

ComFlor Case Study

ComFlor 80: National Mini Storage



ComFlor saves propping, time and money for National Mini Storage

Project Summary

Project name:	National Mini Storage
Location:	Ti Toki Place, Albany, NZ
Structural steel design:	Thorne Dwyer Structures
Main Contractor:	Hughes & Tuke Projects
Fabrication and erection:	George Grant Engineering
Project type:	Warehousing
Mid-floor:	ComFlor 80
ComFlor used:	7,000sqm

ComFlor: A cost efficient solution for National Mini Storage expansion

The National Mini Storage site in Ti Toki Place, Albany, has a total of 900 units on three levels. To accommodate the third level, the existing building had to be raised 2.7 metres. Site Manager for Hughes & Tuke Projects Gary Wykes says he found an alternative use for shipping containers; he used them to stabilise the building during the lift.

To avoid the expensive foundations that would have been needed to cope with the additional loads of the suspended floors, Hughes & Tuke Projects Ltd came up with a simple solution: pour a 200mm reinforced concrete raft over the existing 150mm slab.

The structural steel design was done by Steve Thorne of Thorne Dwyer Structures Ltd. "It's based on a three metre grid to suit the layout of the storage units. It uses 150mm Square Hollow Sections, filled with concrete to achieve a half hour fire rating. The diagonal tie bracing also used SHS 150mm square to avoid impinging on the internal space of each of the 900 units. The steel decking chosen for the project was ComFlor 80 supplied by Corus because it spans the three metre grid without propping."

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Fabrication and erection of the steelwork was by George Grant Engineering. Scott DeLacey said some 300 tonnes of steel were needed. "There was a lot of on-site welding, and the sequencing was quite tricky – a bit like a steel puzzle. Glad we solved it!" (Main article text sourced from SCNZ magazine, Nov 2007).

To learn more about ComFlor, the National Mini Storage project, or other projects that have used ComFlor to their advantage call +64 (0) 271 7180 to arrange an in-practice presentation from one of our representatives.

Why ComFlor?

Performance:

The variety of materials stored in the units demanded a high fire rating of all materials used. ComFlor achieved the required fire rating without any additional costs.

Ease of construction:

A three metre grid was chosen to suit the layout of the storage units. ComFlor 80 was the perfect mid-floor because it spanned the three metre grid without propping and insignificant deflection.

Cost efficiency:

Elimination of the need for propping reduced construction costs and gave a shorter construction programme so the building was back in action earlier, full of people's prized possessions' and earning rentals again.

Sustainability:

Corus use 12% recycled material in the manufacture of ComFlor.



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