

PROJECT REVIEW: PAN PAC TIMBER WAREHOUSE, NAPIER

In 2020 iNFORCE was engaged by Stead Construction and their Structural Engineers to provide an optimised solution for a 10,000m² industrial timber warehouse.

The space would be subject to heavy and repetitive forklift loads, so a strong and smooth flooring solution was required.

After consultation with the client, we put forward a fibre-only jointless floor design, completely removing the need for steel mesh reinforcement and sawn joints.

In between each 900m² jointless floor panel, a steel armored joint was specified to provide protection to the arris, along with providing adequate load transfer.

It was a privilege to work alongside Stead Construction and their engineering team to provide an optimised solution for Pan Pac Forest Products.

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It was great working with the team at iNFORCE to come up with a specialist flooring design for our client. Their support from the design phase right through to being onsite during construction was invaluable to ensuring the outcome was at the level our client was looking for. I would certainly recommend iNFORCE as the 'go to' slab design team if you're looking for an optimised and well thought out slab design.

**- Jeremy Stead,
Stead Construction**



PROJECT DETAILS

- 10,200m²
- 200kN axle loads
- High load case repetitions



A JUICY CHALLENGE: GOLDEN BAY FRUIT, MOTUEKA

THE PROJECT

The iNFORCE team supported the project engineer for this new cool store extension, ensuring Golden Bay Fruit received an optimal slab design solution.

The design criteria was simple: meet the load cases as per the specification and minimise joints.

After consultation with the project team, we put together a design that would remove sawn joints. Where joints were required, we specified Permaban Wave - an innovative and robust jointing system that would protect the joints, particularly in high traffic areas.



SLAB DESIGNED TO HANDLE 70+ TONNES: MCLEOD CRANES, TAURANGA

THE PROJECT

A heavy-duty slab with high wear requires a pavement design that is fit for purpose.

The design team at iNFORCE worked with the project engineer to provide a jointless external pavement design that was capable of supporting the client's CVS Ferrari F500.RS2 Reach Stacker with a tare weight of 71,500kg and a lifting weight of 45,000kg.



ASK AN EXPERT: HOW DO I KEEP PROJECTS ON TRACK AMIDST STEEL SHORTAGES & PRICE HIKES?

Austen Griffiths, Project Manager

Last month the NZ Herald reported that National Trade Stores had released more price rises for steel mesh and bar, with reinforcing steel set to be up an additional 8% as we head towards July.

This is on top of significant increases over the past 18 months, with mesh and rebar costing between \$800 and \$1,000 USD per tonne (up 181% from October 2019 for slab and 163% for rebar).

Across both New Zealand and Australia, steel is in high demand due to increased Government infrastructure projects and the post-Covid building boom. Demand has grown significantly over the past year, and product shortages are now standard across a range of key building products.



Add reductions in global steelmaking capacity and international supply chain issues into the mix and we are seeing extended steel lead times and project delays throughout the region. Steel product lead times increased from 6 weeks to up to 16 weeks over the course of 2021, and these delays have continued into 2022.

iNFORCE Project Manager, Austen Griffiths, notes that these market forces are causing a host of issues for commercial building projects.

“Steel delays and cost increases are causing many project budgets and

timelines to blow out, putting pressure on builders, civil contractors and the engineers and specifiers working on these jobs.”

So what’s the solution?

THE WAY FORWARD: FIBRE REINFORCEMENT

One of the viable alternatives to conventional steel bar and mesh is steel or synthetic fibre reinforcement.

Fibre-reinforced concrete is a strong, reliable and cost-effective alternative that increases the flexural strength and shear resistance of the concrete. In addition, slabs and pavements constructed with fibre provide design efficiencies by removing the need for sawn joints and reducing construction joints.

Steel or synthetic fibre reinforcement allows for substantial reductions in transport costs and faster placement and - critically - it is **readily available!**

