Ipswich Motorway Upgrade
Rocklea to Darra – Stage 1 project

Bridge piling night works. Why?
The Rocklea to Darra – Stage 1 project will be commencing piling night works from late March 2020 for the construction of the new wider and higher motorway bridges, westbound, over Little Doris Creek, Oxley Creek Overflow and the Oxley Creek, Oxley.

History has shown us that major flood events will continue to occur. This section of the motorway upgrade will significantly improve the flood immunity of this vital link. For residents, commuters and industry, that means better reliability and connectivity when we need it most.

To complete these noisy works as quickly and safely as possible, part of these piling works need to be done at night when traffic numbers are at their lowest to ensure the safety of work crews on site and road users on the motorway.

What is bridge piling?
Piles are deep, strong foundations that are used to support bridges, high-rise buildings and other large structures. They form a solid foundation in areas where soil closer to the surface does not have the strength to support the structure. Driven piling involves lifting pre-cast or prefabricated piles into place with a crane. The piling rig then drives the pile into the ground using a large steel ‘hammer’.

Where on the Ipswich Motorway are these works being done?
These bridge works are being undertaken at Little Doris Creek, Oxley Creek, and Oxley Creek Overflow channel, Oxley. Please refer to the project website www.tmr.qld.gov.au/rocklea2darra1 (Design map: March 2019) which clearly shows these locations.

How many piles are required for these works?
- 82 concrete piles varying in lengths from 13m to 23m long to support the Oxley Creek bridge structure (two locations - westbound).
- 20 metal piles up to 18m long to support the Little Doris Creek bridge structure.

How many piles are being placed into the ground each night?
Typically, between four and five piles each night. This is dependent on ground conditions, construction equipment and weather.
What does driven piling involve?

Driven piling involves boring a hole part-way into the ground and then inserting a pile. At night, the pile is then placed into the hole and hammered for between 2 – 10 metres so that the pile (pre-cast concrete or metal) stands up safely without support. The next day, the pile is then fully installed by using a hammering action until it reaches a predetermined resistance.

![Placement of pile](image1)
![Installation of pile](image2)
![Repetition of pile](image3)

A piling rig is used to install the pile into place. The hammer is typically up to 10 tonnes in weight, and falls from a height of up to one metre.

Driven piling works are usually broken up into two main activities, which is preparing and pitching the pile – effectively getting it into position – and installing the pile into the ground. The pitching and driving process continues until all piles are driven into the ground so that the bridge structure can be constructed.

When will this work start and when is it expected to be finished?

These works are scheduled to start late March 2020, and are planned for completion in August 2020, weather and construction conditions permitting. These works are being undertaken in a staged approach, from Oxley Creek to Little Doris Creek to, Oxley for the westbound motorway bridges.

Why does this work have to be done?

Piling works are an essential component of building the new bridges that will contribute to widening of the motorway from four to six lanes from Granard Road, Rocklea to just east of the Oxley Road Interchange, Oxley.

Is this work noisy?

Yes, due to the nature of this work it is noisy, and we apologise for this. Most of the noisy work occurs during the day, with only safety-critical work occurring at night. We will continue to monitor the noise and minimise impacts as much as possible.
How often should I expect to hear this ‘hammering’ noise at night?

Each pile needs to be placed and positioned safely into the ground at night. You should expect to hear this ‘hammering’ noise (at infrequent intervals) for 1 – 10 minutes, for each pile. It is expected that timing should be approximately 10-15 minutes for each pile however, should we happen to come across unexpected hard material such as rock while completing this activity, this time will need to be extended. We will try to minimise the amount of time required as much as possible.

As an example, the following timeline a typical night of works. These times, gaps and length of piling may change each night, but it is an indication of intermittent nature and length of ‘hammering’.

- ‘Hammering’ – 1 minute. 1hr gap for boring/ ‘standing’ of next pile
- ‘Hammering’ – 1.5 minute. 40-minute gap for boring / ‘standing’ of next pile
- ‘Hammering’ – 1 minute. 1-hour gap for boring / ‘standing’ of next pile
- ‘Hammering’ – 1.5 minute. 50-minute gap for boring / ‘standing’ of next pile
- ‘Hammering’ – 2 minutes. Night works completed.

Will piling works be done over the Easter break or on public holidays?

No piling night works will occur over the Easter break, from Friday 10 April to Monday13 April 2020, or on gazetted public holidays.

What does this work involve?

At night placement of piles into pre-bored holes so that the piles stand up safely into the ground. In the morning from 7am, we will then drive the piles deep into the ground to their final position.

What can I expect?

Driving or hammering the piles during the day is noisy. At night, the piles need to be positioned vertically into pre-bored holes. This requires some preliminary hammering for about 1-10 minutes per pile to make sure they are safely secured. We apologise for the noise at night, however it is necessary for the safety of workers on site and traffic using the motorway and service roads.

Safety is being carefully managed. Specialist piling contractors perform the works. At night, traffic will be reduced to one lane each direction for your safety and to enable safe clearance from the traffic to the works. Traffic will also be stopped for periods up to 10 minutes while the piles are being lifted into position for the placement to ensure the safety of motorway and on ramp users.

Why do these works need to be done at night?

The placement/preliminary driving takes place late at night, at infrequent intervals, is necessary to ensure the safety of work crews on site and motorists travelling on the motorway. The piles are long and need to be placed/preliminarly driven to a depth, so they are secure and safe until they can be fully installed the next day. Placement requires an exclusion zone for safety. Due to the proximity to the motorway and the onramp, traffic in the
area needs to be stopped whilst the piles are lifted into position for the placement. This can be up to 10 minutes at a time. This needs to be done at the lowest traffic volume times.

**Will there be more piling works after these are finished?**

No. This is the completion of the piling works for the current stage 1 project.

**When do these works need to be completed?**

While most of the piling works will be carried out during the day between 7am and 5pm, Monday to Saturday, pile pitching night works will be required, between 8pm and 5am.

**What are the impacts from piling?**

Piling is noisy. For this reason, most of the hammering and driving of the piles will be completed during the day. Lane closures are required to ensure safe clearance from traffic to the piling placement activities. These lane closures are undertaken late at night when traffic flows are at their lowest. Traffic will also need to be stopped at night for periods of up to 10 minutes at a time. There may also be dust and vibration associated with the works.

**How are we managing impacts?**

- At the point of impact between the hammer and the pile, timber packers (rubber and plywood sheets) will be used on and around the pile to minimise noise.
- The timber packer will be replaced regularly to best ‘muffle’ the sound being generated.
- Night time hammering is being limited to the absolute minimum required to ensure the pile can be left in a safe position before being fully installed the next day.

**When will the whole project be finished?**

It is anticipated that the whole Ipswich Motorway Upgrade: Rocklea to Darra – Stage 1 will be finished early 2021.

**Who should I contact if I have a question about these works for would like information about the project?**

Please contact the Project Community Relations team by referring to the details provided below. Thank you.