

NASH NEWS

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NEW NASH HANDBOOK

AVAILABLE NOW!

NASH Handbook - Design of Residential and Low-rise Steel Framing has just been released.

It assists the designer in the application of Part 1 of the NASH Standard on the design of low-rise steel framing. Apart from the structural aspects of the design of roofs, walls, floors and bracing, also covered are testing, durability, fabrication and construction practice and fire and energy efficiency.

To assist designers, performance data is provided for a number of proprietary components such as screws, rivets, bolts and anchors. This is complemented with design tables of the design capacity in accordance with the Cold-formed Steel Standard (AS/NZS 4600).

The handbook is available for purchase through the NASH web site www.nash.asn.au

A seminar in conjunction with the Australian Steel Institute, Engineers Australia and the Institution of Structural Engineers was held in Brisbane on 10 September to launch the Handbook in Queensland. The event was hugely successful with 125 attending.

The presenters, Greg Anderson of Structerre Consulting Engineers and Ken Watson of NASH, gave an overview of the Handbook as well as highlighting key aspects in the design, fabrication and construction of steel frames. A lively question time followed demonstrating the audience's strong interest in steel framing.

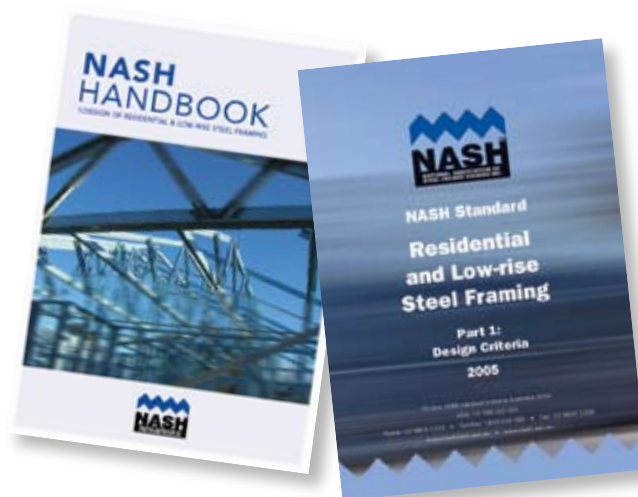
The NASH Standard for Residential and Low-rise Steel framing, Part 1: Design Criteria was first referenced in Volume 2 of the Building Code of Australia (BCA) in 2006 and in Volume 1 in 2007. It sets out the design criteria, in terms of structural adequacy and serviceability, for the design of low-rise steel framing (<8.5m high). It includes houses as well as low-rise commercial structures and a normative appendix for manufacturing and installation tolerances.

This Standard forms the basis of the South African and New Zealand Standards that are currently under development.

An amendment is currently going through that removes references to the old loading standards (AS1170) and clarifies the use of flared holes in steel framing.

Hardcopies of the NASH Standard Part 1 can be purchased through the Australia Building Codes Board (ABCB) online book shop www.abcb.gov.au or through the NASH website www.nash.asn.au

An electronic version of the Standard can also be purchased through the ABCB website.





IS YOUR BUSINESS UP TO THE MARK?

NASH members will recall, during 2007 NASH undertook an industry wide benchmarking study of business data, practices and opinion in the steel framing industry, examining both qualitative and quantitative aspects of business practice.

The study was conducted with the direct involvement and financial contributions of NASH members and supported by an Industry Cooperative Innovation Program (ICIP) grant from the Australian Government.

There were two major outcomes from this ongoing study. In May 2008, a National Benchmarking Workshop was held in Melbourne to review the study findings and develop further projects and priorities. The Workshop was reported to members in a special edition of NASH News in June 2008.

As one of the project deliverables, NASH developed an on-line business assessment tool to assist in monitoring the performance of a range of business parameters. In its original form, the tool was based on the quantitative survey instrument. With further improvement, and the inclusion of many of the qualitative survey outcomes, the tool is ready for general use. NASH encourages all members to use this tool frequently and thoroughly, to compare past results and assess improvement. In doing so, the database that supports the tool can be kept up to date, thereby improving the quality and value of the assessments produced.

NASH is very conscious of the confidentiality of member data. All information entered into the assessment tool is contained in a secure database and is not identified or reported on an individual basis. Aggregated data will be used to calculate statistical values for the purpose of updating and improving the database and assessment reports. Contact information may be used to detect any unauthorised or inappropriate use of the system.

The best way to learn more about the tool is to use it! How do you find it? Just go to the NASH website, log in to the members' area and click on the Business Assessment Tool link on the right hand menu.

The tool will open in a new browser window and then just follow the instructions. And remember - constructive feedback is welcome in the interests of continuous improvement.



