Cooks River - Sydney Metro

Sydney, Australia

Slope stabilisation and bearing capacity on Sydney Metro project

The project

Sydney Metro is Australia’s largest public transport project which required ground improvement on a stretch of rail corridor adjacent to Cooks River, Campsie.

The challenge

Located adjacent to Cooks River, within a live and tight rail corridor, adjacent to a gas main and beneath high voltage power lines; the client didn't have many cost-effective solutions to improve the soft soils beneath the proposed embankment widening. With the work area sloping towards the adjacent river and soft soils present up to 7m below ground level, environmental concerns from site run-off or creation of spoil remained a top priority when considering treatment options available.

The solution

A custom designed rigid inclusion scheme was the perfect solution for stabilising the soft soils beneath the future embankment. Requiring minimal equipment and producing less spoil, this solution met the project requirements, minimised potential environmental impacts and provided cost benefits to a happy client.

Project facts

Owner(s)
NSW Government

Keller business unit(s)
Keller Australia

Main contractor(s)
Laing O'Rourke John Holland JV

Solutions
Bearing capacity / settlement control

Markets
Infrastructure

Techniques
Rigid inclusions