889 Collins Street

Docklands, VIC

Development of an installation process and sequence that ensured driven precast piles could be installed adjacent to a movement sensitive retaining wall.

The project

889 Collins Street Project is a boutique multi-storey residential development on the edge of the Yarra River in Melbourne's Victoria Harbour Precinct. It includes a 30-storey North Tower and a 24-storey South Tower, comprising 550 apartments with car parking on a 6-storey podium. The project required 440 precast square concrete piles of 270mm, 350mm and 400mm driven to 36-38m deep.

The challenge

There were real concerns that the installation of displacement piles would cause movement and damage to an adjacent existing sheet pile retaining sea wall. In order to allow the use of the cost efficient driven precast concrete pile type under the entire building Keller had to develop a methodology to mitigate this risk.

The solution

Using a detailed sequencing methodology to install the precast piles, as well as predrilling of some piles, Keller was able to minimise ground displacement. To accommodate the ground movements that were measured, the Keller team continually monitored and reviewed pile as-built information and were able to amend pile design as required.

Project facts

Owner(s)
Lend Lease

Keller business unit(s)
Keller Australia

Main contractor(s)
Lend Lease

Solutions
Heavy foundations

Markets
Commercial
Residential

Techniques
Driven precast piles