



# Coffs Harbour bypass

Transport for NSW

## Fact Sheet

### Bored piling for bridges on the Coffs Harbour bypass | September 2023

The Australian and NSW governments are funding the \$2.2 billion, 14-kilometre Coffs Harbour bypass project. The bypass will boost the regional economy and improve connectivity, road transport efficiency and safety for all local and interstate motorists.

The project team is building 17 bridges, including the Luke Bowen Footbridge, in Korora, for the Coffs Harbour bypass.

The first step in building a bridge is piling and this will start on the project in September 2023 at various locations along the bypass alignment. Piling will take about two years to complete, weather permitting.

For the Coffs Harbour bypass, all of our 270 piles will be bored rather than driven, which will minimise disruption for the community.

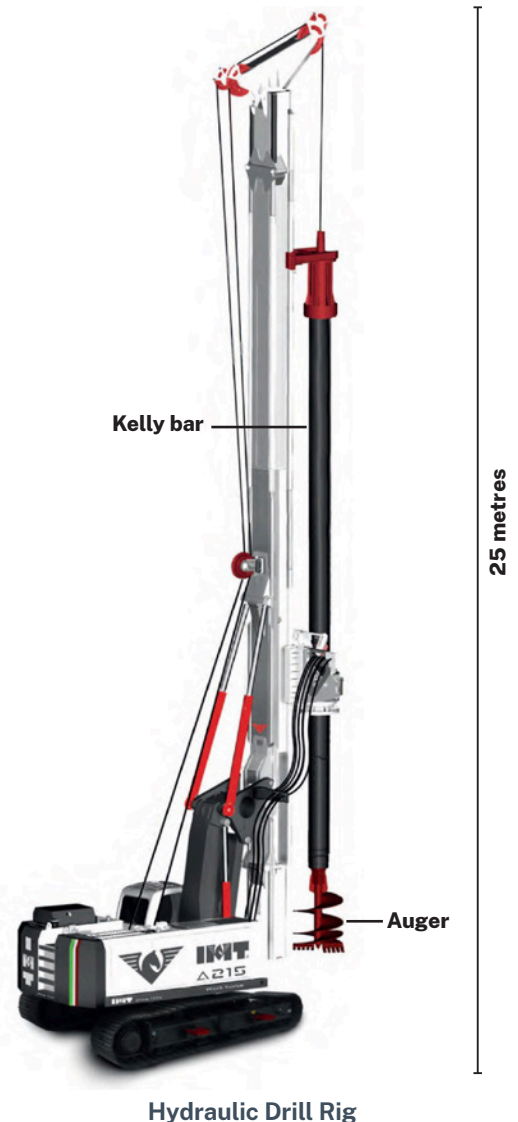
#### How do we prepare for piling?

Before we start piling, we build a piling pad using rock and/or concrete to provide a strong and stable surface for our piling rigs. We also undertake geotechnical testing to help us understand the underlying geology of the rock we are boring into.

#### What is a piling rig?

A piling rig is a person-operated piece of machinery with a big, rotating auger that drills cylindrical holes deep into the ground. The auger goes in and out of the hole several times during the digging operation to reach the required depth and extract the rock and slurry materials. Slurry material is the dirt and other material that is dug out of the hole. We stockpile this material on site and then reuse it along the alignment to build up our “fill” locations. The material will be transported by trucks using internal haul roads where possible and local roads as required.

We will have two piling rigs working across the bypass alignment until piling is complete. This generally means we will be piling in two separate locations at once. Each piling rig will finish at one location before it is moved to the next bridge site.



Hydraulic Drill Rig

## What are bridge piles?

Piles are like legs for bridges. They are cylindrical poles placed deep into the ground until they reach hard rock. They are usually made from concrete, steel or timber and are used to provide a solid foundation and support for the above-ground bridge structure.

## What is bored piling?

We are using bored piles instead of driven piles which means we drill into the ground rather than hammering. This approach helps us break through the hard argillite rock in the Coffs Harbour area and is less impactful to nearby residents because it creates less noise and vibration.

The drilling for the piles will go to a minimum of six metres into the ground and will continue until hard rock is found.

## How do we build piles?

Once the hole is dug deep into the ground and all material is removed, the hole is reinforced with a steel cage and filled with concrete poured on site. We overpour the pile to prevent contamination and then remove the overpour with a pneumatic drill (jackhammer).

## How long does it take to complete each pile?

Depending on the diameter and depth required, each pile takes about eight hours to drill, install reinforcement and pour concrete.

Most bridge work will take place within approved construction hours. Some work, such as concrete pouring, may need to be completed outside of standard construction hours to meet temperature requirements. We will notify impacted residents separately for this work.

## What are the expected noise levels from bored piling?

The project's Environment Protection Licence (EPL) sets strict limits for construction noise, and we undertake regular noise monitoring to ensure compliance.

Moderate, consistent noise will also be heard from the piling rig when it is drilling in the ground. Louder clangs will occur towards the end of the drilling operation to remove material from the auger.

Concrete is overpoured for piles so that any contamination in the concrete can be removed. We will remove the overpour with a pneumatic drill (jackhammer) which is noisy.

