

## The Eighth

South Melbourne, VIC

Deep CFA soldier piles in challenging conditions with a high water table and highly variable rock levels and strengths for this six level basement.



## The project

The Eighth is a luxurious apartment complex spanning 18 levels, with a six-level basement carpark. Keller was responsible for installing deep CFA piles for the soldier pile retention wall and tower foundations.

## The challenge

The ground conditions varied considerably over a relatively small site footprint, with deep soft soils in one half of the site and shallow depth medium to high strength siltstone in the other. The high water table also meant that the foundation piles needed to be installed from existing ground level, up to 20m above cut-off level, increasing the risk of misalignment of the piles at the basement level.

## The solution

We collaborated with the client from an early stage to find the best design approach for the project for the retention system and foundation piles. Our expertise in rock drilling using market leading high torque CFA piling rigs, allowed us to adopt a much more economical solution for the pile installation compared to conventional bored piling techniques. For the foundation piles, our innovative design approach of adopting groups of three smaller diameter piles per column, ensured there was no requirement for costly rectification works or tie beams at basement level.

## Project facts

### Owner(s)

Crema Constructions

### Keller business unit(s)

Keller Australia

### Main contractor(s)

Delta Group

### Solutions

Heavy foundations  
Excavation support

### Markets

Residential

### Techniques

CFA piles  
Soldier and contiguous pile retaining walls