

# PRECAST NEWS 06

MEMBERS/INDUSTRY EDITION MAY 08

PRECAST NEW ZEALAND INC. WWW.PRECASTNZ.ORG.NZ



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## WORD FROM THE PRESIDENT

Welcome to the 6th issue of the Precast New Zealand Industry Newsletter.

### NZ Building Sub-contractors Federation (NZBSF)

Precast New Zealand is an executive member of NZBSF. NZBSF has recently held meetings with Standards NZ and interested parties, including Registered Master Builders, with a view to producing a NZS 39XX Standard Conditions of Sub Contract (similar to NZS 3910:2003) or alternatively there may be an opportunity to modify Master Builders SC1.

The completed document is intended to be used as an industry standard which provides for a balanced set of sub-contract conditions, is transparent and can be relied upon by contracting parties to address current issues without bias.

Precast New Zealand fully supports this NZBSF initiative from our perspective as off-site manufacturing sub-contractors.

### Associate Member – Richard Carr of S. Austin Carr & Co. Ltd.

Richard Carr's recent death on 12 April 2008 is noted.

Dick Carr had a long association with the prestressed concrete industry since the 1950's and was the industry historian having written a booklet on the history of prestressing in NZ. His passing along with his good humour will be missed by the many companies that he supplied with the essentials of prestressing equipment over some 50 years. A very proud record.

This edition of our newsletter features the company profiles of a member precaster Stresscrete who is a supplier of structural and architectural precast and an associate member Vulcan Steel Ltd who supply prestressing strand, reinforcing steel and a variety of other steel products to our industry.

Please remember if you have any industry news or information you consider would be beneficial to the ever growing list of recipients of the PCNZ newsletter, please contact our executive officer (Ross Cato) to arrange for inclusion in the next issue.

**Russell Bennetto, President, Precast NZ**

**01 Building & Construction ITO (BCITO) >** New trainees to 30 April 2008 number 79. Unit standard completions number 2. A total number of 92 are undergoing unit standard training within the precast industry and are distributed throughout New Zealand. Unfortunately discontinued trainees numbered 79 predominately in the Auckland region.

The Concrete Core Skills Qualification is progressing through various stages: Initial evaluation – end of April Compliance check end of May Section 10 approval August / September

**02 Prison Labour – Corrections Inmate Employment (CIE) Marketplace operations >** Since our last

newsletter No. 5 was published a new Minister of Corrections has been appointed – Phil Goff. Unfortunately for PCNZ this will mean putting our case once again to a new Minister who will need to be briefed to respond to our presentation concerning this part of his portfolio.

**03 Web-Site >** The Members only web page has now been completed and access codes and passwords have been distributed. Articles have recently been revised / updated and comments received to date indicate that the site will ably cater for Members needs.

**04 SRRB (Seismic Retrofit Research Board) >** The last meeting was held on 11

February 2008.

Membership of SRRB, publications, research papers etc can be viewed on [www.retrofitsolutions.org.nz](http://www.retrofitsolutions.org.nz)

Attending were Peter Smith of Spencer Holmes (chair) Des Bull, Stefano Pampanin of Canty Uni, Jason Ingham of Auckland Uni, Adam Thornton of Dunning Thornton, John Buchan of Christchurch City, John Hare of Holmes, Paul Wymer of Contech for part of the meeting, Rod Fulford representing PCNZ. Apologies from Richard Fenwick, Rob Jury & Len McSaveny

Also present at various times were Auckland University staff members and students involved in various aspects of

the research. Including John Butterworth & Nawawi Chouw (steel), Mick Pender (foundations), Suzanne Wilkinson (non structural considerations in decision making), Quincy Ma (NZNEES – Inter campus collaboration) and others.

### Research

Numerous research projects are being undertaken at Auckland and Canterbury Universities and a number of overseas universities and other organizations are also involved. Jason Ingham has 10 PhD students at Auckland on this project alone.

