

CABRAMATTA LOOP PROJECT

BRIDGE CONSTRUCTION

CLP_08

The Cabramatta Loop Project will increase rail freight capacity on the Southern Sydney Freight Line by allowing freight trains travelling in either direction to pass each other. As part of the Project, two new bridges over Cabramatta Creek and Sussex Street will be constructed. The new bridges will be built next to the existing rail bridges. These bridges will make up part of the 1.6km Cabramatta Loop.

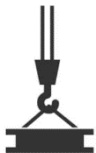
Sussex Street bridge



14 piled foundations
Each pile is between
11m and 18m deep



A 250-tonne crane is used to lift
and install 36 concrete planks



Each plank = 6.5-8.5 m long and
0.65-0.75m wide
Total number of planks = 36
Each plank = up to 14.5 tonnes



The existing rail bridge at Sussex Street, where it joins Broomfield Street.

Cabramatta Creek bridge



18 piled foundations
Each pile is between 15m
and 19m deep
Each foundation is of varying depths
depending on ground conditions found
during geotechnical investigations



Two cranes will be required to lift
the planks
The largest crane weighs 750 tonnes



Each plank = 14m-21m long
Total number of planks = 48
Each plank = up to 50 tonnes



The existing rail bridge at Cabramatta Creek

Piling and substructure construction will take place throughout mid-2022 and once completed, the planks will be lifted into position during track possession weekends in September and November. Throughout the year we have limited opportunities to access the rail corridor to do work like this, so we will need to work outside standard hours. We will notify affected people about this work closer to the time.

Planks for the Cabramatta Creek Underbridge are heavier and larger due to them spanning further between piles as they cross the creek. Once the planks have been placed into position, the top of the planks will be waterproofed and have a protective ballast mat (to reduce noise and vibration) installed in preparation for laying of the ballasted rail track. Ballast consists of crushed rocks or stone which forms a base underneath the steel rail.

To build a rail bridge, specialised machinery is needed. As with any major construction, this can result in noise and vibration. The project team will monitor noise and vibration levels to make sure they are within the Environment Protection Authority (EPA) noise control guidelines. More information about this can be found on the Noise and Vibration Fact Sheet on our website www.cabramattaloop.com.au.

What is piling?

Piling is a foundation support commonly used for concrete structures. It is a technique that sets a column-like structure deep in the ground to support a new bridge.

Firstly, the ground is prepared to carry the heavy loads of piling machinery including cranes and piling rig. To prepare the ground, our crews will use specific materials that are compacted, to ensure there are no weak spots. Large machinery can tip over if the ground underneath it is not solid and even.

A piling rig will be used to screw a large hollow steel pipe into the ground, to hold it and stop the hole from collapsing. The pile rig will then drill into the ground and into bed rock to remove the earth now inside the hollow pipe. Each can take up to half a day of work.

From there, a cylindrical steel reinforcement cage is inserted into the hole. A small tube is placed inside the hole for the concrete to be poured through, to ensure the concrete reaches the bottom of the pile without separating. Concrete is then poured to form the pile.

When this is finished, the bridge structure above it can be constructed.



Example of a piling rig used for the bridge foundation work



Translation and Interpretation Services

Please call **131 450** and ask them to call the project team on **1300 550 402**.

Vietnamese

Dịch vụ Thông Phiên Dịch – vui lòng gọi số 131 450 và nhờ họ gọi cho toán phụ trách dự án qua số 1300 550 402.

Chinese Simplified

翻译与传译服务——请致电131 450，并请他们接通项目团队电话1300 550 402。

Arabic

خدمة الترجمة التحريرية والشفهية - اتصل على الرقم 131 450 واطلب منهم الاتصال بفريق المشروع على الرقم 1300 550 402.

Khmer

សេវាកម្មបកប្រែភាសា - សូមទូរស័ព្ទទៅលេខ 131 450 ហើយសុំឱ្យគេទូរស័ព្ទទៅក្រុមការងារគម្រោងតាមលេខ 1300 550 402។

Chinese Traditional

翻譯與傳譯服務——請致電131 450，然後要求他們接通項目工作組電話1300 550 402。

WANT TO KNOW MORE?

p: **1300 550 402**

e: cabramattaloop@fultonhogan.com.au

w: cabramattaloop.com.au



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