

Making light work of precast concrete panels

150 concrete pours – and formwork still going strong. Precaster lauds Spartan Sideforms for durability and ease of use in mammoth motorway project

Mark Williams knows a thing or two about concrete. He's worked behind the scenes on some of New Zealand's most scrutinised precast concrete landmarks, including the panels that give national museum Te Papa its distinctive external character.

The co-owner of Levin-based Riverside Precast Limited, Williams' more recent work saw his company produce 440 similarly-sized precast wall panels – using 3,800 square metres of concrete – to provide a noise barrier along a 2.5 km stretch of the \$650 million McKays to Peka Peka Expressway (M2PP).

At the project's early stages Williams questioned the traditional method of fabricating sideforms. He figured the sheer number of repetitive pours warranted a fresh approach to reduce manual effort involved in form work.

Lighter load

Spartan ticked all the boxes for Williams. Lightweight aluminium forms and 'bolt-on bolt-off' assembly of chamfers and capping looked like a smarter way to do form work.

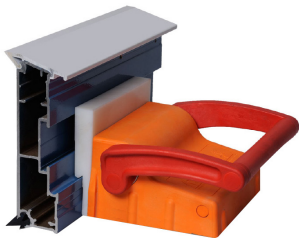
"Traditional forms are much harder and more physically demanding, because they're fabricated from steel and timber. We also needed a light form that we could drop onto retarder paper and clamp it into place. Spartan is extremely light – it was the right solution for this application."

"Spartan is like Lego – you can take pieces of this and that and clip them together to get the right shape and the right height." – Mark Williams, Riverside Precast Limited

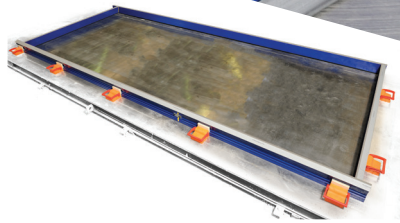
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Client	Riverside Precast Limited, Levin, New Zealand
Project	Noise walls for a 2.5 km stretch of the \$650 million Mackays to Peka Peka Expressway
Output	440 precast wall panels – using 3,800 square metres of concrete
Product	Spartan Sideform and Graphic Concrete





(1) Spartan



(1) Spartan Configured

Smarter assembly, fewer skills

Changing traditional sideforms is a tricky business, often requiring carpenters to make modifications. Spartan's modular assembly doesn't require special skills, so when something breaks or needs to be replaced anyone can do it.

"If we broke chamfer we simply replaced it," said Williams. "We didn't require a carpenter to do the work. Spartan is like Lego – you can take pieces of this and that and clip them together to get the right shape and the right height. You need less skilled labour to do stuff."

Silicone free

Spartan's rubber base inserts replace silicone, providing the seal between the bed and formwork to prevent concrete bleed.

For big jobs like this one, eliminating silicone from the process delivered savings in terms of both materials and time associated with silicone application and removal – a win Williams described as a "bonus".

Long life

Looking back, Williams was impressed with the durability of Spartan Sideforms. "We've completed 150 pours using this form work, and it's as good as the day we bought it. Treat it well and it treats you well," he said.

Would he recommend Spartan to other precasters? Yes he would. "This is the perfect solutions for making wall panels," he said, highlighting cost and labour efficiencies when casting a large number of identical panels.

The Verdict:

Lighter and easier to use than traditional formwork; perfect for casting a large number of identical panels



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