

# Shed 15 Dry Goods Store

## PT Slab

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**Location****Tauranga, New Zealand****Contract No****A1777**

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**Client:** Port of Tauranga**Consultant:** Redco**Contractor:** Marra Construction Ltd**Date:** June - July 2001

The Port of Tauranga has been proactive in adopting the post-tensioned joint free design and now boasts three such slabs on its Sulphur Point site.

Marra was awarded the contract for the most recent addition, a new dry goods dairy store facility at the Port of Tauranga that involved the construction of a 7,000m<sup>2</sup> floor slab. Contech was engaged to provide a full post-tension service that included design, supply, installation, tensioning and grouting.

Consultech carried out the design for this 92m x 76m slab with a depth of 150mm. The slab has no joints and is the largest commercial floor slab ever constructed in a single pour in NZ. The BBR Cona Flat slab tendons comprised 4 No. 12.9mm diameter superstrand with UTS 744kN and are spaced at about 1.6m centres in each direction. All tendons were double-end stressed.

The construction methodology adopted by Marra required the floor slab be poured prior to the erection of the roof. At this time of the year, timing was critical and everyone involved worked very closely together to ensure no stones were left unturned and milestone dates were achieved. The 1100 cubic metre pour started at midnight one Saturday and the last truck rolled out about 10am the same morning. It rained after the slab had been floated which helped the curing process but the cool winter days meant that the gain in concrete strength was slower than expected. While this delayed the application of the initial prestress, it was without detriment to the slab.

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