

iNFORMER

YOUR QUARTERLY FRC NEWS & TECHNICAL UPDATE FROM INFORCE

PRESIDENTIAL HOMES PROJECT OVERVIEW

Presidential Homes, a locally owned and operated company in Palmerston North, specializes in designing and building high-quality prefabricated and transportable homes throughout the North Island.

Project Summary

Presidential Homes approached Inforce with the need for durable internal and external concrete flooring capable of withstanding the weight and wear associated with constructing transportable homes. Inforce delivered 8,000m² of jointless internal slabs and 6,500m² of external concrete, tailored to meet the project's demands..



Why Choose Inforce?

The structural engineers on the project recommended Inforce for their expertise in slab design. Inforce was tasked with creating an optimized, fit-for-purpose slab design that met the project's structural requirements efficiently.

Desired Outcome and Achievement

The primary goal was to design fibre-only jointless slabs for the internal factory floor and fibre-only saw-cut slabs for the external areas. This approach aimed to accelerate the construction timeline. The objective was successfully achieved, with 8,000m² of jointless slabs completed in just over a week. This expedited timeline allowed Presidential Homes to move forward with their operations swiftly, leading to high client satisfaction.

Project Benefits with Inforce

Inforce added significant value to the project by managing the slab design process, delivering a tailored solution that met both structural and operational needs. Their expertise streamlined the construction process, ensuring durability and efficiency.





HOG HAULAGE LTD

PROJECT OVERVIEW

Hog Haulage Ltd is a family-owned and operated transport company headquartered in Taupo, delivering reliable and professional linehaul freight services across New Zealand, from Kaitaia to Bluff. With a fleet of 50 linehaul units, they are dedicated to maintaining high standards of service nationwide.



Why Opt for an Inforce Yard Solution?

A fibre concrete yard design was selected to achieve a durable, hard-wearing pavement while minimizing labour requirements, reducing material wastage, and realizing significant cost savings.

Objectives and Outcomes

The primary objective was to construct a tough, hard-wearing pavement within a minimal timeframe and at a competitive cost. This goal was successfully achieved through the collaborative efforts of all parties involved, ensuring the efficient completion of the yard slabs.

Value Added by Inforce

Inforce delivered considerable value to the project through:

- **Design Support:** Providing expert input and tailored solutions to meet the project's requirements.
- **Construction Monitoring & Oversight:** Ensuring the highest standards of quality and compliance throughout the construction process.
- **Agility and Flexibility:** Adapting to design changes later in the program to meet consent requirements without compromising timelines or quality.



Project Summary

The project involved developing a regional freight hub for a national road freight company, consisting of two separate buildings, one of which included an attached office complex. A large concrete yard and wash bay were strategically positioned between the buildings.

Inforce was engaged to explore fibre slabs design to accelerate the build program.



SPRAYED CONCRETE SURFACE OF TEST PANEL BY FIRE TEST

MT MESSENGER TUNNEL

PROJECT OVERVIEW

The Mt Messenger Bypass project on State Highway 3 involves a fibre reinforced sprayed concrete tunnel lining that required fire resistance validation to bury any concerns. Tonkin & Taylor undertook fire testing to confirm the durability and safety of the concrete mix used in this critical infrastructure development.

Fire Testing Procedure and Results

The concrete mix was exposed to temperatures exceeding 1,000 degrees Celsius for a minimum of two hours. Test lab personnel expected explosive spalling and cracking they commonly see when testing plain concrete. However, the fibre reinforced concrete test outcome exceeded expectations—there was no spalling, only general melting, demonstrating exceptional fire resistance. The results impressed the testing team, validating the performance and safety of the concrete mix.

FIRE TEST BEFORE



FIRE TEST AFTER



Outcome and Project Continuation

The successful fire testing satisfied all engineering requirements, allowing the Mt Messenger project to proceed with certainty.

Project Background and Fire Testing

Before commencing the project, Inforce collaborated with the concrete supplier and the project engineers to finalize the mix design. During the review process, concerns emerged about the elevated quartz level in the aggregate, and its potential impact on the fire resistance of the shotcrete.

To address these concerns, fire testing was conducted at the Fire TS Lab in Māngere, Auckland, led by Andy Bain, an expert renowned for his extensive knowledge of fire testing across a variety of materials.

SPRAYED CONCRETE TEST PANEL BY TEST



INTRODUCING ANNEKE VISAGIE



We are so excited to have Anneke back on our team at Inforce as a Project Manager based in Tauranga. She has a huge amount of experience in the civil industry and will be overseeing projects from BOP to Northland.

A bit from Anneke

I am a dedicated professional with a strong foundation in construction and engineering, currently advancing my career through studies toward becoming a Construction Project Manager. I am thrilled to apply my expertise in my role as a Project Manager at Inforce, leveraging my technical skills and project experience to deliver successful outcomes.

Previously, I honed my skills at Egis within the Bridge Team, where I specialized in drafting and design. With extensive experience as a skilled draftsman, I excel in creating precise 2D drawings and 3D models using AutoCAD for multi-disciplinary projects. My portfolio spans a wide range of

structures and systems, including steel and concrete structures, reinforcement detailing, stormwater layouts, retaining walls, concrete reservoirs, piping and more.

Throughout my career, I have been entrusted with critical responsibilities such as site measurements, collaborating with design engineers to transform sketches and verbal instructions into detailed engineering drawings, and performing quality checks to ensure cross-disciplinary accuracy.

I am passionate about bringing precision, creativity, and efficiency to every project I undertake and am excited to continue building impactful solutions in the construction and engineering industry.

Snapshot of our team day

It was fantastic to bring a number of the NZ team together for a morning of strategic overview and planning, followed by an afternoon sailing on the Waitematā Harbour aboard a former America's Cup yacht.