NASH COMMENTS ON BCA 2010 ENERGY EFFICIENCY REQUIREMENTS

The Australian Building Codes Board (ABCB) releases a new edition of the Building Code of Australia (BCA) on 1 May each year.

The drafting and comment period for the text of each release commences about 18 months before the release date, and the actual content included in the draft may have taken several years to prepare.

As mentioned in the last NASH News - the draft BCA 2010, for which comment closed 3 August 2009, includes a significant change to energy efficiency requirements – the move to “6-star” rating for homes and other buildings. Under BCA 2010, thermal efficiency requirements may be met either by the use of Energy Rating Software or by following prescribed forms of construction for specific building elements. Whilst many of the changes to the prescriptive requirements have little or no effect on residential and low-rise steel-framed construction, NASH has identified several requirements that could unduly restrict some forms of steel-framed construction or have potentially negative effects on frame durability.

The ABCB requested that comments on the draft proposals be limited to technical matters. A Regulation Impact Statement is due to be released in September and comments will be sought on that Statement.



The NASH submission to the ABCB therefore covered the following matters:

- Changes to the proposed distribution of compensating roof and ceiling insulation due to ceiling penetrations

The NASH submission is directed towards limiting the possibility of roof space condensation leading to degradation of roof space materials and equipment.

- Limiting the substantial proposed increase to the R-value required for low mass wall systems in Class 2-9 buildings in hotter climate zones

The proposed R-value of 3.3 (increased from 1.4) for an unshaded low-mass wall of any orientation will be difficult to achieve with currently available construction products and methods, limiting construction choices in situations where shading is impractical.

- Removing the proposed requirement to place most or all of the extra insulation required in the coldest climate zones at ceiling level

Roof space and wall cavity conditions require careful consideration to avoid the possibility of dew point conditions on the interior of membranes in cold climates. Roofs with limited or no roof level insulation also expose materials and equipment to more rapid deterioration due to ambient extremes.

- Removing the proposed concession in roof system R-value when tiled roofs have no sarking installed

NASH supports a BlueScope Steel submission regarding the R0.5 concession for unsarked tile roofs, on the basis that deletion of roof sarking represents poor building practice and is inconsistent with other regulatory objectives.

- Limiting the substantial proposed increase to the R-value required for weatherboard and cement sheet wall systems in Class 10 buildings in hotter climate zones

The proposed increased total R values for the cement sheet and weatherboard cases in warmer climates will require bulk insulation with R-values greater than readily available bulk insulation products suitable for 70/75 mm wall framing. This particularly affects construction in Queensland where 70 mm studs are widely used.

The slight reduction in the new R-value suggested by NASH will enable straightforward solutions for framed construction using commercial insulation products designed for 70/75 mm frame depth without the additional complexity of energy rating software.

- Adding specific references to the need for reflective foil wall insulation to be vapour-permeable in situations where there is any possibility that moisture may condense on the inside of the insulation membrane

This suggestion is consistent with recommendations regarding condensation risk in specific climatic conditions.

- Adding an objective to the effect that a building should be designed to minimise the need for mechanical heating and cooling and artificial lighting.

The full NASH Submission is available from the NASH website in the Members' only area.



NASH CONTRIBUTES TO WA TRANSPORT STUDY

Members supplying framing products interstate will be aware that transport regulations for vehicles carrying loads such as prefabricated wall frames and roof trusses are not harmonised across the Australian states.

Each state has many pages of regulations and guidelines to be followed. While the basic maximum vehicle dimensions are consistent, the regulations for oversize loads – what can be carried when, where and how – vary slightly in definition, detail and interpretation.

Main Roads Western Australia (MRWA) is undertaking a study into the issues relating to the safe road transport of roof trusses and wall frames in WA.

As a national industry representative body, NASH was asked by MRWA to provide any information we may have on the subject from the different states and territories in Australia.

In compiling its response, NASH found that most states operate a “notice” or “gazette” system, under which oversize vehicle/load combinations may travel without a specific permit provided they comply with certain rules regarding signage, warning lights, time of travel, route and pilot escort. WA appears to be the most restrictive, having no notice or gazette system and requiring a permit for all travel by oversize vehicles (wider than 2.5 metres). Trucks carrying loads that are deemed “divisible” – able to be divided or rearranged to fit within statutory dimension limits - are not eligible for overwidth permits in WA. They must, with very few exceptions, be configured to fit within statutory dimension limits

even if this is impractical or uneconomical, or has safety implications beyond the public road network.

