



Australian Government

BUILDING OUR FUTURE



Placing material over geofabric at soft soil site close to Tuckombil Canal

Devils Pulpit to Richmond River Woolgoolga to Ballina community update

May 2017

The Australian and NSW governments are jointly funding the \$4.36 billion Woolgoolga to Ballina Pacific Highway upgrade. Roads and Maritime Services' Pacific Highway Office and Pacific Complete are working together to deliver the project.

IN THIS UPDATE

- Ongoing and upcoming work
- Soft soil update
- Woodburn to Broadwater service road
- New bridge over Richmond River at Broadwater
- Building foundations
- Preparation for wet weather
- Environmental update
- How this work may affect you
- Innovation – Yellow line trial

Woolgoolga to Ballina project vehicles are restricted to 80 kilometres an hour or less on some local roads to help manage safety and dust.

We have fitted monitoring systems in vehicles, allowing us to track the location and speed of our vehicles as we travel through local communities.

These measures are in place as part of our commitment to managing the impact of our work as the numbers of vehicles and trucks increase on local roads.

Ongoing and upcoming work

Early work continuing between Devils Pulpit to Richmond River during the next three months, weather permitting includes:

- soft soil work including loading earth on soft soil sites and installing equipment to monitor settlement
- building the Woodburn to Broadwater service road
- intersection improvement work at Serendipity Road and Glencoe Road, Tabbimoble
- utility relocations for power, water, sewer and telecommunications
- installing environmental controls and monitoring dust, noise, water quality, flora and fauna.

Soft soil update

Soft soil work between Devils Pulpit to Richmond River is now 88 percent complete. Soft soil work will continue in this area with another 80,000 cubic metres of earth still to be moved.

Soft soil fast facts

- Moved and placed about 95,000 cubic metres of rock for under the embankments, this is equivalent to about 38 Olympic size swimming pools
- Installed more than 455,000 metres of wick drains
- Installed and gathered information from more than 98 instruments which are monitoring ground settlement

410,000 cubic metres
of earth moved and placed
for embankments



Next steps for soft soil

We are continuing to build the new road between Devils Pulpit to Richmond River. Soft soil work will continue in this area and we will monitor ground settlement in the completed sections for the next 18 months and remove excess soil or top up as required. Once the settlement has reached the required level, we will remove the excess soil ready for construction of the new road.

Green embankments

You may have noticed the embankments along the road are green. This is because we have covered the embankments with soil binder. Soil binder is a dust control measure we are using to minimise erosion. It is particularly useful in hot and dry conditions. We will replace the soil binder with landscaping after the road pavement is built.

What's a wick drain?

We've installed in excess of 450 kilometres of wick drains between Devils Pulpit and Richmond River.

Wick drains remove water from soft soils so the settlement time of the soil is reduced from years to months. The process is like squeezing a sponge to remove moisture.

Wick drains look like flat firefighting hoses and come in large reels, but have a plastic core like a bunch of drinking straws. The core is wrapped in fabric to allow water through and inserted into the soil, with about 20 centimetres of the top of the wick exposed at the surface.

Fabric is then laid on the soft soil and rock placed on top to put pressure on the ground underneath. The wick drain is then inserted through the fabric into the ground using a truck-mounted rig. As more earth is placed on top of the embankment, the increased weight pushes the water out of the soft soils, through the wicks into drains alongside the embankments.

Woodburn to Broadwater service road

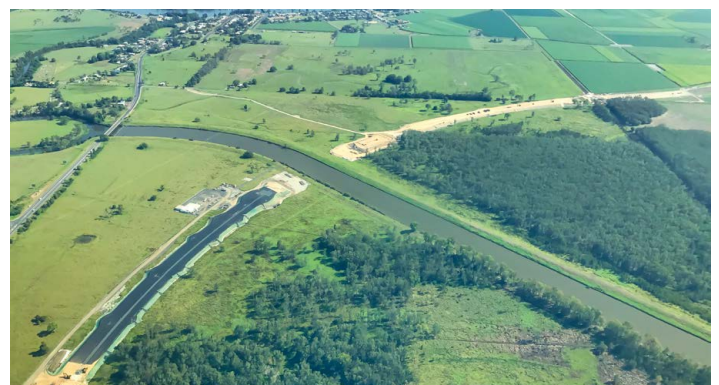
Work is underway to build the service road next to the existing highway between Woodburn and Broadwater through the Broadwater National Park. SEE Civil has been engaged to carry out this work. Work that has started in this area includes fencing, vegetation clearing and the construction of new access points for the work area.

Motorists will travel on this new road while the existing highway is upgraded. This will minimise the impact of our work and improve safety for workers and motorists. Once the upgrade is completed the service road will remain as a local road connecting Woodburn and Broadwater.

New bridge over Richmond River at Broadwater

Lendlease Engineering will be delivering the kilometre-long bridge over the Richmond River at Broadwater. To inform the detailed design for the bridge, surveying and geotechnical investigations have started.

More information will be available soon.



Aerial view showing soft soil site at Tuckombil Canal, February 2017

Building foundations

Much of our work to date has been focussed on clearing vegetation, installing environmental controls and preparing soft soils for construction. The next wave of work in the Devils Pulpit to Richmond River section will focus on piling for future bridges. Piling will start at two areas north of Woodburn over the next few months.

What is piling?

Piling is used to create a stable foundation for bridges, structures and buildings by transferring the weight of the structure deeper into the ground. Piles are large columns generally made from reinforced concrete or steel. Inserting piles into the ground can take between one to two days to complete depending on the length and size. They can vary in length depending on the ground conditions and are driven or bored into the ground using a combination of cranes, piling rigs and vibrating hammers. An example of what this equipment looks like is provided on this page.

