

RE:BUILDING

CANTERBURY CONSTRUCTION NEWSLETTER / JUNE 2012 / ISSUE 1 / FROM WINSTONE WALLBOARDS



INVESTING IN CHRISTCHURCH FOR THE CANTERBURY REBUILD

With manufacturing upgrades Winstone Wallboards is now solidly based with sufficient capacity to deliver what the Canterbury rebuild will require.

Following the series of earthquake events and the damage that has been caused throughout the Canterbury region, it was clear, given the significant role of GIB® plasterboard in the rebuild, that additional manufacturing capacity would be required.

Previously the Christchurch GIB® manufacturing plant was limited to operating on a three shift basis due in part to a number of process bottlenecks. During the latter part of 2011 a number of major engineering projects focused on eliminating these bottlenecks allowed the site to increase output and add a fourth production shift. The outcome of these projects will increase total capacity by around 25% relative to a fully utilised three shift operation.

There were three key projects identified and implemented over the 2011/12



summer in order to deliver the capacity improvements. These were;

- Installing greater gypsum drying and grinding capacity (Lopulco mill project)
- Upgrading the plastermill-to-boardplant plaster transfer systems.
- Upgrading the boardplant dryer to increase efficiency and reliability.

The delivery of these three projects has now allowed for full utilisation of a fourth shift when it is required.

These manufacturing upgrades follow substantial investments made on the Christchurch site by Winstone Wallboards in 2008, namely a new warehouse and distribution centre. These facilities were specifically designed to meet the

"These facilities were specifically designed ... with future market growth in mind"

requirements of various customer service offerings and were built with future market growth in mind.

Winstone Wallboards has invested in excess of \$3 million over the last 12 months to implement the factory upgrade projects. The company is now well positioned with sufficient capacity to deliver on future requirements for the Canterbury rebuild.

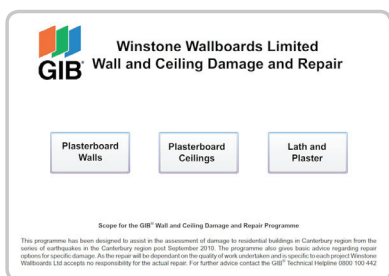
NEW GIB® ASSESSMENT TOOLS TO ASSIST WITH THE CANTERBURY REBUILD

With the repair activity in Canterbury continuing and the need to supply the market with straight forward relevant information, the technical team have developed two assessment tools which are now available as downloads.

The **GIB® Bracing Calculator**, specifically set up for the Canterbury region, allows users to enter residential building information while on-site and determine whether the structure has sufficient bracing performance under NZS 3604:2011 requirements. The calculator will also provide suggestions, such as condensed fastener patterns, needed to bring the bracing requirements of the building up to current standard.

The **GIB® Wall and Ceiling Damage and Repair Tool** illustrates various types of damage that may have occurred, split between plasterboard walls, plasterboard ceilings and lath & plaster. Once a specific type and level of damage has been identified the tool lists repair strategies that should be used for each.

Both tools are available for download at www.gib.co.nz/canterburyearthquake-tools/ for all popular operating systems (Windows, Mac OS and Android). The iPad iOS App is available from the [Apple store](#).



RELATED INFO

Both these tools are available now at gib.co.nz/canterburyearthquake-tools/ or at [itunes.com](#)

UPDATED INFORMATION ON THE WEB

www.gib.co.nz/canterburyearthquake

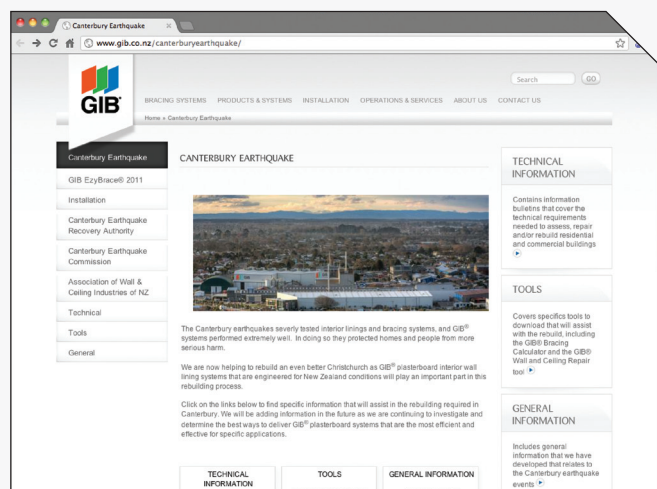
With the increasing amount of information related to the Canterbury earthquake rebuild, Winstone Wallboards has revamped the web pages to make it easier to find the right information.

Since the first major earthquake in September 2010 the technical team at Winstone Wallboards has been working extensively in the Canterbury region to determine the extent of damage the earthquakes caused and to develop the repair or building systems needed to deliver effective solutions for the damage incurred.

Over the nearly two year period the team have produced a number of information bulletins, assessment tools and general information related to the earthquake damage. All this information is available to view and download from the GIB® website, over three separate pages.

The three pages contain the following;

- **Technical Information** - Contains information bulletins that cover the technical requirements needed to assess, repair and/or rebuild residential and commercial buildings
- **Tools** - Covers specifics tools to download that will assist with the rebuild, including the '**GIB® Bracing Calculator**' and the '**GIB® Wall and Ceiling Damage Repair tool**'
- **General Information** - Includes general published information relating to the Canterbury earthquake events such as the important role of GIB® bracing systems placed in these extreme events



RELATED INFO

feel free to check on all Canterbury related news at www.gib.co.nz/canterburyearthquake

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LOW DAMAGE SOLUTIONS FOR NON-STRUCTURAL ELEMENTS

Over the past 12 months Winstone Wallboards has been working closely with the engineering faculty at the University of Canterbury to develop improved systems for interior linings within commercial buildings.