NASH obtained input from its major fabricator members in Queensland, NSW, Victoria and South Australia to establish loading practices and transport experiences in those states, and provided a detailed report to MRWA. Members reported that handling safety, load stability and trip minimisation are the primary factors in deciding how vehicles are loaded. No instances were reported outside WA of operators being required to reconfigure loads of wall frames and roof trusses from flat to vertical, or of fines or warnings being issued for flat transport. Vertical transport of high wall frames and large trusses is generally considered to be unsound from a load stability, tie-down procedure and safe handling viewpoint.

Prefabricated steel wall and roof framing is limited by volume and not mass, and some members estimated that vertical loading could as much as double the number of loads required. This is both an economic as well as a road safety issue, and could lead to a significant increase in heavy vehicle movements.

In providing its report and offering further assistance, NASH recommended that MRWA consider adopting a notice and permit system aligned with those operating satisfactorily in other states for the transport of prefabricated wall frames and roof trusses. NASH will continue to monitor the MRWA study and provide further updates as required.





NEW SOUTH WALES HOUSING CODE – FASTER AND CHEAPER HOUSING APPROVAL

The NSW Housing Code came into effect on 27 February 2009. The Code represents a very significant reform in the often slow and costly process of gaining development and construction approval for new detached housing, extensions and renovations in NSW.

The Code allows home development within defined parameters without the need for a development application. However the requirements of BASIX and the Building Code of Australia still need to be met.

There are several major process reforms within the new Code:

- Standardisation of *complying* development criteria for housing across all local government areas, subject to specific local exemptions and other legislation such as roads, bushfire areas, heritage and conservation zones etc.
- Standardisation of *exempt development definitions* across all local government areas.
- Removal of *merit criteria* in the assessment of development proposals that meet the objective criteria contained in the Code.

The principles and key rules

The Code embodies five general principles for complying housing development:

- site coverage and setback,
- relationship to neighbours,
- appropriate building heights,
- adequate landscaping, and
- management of car parking and garages.

These general principles are further expanded to a set of key rules that are set out in the Code:

1. *Site requirements*: The maximum building footprint and floor area of the house.
2. *Building heights*: The maximum height of the building.
3. *Setbacks*: The minimum distances from roads and boundaries depending on lot and building size.
4. *Landscaping*: The minimum areas for landscaping and private open space.
5. *Car parking and access*: The minimum garage setback, parking requirements and garage door size.
6. *Earthworks and drainage*: The maximum allowable excavation and fill, and drainage requirements.
7. *Ancillary development*: Specific controls for swimming pools, fencing, retaining walls, demolition and removal.

The Code classifies lot sizes into four types with areas 450-600m², 600-900, 900-1500 and over 1500m². Within each lot type there are limits on lot width, footprint, floor area, setbacks and landscape areas. Building height is limited to 8.5m for all lots while private open space must be at least 24m² for all lots.



Complying development key controls for different Lot Types

Lot Type	Lot size range	Lot width min	Site coverage max	Floor area max	Building height max	Front setback min	Secondary street setback min	Side setback min	Rear setback min	Land-scaped area min	Principal private open space min
A	450m ² up to 600m ²	12m	50%	330m ²	8.5m	4.5m	2.0m	0.9m plus formula	3.0m plus formula to 8.0m	20%	24m ²
B	600m ² up to 900m ²	12m	50%	380m ²	8.5m	4.5m	3.0m	0.9m plus formula	3.0m plus formula to 8.0m	25%	24m ²
C	900m ² up to 1,500m ²	15m	40%	430m ²	8.5m	6.5m	3.0m	1.5m plus formula	5.0m plus formula to 12.0m	35%	24m ²
D	Over 1,500m ²	18m	30%	430m ²	8.5m	10.0m	5.0m	2.5m plus formula	5.0m plus formula to 12.0m	45%	24m ²

Administrative arrangements

Developers and homeowners initiate the process by lodging an application for a *complying development certificate* (CDC) with either Council or an accredited certifier. Development proposals that meet all criteria in the Code are *complying developments* and do not require a development application. Under the Code, a (CDC) replaces the development consent, and must be issued within 10 days.

The Housing Code will operate in parallel with the existing process for 12 months, during which time either the Code or the existing development application process may be used (but not mixed). After 27 February 2010, proposals that fall within the Code parameters must use only the new Code.

The Department of Planning is working towards delivering more online information to assist in the application of Housing Code rules.

It is intended that applications for complying development certificates can be submitted online at some point in the future.

Full details of the new Code can be found at the NSW Department of Planning website www.planning.nsw.gov.au/planning_reforms/housing_code_community.asp

Developments in other states

Luckily NSW is not the only state that is seeking to implement fast-tracked approvals for complying development. South Australia and Victoria are currently seeking to simplify and streamline their planning systems with a focus on reducing approvals for small-scale development.

