

Sydenham Station

Marrickville, NSW

Improvement of soft clay below future embankment to ensure stability



The project

Joint contractors John Holland and Laing O'Rourke were awarded the \$300M upgrade of Sydenham Station as part of the wider \$20B Sydney Metro works. As part of the works, the contractors were improving the existing rail corridor by constructing a new piled retaining wall to allow a safer rail embankment. Keller were engaged to install jet grout in the underlying soft clays under the proposed retaining to assist overcoming the risk of potential stabilities issues.

The challenge

The site was positioned within a 200m long, 2.4m wide area between the existing rail embankment and community football ground. The works were performed between live rail on one side and high voltage power cables on the other.

The solution

Keller installed 82 jet grout columns (1.2m diameter) underneath the proposed retaining wall. The columns were installed to assist overcoming possible slip failures of the soft ground conditions due to the increased loading behind the proposed post and panel retaining wall. Keller utilised a specialise jet grouting crew to exceed quality expectations and complete the works safely and on ahead of programme.

Project facts

Owner(s)

Sydney Metro

Keller business unit(s)

Keller Australia

Main contractor(s)

John Holland and Laing O'Rourke JV

Solutions

Bearing capacity / settlement control

Markets

Infrastructure

Techniques

Jet grouting