

## Iluka - The Spirit - Development

Gold Coast, QLD

An 88 storey tower over a 6 level basement carpark on Queensland's Surfers Paradise was a project Keller had to be part of...



### The project

When finished, the Gold Coast's Iluka re-development will be the tallest residential tower in the southern hemisphere. The 88-storey mixed-use residential building will include 693 luxury apartments and three levels of recreation decks for residents, as well as premium shopping, restaurants and commercial spaces.

### The challenge

The building will sit on a six-level basement carpark, within a high-water table that is heavily influenced by tides. Irregular ground conditions include layers of sands, clays, and underlying medium strong rock.

## The solution

Working with the client and its engineers, Keller developed a buildable, value-added 'top-down' construction method. This included 1.80m diameter bored piles to depths of 42m, incorporating large prefabricated reinforced concrete plunge columns, and 1.5m x 2.8m barrettes installed to 60m that contain steel plunge columns. More barrettes will go in to support the buildings large core structure. To form the basement walls, Keller installed a diaphragm wall to 38m to form the perimeter retention system. All this was completed on site, with only a 3600m<sup>2</sup> footprint.

## Project facts

### Owner(s)

Keller Pty Ltd

### Keller business unit(s)

Keller Australia

### Main contractor(s)

Forise Investments

### Solutions

Excavation support  
Heavy foundations

### Markets

Residential  
Commercial

### Techniques

Diaphragm walls / barrettes  
Bored piles