FRAMECAD SOLUTIONS SETS UP DEMO FOR A WEEK

To launch the “Factory in a Can” Solution and the newly developed FRAMECAD FrameMaster F300i roll forming machine, FRAMECAD will take over a Melbourne factory from 19–23 October.

FRAMECAD will be performing live demonstrations of the F300i roll former which can produce wall frames at up to 700 lineal meters per hour.

The full “Factory in a Can” containerised solution will be set up and operating for you to view in action. Each day at 10am and 5.30pm FRAMECAD will present and demonstrate the advantages of the “Factory in a Can”, the F300i roll former and the impact they can have on your business. A team of their experts will be available at the factory to answer any questions you may have about their system or software.

The “Factory in a Can” system is designed for rapid on-site setup of manufacturing facilities and is fully self-contained including a gantry crane and generator set. It’s designed for onsite production of framing and trusses for large projects, remote locations or situations where the local conditions are extreme enough to warrant controlled production environments.

Monday 19 October has been set aside for steel frame fabricators and all NASH members and their associates are invited. However if you’re unable to attend on Monday, you’re welcome to attend on another day. There will be light refreshments and a BBQ provided daily.

On the Monday, the evening session will include a presentation on the Design of Residential and Low-rise Steel Framing. The presentation is based on the newly released NASH Handbook by Les McGrath, past-President of NASH and Director of TGM Group, and Ken Watson, Executive Director of NASH.

For more information visit www.framecad.com or contact Peter Blythe, mobile 0149 101 639 or e-mail peterb@framecad.com

The factory’s address is 341 Francis St, Denim Park, Yarraville Vic.





NASH SUBMISSIONS NOW ON THE NASH WEBSITE

Submissions made to Government enquiries and requests are now available for members to read via a new section we've added to the Members' only area of the NASH website www.nash.asn.au

The submissions on WA transport Study (overwidth loads) and BCA2010 6 star energy rating (featured in this NASH News) and NASH's submission to the Victorian Bushfire Royal Commission (NASH News – June 2009) are already available.

Also included in the Members' only area are:

- Minutes of NASH chapter and council meetings
- Presentations
- Business assessment tool

It's easy to gain access - members select their own username and password, these details are forwarded to the National office for verification and the member is notified by return email on approval.



STEEL PEOPLE ON THE MOVE

Peter Webb has left BlueScope Steel Pipeline Supplies and is commencing his new appointment with Atlas Specialty Metals in December. Peter first became involved with NASH in 1991; he became the Queensland Chairman in 1997 and National Treasurer in 2002. Peter was awarded a Life Membership in 2006 in recognition of his considerable contribution to NASH.

Dave Humphrey and Cam Seccombe have retired from BlueScope Lysaght Research and Development. Dave was involved in the earliest work on Project Arrow in 1981, developing many of the equipment, software and design approaches that are now commonplace in the industry. Cam has led much of the research effort on steel framing and other steel products within BlueScope Lysaght for over 20 years.

Graeme Stark has left BlueScope Steel Research after 35 years. Graeme has been actively involved in the steel framing industry for most of this time, including a significant contribution to the original Domestic Steel Framing Manual. More recently he has been involved in the development of the NASH Standards and Handbook. Graeme has now taken up the position of Business Development Manager at the Cyclone Testing Station, James Cook University, Townsville. He has agreed to continue on the NASH Standards Committee.

Tony Mason has retired from BlueScope Steel. Tony moved to Queensland over 10 years ago, following a career in production and international marketing. He has been a long serving secretary of the Queensland Chapter of NASH and contributed significantly to the development of the steel framing industry in Queensland.

Professor Gregory Hancock has stepped down after 5 years as Dean of the Faculty of Engineering and IT at the University of Sydney and he was BlueScope Steel's Professor of Steel Structures in the Department of Civil Engineering from 1990 to 2009. He is currently Emeritus Professor at the Centre of Advance Structural Engineering at the University of Sydney. Greg has spent most of his academic research career investigating the behaviour and design of cold-formed steel members and was awarded a Doctor of Engineering in 2003 in recognition of this research work. He chairs the committee responsible for the Australian Standard on the design of cold-formed steel structures (AS/NZS 4600) and is a member of the equivalent American Iron and Steel Institute Standards Committee for Cold-formed Steel. Greg has recently updated his book on cold-formed design and will be holding a series of seminars around Australia in November for the Australian Steel Institute (see www.steelevents.com.au for more details).

We would like to thank this outstanding group of people for their contributions to the development of the industry and NASH and we wish them all the very best in the future.

Ken Watson
Executive Director