

Lilydale Level Crossing Removal Project

Lilydale, VIC

While working within a rail corridor with extreme spatial, vibration and surface constraints and irregularities, Keller installed a driven sheet piling retention solution to achieve project requirements.



The project

The Lilydale Level Crossing Removal Project provided Keller with a unique opportunity to deliver on a design and construct (D&C) rail infrastructure project. It involved the design and construction of a sheet piling retention system within a rail corridor, to facilitate the construction of a skyrail and new elevated station.

The challenge

Working within a rail corridor is problematic enough without the added burden of COVID-19 restrictions and lockdowns. One of the major challenges was the timeframe around the delivery of the sheet piles, which were sourced from the Middle East. Other challenges included managing the design process, dealing with tight spatial demands and unknown surfaces, and minimising vibrations.

The solution

While Keller has vast experience in rail corridor works, and in D&C contracts for residential and commercial projects, this was a unique D&C contract for a rail infrastructure project. As all designers on MMTA (Melbourne Metro Tunnel Authority) works require certification, Keller engaged and managed an experienced designer (CMW) through the process. With global shipping thrown into turmoil, the on-time delivery of the sheet piles was a constant concern, and an alternative supply was sourced and held in case it was needed. However, the original supply arrived within hours of the due start date. Several issues emerged around the tight rail corridor, unexpected surface inconsistencies, and vibration/noise monitoring. All were resolved, partly with the assistance of piling experts from Austral, a Keller subsidiary. Keller's access to such expertise, particularly at a time when border closures severely restricted movement, was a major asset.

Project facts

Owner(s)

Rail Victoria

Keller business unit(s)

Keller Australia

Main contractor(s)

SEPA

Solutions

Excavation support

Markets

Infrastructure

Techniques

Sheet piles