Preliminary data indicates that there have been four fatal crashes and fatalities in the January to June 2018 period.

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).

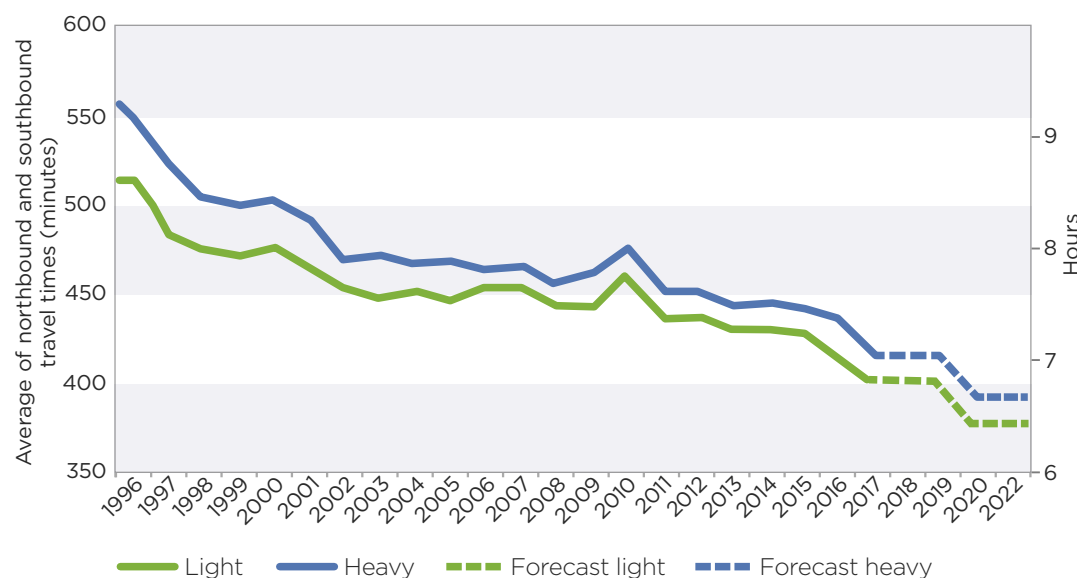
Fatal crashes and fatalities each year



Annual travel time surveys have used the same start and end points to ensure the results over time can be compared. Since the last six month report card new sections of the highway have opened to traffic (Oxley Highway to Kundabung, Warrell Creek to Nambucca Heads) and the speed limit has increased on other sections. It is estimated that these changes have further reduced travel times by around 10 minutes. This reduction has not yet been reflected in the annual travel time survey results, but will be picked up in the survey at the end of 2018.

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. 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.

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).



Community

W2B directional signage on display

The draft directional signage plan for the Woolgoolga to Ballina upgrade was displayed for community feedback between 31 May and 15 June to inform the proposed directional signage plan for the upgrade. To develop the draft directional signage plan, we consulted with:

- Local councils
- Representatives from local business and community groups
- The Tourist Attraction Signposting Assessment Committee (TASAC).

Meetings were held in early 2018 with focus groups to seek feedback on the draft plan. The focus groups included representatives from business, community groups and local councils. Meetings were also held with Clarence Valley, Richmond Valley, Ballina and Lismore councils. Four information sessions were held within the project area and were attended by 53 people. In total, 33 submissions were received during the consultation period. Feedback received will be considered in finalising the plan which will be submitted to the Department of Planning and Environment in late 2018.

Bypassed towns signage trial

In November 2017 a project started to develop a range of signage initiatives and improvements to encourage more drivers to visit bypassed towns. The objective of the signage initiative is to encourage travellers to stop at regional and bypassed towns throughout rural and regional NSW, thereby contributing to the economic benefits from visitations.

Signage is one way Roads and Maritime can improve visitation into local towns. Roads and Maritime in consultation with Destination NSW included Berry, off

the Princes Highway, Holbrook, off the Hume Highway, and Macksville, off the new Pacific Highway in the pilot program. The signs were installed between December 2017 and March 2018. An evaluation of the piloted signs to gauge their impact and effectiveness in each of the three communities has been carried out. The results of the evaluation will be considered and determine whether the initiative is rolled out more widely across the state.



Bypassed towns signage

Jobs roadshow - it takes people to build a road

The Woolgoolga to Ballina project team rolled out two initiatives to support local employment on the upgrade.



In June there were about 3300 people working on the Woolgoolga to Ballina upgrade. This is expected to now be around peak employment for that project.

To engage with local workers, three rounds of Jobs Roadshows have been held across northern NSW during 2017 and 2018. These provided job seekers with direct contact to the contractors building the project.

The Work Ready program provided induction and safety training for people interested in working on the upgrade. This program allowed potential workers to complete the project induction, which means they can start immediately once they are offered a job by one of the contractors.

Additionally, the project team worked closely with TAFE NSW to provide Work Ready training to its Civil Certification III graduates.

How did we do



more than **950 people** attended the jobs roadshow



more than **700 people** have completed the Work Ready program



More than **8000 people** have received induction safety training



Currently about **9% Aboriginal participation** on the project

Meet Brian

Inducted in 2017 through the Work Ready program, Brian is a northern NSW local who is now driving trucks for the project at Glenugie.



How did the Work Ready program prepare you for your new role?

It gave me a good insight into the safety requirements of the job.

What does a normal day on site look like for you?

I drive a truck between sites and quarries, picking up soil from one location and transporting it to where it needs to go.

What skills have you developed since working on the project?

Before gaining employment on the project, I did not know how to drive a truck and dog, so it's been a big learning curve. I've also learnt to identify different types of soil and how to communicate on the radio with all site-based workers.

What's the best part about your job?

Just seeing how everything comes together and changes all the time.

What's your advice to other people seeking employment on the upgrade?

Stick with it and be persistent - it's a fantastic opportunity for local people.

With the project at peak employment, our Jobs Roadshows and Work Ready program are closing. Thank you to everyone who participated.

Pacific Highway pavement grinding trial and road noise perception survey

Roads and Maritime started a pavement grinding trial near Valla in June 2018, to determine if grinding the pavement reduces road surface noise.

While the July 2017 Nambucca Heads to Urunga Post-construction Operational Noise Report showed road traffic noise levels and mitigation measures met the project's noise goals, the Pacific Highway project team began investigating what noise benefits pavement grinding can have on concrete sections of the highway.

Pavement grinding uses diamond blades to cut grooves into the concrete road surface. Test results from previous trials of the treatment on the Hunter Expressway showed positive results in reducing noise levels caused by tyres on the road surface.

As part of this trial, a resident survey is also being conducted. This is to determine if residents notice a difference in noise once the pavement has been grinded.

An independent noise specialist will also take road side noise measurements before and after the grinding work. The objective of this study is to obtain technical road surface noise level data to test whether the grinding of the surface is effective in reducing noise. To do this, noise monitors are placed at the road side to record noise data before and after the work. Noise monitors will not be placed at properties because too many sound variables exist between the road surface and properties to capture accurate sound data.

A report outlining the results of the trial is expected to be released to the public once the work has been completed and the survey has been analysed.



Diamond blade pavement grinding machine used to cut grooves into the concrete road surface as part of the pavement grinding trial and road noise perception survey on the Pacific Highway

Aboriginal participation

With all of the sections of the Pacific Highway between Port Macquarie and Glenugie now open to traffic, Aboriginal employment on the Pacific Highway has averaged about 9.22 per cent over the first half of 2018. Aboriginal employment on the Woolgoolga to Ballina upgrade (Glenugie to Ballina sections) averaged 8.6 per cent in the first half of 2018.

