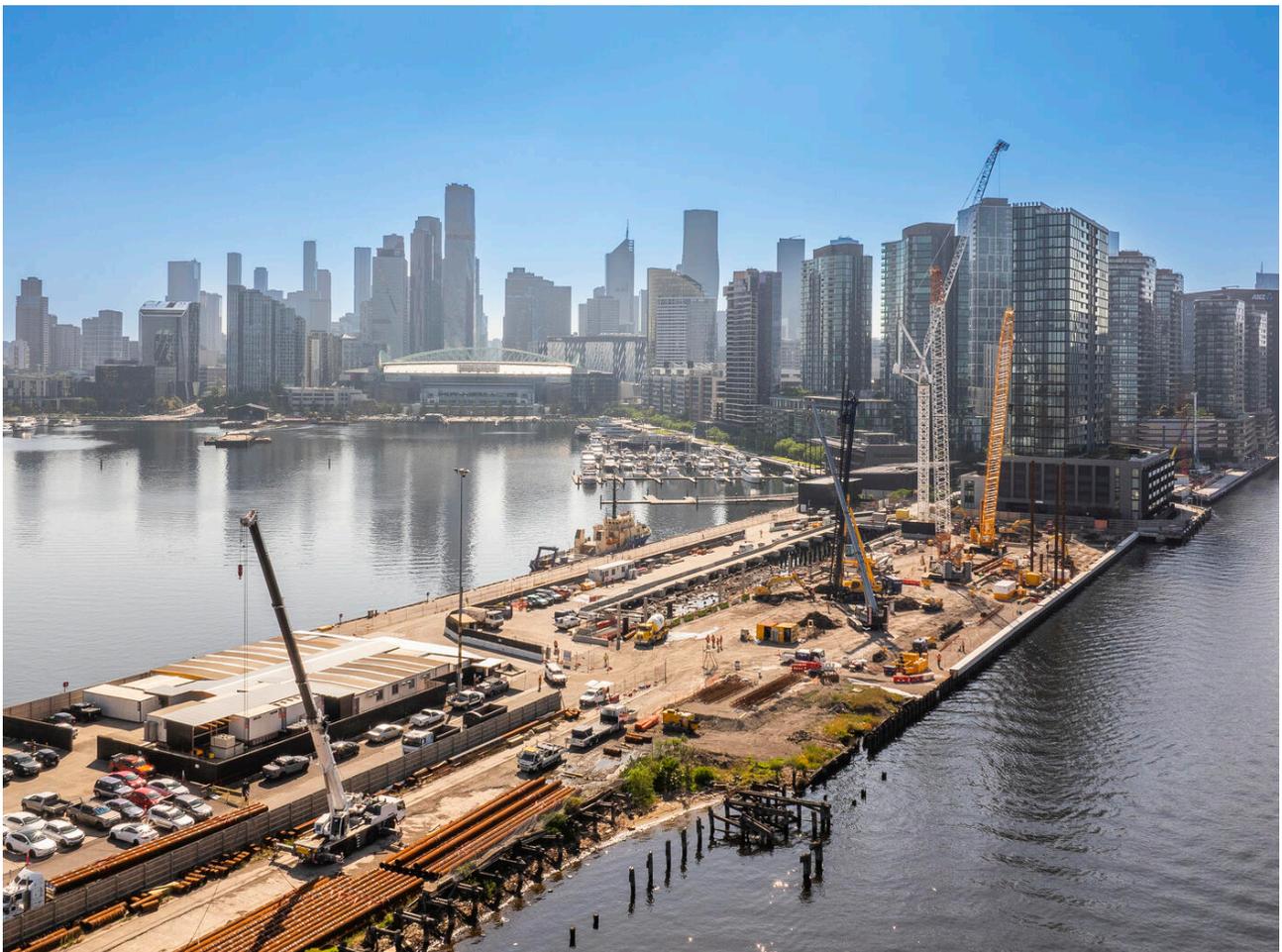


Keller and Austral team up for Collins Wharf

Melbourne, Australia

Keller Australia and sister company Austral Construction have again combined their expertise to support a prestigious residential project in a historic part of Melbourne.



