





Artist impression of the new bridge over the Richmond River

# New bridge over the Richmond River at Broadwater

# Woolgoolga to Ballina community update

April 2018

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

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# **Work update**

Major work is underway on building the new bridge over the Richmond River at Broadwater with the first girder delivered four months ahead of schedule. More than 200 large precast concrete components including headstocks and concrete bridge girders are needed to build the bridge. These will be stored on site before they are lifted into place by a side-lifting truss, which has also been assembled on site.

# **Update on current work**

#### **Temporary jetties**

Following the completion of the southern temporary jetty in January, marine operations including marine piling has started. Work has started on the northern embankment and temporary jetty and is expected to be completed and in use by May, weather permitting.

The jetties will be for marine operations as we build the new bridge and will be in place until late-2018. They will be removed after marine-based construction are completed.

#### **Piling**

Nearby residents and Pacific Highway users will notice piling for the new bridge has started with the mobilisation of piling rigs and heavy mobile cranes on site.

Piling is the first stage for building the bridge and creates a solid foundation for the structure. A combination of driven and bored piles is being used to install more than 50 piles, which are required for the 25 bridge piers. A pilecap connects the piles in the river to the columns and bridge structure above.

All land based piling has been completed and marine piling using temporary jetties has started.



The first headstock installed on the southern side of the Richmond River



Bridge columns will continue to be poured over coming months





Images of the piling barge on the Richmond River

#### **Girder installation**

A bridge girder is a large concrete beam used to span from pier to pier. Piers are made up of two columns and a headstock built with reinforced concrete and they are from 2.6 metres to 14.3 metres in height at the bridge peak.

The first 40 of 234 bridge girders have been delivered to site. In March, the project team started to install the bridge girders from the southern side to the northern side of the river. This work involves lifting one girder at a time onto the bridge headstocks using a specialised side-lifting truss, enabling the team to build the bridge efficiently across both land and water.

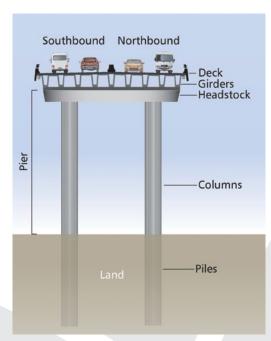
#### **Headstock**

Headstocks sit on top of the columns and support the load of the girders. On the new bridge, the headstocks will be placed about 38 metres apart. The first of 25 concrete headstock shells started arriving on site in February. In March, the team began installing them with the first headstock shell concrete pour completed.

To ensure weather doesn't impact the curing process, the project team may need to work outside of standard construction hours at times, to complete this activity. The project team has consulted with neighbours directly affected by this work and will provide the community with regular updates. We appreciate the community's patience while this important work is carried out.



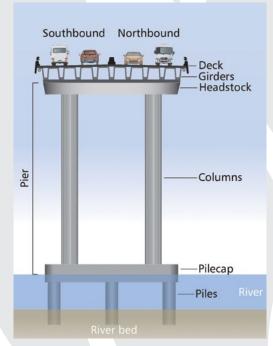
One of 234 girders being delivered to site



Indicative image of structural elements for bridge construction over land



The first of 35 headstocks was installed in February



Indicative image of structural elements for bridge construction over river

## **Temporary highway closure**

In mid-2018, the project team will install nine girders over the existing Pacific Highway. For the safety of motorists this work will be completed at night and will involve temporary closures of the existing Pacific Highway. We will provide you with more information about how we will manage the impacts of our work activity when timeframes are confirmed.

## **Upcoming work**

As we continue with major bridge building work, residents and road users will notice an increase in activity. During the next three months, the project team will begin to install the first pile caps to the marine piles. Columns and headstocks will continue to be installed and poured. In March, we reached a project milestone with the installation of the first girder on the southern side of the river.

# **Project success and innovation**

Roads and Maritime Services started the Pacific Highway upgrade twenty years ago. This allowed for a pipeline of projects providing a framework for continuous learning. The new bridge over the Richmond River at Broadwater will be the first time in Australia a single precast headstock shell is used for a bridge of this width. Using a precast headstock limits the amount of temporary construction works effectively eliminating about 20,000 man hours of working at height. Typically headstock construction would require up to three weeks to complete. The project team estimate that the precast method will reduce construction time for a completed headstock to one week, weather permitting.

# How this work may affect you

All work for the upgrade is regulated by a construction environmental management plan (CEMP) which is approved by the Department of Planning and Environment. The CEMP has strict conditions about managing the project's impact on the environment. We will try to minimise impacts to residents during this work. Access to residents' properties will be maintained and traffic control will be in place where required.

#### Information for marine users

A channel will remain opened at all times for Richmond River users. Marine operators are advised to use care navigating near the work and reduce speed to four knots when within 100 metres of the work area.

# 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. You may also notice some changes in the area during the work including increased vehicle and truck movements as well as project team members on site. 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.

#### **Work hours**

Typically work will be carried out between 7am and 6pm, Monday to Friday and 8am to 5pm on Saturday if required. In areas where residents live more than 200 metres from the project boundary, extended work hours from 6am to 7pm weekdays are allowed. Nearby residents will be notified at least five working days in advance of any activities scheduled outside of these working hours.

#### **Contact us**



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