The project is divided into pre 1970 and post 1970 buildings, and one of the major points of focus in post 1970 buildings relates to floor performance.

While this is focusing on past construction, it may have some bearing on future practices as research carried out may uncover problems affecting current construction methods.

Floor systems form a significant part of the post 1970's investigation. It has been one of Richard Fenwick's premises that the problems disclosed by Jeff Matthews tests may apply to much more than just Hollowcore, and theoretical studies are being undertaken on this. Presumably if theoretical investigation indicates there may be problems, experimental evidence will be sought. Results of this could affect codes and DBH Bulletins.

### Results of research to date

Studies undertaken and papers delivered may be viewed on the SRRB website.

### Hollowcore Flooring

The hollowcore issues took up little of the meeting because it was felt there was overlap with the work of the DBH Flooring Overview Group and they would let that run its course before giving much further consideration to precast floors.

Des Bull did state that a recent test on a rib and infill floor at Canterbury had shown excellent performance.

## 05 Flooring Overview Group (FOG) Dept. of Building & Housing >

This group consists of representatives from SESOC, NZSEE, NZCS and DBH following concerns about the use of Hollowcore flooring after the Jeff Matthews test showing unexpected failure modes.

The FOG was formed to address concerns that there were other possible deformations or actions that may be induced under extreme seismic events that may still cause collapse or other unacceptable behaviour. A paper has been produced listing 11 possible failure mechanisms.

Although Hollowcore flooring has undergone significant and rigorous testing and has been shown to accommodate the required levels of deformation using currently approved detailing, the fact that the Matthews test resulted in unexpected failure mechanisms, has left some lingering concerns regarding the use of Hollowcore flooring.

It appears the majority of buildings constructed in accordance with the current code will be unlikely to exhibit any problems, but there may be some instances where different detailing could place some units at risk.

### DBH Advisory Notices

The DBH can issue Advisory Notices to territorial authorities and practitioners, and these advisory notices have the impact of a NZ Standard without having undergone the same rigorous review and comment procedures.

The DBH Advisory Notices cover areas of concern and hence are more likely to highlight the 11 possible failure mechanisms rather than the level of confidence that can be enjoyed in most cases as a result of recent testing and current practices. Precast NZ concerns are compounded by the fact that for many of those possible failure mechanisms, there is no accepted method for analysis and no accepted limits for the results.

The message sent out could be "here are some potential

problems but we do not know how to analyze them and we do not know what to do about them". Although this appears of concern to only the few of our members who produce Hollowcore, it is the intention of the FOG to take their investigation to other forms of floor construction.

These concerns are largely theoretical and for many there are no methods of analysis. There is no testing proposed to investigate them so they may remain as concerns that are identified, but they may or may not be significant, and for which there is no satisfactory remedy. Testing to adequately address these concerns would be very involved, time consuming and prohibitively expensive.

### DBH Guidelines

The delays in issuing clear guidelines by the FOG and the resulting uncertainties were causing concerns to designers and users. In view of this, letters were sent to FOG by PCNZ and to DBH by CCANZ. The letters requested, in part, that DBH consider issuing an interim statement giving conditions and situations under which hollowcore could safely be used without concern, pending publication of their final findings.

Subsequently a meeting between DBH and PCNZ, CCANZ (Rod Fulford & Pat McGuire) took place. As a consequence DBH advised as follows:

- That FOG were more concerned with retrofitting existing structures
  - That FOG would allow PCNZ comment prior to the release of any public documents
  - All research was being applied to concrete flooring and not to steel supported floors.
- PCNZ will maintain an ongoing dialogue with DBH.

## 06 Thermally efficient design with precast >

Are you interested in obtaining technical data on thermal construction in precast?

Then the following link will take you to page 3 of the February issue of the NATIONAL Precaster

(published by the National Precast Concrete Association of Australia).

The article is called Thermally efficient design with precast and is authored by Ric Butt of Strine Design.

