

# Gateway UPGRADE NORTH

## Piling

FACT SHEET

February 2016

### What is piling?

The installation of 'piles' into the ground creates a solid foundation to support the construction of large structures such as bridges or buildings. The piles penetrate the ground, reaching a strong layer of soil or rock in areas lacking in strength.

There are different methods of piling, depending on the type of soil and/or the type of structure to be built. The number of piles required in an area is also dependent on these factors.

Most piling activities are supported by a mobile crane which is used to position the pile ready for piling to commence.

### Types of piling

**Bored piling** involves the use of a vibratory hammer to drive a permanent steel lining into the ground. Then a piling rig is used to drill into the ground to create a hole, removing material from within the newly installed liner.

Once the hole is created, a steel prefabricated reinforcement cage is lowered into the hole. Concrete is then poured into the hole to form the pile and once the concrete sets, the bored pile is complete.

**Driven piling** involves hammering a precast (or pre-made) concrete pile into the ground to a determined depth, using a piling rig.

**Sheet piling** involves using vibration to drive interlocking sheets of metal into the ground to form a barrier similar to a retaining wall.

This method is often used when construction activities are close to existing structures, as the piles result in minimal disturbance to the ground and do not require any material to be removed.

### Piling on the Gateway Upgrade North project

The Gateway Upgrade North project involves upgrading, widening or constructing 13 separate bridge structures, which all require piling to create a solid foundation to support the future structure.

The project corridor passes through areas with varying ground conditions over its 11.3km length. With piling works occurring in close proximity to motorists and existing structures, the project team will need to use a number of different piling methods.

Piling works will be carried out on bridge structures at the Nudgee Road interchange, Nundah Creek, Bicentennial Road interchange, Sandgate Road/Braun Street, Depot Road and the Deagon Deviation.

### About the project

The Gateway Upgrade North project involves upgrading 11.3km of the Gateway Motorway to six lanes between Nudgee and Bracken Ridge. The project will deliver important safety and efficiency improvements for the 83,000 vehicles that travel on the motorway each day.

The project is jointly funded by the Australian and Queensland Governments and delivery is being managed by the Department of Transport and Main Roads and Transurban Queensland. Lend Lease Engineering Pty Ltd has been appointed to design and construct the project.

Major construction started in early 2016 and is due for completion in late 2018.

An example of a piling rig



## Contact details

You can contact the project team via:

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