The Woolgoolga to Ballina project teams continued to support the NSW Government's Aboriginal Participation in Construction (APiC) initiative.

There were also several Aboriginal businesses supplying goods and services on the Woolgoolga to Ballina upgrade during the first half of 2018.

Workplace health and safety

Safety is a core value for Roads and Maritime and its 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, Roads and Maritime 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

Traffic light results reflect performance against lead (positive activities) and lag (outcome) indicators. In the graph below the green results show all indicators meet requirements. In the period January to June 2018 86 per cent of results were rated green compared to 64 per

cent green for the period July to December 2017. This demonstrates an improvement in overall achievement of key measures and metrics for WHS. Training and feedback were provided to contractors during this period to improve understanding of activities and measures.

Fifty two incidents were reported during this period, an overall decrease of 27 per cent compared to the preceding period. Plant related incidents were the most common type of incidents on Pacific Highway project sites. Incidents in this category were 29 per cent of total incidents and included collision between plant, plant roll over and plant striking people. Many of these incidents can be prevented by effective planning and maintenance of controls such as adequate delineation and separation of work areas and types of activities.

Figure 1: Work health and safety traffic light status (comparing lead and lag indicators) July 2017 to June 2018

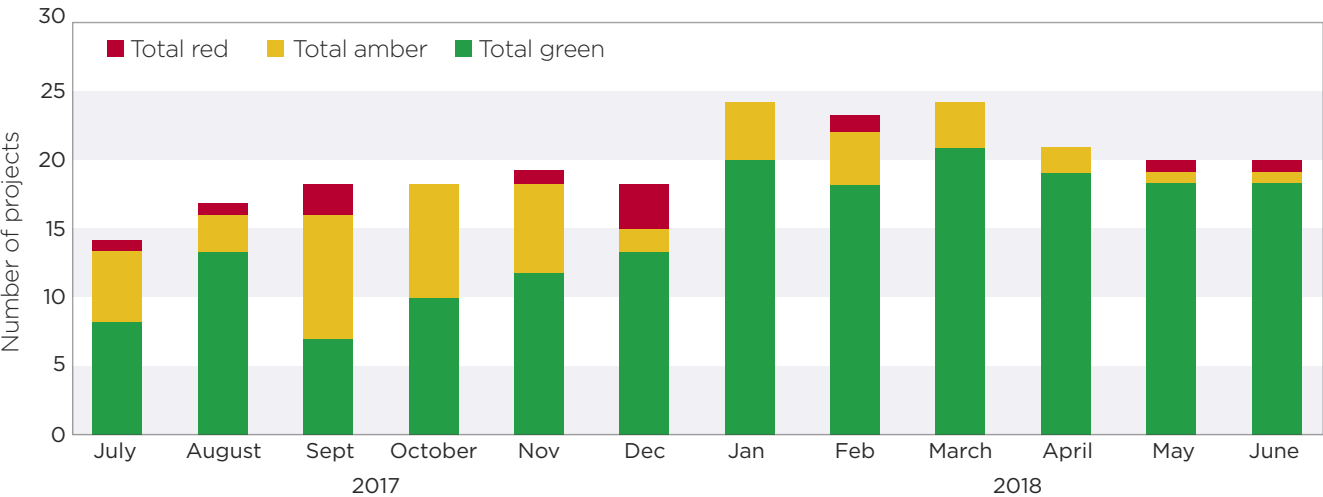
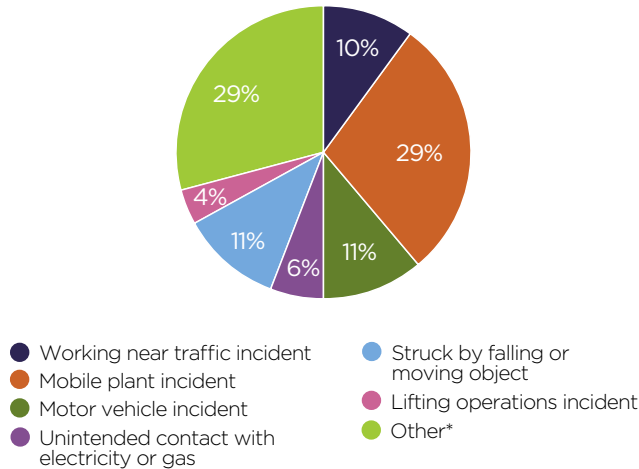
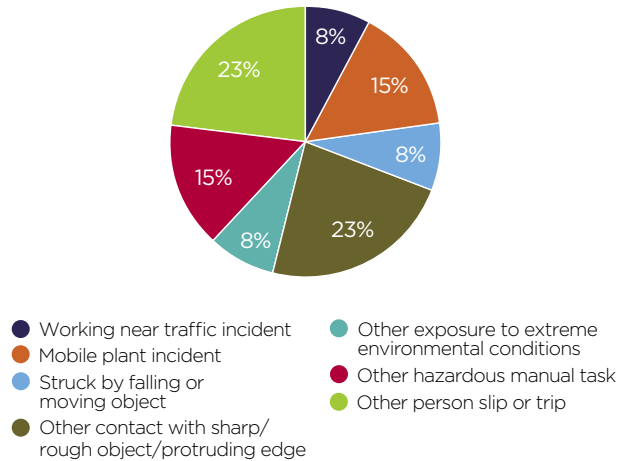


Figure 2: Reported incidents by category January to June 2018



* 'Other' includes contact with underground service or mobile plant, manual tasks such as slip, trip or fall, and environmental conditions

Figure 3: Reported injuries January to June 2018



Thirteen injuries or illness were reported during the period, a decrease of 35 per cent from the previous period. This represents a continuing downward trend in injury and illness frequency. The injuries in the current period included four lost time injuries. Contact with sharp protruding objects and slips, trips and falls were the leading cause of injury at 23 per cent each. Monitoring and inspection of sites to identify hazards and reduce risks associated with slips, trips and falls and protruding objects remain a focus for all projects.

Safety Initiatives – Separate Yourself

In March, the results of the Pacific Highway Separate Yourself* trial were presented to the SafeR forum in Sydney. It was agreed the program had been successful and was approved to be rolled out at a further five sites across the state as part of the next round of SafeR initiatives.

Following the robust evaluation period, the Pacific Highway working committee agreed to relaunch Separate Yourself. The relaunch reinforced the importance of the controls to site workers and engaged industry partners in their commitment to the program. The evaluation highlighted the program was effective, however there was still a need to embed the key messages and ensure they are everybody's responsibility.

“Have you Separated Yourself yet?” was agreed as the new message to relaunch the program and two focus groups were established to assess the need for further controls or collateral. A “Separate Yourself” induction video was also introduced to all sites.

Site champions were introduced to lead and assist in the upskilling of communications at all site levels, with a guide created to support controls on site.

Mental health and wellbeing

Research shows the construction industry has one of the highest proportions of mental health issues in the workforce. A number of factors contribute to these statistics, including a culture of not discussing mental health issues, remote or isolated locations, limited social support systems and a transient workforce with limited job security. Pacific Highway contractors and Roads and Maritime have taken on this challenge by implementing programs and sharing knowledge on how to best support the workforce in managing mental health and wellbeing.

