

THE JEWEL IN THE HARBOUR

Gathering momentum as a stylish new place to call home is the Marina Quays Development at Wyndham Harbour, located along the foreshore of Port Phillip Bay in Victoria.

MAIN CONSTRUCTION COMPANY : Hutchinson Builders
CONSTRUCTION VALUE : \$35 Million
ARCHITECT : Fender Kapsolides Architects
ENGINEER : ADG



Awarded the \$28 million design and construct contract, Hutchinson Builders tendered with out-of-the-box thinking that led to structurally more efficient methods as well as cost and timely benefits for a project likely to be seen as a benchmark build for the developing coastal region.

Located 32km from Melbourne CBD, the project is comprised of 104 apartments, four retail tenancies, and a large new large piazza as part of the master-planned community.

The new landscaped piazza will manifest from a landfilled area being conducted by B&D Civil, that will carry the foreshore out into the bay

while also providing placemaking for a future marina. In winning the project, Hutchison's demonstrated key well-researched ideas that meant a top quality construction design along with a building that engages efficiently with its sometimes wily site conditions.

"We re-designed the foundations and removed all the bored piers. "We were able through ADG, our consulting engineer, to come up with a PT' raft slab design, on the ground floor slab, which took a month off our program, and obviously resulted in considerable cost savings for the client as well. "We were also able to value engineer the structure and make it all large span, so

we only had 5 pours per level, and they were all 200 thick PT slab design." commented Graham Spence, Project Manager. "It gets quite windy down here so we just had to make sure that the design we had meant the building was weather tight.

"We had to pay attention to things like damming angles on all the window jams, as well as the management of detailing between the blockwork and cladding of the external walls.

"We also used a wall panel system product named Barestone, which is a new product by CSR and it looks like a concrete panel but its actually compressed by the cement sheet,

and it helps keep the building weather tight'. Designed by Fender Kapsolides Architects from Melbourne (FKA), a rich choice of materials, particularly on the façade, has created an emblematic development that creates a sense of luxury while playfully engaging with the coast wind and light environment.

The facades' impressive aluca bond cladding in natural copper, was made to order from Germany and is the first to be used in Australia. With the massing of the development arranged to have a different perception at various angles and has no repeat level in the building design. Hutchison's decision to build the structure themselves was enabled

both by designing the building structure to accommodate that and also by the availability of pre-fab formwork system. With 15000m² in total, the structure is 4 levels, with all slabs being flat-plate and without beams.

"It's a bit rare these days as a builder, but we did all the formwork ourselves, so we engaged all our own formwork carpenters that were employed by Hutchison, and we used the Peri gridflex formwork system, which is a system from Germany. "So that was probably one thing that helped us during the structure, to move through very quickly, and we designed the building to accommodate that." With a team peaking around 18, Hutchison

had around 6 members in management and the other half as on-site team. The project sub-trades numbered 16, with Hutchison themselves building the structure.

A further exciting landmark project coming up for Hutchison Builders is the Karolyn Apartments. Located on La Trobe St, it is a 32 story high-rise and will be the first for Hutchison on the Melbourne CBD grid.

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CHAMPIONS OF THE FORMWORK WORLD

In creative collaboration with Hutchison Builders on the Marina Quays Development in Victoria, is PERI Australia, the national branch of one of the world's leaders in the provision and manufacturing of scaffolding and formwork systems.

Their range of versatile formwork and adaptable scaffolding systems have catered to developments crossing the globe and have facilitated a number of architectural designs that celebrate the plasticity of concrete as a building material.

Two formwork systems were selected for use on the Marina Quays Development project, namely the 'GRIDFLEX', an aluminium grid slab system and the 'SKYDECK', aluminium panel slab formwork system. As Hutchison were building the structure themselves rather than a sub-contractor, PERI Australia worked in direct collaboration with the company to produce a tightly staged and programmed supply schedule for different parts of the construction process.

"We supplied approximately 4000m² of the PERI GRIDFLEX Slab support system. And additional to that approximately 2000m² of the PERI SKYDECK Slab support system.

It was flat slab formwork, so it allowed them to cycle through the pours at a great rate of knots. The main idea was speed; the project itself was 3 levels of just over 5000m², so the speed of the system allowed them to crash through it," stated Brendan Holmes, PERI Australia Project Manager. What both teams were impressed with in this project was the formworks ability to withstand wind loading from the site conditions coming in off Port Phillip Bay.

"The formwork stood up well under severe weather conditions- handling the strong winds coming off the bay because it's right on the water. "That was a big challenge really, it's a big liability point in building in strong winds, things get thrown and lifted up into the air, and it was severe down there with the wind coming right up off the water."

Part of PERI's service to their clients is a complete support service from start to finish. Brought in at the tender stage, PERI assisted with the formwork designs and collaborated

on the decision making for the programme of the build. Their consultation and guide is on call as and when required.

"The other thing that was part of the supply was that it was staged and organized as they needed it. So there was quite of bit of thought that went into the delivery and staging of different areas and what was required."

"The overall way that it went and the co-operation between the two companies, and the smoothness of the whole thing was the most successful part. Everything was organized, and it just happened, and it went really well," Brendan Holmes commented.

A key selling factor for these all PERI systems is overall safety and OHS on site. Being aluminum, they are light, strong and easy to handle, and is ultimately a move away from heavy timbered formwork.

"GRIDFLEX is a prop and panel system, with minimal components. There's three basic components, and the speed is the factor it – speed of erection and its simplicity.

"There is adaptability in the height and configuration, and that's the same with the SKYDECK system - lightweight and strong aluminum components, minimal components, for speed, and of course the on-site adaptability."

PERI Australia has been successfully operating in the country since 1997, with a number of major formwork companies owning the systems outright. With their head office in Western Sydney, they have offices in every state and also in New Zealand.

PERI Australia are currently supplying to the Barangaroo Project in Sydney, but for Marina Quays in Victoria, Brendan Holmes states.

"In 25 years, this was probably one of our better projects. It really went well."

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