

Newcastle Inner City Bypass

Jesmond, NSW

With no water supply available on site, the drilling system was modified to minimise water usage, and an in-house designed grout mix was batched offsite and delivered via agitators, all while carefully programming activities to reduce the impact on local traffic congestion.



The project

To minimise the risk of future mine subsidence events beneath the proposed Newcastle inner city bypass, a portion of the future pavement area required mass grouting to remove the likelihood of voids or collapsible ground. Keller worked closely with the client and geotechnical consultant leading up to the works to develop the grouting campaign to practically and economically meet project requirements.

The challenge

The project involved substantial earthworks, plant movements and had limited water available on site. The traditional onsite grout batch plants were seen by the client as unfavourable due to space and logistics constraints on the wider project.

The solution

Keller successfully produced and placed a custom fly ash grout using an offsite batch grout and delivered the grout in agitators. Grout was placed on multiple fronts to increase production and hand over completed zones to enable future works to commence. Regular downhole CCTV camera inspections were used to monitor grout flow and ensure it reached the target locations. All works were verified by the consulting engineer to meet SA NSW requirements.

Project facts

Owner(s)

TfNSW

Keller business unit(s)

Keller Australia

Main contractor(s)

Fulton Hogan

Solutions

Mine stabilisation / void filling

Markets

Infrastructure

Techniques

Mine infill or cavity grouting