Roads and Maritime contractors Lendlease, Pacific Complete, BGC, BMD, Pacifico, Georgiou, CPB, Quickway, AFS, Seymour Whyte, CMC, OHL/York and OHL/McConnell Dowell include confidential free employee assistance programs (EAP) to support workers who may be experiencing issues.

In addition, a number of contractors have involved Mates in Construction. Mates in Construction is a charity initiative to develop mental health awareness and train mental health ‘connectors’ as front line contacts for construction workers with mental health and wellbeing issues. To date approximately 400 people have completed general awareness training, and about 50 people have been trained as ‘connectors’ on Pacific Highway projects.

Mental Health was the theme of the February 2018 Pacific Highway safety workshop. Presenters included SafeWork NSW, Mates in Construction and an EAP and psychological services provider.

* The Separate Yourself program aims to provide consistent guidance on worksites to separate workers on foot from vehicles and light vehicles from other larger machines.



Traffic management

Evaluating safety initiatives on the Pacific Highway

The 'navigating through worksites' project is focused on maximising worker and road user safety as well as creating a more consistent travelling experience through road worksites.

Working near traffic is one of Roads and Maritime's key safety risks and the proposed activities aim to provide a deeper understanding of how drivers of both light and heavy vehicles interact with work zones in a regional setting and respond to these initiatives.

The project assesses the relationship between yellow line markings and variable speed limit signs on driver behaviour to understand if the yellow lines improve the differentiation between a work zone and adjacent roads for drivers. The purpose is to improve safety by making drivers more aware they are driving through a work zone as poor worksite visibility (to drivers) and distracted driving by motorists are factors that can be a cause of incidents in the work zone.

The Australian Road Research Board (ARRB) was engaged by Roads and Maritime to investigate drivers' interactions with and perspectives of safety initiatives in work zones on the Pacific Highway, through conducting an instrumented drive through the initiatives.

The instrumented vehicle study involved 22 participants driving a predetermined route of approximately 15 kilometres between Iluka and Maclean. Drivers were monitored with video, audio, GPS and eye-tracking devices, and completed a think-aloud task during the drive, and a post-drive survey.

Overall the results from the study indicated that driver performance, such as speed and lane position, was not negatively influenced by the yellow line marking during this study. Furthermore, qualitative data from the think-aloud task and survey indicated drivers prefer the yellow line marking over the white due to its increased visibility to drivers and increasing drivers' awareness of work zones.

A heavy vehicle study with short haul and long haul drivers has also been commissioned to investigate heavy vehicle drivers' perceptions of roadwork sites on the Pacific Highway upgrade, including yellow line markings and variable speed limit signs, and wider road shoulder initiatives. Results of this survey will be available after November 2018.



A participant being monitored with video, audio, GPS and eye-tracking devices as part of the Driver Safety Study conducted on the Pacific Highway between Iluka and Maclean

Managing traffic and safety

As we continue to build the Woolgoolga to Ballina upgrade, there is a need to change traffic conditions along the Pacific Highway to ensure the safety of workers and motorists.

Changes include reduced speed limits, concrete barriers being installed between moving traffic and work sites, traffic control, night work, removal of overtaking lanes and rest areas and switches onto travel lanes and turning.

For safety, it is vital that motorists reduce their speed when travelling through work zones. The reduced speed limits in these areas are enforceable even if you can't see work being carried out on the site.

Why we do this?

- **Reduced speed limits** because the road environment has changed. This can include narrowed shoulders, changes in the lane configuration and entering and exiting traffic.
- **Barriers** are used to separate moving traffic from construction zones where people are working.
- **Acceleration and deceleration lanes** provide safer turning movements into and out of project sites. This helps maintain travel times as the trucks move into the other lanes when going slower.
- **Traffic controllers** provide immediate measures to manage motorists where there are ongoing changes in road conditions.
- **Signage** provides early warnings and updates on changed speed limits and traffic conditions.

Some traffic management measures will be in place until we finish building the upgrade while others will change daily because we are doing different work.

We understand our traffic management can sometimes be frustrating, but safety for motorists and workers is a priority.

Oversize and over mass deliveries

As part of the Woolgoolga to Ballina upgrade we are moving more than 8500 large concrete pieces from precast yards in Macksville, Coffs Harbour and Brisbane to site. We are about 26 per cent of the way through these deliveries.

Delivery update

- 48% planks
- 82% headstocks and abutments
- 37% Super-T girders
- 25% parapets delivered

Being delayed by a slow moving oversize truck can be frustrating so we encourage you to use PAC – Plan, Awareness, Caution.

Motorists can see where the trucks are on the Pacific Highway and local roads using our PAC real time delivery map at rms.nsw.gov.au/w2b.



Girder delivery by crane, Harwood bridge



Over size and over mass

Environment

Monitoring results of threatened and vulnerable species

The Pacific Highway upgrade project team recently welcomed findings that fauna crossing structures on the completed Sapphire to Woolgoolga project are proving effective. Fauna crossing measures, including vegetated medians and glide poles, were installed as part of the project, and an ecological monitoring program was established to study the area known to house a number of threatened species, including the squirrel glider.

Remote cameras and a catch-and-release method have shown the structures are working, recording regular use by sugar gliders, feathertail gliders and squirrel gliders. The use of a glider pole by a feathertail glider was considered unexpected, given the species' small size and vulnerability in open areas, and gliding capability not as strong as other larger species. All three species, including the threatened squirrel glider, were recorded moving in both directions, confirming they've not only crossed the highway, but also showing there isn't a behavioural limitation and the gliders are readily willing to use these structures to cross the road.

The ecologist responsible for the study, Sandpiper Ecological's Brendan Taylor, said the fauna crossings helped connect animals to habitats. "The structures are considered insurance policies," he said. "We want animals to cross the road in the first instance, but also to feel safe enough to cross and to breed, so glider populations become connected and avoid an isolation of population." The structures are part of the project's compliance with the strict conditions in place for the management of threatened species and the measures are part of the Pacific Highway project's commitment to the ongoing safe movement of local wildlife under or over the new highway now and in the future.

Biodiversity offset program

The Pacific Highway Biodiversity Offset team is delivering one of the largest biodiversity offsetting programs in Australia on the Woolgoolga to Ballina upgrade.

The offset package includes 31 properties covering over 5100 hectares to be protected and managed for conservation in-perpetuity, offsetting around 870 hectares of affected native vegetation.



Widened vegetated median through Wedding Bells State Forest on the Sapphire to Woolgoolga project

Innovative solutions and methodologies were used to identify land and meet State and Federal Government requirements, including an industry-first public expression of interest (attracting 81 applicants) that is now being used across other regions.

A recent addition to the biodiversity program has been the acquisition of a 100 hectare property east of Woodburn that adjoins Broadwater National Park. Previously privately owned and subject to development, the property will now be protected in perpetuity via a transfer to the National Parks and Wildlife Service for inclusion in the Broadwater National Park.

The property has a number of important environmental values including: a resident koala population, several other threatened species including Oxleyan pygmy perch and wallum froglet, littoral rainforest (which is listed as critically endangered under the Commonwealth EPBC Act and endangered under State legislation) and a number of other threatened ecological communities (swamp sclerophyll forest and Subtropical Coastal Floodplain Forest). The purchase of this property increases the size of the national park and contributes to an environmental legacy.

The team has an important face-to-face role with customers and has developed strong relationships with private landowners, measured by the number of property owners that have agreed to participate in the offset program.

The team worked collaboratively with the Office of Environment and Heritage and Environment Protection Authority to assess and prioritise properties to be included in the package. The processes developed have set the benchmark for the application of biodiversity offsetting.