Managing noise during piling

Piling can create increased levels of intermittent noise and vibration. In order to mitigate any levels issues, we will carry out noise and vibration monitoring throughout this work. We will also carry out noise mitigation, where possible, including shielding the work area and if the piling exceeds the noise guidelines we will make use of respite periods.

Will this work affect nearby buildings?

We do not expect piling to have an impact on buildings around our work area, however piling can create vibration. As part of the project, all properties within 200 metres of vibration work are offered a property condition survey. This survey is carried out before work starts and includes an inspection of the interior and exterior of the property, including any external structures such as sheds, driveways, pathways, swimming pools, dams, fences and retaining walls. In the unlikely event that damage does occur, the survey can help demonstrate if this was a result of activities in the area. Most of the property conditions surveys for the upgrade have already been completed and a copy of the survey provided to landowners.



Example of what piling work will look like (indicative only)

Devils Pulpit to Ballina hydrological mitigation report update

The Devils Pulpit to Ballina hydrological mitigation report will be made available during May. This report sets out the flood management objectives and how the project has and will continue to reduce the impacts of flooding in the Richmond River catchment. Your feedback has been considered and addressed in this report. We thank everyone for their involvement during the flooding assessment development. As part of the report's release, we will be holding community drop in sessions during May to discuss the report and respond to any questions or concerns you may have. We will be in touch to confirm locations and dates for these sessions.

Preparation for wet weather

Following the recent rain and flood events in the Richmond River catchment as well as a number of smaller local catchment areas we have reviewed our approach to wet weather events. We have made some changes to our approach before, during and after wet weather events that will help us reduce the effect of our work and minimise disruptions to local property owners and communities.

Before weather events we:

- confirm drainage is clear of obstructions
- remove items from the flood plain which may create obstructions
- relocate and remove equipment and machinery to higher ground out of low lying flood prone areas.

During weather events we:

- monitor conditions closely and are on standby to implement flood emergency response plans
- communicate and work with Roads and Maritime maintenance response teams
- work to keep travel safe and information available including using electronic message boards to provide information about road conditions
- have our emergency management response team available 24 hours, with access to contractors, machinery and equipment to provide assistance if it is safe to do so
- use drones and other equipment to monitor water flows through the project sites and capture information to assess our flooding targets.

After weather events:

- when it is safe to do so we assess the impact, ensure sites are safe and prioritise our work to reduce disruption to peoples' access or use of their property.

Environmental update

Wildlife connectivity structures

The upgrade crosses land which is identified as key habitat and wildlife corridors. These corridors are areas of predicted high conservation value for wildlife populations. The habitat areas are important for ecological processes such as migration, colonisation and interbreeding of animals between two or more larger areas of habitat. Wildlife connectivity structures will be built at key locations along the upgrade to protect and connect these corridors and its wildlife populations.

The Woodburn to Broadwater service road will include building four wildlife connectivity structures. These will be the first connectivity structures for the Devils Pulpit to Richmond River section of the upgrade.



Illustration of a wildlife connectivity underpass

Oxleyan Pygmy Perch native fish species

The Oxleyan Pygmy Perch live in some local waterways between the Devils Pulpit and Richmond River section of the upgrade. This native fish is vulnerable to changes to its habitat so during spawning season, from early October to late April, we restrict work in waterways containing these fish. Once their spawning season has finished we will begin piling for bridges north of Woodburn in two of the waterway areas. This work will start in May and stop by the end of September.

How this work may affect you

Changed traffic conditions

There will be some temporary traffic changes while this work is carried out. Reduced speed limits and lane closures may be in place for access and may affect travel times. Please keep to speed limits and follow the direction of traffic controllers and signs. For the latest traffic updates call 132 701, visit livetraffic.com or download the Live Traffic NSW App.

Innovation – Yellow line trial, Woolgoolga to Ballina

To improve the safety of road users and workers we are trialling a number of new ways to guide people through work zones and increase awareness of changed traffic conditions and speed limits. We are doing this because we understand changes to the road environment during construction change your experience of your journey.

If you are travelling south on the Pacific Highway and cross the Harwood Bridge you will enter the yellow line trial. The yellow lines begin on the southern side of the bridge near the Yamba turnoff. The yellow lines continue for about 1.2 kilometres and signs have been installed to let road users know when they are entering and exit the trial.

Yellow lines will replace white lines at a number of temporary work zones near the existing highway to provide better guidance through work zones and raise awareness of changed conditions. We need your feedback about travelling through the yellow line trial to help us understand if you think they are effective. To be part of this important safety initiative please complete our five minute survey www.surveymonkey.com/r/yellow_line_trial or visit www.rms.nsw.gov.au/W2B

For more information about the project, please contact us:

T 1800 778 900 (toll free)

E W2B@pacificcomplete.com.au

W www.rms.nsw.gov.au/W2B

We thank you for your patience during this important work.

Privacy Roads and Maritime Services ("RMS") is subject to the *Privacy and Personal Information Protection Act 1998* ("PIIP Act") which requires that we comply with the Information Privacy Principles set out in the PIIP Act. All information in correspondence is collected for the sole purpose of assisting in the assessment of this proposal/ delivering this project. The information received, including names and addresses of respondents, may be published in subsequent documents unless a clear indication is given in the correspondence that all or part of that information is not to be published. Otherwise RMS will only disclose your personal information, without your consent, if authorised by the law. Your personal information will be held by RMS at 76 Victoria St, Grafton NSW. You have the right to access and correct the information if you believe that it is incorrect.



This document contains important information about public transport projects in your area. If you need help understanding this information, please contact the Translating and Interpreting Service on **131 450** and ask them to call us on **1800 703 457**. The interpreter will then assist you with translation.