Following the Canterbury earthquakes, many commercial buildings have suffered significant damage. As widely reported most high rise buildings in the Christchurch CBD have been, or are being, deconstructed. The many low-to-medium rise buildings that survived have often suffered significant damage to non-structural elements such as internal partitions and ceilings. Damage to these elements has generally been more costly than damage to the structure itself. Damage to non-structural elements also causes significant business disruption, either directly or during the repair process.

Non-structural ceilings and partitions are commonly lined with gypsum plasterboard and the owner's preference, often guided by the specifier, is more often than not for a flush monolithic finish. Expansive wall and ceiling areas are flush-finished and corners at wall and wall-to-ceiling intersections are typically square stopped. Non-structural elements tend to be tightly fitted into the main structure. Once taped and stopped, gypsum plasterboard lined walls and ceilings are very stiff. When locked into the main structure these elements do not have the ability to follow expected structural movement and 'inter-storey drifts' that occur during serviceability and design level earthquakes. As a result non-structural elements can suffer significant damage. This has been evident in Christchurch and even after re-fixing, plaster-stopping and painting, damage has repeated



Testing rig at University of Canterbury

following further aftershocks.

Testing at Canterbury University has shown that 'low damage' solutions can be achieved by simply incorporating regular control joints. Negative details at wall junctions and intersections with the main structure, and breaking up expansive areas with regular control joints, will provide freedom for the non-structural elements to accommodate movements of the main structure.

Comments from the researchers include;

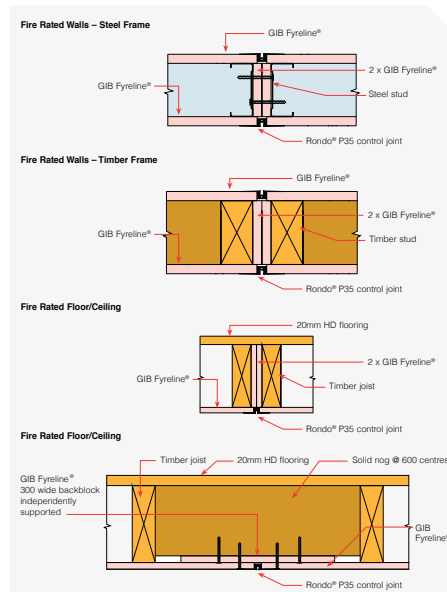
"The details work astonishingly well. Partitions stay flawless till 2.0% drift"
"Even at triple the current serviceability requirements, damage was minimal or in serviceable condition"

"Gaps can be arranged by simple calculation with a very high precision"

"Gaps can easily be made aesthetically pleasing or hidden with trim finishes"

"This cannot be achieved with existing monolithic finish practices"

Recommended details are as simple as they are effective, but a shift in owner and architectural expectation is required to make them work. The challenge to the architectural profession is to incorporate and



Control Joint Illustrations from GIB® Fire Rated Systems 2006

'celebrate' these expressed details if we are to have 'low' or 'no damage' solutions for non-structural elements in seismic zones.

For further information contact the GIB® Technical Helpline 0800 100 442. A detailed information bulletin is being prepared and will be available shortly.

TECHNICAL SUPPORT – WHEN YOU NEED IT

With the rebuild continuing in the Canterbury region, it is important that repairs and rebuilds are done right first time, using best practice techniques.

Given the time that the Winstone Wallboards technical team have now had in the region, along with discussions with other organisations, we've built up a wealth of knowledge and understanding that we wish to impart in the region.

ONLY A PHONE CALL FOR THE RIGHT ADVICE

With the GIB® technical helpline 0800 100 442 covered 5 days a week during business hours, any information you require can be quickly and effectively explained. And if our technical team don't have the answer then and there, because there are often unique situations, we'll endeavour to find the right solution and get back to you within 24 hours.



If contact by phone isn't possible we've also setup an e-technical contact process. This is either by email to info@gib.co.nz or on our website

www.gib.co.nz/contact-us/. On receipt we'll either respond directly to your query by the end of the next working day or will contact you, probably by phone, to discuss and gain further clarification on the issue.

ON-SITE TRAINING BOOKINGS ANYTIME

Our technical team continue to undertake on-site training sessions right

across the country. These sessions are modified for each individual group with a focus on best practice installation techniques and GIB® plasterboard systems.

With the increased requirements in the Canterbury region we've allocated more resource to be in the region and have higher numbers of on-site training to inform building professionals of the learning's we have gained from the earthquakes, and the best solutions to repairing or rebuilding for the future. The material is still consistent with our best practice techniques, but there are some specific areas that are worth focusing on given the post-earthquake environment

If you are interested in holding an on-site training session please either phone the technical helpline 0800 100 442 and talk directly to one of the team, or visit www.gib.co.nz/training/ and book in for a session. We'll then contact you to arrange a time when one of the team are going to be in your area.



RELATED INFO

to book a GIB® technical training session go to www.gib.co.nz/training

Winstone Wallboards Limited: 37 Felix Street, P.O. Box 12256, Auckland | phone: 09 633 0100 | GIB® Helpline: 0800 100 442 | website: www.gib.co.nz

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