The endangered giant barred frog, found on biodiversity offset property in Arrawarra

A quoll-ity find!

A spotted-tail quoll has been recorded using an underground fauna culvert on the Pacific Highway on the Oxley Highway to Kundabung project. Rustic-brown in colour, with white spots on its back and tail, the endangered species is Australia's largest carnivorous marsupial.

An initial environmental assessment did not record any spotted-tailed quolls in the project area. Despite this, a habitat assessment deemed large sections of the project area to be quoll-friendly, and mitigation measures were introduced to reduce any impacts on a potential quoll population including clearing impacts, fauna underpasses and ecological monitoring programs. Strict conditions of approval for the Pacific Highway required a pre-construction survey for the quoll, conducted over three months in 2014 using a total of 108 remote cameras. The survey did not detect any quolls.

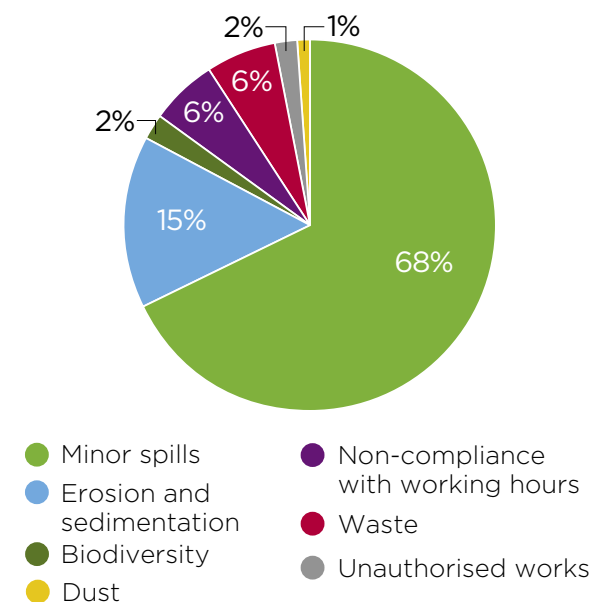
As part of the ecological monitoring program, fauna underpass monitoring is carried out at 13 fauna culverts, using remote cameras over a period of 60 days. The monitoring event conducted between March and May 2018 was the first event following the opening of the final stage of the project in March, and revealed on camera, for the first time, the use of an underpass by the species.

The sighted animal appeared to be on a mission which may explain why it was determined to use the structure to cross the highway. Despite being incredibly elusive, researchers are hoping the next culvert monitoring event, which will take place in summer 2018-19, might see the return of a quoll. Mitigation and monitoring activities will continue as part of the plan to reduce the project's impact on the environment.



A spotted-tailed quoll

Environmental incidents recorded January to June 2018



There were 125 incidents recorded on active Pacific Highway construction projects from January to June 2018. Minor spills refer to spills less than 10 litres that have not left the project boundary and are cleaned up immediately. There was one biodiversity incident related to a small area of clearing less than 650m². No hollow bearing trees or identified habitat features were present within the clearing area. No vegetation was cleared outside the approved clearing limit, as verified by the survey. Unauthorised works relates to work occurring with our internal approvals in place and was minor.

Port Macquarie to Coffs Harbour overview



Status of upgrade at June 2018.

In June 2018, the final six kilometres of four lane divided highway between Port Macquarie and Coffs Harbour opened to traffic. This signalled the completion of the Pacific Highway upgrade along this 145 kilometre length of the corridor. The first duplication as part of the Pacific Highway upgrade was at Raleigh, opening in September 1998. It has been a steady journey to complete the upgrade, with 105 kilometres opening to traffic since 2016. The benefits of the upgrade can sometimes be seen immediately, such as travel time savings, with others taking time to be realised, such as regional economic and social development.

Achieving the benefits

Travel time savings

Journeys that used to take just over two hours between Port Macquarie and Coffs Harbour in 1996 are now taking around an hour and a half. A further small reduction will be experienced once the Warrell Creek to Nambucca Heads upgrade lifts the speed limit to 110km/h towards the end of 2018.

Before the bypasses of Kempsey and Macksville, travel times were significantly higher during peak holiday periods, where queue times to travel through these towns have been recorded at over an hour.

Improved travel safety

Fatalities and severity of vehicle crashes have declined over the upgrade period with 13 fatalities recorded between Port Macquarie and Coffs Harbour in 2000, and four fatalities recorded in 2017.

Along this route the upgrade has also provided four new rest areas, with one each way at both Barrys Creek and Clybucca. Highway service centres are also now open at Port Macquarie, South Kempsey and Nambucca Heads interchanges. Together these provide road users with opportunities to stop, revive and survive.



The first vehicles using the newly opened section of highway between Warrell Creek and Scotts Head Road, June 2018

Reliability

The upgrade of this section has provided for more consistent and reliable journeys. The availability of two lanes in each direction means no longer being stuck behind slower vehicles and bypassing of towns now avoids the substantial delays that were experienced during peak holiday periods.

This section of the Pacific Highway is also now less susceptible to flooding and closure due to traffic incidents. Flooding of the highway was regularly experienced at Kempsey and Clybucca, where the

highway was often closed for quite a few days. Most of the upgraded highway, including the bypasses of Kempsey and Macksville, now has 1 in 100 year flood immunity. Before the highway was upgraded, a serious crash may have meant hours of complete highway closure, now the higher standard of road will result in fewer crashes. When they do happen, the availability of four lanes, two carriageways and alternative routes, provides options for management of affected traffic, which keeps customers moving.

Regional development

The Pacific Highway upgrade is more than just a road and has already transformed this part of the North Coast of NSW, contributing to regional growth, including direct jobs on the highway but also secondary benefits to local services, tourism and economic development. The highway is used as a local road connecting regional communities and the upgraded highway means the separation between local slower traffic and high speed through traffic, including safer local access.



View of the Oxley Highway to Kundabung section of the Pacific Highway near Sancrox, January 2013



View of the Oxley Highway to Kundabung upgrade of the Pacific Highway and the growing industrial precinct at Sancrox, December 2017

Port Macquarie to Coffs Harbour overview

Case study - Kempsey

Kempsey's town centre has been revitalised, transforming it from a transit town to a regional centre where local communities want to do business and come together. Kempsey Shire Council planned and led the changes to the main street through Kempsey following the opening of the Kempsey bypass in 2013.

A post-bypass study commissioned by Kempsey Shire Council and conducted by Dr Bruno Parolin found that at the time of the bypass opening to traffic in 2013, there was widespread concern by businesses in the town that they would suffer significant downturn. While there was an immediate decline in trade experienced by most businesses on opening of the bypass, this was short-lived. The study found:

- An increased turnover from \$109.5 million in 2013 to \$159.2 million in 2017 – a 45.2 per cent increase.
- Between the period 2013 and 2017, across all businesses, there has been an increase of 249 jobs – from 1137 jobs in 2013 to 1386 jobs in 2017 – an increase of 21.8 per cent over 2013 levels.



Before Kempsey bypass

- Businesses reported there was an increase in local residents and those from coastal and hinterland towns utilising Kempsey as it was easier to access and a more desirable place to shop now that the congested highway traffic was no longer there.
- Twenty four businesses closed between 2013 and 2017, however, in the same period, 21 new businesses started operations in Kempsey with 11 of these being in the catering sector. These new businesses alone generated 250 new jobs, 170 of which are located at the highway service centre.¹

The study found that Kempsey Shire Council's early planning for completion of the bypass, including the investment in beautification of the streetscape infrastructure, along with local business willingness to diversify and embrace new markets, has significantly contributed to the increase in visitors, trade and tourism in the town.



