

North-South Corridor Darlington Upgrade Project



Piling Fact Sheet

November 2016

The Darlington Upgrade Project involves the upgrade of approximately 3.3 kilometres of Main South Road and includes the construction of a lowered motorway and eight road bridges, creating a non-stop motorway between the Southern Expressway and Tonsley Boulevard.

The \$620 million Darlington Upgrade Project is being funded by the Australian Government (\$496 million) and the South Australian Government (\$124 million). As part of the project, piling works will be undertaken.

What is piling?

Piling is the construction of columns in the ground that provide vertical and horizontal support to a structure, such as a bridge or retaining wall, by connecting to stable soil or rock.

Piles are installed vertically into the ground and can be made from reinforced concrete, steel or timber. There are various piling methods used in construction, but generally it involves boring or driving them into the ground.

For the Darlington Upgrade Project, the primary method of piling will be Continuous Flight Auger (CFA) piling. CFA piling is an efficient method and has the least community impact.

A pile is formed by drilling a shaft into the ground with an auger (a drill resembling a large corkscrew) by a purpose-designed piling rig.

Concrete is injected under pressure through the hollow stem of the auger, and this pressure is maintained throughout the auger extraction process.

On completion of concreting, a steel reinforcing cage is inserted into the concrete whilst it is still workable to complete the pile (refer to image opposite).



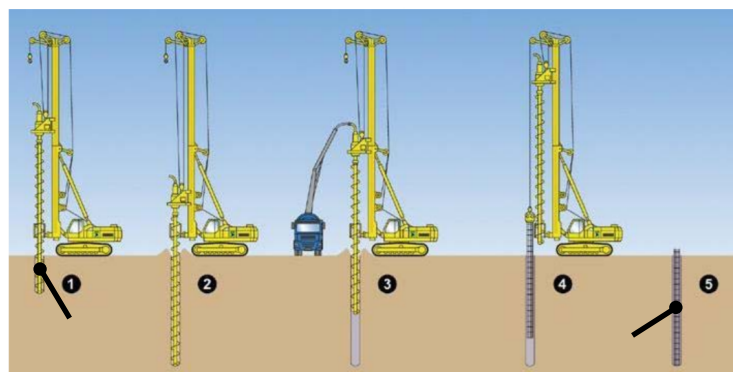
CFA Piling Rig

What machinery will be used for piling works?

Piling rigs, cranes, excavators and concrete trucks will be used during piling works.

Where will piling works be undertaken?

Piling works will be undertaken along the length of the Darlington Upgrade Project site with piling rig masts clearly visible. Approximately 1,500 piles will be installed.



CFA Piling Process