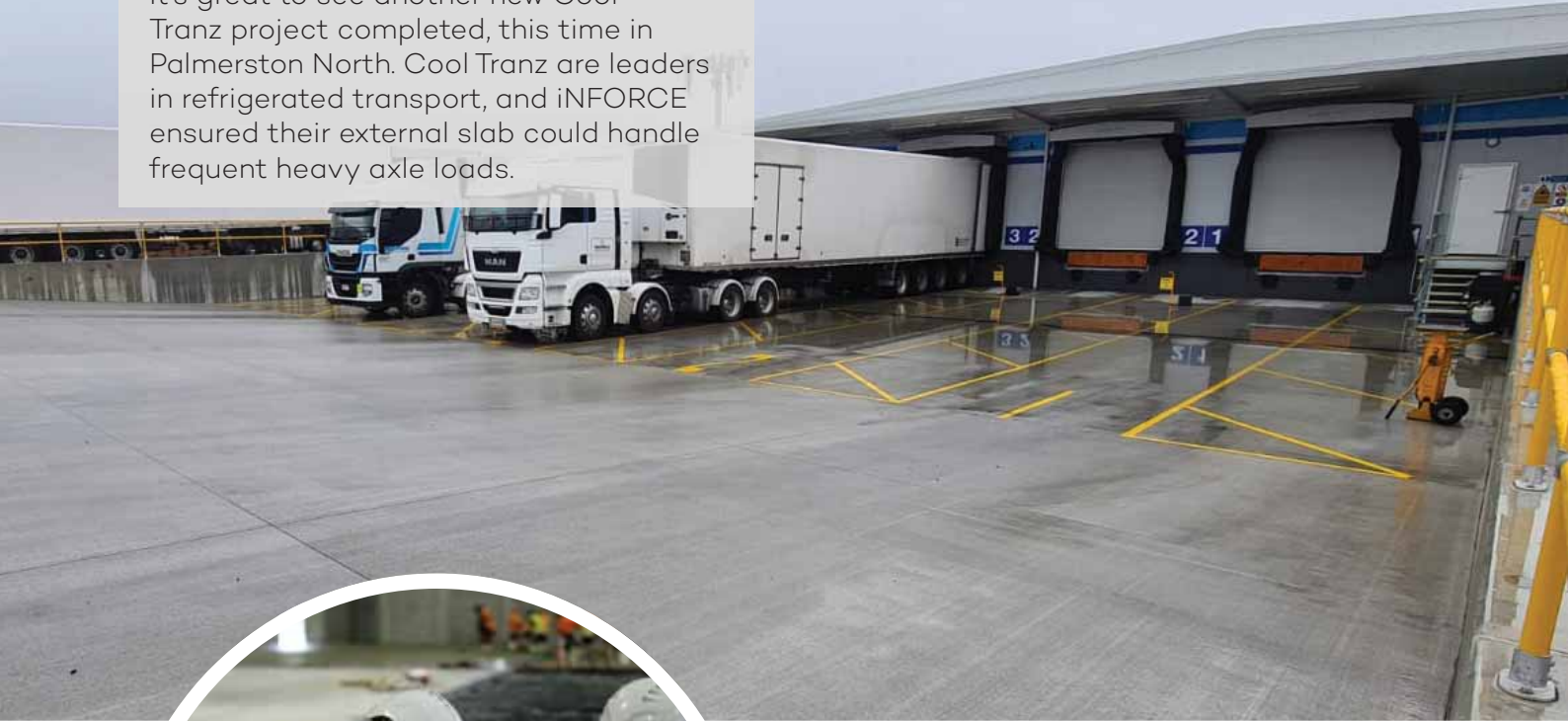
Austen adds that the cost efficiencies are pronounced, **saving up to 40%** on some projects.

“In recent projects where we have replaced the steel mesh with fibre, we have seen cost savings from 15% up to as high as 40% when compared with a conventional mesh and bar reinforcement slab design. Add the fact that you can have fibre delivered to site immediately - already in the concrete mix - and the project efficiencies are plain to see.”

KEEP YOUR PROJECT MOVING WITH A FIBRE DESIGN FROM INFORCE - CALL OUR TEAM TODAY FOR A FREE DESIGN FOR SLABS OVER 1000M2.

A COOL NEW PROJECT: COOLTRANZ, PALMERSTON NORTH

It's great to see another new Cool Tranz project completed, this time in Palmerston North. Cool Tranz are leaders in refrigerated transport, and iNFORCE ensured their external slab could handle frequent heavy axle loads.



WANT FREE SLAB & PAVEMENT DESIGNS? JUST ASK INFORCE!

Are you struggling to provide optimised slab or pavement designs for your clients?

Are you frustrated with steel mesh shortages and steep price increases?

Have a chat with the iNFORCE team about how we can work to overcome these issues with our fast and professional fibre reinforced slab and pavement designs. We work with architects, specifiers and engineers to help you deliver an optimised design to your client.

We provide a free design service for any slabs over 1000m² - get in touch to find out more.

iNFORCE
SIMPLIFY WITH CONFIDENCE.