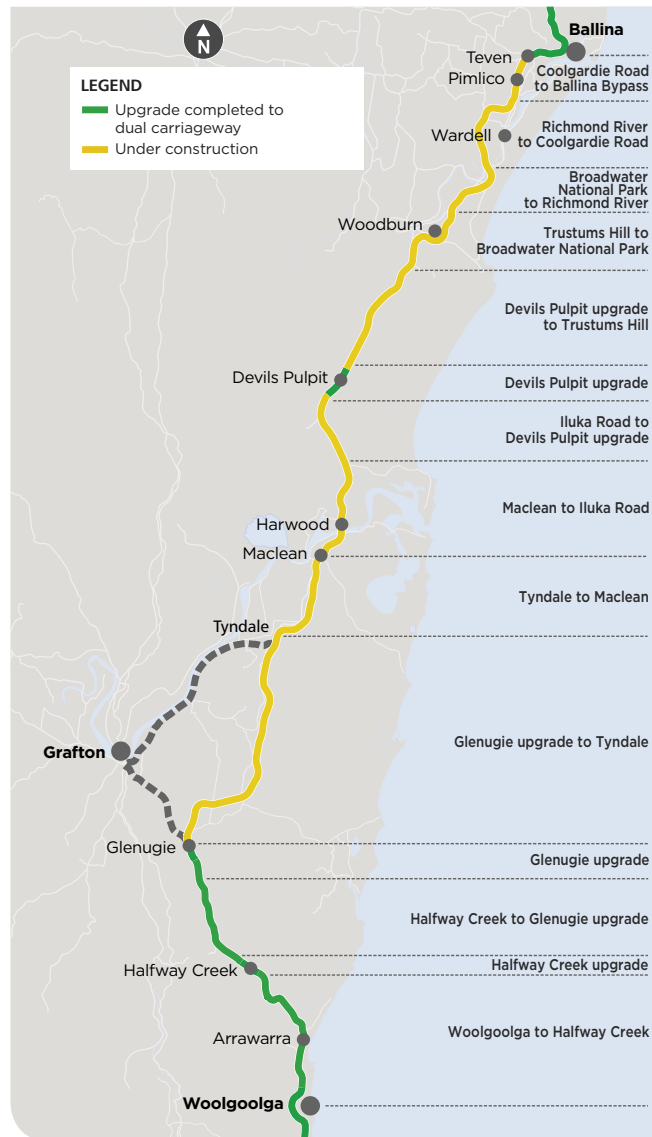
After Kempsey bypass

1. Kempsey Post Bypass Impacts Monitoring Study (August 2017) <http://www.kempsey.nsw.gov.au/council/meetings/2017/2017-09-19/pubs/2017-09-19-appendix-k-kempsey-post-bypass-impacts-monitoring-study-august-2017.pdf>



Macleay Valley Bridge, part of the Kempsey bypass

Woolgoolga to Ballina overview



The Australian and NSW governments are jointly funding the Woolgoolga to Ballina Pacific Highway upgrade. Roads and Maritime Services' Pacific Highway Project Office, Pacific Complete and contractor partners are working together to deliver the project.

Key features of the Woolgoolga to Ballina upgrade:

155 kilometres of dual carriageway

\$4.945 billion

More than 170 bridges to be built

13.1 million cubic metres of earthwork

Nine interchanges

Five towns/villages bypassed

The final cost of the Woolgoolga to Ballina project is \$4.945 billion. This rises from the previous estimate due to:

- Increased market pricing due to the unprecedented number of infrastructure projects being delivered across the State, which has seen pressure on the availability of resources, plant and materials
- Implementing the strict environmental conditions such as the Ballina Koala Plan and securing biodiversity offset land
- Increasing the number of bridges to manage flood impacts across the Clarence Valley floodplain
- Managing a large number of unexpected Aboriginal heritage artefacts found across the alignment

- Bringing forward the building of additional off-ramps at Yamba.

The extra funds have been drawn from the Federal Government's already allocated funding for the project and State Government's savings from previous highway upgrade projects to achieve the agreed funding share.

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

January to June 2018, work progress

- ✓ Contractor announced for concrete paving between Richmond River to Coolgardie Road
- ✓ Display of directional signage plan for community consultation
- ✗ Started mainline paving for Glenugie to Maclean, Maclean to Devils Pulpit and Richmond River to Ballina sections
- ✗ Installed the final girder on the new bridge over the Clarence River bridge at Harwood (completed July 2018).

July to December 2018, expected work progress: weather permitting

- Start concrete paving across all sections
- Publish of operational noise report
- Start at house noise treatments
- Finish deck pour for Harwood Bridge.

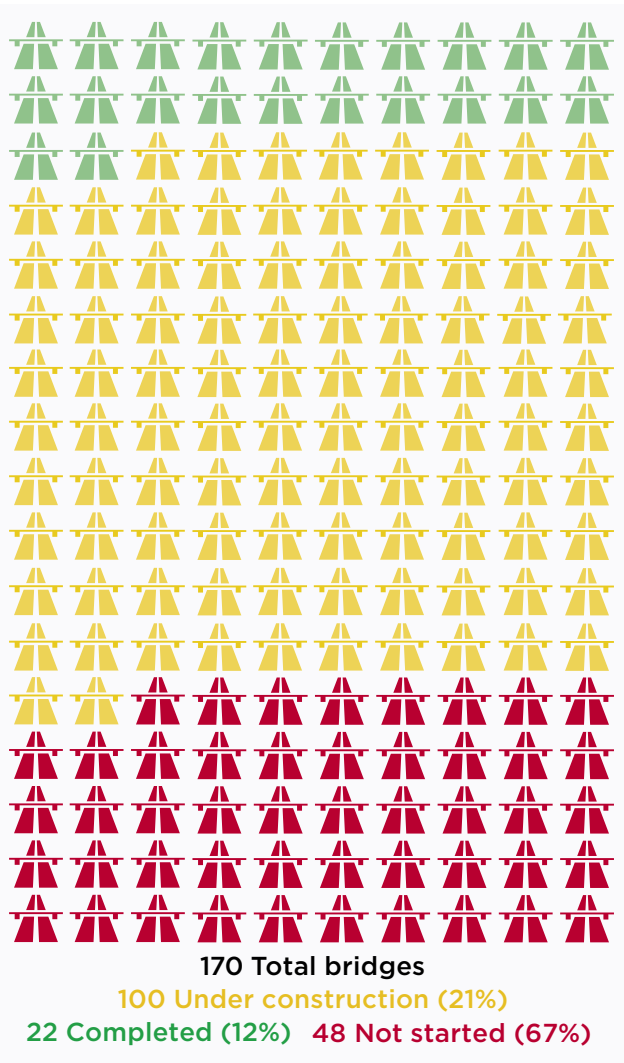
 on average **2890** workers on site per month