We will position plant and equipment as far from sensitive receivers as possible during piling operations and will schedule respite periods as required.

## Where is the concrete sourced from?

Concrete will come from the project's temporary concrete batch plant at Englands Road, North Boambee.

Concrete deliveries will be via approved routes, and in most cases, along the alignment to minimise the number of heavy vehicles on local roads.

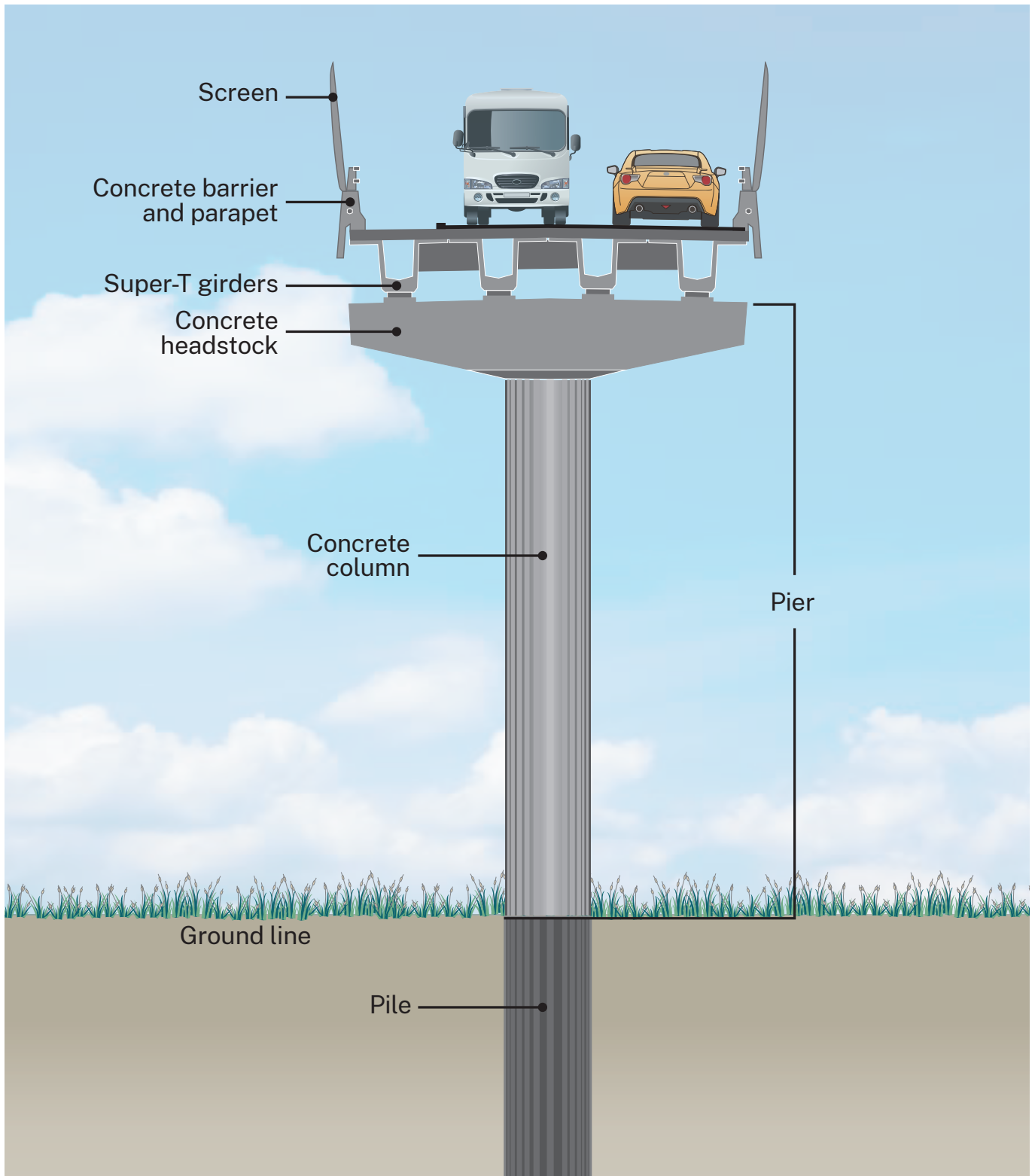
More information on the project's concrete batch plant can be found at [www.pacifichighway.nsw.gov.au/document-library/coffs-harbour-bypass-fact-sheet-august-2023](http://www.pacifichighway.nsw.gov.au/document-library/coffs-harbour-bypass-fact-sheet-august-2023).

## Next steps

After the piles are built for each bridge then we will build the columns and headstocks using concrete, bring in girders and parapets before doing the concrete pouring for the bridge deck and adding the finishing touches of the railings and line marking and, the anti-throw screens and noise walls, where required.



Artist's impression of bridge crossing near Coramba Road interchange



Cross section of bridge components

 **Contact us**

If you have any enquiries and complaints, please contact the project team on 1800 550 621 or [community@chbteam.com.au](mailto:community@chbteam.com.au)

 **Translation and interpreting service**

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