

Ideal Formwork for Building up to the Boundary

An innovative, environmentally friendly formwork system has provided a cost-effective construction solution on a new development in Melbourne's Albert Park. Lightweight, strippable plastic planks manufactured and supplied by ICF Contracting were used to form up in-situ concrete walls - both external and internal load bearing - for the three-level commercial/residential development. ICF styrene planks were also used to form up the external face of walls along the boundary with adjoining buildings.

The Albert Park project, comprising street level shops, first floor office and second floor penthouse, was developed and constructed by Gryphon Building Projects. The ICF formwork system was recommended to the builder by engineer David Novak, who had previously worked with it on a similar project in Toorak. Novak said the ICF system is ideal for sites where access and site restrictions prevent the use of masonry and precast. "On this particular site we were building up on the boundary, so masonry construction would have been quite difficult. The ICF system proved to be a great solution," he said.

Ari Schupak, from ICF Contracting, says the plastic formwork system has a number of unique advantages. "The biggest advantage is its ease of use. The plastic planks are light and therefore easy to handle on site, and can be formed up and stripped out quickly. In fact, the light weight of the planks reduces the risk of injuries associated with handling heavier timber formwork. And unlike conventional timber formwork, the plastic planks can also be reused up to 100 times, which is good news for the environment," he said.

Schupak said the ICF solution adopted at Albert Park eliminated many of the problems usually encountered on tight, inner city sites. "Block work creates a lot of mess. You also have to find space on site to unload the blocks or bricks, sand and other materials, and of course you need scaffolding," he said.

Precast panels are also problematic because of access issues for trucks and cranes, particularly in narrow inner city lanes. By contrast, the ICF system is a compact, fast, clean and green solution. Depending on the site restrictions, the ICF plastic planks can be used as formwork on both sides of a wall or in conjunction with the styrene formwork planks. The styrene panels can be manufactured to any designed thickness to provide superior insulation for any building.

"The advantage of the styrene planks is that they can be left in place to provide thermal and acoustic insulation. The 50mm styrene panel has an insulation value of R1.5, which in combination with the concrete can deliver a very effective solution," Schupak said.



ICF plastic formwork in use on another recent Melbourne project.



In-situ concrete wall after the ICF plastic formwork has been stripped out.



The completed Albert Park project.

In cases where the styrene is used as permanent formwork on the internal face of a wall, plasterboard can be simply fixed directly to it via plastic ties fixed into the planks. Externally, the styrene can be rendered and painted if necessary.

Ari Schupak says interest in the formwork system is growing, here and overseas. "Locally, the styrene planks in particular are fast becoming the product of choice for architects, builders and developers committed to environmentally sustainable construction solutions," he said.

Because of their inherent insulative qualities, use of the styrene planks as permanent formwork can reduce the requirement for air conditioning and heating, in turn reducing greenhouse gas emissions. Contact ICF Contracting on 03 9846 4841.

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