 about **49%** complete

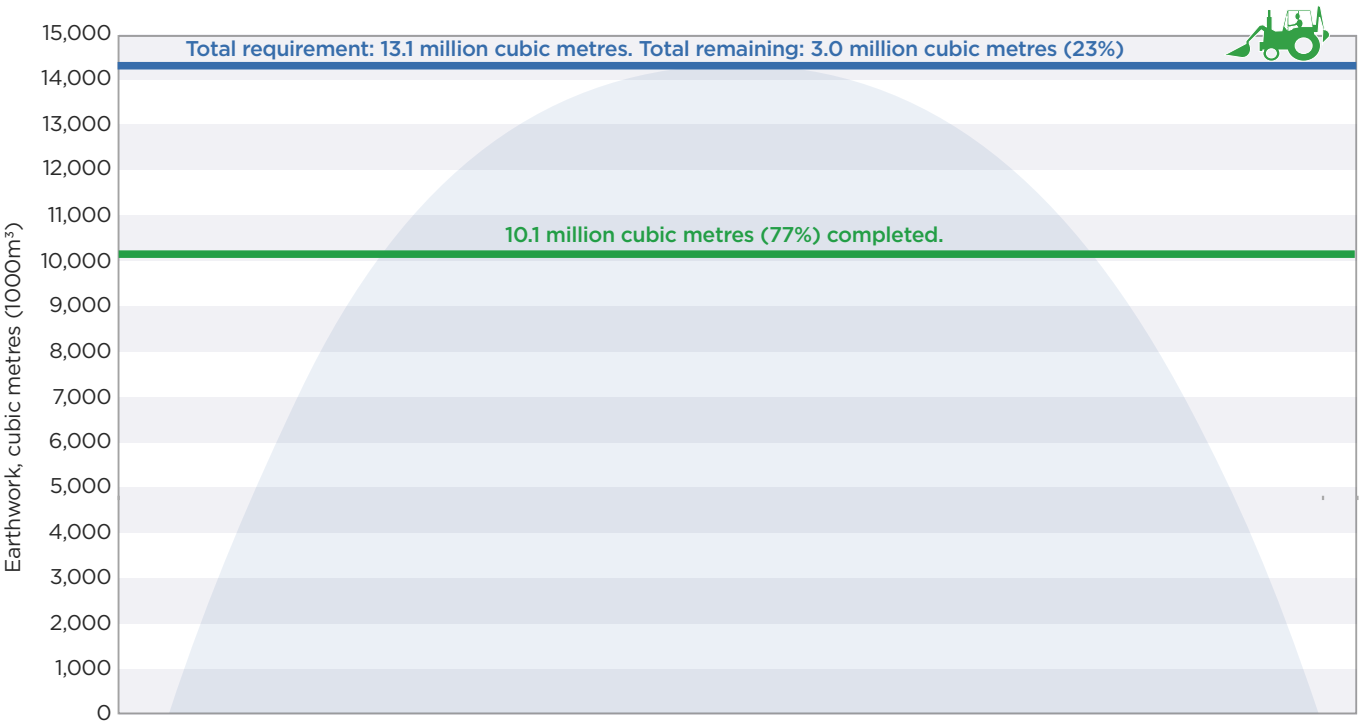
 on average **867** pieces of large machinery on site

Woolgoolga to Ballina overview

Bridges



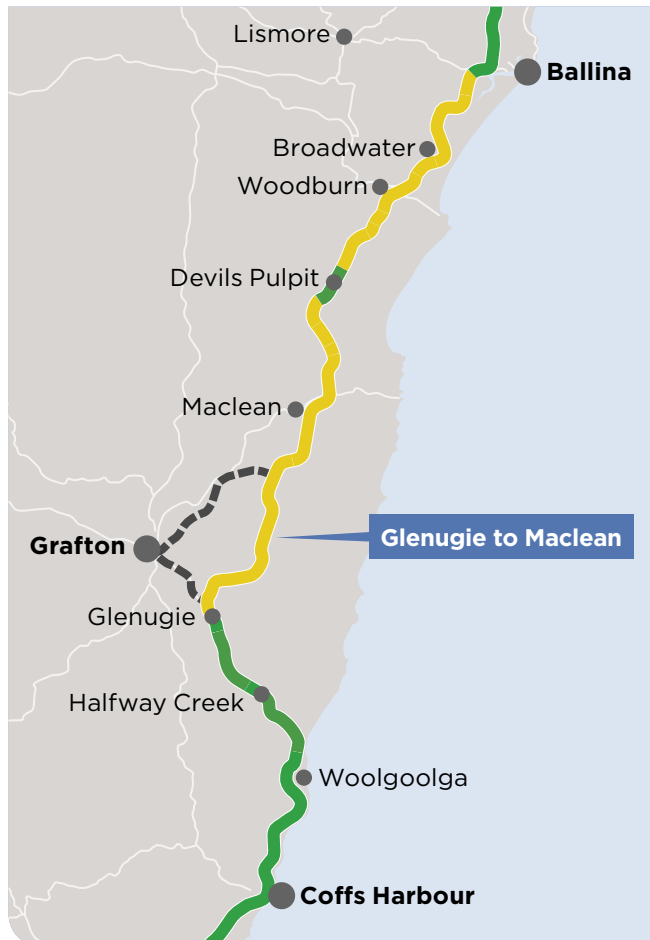
Earthwork



Road surface (road carriageway kilometres)



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.

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

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

January to June 2018, work progress:

- ✓ Contractor announced for construction of rigid road pavement
- ✓ Started work on section of highway near Eight Mile Lane, Glenugie

- ✓ Started work on placing “Super-T” girders at Shark Creek
- ✗ Finished bridge construction between Glenugie and Shark Creek.

July to December 2018, expected work progress, weather permitting:

- Start work on building Tyndale interchange north
- Open first overpass bridge to traffic
- Start mainline paving
- Start deck pours for Shark Creek Bridge.

Community issues:

- Maintaining local roads being used by the project's heavy vehicles
- Keeping the community updated on controlled blasting at the Tyndale borrow site.

 on average **744** workers on site per month

 on average **312** pieces of large machinery on site

 about **50%** complete

Main contract partners on site

Seymour Whyte Constructions
BGC Contracting Pty Ltd
BMD Construction

December 2017



Aerial view north of Tyndale looking north

June 2018



Aerial view north of Tyndale looking north

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.

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

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

January to June 2018, work progress:

- ✓ Finished remediation work at old United service station and Roads and Maritime Services depot
- ✓ Finished soft soil treatment
- ✓ Started piling work at Mororo Bridge
- ✓ Started main civil work between Iluka Road to Devils Pulpit.

July to December 2018, expected work progress: weather permitting

- Finish the first stage of piling work on all bridges between Maclean and Devils Pulpit
- Finish Chatsworth Road North local road connection, Chatsworth Island
- Open new Ryans Lane local road, Chatsworth Island
- Open new Old Mill Road connection and close Watts Lane, Harwood
- Start placement of girders on Mororo Bridge.

