

**LATERAL LOAD TESTING
ON A TIMBERCRETE WALL PANEL**

**FOR
TIMBERCRETE NZ LTD
REPORT NO: TE06-001b**

**by
Doug Gaunt**

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A report prepared for
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by

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Lateral Load Testing on a Timbercrete Wall Panel

Objective

- To evaluate the Lateral load stiffness of an 1800 mm wide x 200mm thick x 2400mm high Timbercrete solid timber/masonry unlined wall.

Material

Timbercrete NZ Ltd constructed the 1800mm high wall in the Timber Engineering Pole-barn as per Appendix A. The wall was left for at least 28 days to cure and then was carried down to the laboratory for testing by forklift.

Test Methods

1. The testing was carried out on the 13 September 2006 in the Timber Engineering laboratory at Ensis, Rotorua.
2. The wall was restrained top & bottom, loaded at mid-height across full width of the wall as shown in Figure 1.
3. Load and deflection were measured at centre of wall at mid height relative to top & bottom of wall. A continuous plot of load and deflection were made using an XY recorder. Figure 2 shows this plot.



Figure 1: Timber Engineering Lateral Load wall Test Setup

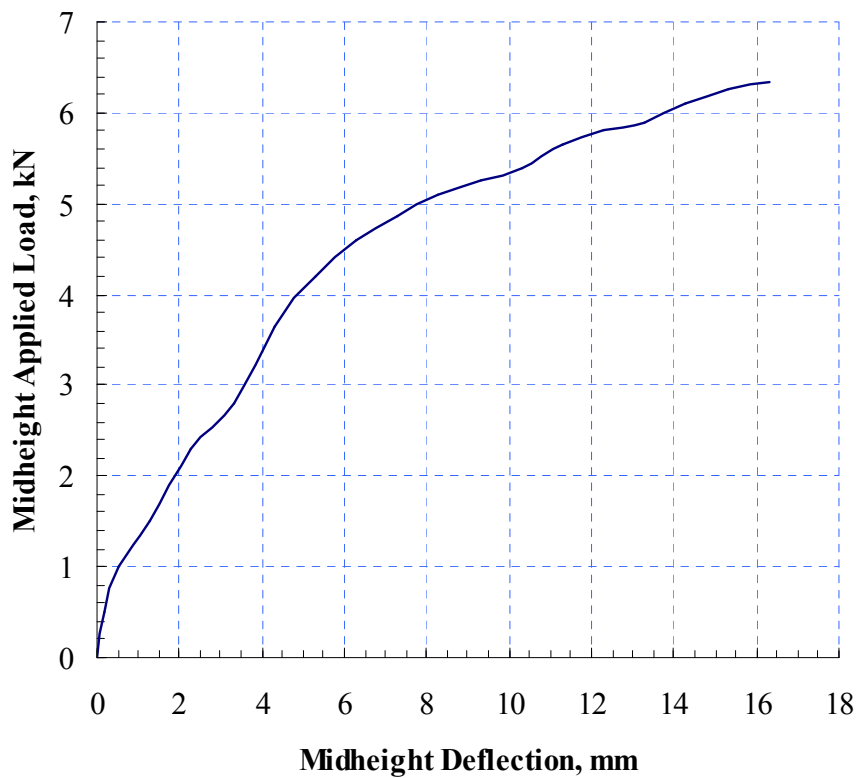


Figure 2: Load versus deflection for wall lateral load test.

General Comments on the Wall Performance.

The wall remained intact at the large lateral deflections. Figure 3 shows a horizontal crack at mid height opposite the loading beam.



Figure 3: Horizontal crack under large lateral deflection

Figure 4 shows the large lateral deflection applied.



Figure 4: Overall Lateral Deflection

Appendix A - 1800mm Wall Construction Details