[http://www.npcaa.com.au/datasheets/Precaster\\_47.pdf](http://www.npcaa.com.au/datasheets/Precaster_47.pdf)

## 07 Industry Review of the Department of Labour - Code of Practice for the Safe Handling, Transportation and Erection of Precast Concrete

> A preliminary joint meeting of industry representatives from the Dept. of Labour, Accident Compensation, Crane Association of NZ, Reid Engineering, NZ Heavy Haulage, Registered Master Builders representative Fletcher Construction and Precast NZ took place on 25 February 2008. Other interested associations include representatives from Height Work – rigging, and the Road Transport Industry. The meeting agreed to carry out a review of the code and the preliminary meeting was followed by a further 3 meetings. Topics included Transport of precast elements (from off-site mould to final position on site. Assistance is also being given to ACC toward their publication "Transport Guidelines". These meetings will continue until the meeting attendees are satisfied that the Code of Practice contains industry best practice.

## 08 NZ Concrete Industry Conference October 2008 >

Plans are being finalised for this year's NZ Concrete Industry Conference to be held at the Rotorua Convention Centre from 2-4 October 2008 which promises to be another engaging and entertaining weekend with plenty of opportunity for networking, learning and fun, in one of New Zealand's most popular holiday destinations, Rotorua. The program encompasses industry-leading presenters and projects, underpinned by a look at the year's hot topics.

For further program information please click on the link [www.concretesociety.org.nz](http://www.concretesociety.org.nz) or contact by email: [concrete@bluepacificevents.com](mailto:concrete@bluepacificevents.com). Precast New Zealand will again be holding its Annual General Meeting during the conference.

**09 Plant Visits** > Precast NZ wishes to promote site visits to Member plants throughout New Zealand. The precast industry believes it is an activity that assists in promoting understanding between head contractors, specifiers, project managers and members. Particularly in the areas of precast manufacture and sub-contract supply.

Anyone wishing to visit off-site precast manufacturing plants please contact Ross Cato at 09 6389-416.



Glass Cube, European precast - striking image courtesy opus C - Concrete Architecture & Design

# MEMBERSHIP

<b>CORPORATE MEMBERS</b>	<b>PHONE No.</b>	<b>ASSOCIATE MEMBERS</b>	<b>PHONE No.</b>
Ashburton Prestress Concrete	03 308 2397	0800 Ducting Ltd	07 343 9505
Atlas Tilt Slab	09 426 9497	Allied Concrete	03 217 1612
Bradford Precast Ltd	03 308 9039	Argon Construction Ltd	09 274 5672
Busck Prestressd. Conc Ltd	09 438 3059	BASF Construction Chemicals NZ Ltd	09 414 7233
C. Lund & Son Ltd	03 349 6900	Bridgeman Concrete	06 879 7254
Emmetts Civil Construction Ltd	06 349 1788	Canzac Ltd	03 343 4254
Formstress Precast Ltd (Waiuku)	09 235 7257	Demden Ltd	07 575 5410
Fulton Hogan Concrete Div	03 418 2880	Firth Industries /Certified Conc.	09 525 9193
Heb Precast	07 575 2325	Fletcher Reinforcing	09 570 1383
Hynds Precast	09 274 0316	Holcim New Zealand Ltd	09 634 0132
Latley Civil Engineers Ltd	06 879 8364	Humes Pipeline Systems	09 580 0781
Precast Compts (Wgtn) Ltd	06 364 8355	Mainzeal Property & Construction Ltd	09 375 2100
Precast H.B. Ltd	06 835 8315	Mike Herlihy Consulting Ltd	03 325 1165
Smith Crane & Construction Ltd	03 359 7759	Nawkaw Australia	09 486 1615
Stahlton Prestressed Concrete	09 831 0107	RC Macdonald Ltd	04 472 4924
Stevenson Precast Sys. Ltd	09 274 0726	Reid Engineering Systems	09 444 4122
Stresscrete Northern Ltd. (Papakura)	09 295 0610	S Austin Carr & Co Ltd	09 535 5245
Stresscrete Wellington Ltd. (Otaki)	03 344 3014	Sika (NZ) Ltd	09 828 7002
Thelin Construction	03 544 8906	Vulcan Steel Ltd	09 273 7214
Wilco Precast Ltd	09 295 1060		
Wilson Precast Construction Ltd	09 294 7207		