Community issues:

- Changes to traffic arrangements through the Mororo area
- Finalising consultation on raising part of the Maclean levee
- Identification of suitable location for asphalt plants.

 on average **342** workers on site per month

 on average **120** pieces of large machinery on site

 about **40%** complete

Main contract partners on site

Golding Contractors
See Civil
Shamrock Construction
BMD Constructions
Bielby Hull Albem Joint Venture
AFS

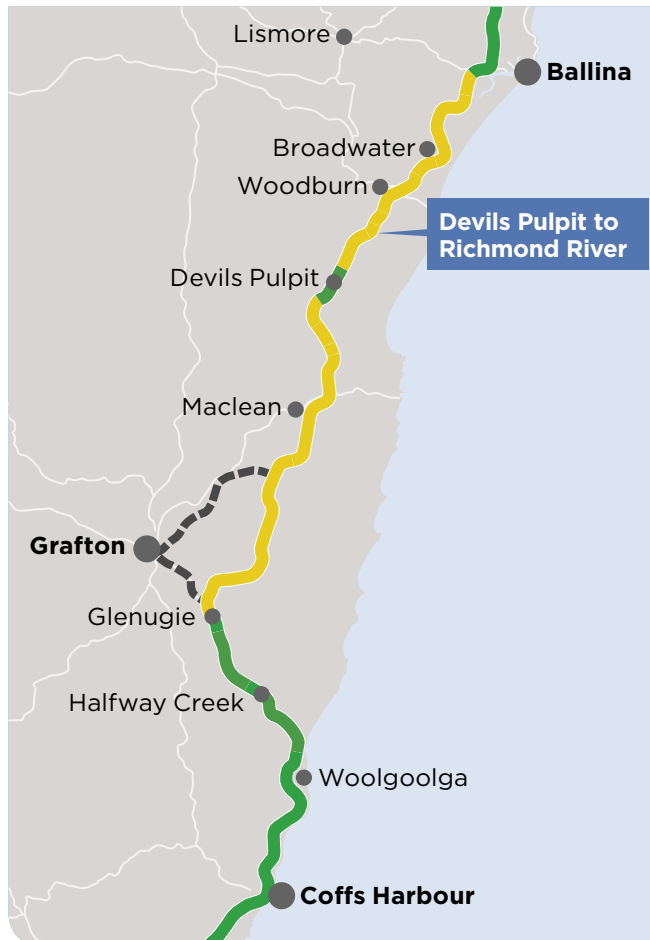
December 2017

Aerial view of Clarence River North Arm at Mororo looking east

June 2018

Aerial view of Clarence River North Arm at Mororo looking south

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 Richmond River bridge. In this area the upgrade bypasses Woodburn and Broadwater and includes the Broadwater interchange.

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

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

January to June 2018, work progress:

- ✓ Opened Woodburn to Broadwater service road
- ✓ Finished two bridges
- ✓ Finished Telstra fibre optic relocation
- ✓ Started main civil work
- ✓ Started mainline paving.

July to December 2018, expected work progress: weather permitting

- Start building the new bridge over Tuckombil Canal, Woodburn
- Finish bridge at Tabbimoble before the start of the Oxley pygmy perch (threatened fish speices) spawning season in October
- Finish first stage of clearing.

Community issues:

- Provided notification and managed community concerns about the final stages and opening of the Woodburn to Broadwater service road proposal including two information sessions and one on one meetings with landowners.

 on average **299** workers on site per month

 on average **94** pieces of large machinery on site

 about **35%** complete

Main contract partners on site

SEE Civil
Bielby Hull Albem Joint Venture
CPB Contractors

December 2017



Aerial view near Woodburn

June 2018



Aerial view near Woodburn

Projects being built



Broadwater to Ballina bypass

The Broadwater to Ballina bypass section of the Woolgoolga to Ballina, Pacific Highway upgrade, extends more than 18 kilometres from the Richmond River bridge to just south of the Ballina interchange. In this area the upgrade bypasses Wardell and includes the Coolgardie interchange.

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

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

January to June 2018, work progress:

- ✓ Started soft soil treatment at Coolgardie intersection
- ✓ Started building new bridge over Emigrant Creek
- ✓ Finished vegetation removal along existing Pacific Highway south of Whytes Lane
- ✗ Finished building Old Bagotville and Montis roads.

July to December 2018, expected work progress: weather permitting

- Move traffic onto new northbound carriageway to enable soft soils treatment on future southbound carriageway
- Finish fauna crossing culvert at Wardell Road
- Finish building more than half of the bridges for this section.

Community issues:

- Concerns about bulk haulage on local roads and potential property damage
- Monitoring of project vehicles in relation to speeding
- Outcomes of Operational Noise Review and review of pavement type in part of this section.

 on average
455 workers
on site per month

 on average **247**
pieces of large
machinery on site

 about
48%
complete

Main contract partners on site

Georgiou Group
Quickway Constructions
Lendlease Engineering

December 2017

Aerial view of the Pacific and Bruxner highways near Ballina, looking south

June 2018

Aerial view of the Pacific and Bruxner highways near Ballina, looking south

Projects being built

Project snapshot

Contractors: Pacifico

Form of contract: Design and build

Start date of major construction: August 2016

Completion date: Open to traffic by 2020

Project value: Form parts of the Woolgoolga to Ballina upgrade



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

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

January to June 2018, work progress:

- ✓ Started building embankment on the southern shore of the Clarence River
- ✓ Started pouring concrete for bridge deck
- ✓ Installed girders on the southern approach
- ✓ Finished building piles for southern approach.

July to December 2018, expected work progress: weather permitting

- Finish mainline paving
- Finish pouring decks.

Community issues:

- Proactive engagement on traffic delays and detours for evening girder movements across the existing bridge minimised complaints and enquiries.



Clarence River at Harwood looking south (June 2018)

 on average
346 workers
on site per month

 on average **65**
pieces of large
machinery on site

 about
88%
complete

 **1** contractor
company on site

Project snapshot

Contractors: Lendlease Engineering

Form of contract: Design and build

Start date of major construction: June 2017

Completion date: Open to traffic by 2020

Project value: Forms parts of the Woolgoolga to Ballina upgrade



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.

The project involves building a one kilometre long, four lane divided bridge, about 500 metres north of Broadwater. The project is jointly funded by the Australian and NSW governments.

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

January to June 2018, work progress:

- ✓ Finished vegetation removal
- ✓ Finished bridge design
- ✓ Started building first pre-cast bridge headstocks
- ✓ Started piling work in the Richmond River.

July to December 2018, expected work progress: weather permitting

- Finish piling
- Finish 50 percent of concrete deck pours
- Install first overwater headstock
- Start marine girders.

Community issues:

- Proactive engagement on traffic delays and detours for transportation of girders and building the bridge over the existing highway.



Aerial view north of Broadwater (June 2018)

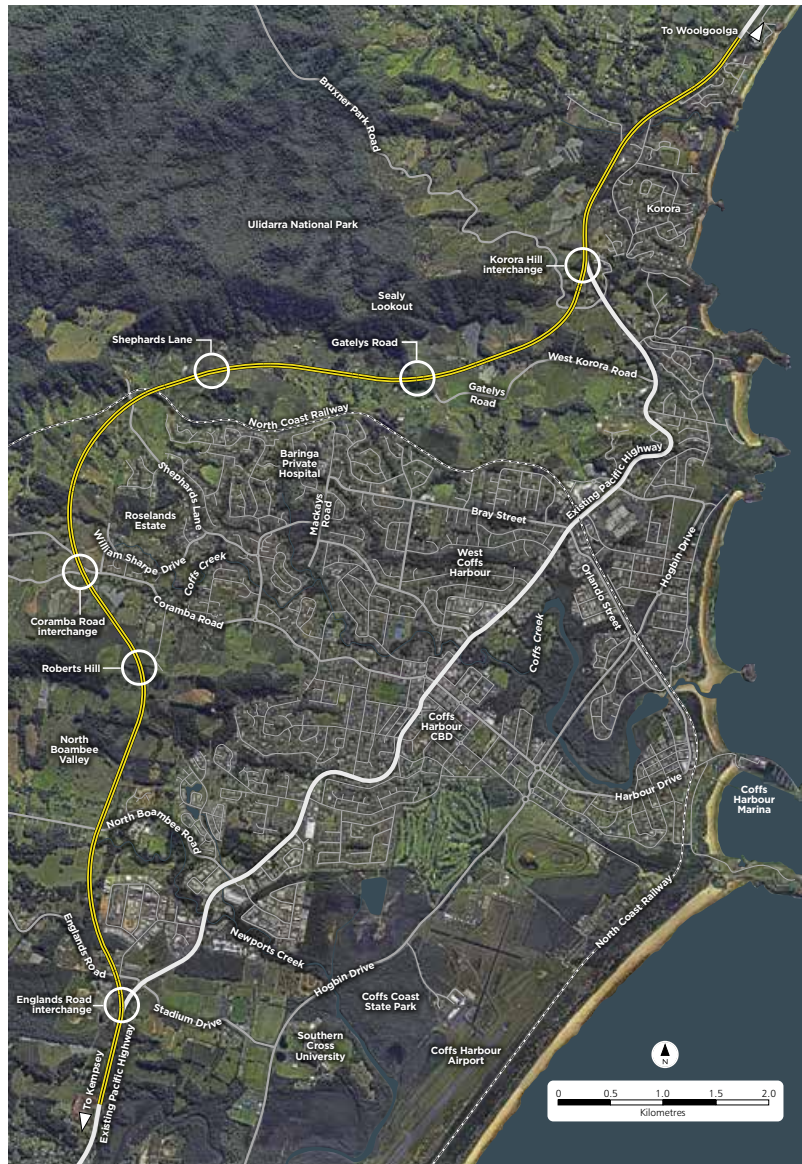
 on average
158 workers
on site per month