The project

Situated on a small strip of land in Melbourne's Docklands, between the Yarra River and Victoria Harbour, Collins Wharf is a unique residential development creating almost a thousand homes in the heart of the city.

The development, by Lendlease, will eventually comprise six luxury towers, the first of which - No1 Collins Wharf - was completed in 2019.

Having successfully provided the foundation works for No1, Keller was again selected for the neighbouring second and third towers, Regatta and Ancora, constructed by Hickory Group. Now, as then, the need for a combination of solutions meant Keller brought in sister company Austral Construction to

offer a full turnkey solution, unlocking significant benefits.

A difficult place to build

“While this is a beautiful spot for a development, with views over the water and city, it’s also very difficult to build on,” explains Callum Woodley, Austral Construction Manager. “It’s a narrow wharf with water on both sides and very deep soft soils, so there was considerable concern over soils being laterally displaced into the water.”

Austral is a specialist in installing sheet piles and tubular steel piles near water. As the name indicates, tubular piles are open ended, so they don’t displace soil as much as closed-end driven piles.

Taking the proven design for No1 Collins Wharf as a starting point, Keller worked collaboratively with the Lendlease from an early stage to develop and optimise the solution for the second two towers.

Because of the site’s location, sequencing of works and logistics had to be well thought out to ensure a smooth operation and no delays. The Austral crew was on site first in July 2024, installing 140 sheet piles for stabilisation and the towers’ elevator shafts. They came back in December for the 610mm diameter tubular piles, eventually installing almost 100. These were positioned close to the edge of the site to prevent displacement, with each one installed in two sections to reach the bedrock 46m below.

Spreading the load

By this point the Keller team was hard at work on the main foundation piles, which included 187 continuous flight auger piles with diameters of 750mm and 900mm up to 45m, along with 98 precast piles.

“Just getting our equipment to the site was a challenge,” explains Mats Wisniewski, Keller Project Manager. “It’s a built-up area with lots of narrow, twisty roads, which meant we had to strip the rigs down much more than usual so they took a little longer to erect.

“Once on site there wasn’t a lot of space as the site was just a very narrow strip of land, so that required a lot of coordination with our client, the Hickory Group. Due to the soft Coode Island silt, there were also some concerns about creating a stable platform that our rigs could work on.

“This was where Austral’s, in-house developed, unique Taree piling frame came into play. The beams the frame sits on were set up so that the weight of the frame was distributed evenly over the concrete pads and onto the platform close to the water. This ensured capacity requirements of the wharf were not exceeded.”

Navigating the Dockland’s past

In the early days of Melbourne, the wharf was where docked ships would quarantine. Keller came into close contact with this history as the team worked, running into numerous obstructions such as old ship chains and timber piles. Some of these could be removed, but others were too deep. This meant the crew had to be agile, making changes to the design and finding new locations for some of the foundations.

“Because Keller was the designer and we were all working together, it made the changes much simpler and quicker, minimising delays,” says Callum. “If there had been an external designer or different subcontractors working on different elements, we would have ground to a halt every time we hit an obstruction, which would have been a headache for the client.”

This illustrates one of the key advantages of using Keller for a project of this complexity.

“With Keller and Austral working together as one, we’re able to offer a high-quality solution with multiple techniques that maximises operational efficiency,” adds Mats. “As part of the same parent group, our values and approach to each project are completely aligned and that allows our clients to deal with just

one single point of contact.

“The project has been a win-win for everyone and we’re proud to have contributed to the redevelopment of this historic part of the city.”

Project facts

Owner(s)

Lendlease

Keller business unit(s)

Keller Australia
Austral Construction

Main contractor(s)

Hickory Group

Solutions

Heavy foundations

Markets

Residential

Techniques

CFA piles (auger cast)
Sheet piles
Driven precast piles