

Welcome to NASH News issue 2.

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**Steel framing
World First**

NASH AGM

Election of Officers

WORLD FIRST FOR LIGHT STEEL FRAMING

Through very generous support from the industry, NASH has recently been leading a comprehensive research programme that demonstrates the earthquake performance of light steel framing with brick veneer. This research, a world first, fully funded by the industry culminated in a full-scale shaking table test of a test house. The research was undertaken at the University of Melbourne under the capable supervision of Professor Emad Gad during April this year.

The planning for this project started about 10 months ago and involved coordinating a variety of international expert opinion. Full details of the NASH specification, loading regimes and protocols were discussed during this time with and agreed by both BRANZ and the Department of Building and Housing. Stuart Thurston of BRANZ attended the testing in Melbourne.

The full-scale test specimen 2.6m x 2.8m in plan and 2.4m in height was made of a steel frame with brick veneer exterior cladding and plasterboard interior lining.

All building components were typical, full size and sourced to emulate NZ building practice.

The test house was designed such that it encompassed a range of typical geometric features in the veneer walls in different directions. It had two brick veneer walls without openings in one direction and in the orthogonal direction one wall with a window opening and the other with a door opening. A roof slab weighing 1500kg was placed on the top of the test house and supported by the frame to simulate the equivalent mass of a house roof. The roof mass combined with the designed wall bracing system exhibited the same dynamic characteristics as those of a typical full scale single storey brick veneer house.

The test house was subjected to earthquake motions based on the El Centro 1940 North-South record, scaled to generate levels of earthquake loading ranging from serviceability to maximum considered (MCE) determined according to the New Zealand earthquake Standard NZS 1170.5.

The performance of the test specimen exceeded target expectations at all levels of loading, and was subjected to nine shakes up to 1.57 x MCE before the testing was terminated due to the capacity of the shaking table being reached. This testing was a world first in terms of the unique high strength thin-walled steel used in New Zealand, and demonstrates that light steel frames with brick veneer exhibit excellent earthquake performance.

NASH awaits the final report from Melbourne, but the draft summary report states:

"Given that the test house was designed using



conventional methods, constructed from typical components and built using professional tradesmen it would be considered to be representative of brick veneer steel-framed construction in New Zealand. With its excellent performance under an extremely onerous earthquake testing programme, it can be concluded that such form of construction would be expected to exhibit performance considerably better than the performance limits listed in the tabularised Earthquake levels adopted for testing, corresponding regions in New Zealand and target performance limits".

The cooperation of the industry in making tests test possible was fantastic and thanks needs to be expressed to the participants who gave of their time and resources to make these tests possible.

NZ Steel for donating the steel.

Framecad for rollforming the steel for the frames.

Austral Bricks for the donation of the bricks

Eagle Wire for donating the brick ties.

Buildex for donating the fixing screws

Greg Bond Bricklaying for the generous donation of his time and expertise at no cost to NASH.

FRAMETEK for building the Test House on site at no cost to NASH.

Professor Charles Clifton at the University of Auckland, Dr Stephen Hicks of HERA Dr Stuart Thurston of BRANZ and Graeme Lawrence of DBH for all their technical input during the course of the last 10 months.

Professional Services were provided to NASH by REDCO Ltd and Stuart Thomson.

MINISTER OF BUILDING AND HOUSING SPEAKS AT NASH AGM

The Hon Maurice Williamson spoke at the recent AGM held at the Bucklands Beach Yacht Club on April 6th. He said Government wants to cut down on red tape and make compliance easier. He was interested in increasing his knowledge about Steel Framed Housing and was shown a presentation about the manufacture of frames and a portfolio of members finished projects.

The Minister took questions from the audience, stayed for dinner, mingled with the members and left well informed about Steel framed Housing.



Hon Maurice Williamson with members of the new NASH Board 2009/2010. From left to right: Graham Rundle (RedCo), Dr Stephen Hicks (HERA), Craig Wearne (RCDC Ltd), Jason Ogilvy (Impact Steel Frames), Mark Taylor (Framecad), Carl Davies (NASH), Minister for Building and Housing Maurice Williamson, Gordon Barratt (Frametek and NASH Chair), Sergey Nikiporenkov (N Steel Framing Solutions), Todd Forsyth (Rollforming Services), Professor Charles Clifton (University of Auckland), Chris Kay (NZ Steel), Wayne Rowe (Howick Ltd), Absent Mike Moughan (Paradise Homes).



Minister expressing his thoughts on cutting down on red tape and making compliance easier for all.



Chairman, Gordon Barratt presents his report.



NASH General Manager Carl Davies reports on the achievements of the past year.



Minister enjoys refreshments after the AGM.

DATES FOR YOUR DIARY

Certified Builders Conference, Hawkes Bay 19th to 21st June
Build NZ Auckland, 28th – 30th June

Future Proof Building Roadshows:

8/9 th June	Taupo
9/10 th June	Napier
10/11 th June	Tauranga
24/25 th August	New Plymouth
25/26 th August	Palmerston North
26/27 th August	Wellington
21/22 nd September	Christchurch
22/23 rd September	Blenheim
23/24 th September	Nelson
2/3 rd November	Queenstown
3/4 th November	Invercargill
4/5 th November	Dunedin



ELECTION OF OFFICERS FOR THE YEAR 2009/2010

The following nominations had been received and accepted.

Nomination:

Gordon Barratt
Christopher Kay
Mark Taylor
Sergey Nikiporenkov
Jason Ogilvy
Graham Rundle
Wayne Rowe
Charles Clifton
Mike Moughan
Craig Wearne
Todd Forsyth
Stephen Hicks

Nominated by:

Graham Rundle
Wayne Rowe
Craig Wearne
Mark Taylor
Craig Wearne
Gordon Barratt
Todd Forsyth
Gordon Barratt
Christopher Kay
Mark Taylor
Wayne Rowe
Todd Forsyth

Seconded by:

Stephen Hicks
Todd Forsyth
Jason Ogilvy
Chris Kay
Mark Taylor
Craig Wearne
Stephen Hicks
Christopher Kay
Gordon Barratt
Christopher Kay
Gordon Barratt
Wayne Rowe