 on average **29**
pieces of large
machinery on site

 about
60%
complete

 **1** contractor
company on site

Projects in Planning



Proposed route of the Coffs Harbour bypass

Coffs Harbour bypass

The Australian and NSW governments are funding the Coffs Harbour bypass. The project includes a 12 kilometre bypass of Coffs Harbour from Englands Road in the south to Korora in the north and a 2 kilometre upgrade of the existing highway between Korora and Sapphire. The bypass seeks to improve connectivity, road transport efficiency and safety for local and interstate motorists.

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.

The Australian Government announced in the May 2018 budget that \$971 million would be allocated to build the project. The NSW Government has previously announced they will contribute \$200 million for the bypass in addition to the \$41 million already spent. With funding secured, Roads and Maritime will work with the relevant authorities to finalise the relevant planning approvals so construction can begin in 2020 with an expected completion date of 2024, weather permitting.

January to June 2018, work progress

- ✓ Australian Government funding secured for building the new bypass
- ✓ Field investigations carried out, including:
 - ✓ Aboriginal cultural heritage
 - ✓ Biodiversity studies
- ✓ Refinements to the concept design
- ✓ Finalised the traffic model
- ✓ Submitted the final business case.

July - December 2018, expected work progress

- Finalise concept design
- Display the preferred concept design for consultation
- Carry out noise modelling and identify mitigation strategies
- Initiate acquisitions
- Display environmental impact statement for public comment.

Community issues:

- Residents would like timeframes for when formal property acquisition will take place
- Noise and visual mitigation measures.



Pacific Highway, Coffs Harbour, looking south

Building to maintaining

The Pacific Highway upgrade represents a significant investment aimed at improving safety, traffic efficiency and productivity, particularly for the freight industry.

With the completion of the upgrade between Port Macquarie and Coffs Harbour, and with work well underway between Woolgoolga and Ballina, Roads and Maritime's focus is already shifting to managing and maintaining this important road corridor.

As we move from building the highway to maintaining it, our Asset Planning team is tasked with the job of managing the new road to ensure it remains in excellent condition.

Just as we do with all State roads, detailed planning will go into maintaining the upgraded Pacific Highway, including regular and systematic inspections to monitor its condition, assessing the performance of the network and developing strategies, plans and programs for asset maintenance.

From there our Asset Planning and Regional Maintenance teams will work closely to maintain the road to a high standard. This is already happening on sections of the highway that have been completed in recent years.

For example, we are responsible for maintaining the iconic St Helena Tunnel near Byron Bay, which was built as part of the Tintenbar to Ewingsdale Pacific Highway upgrade and opened in 2015.

Tunnel maintenance is carried out every three months and involves a range of measures, such as inspecting the various operating and safety systems. We close the tunnel for this maintenance, which also requires collaboration with our traffic operations team.



St Helena Tunnel, near Byron Bay

Changing face of maintenance

Traditionally, our maintenance activities on the Pacific Highway have focused on keeping the road surface itself in good shape.

But in building the upgrade, we have mostly used concrete for the road surface, which is more durable and has the added benefit of not requiring maintenance as frequently.

There are, however, other features of the upgraded highway which will require more attention from a maintenance perspective.

Each upgrade project has included features to make journeys safer for the public as well as measures to protect and manage the environment.

Our task is to find cost effective solutions to maintain these important features of the upgraded highway.

To put the new maintenance needs in perspective, the upgraded sections of highway contain:

- Almost 30 new rest areas between Buladelah and Tweed Heads, which require regular maintenance including cleaning, mowing, rubbish collection and repairs
- Almost 500 kilometres of new animal fencing plus a large number of rope crossings and glider poles, which will require regular inspections and maintenance
- More than 160 hectares of additional vegetation maintenance between Woolgoolga and Ballina alone
- More than 270 new bridges between Port Macquarie and Ballina, plus a large number of culverts and new bridges.

Tidy Roads initiative

Keeping the Pacific Highway corridor clean and tidy is a job we take seriously, but we can't do it without the help of the community.

For this reason, Roads and Maritime has been working with the NSW Environmental Protection Authority (EPA) and local councils to reduce and prevent roadside litter around the state, including the Pacific Highway.

We are committed to cutting roadside litter in line with the NSW Premier's goal of reducing litter volume by 40 per cent by 2020.

In 2016 we partnered with the EPA to host the first Tidy Roads Summit, which brought together key government and industry stakeholders with the aim of finding solutions to roadside litter and illegal dumping.

As part of our Tidy Roads Program, we invest around \$9.2 million each year on litter clean ups and regularly carry out maintenance work, including roadside clean ups, during off-peak travel times to reduce the impact on motorists and to ensure the safety of workers. In 2016-17 nearly one tonne of rubbish was collected for every kilometre of the 18,000 kilometre NSW road network, including the Pacific Highway.

Roads and Maritime has been actively supporting the EPA's ongoing anti-littering campaign, with the emphasis on keeping our road corridors clean and changing public behaviour.

This support has come in a number of forms, including targeting litter "hot spots" with reduction strategies and advertising and the use of permanent electronic message signs along the Pacific Highway to help spread the EPA's anti-littering messages.

Roadside litter is one of the most unnecessary and preventable environmental problems. Reporting littering from vehicles helps to raise awareness, change behaviour, reduce clean-up costs and keep our community clean.

The task of cleaning up litter from major roads brings with it significant logistical and safety challenges. In the context of the Pacific Highway, cleaning up roadside litter requires one lane of the highway to be closed and reduced speed limits. There's also the issue of our people needing to work on foot in a high speed environment.

Then there is the financial cost of cleaning up roadside litter on the Pacific Highway, which is significant. This is money we'd rather spend on making your roads safer and more efficient.



Cleaning up roadside litter is part our commitment to help reduce litter volume in NSW by 40 per cent by 2020.



25,000
tonnes of litter is
tossed in NSW each year



\$180m+
is spent on cleaning up
litter in NSW each year



NSW Government committed
to cut the volume of litter in
NSW by **40%** by 2020



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