## Stresscrete Precast – A New Family Business:

**Paul Cane, Brett Russel and families have recently formed a new partnership and purchased the Stresscrete Precast operations of Auckland (Papakura) and Wellington (Otaki).**

This exciting new venture combines the skill and potential of the existing Stresscrete businesses with the experience of Formstress Precast and the Russel Group. The result is an independent operation with ample capacity to service the North Island market.

From Architectural Panels through to Prestressed Bridge Beams and Hollowcore, the new companies have the ability and expertise to produce an extensive range of precast products. The majority of production is construction-based with infrastructure projects gaining momentum. Prestressed Flooring continues as mainstream with four Hollowcore machines, a range of Double TT's, Unispan and Interspan Ribs also available.

Recent projects include the architectural-shaped panels of Manukau's new Police Station, 30 tonne Bridge Beams for the Onewa Road infrastructure project and Wellington's CentrePort project. General Manager, Paul Cane, describes the new enterprise as an ideal combination of outstanding staff and excellent equipment. The outcome — a precast operation of necessary scale to meet large project demands, while retaining family business culture and customer focus.

"We had been looking for some time to expand our existing precast operation in Waiuku. The purchase of the Stresscrete businesses has enabled this expansion while retaining existing customer relationships and service levels.

We now have the people and production capability to supply a comprehensive range of precast and prestressed products to meet our customer requirements in full, on time, every time."

### Client Services:

- Technical advice at design stage
- Estimates/quotations
- Engineering design
- Shop drawings
- Quality control programmes

### For More Information:

#### Stresscrete Northern Ltd

Papakura, Auckland, Telephone: 09 295 0610

#### Stresscrete Wellington Ltd

Otaki, Wellington, Telephone: 06 364 8126

[www.stresscrete.co.nz](http://www.stresscrete.co.nz)

#### Formstress Precast Ltd, Waiuku

Telephone: 09 235 7257

[www.formstress.co.nz](http://www.formstress.co.nz)



Manukau Police Station



## Overview

Vulcan Steel is one of the largest privately owned steel distributors in Australasia. Starting in Auckland in 1995 we have grown to over 20 different sites throughout New Zealand and Australia. To operate in steel supply a key ingredient is scale, which enables competitive pricing and innovative supply solutions. We enjoy excellent relations with the local steel mills and are also constantly travelling the world keeping abreast of international developments. Particularly in Asia, this involves building personal communication with the main manufacturers in each country.

## Supply Solutions

We have close to a million square feet of warehouse space. This is serviced by the latest overhead crane equipment, operated with remote control. Our in-house trucking fleet numbers around 50 and again we pride ourselves in being up to date.

Collectively we hold in excess of 50,000 tonnes of stock across all shapes – primarily; structural I & C sections, merchant bar of flats angles squares and rounds, hollow sections round square and rectangular, hot rolled plate from 1,6mm to 200mm., reinforcing bar, **Pre Stressing Strand**, sheet and coil.

Much of our development has been in value add solutions with high cost steel processing machinery.

We have 3 factories in New Zealand offering plate service- including cutting folding etc. These are state of the art facilities on an international basis. Considerable time has been spent situating them in stand alone purpose built buildings which promote efficiency and a competitive offer. All machinery is modern with computer support for design and nesting.

Coil processing with slitting and cut – to – length ability is situated in Auckland and Christchurch. Long Product processing via cutting drilling etc. is available.

## Trading

Based on the stock and supply business we have an established a trading arm with true international access. Any steel requirements which are unique for reasons of; order size, source difficulty, logistics, co-ordination or other we can be of assistance.

## Contact details:

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