

NASH NEWS

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A photograph showing a complex network of steel beams and trusses, likely part of a building's roof or structural framework, set against a light sky. The steel is a light blue-grey color.

NEW HEALTH FACILITIES FOR AURUKUN

Steel framing is playing a major role in providing the necessary infrastructure for aboriginal communities in remote parts of Australia. The latest example is the Well-being Centre and two houses for staff constructed at Aurukun in Northern Queensland. Aurukun is located north west of Cairns on the western side of Cape York, 12 hours drive (800 km) on largely corrugated gravel roads.

Aurukun has a population of about 1,000. The Well-being Centre is designed to improve the availability of health services. It provides a community-based approach to treating addiction and related mental health issues, addressing family violence, reinforcing social norms and facilitating pathways out of treatment to employment and education. The services offered by the Well-being Centre include assessments, counselling, support, case co-ordination and referrals to other services. The Centre is being initiated under the auspices of the Royal Flying Doctor Services (RFDS) with the intention of moving to community management over time.

Well-being Centres are also being established in Cape York at Coen, Hope Vale and Mossman Gorge with joint funding by the Australian and Queensland Governments.

The contract for the construction of the Centre together with the two staff houses was awarded to Alan Jenkins and Natalie Gordon Constructions. Homefab Steel Truss and Frame from Mareeba on the Atherton Tablelands was responsible for the design, manufacture and delivery of the complete kit that included the steel frame with windows, doors, Colorbond® Sandbank steel external cladding for the roof and walls, and fibre cement panels for the internal wall linings. The contractor managed the site erection of the steel floors and frames, the fixing of the wall and roof claddings, windows and doors, carried out all plumbing and electrical work and the fitting out of the kitchen and bathrooms.

DESIGN FACTORS

As the buildings were not required or likely to house a large number of people and were not deemed to have an essential post-disaster function, they were designed for an Importance Level of 2 as required by the Building Code of Australia. Hence the buildings are required to withstand a wind event with an annual probability of exceedance of 1 in 500. The site is located in cyclonic wind region C and was assessed as having a terrain category 2. The buildings are approximately 5 metres high, on a level site and with no other buildings providing shielding.

Applying the appropriate regional wind speed and factors from AS/NZS 1170.2 gives an ultimate limit state design wind speed of 63 m/s, corresponding to AS 4055 housing class C2 (61 m/s). In tropical cyclones, the window glass may be broken by flying debris and consequently the internal pressure coefficient was determined using the values from AS/NZS 1170.2 for a dominant opening in the windward wall.

The roof battens and truss top chord comply with the requirements determined from cyclic testing of the roof sheeting with the battens. This set the minimum thicknesses or maximum spacing or maximum spans for these members. The cladding roll former provided the fixing specification in their literature.

Even though not currently required by the Queensland building regulations, a thermal break between the external cladding and the steel studs was specified by the client.

The *Mastotermes Darwiniensis* termite is one of the world's most destructive subterranean termite species and is endemic to northern Australia. Given this menace, steel framing was the natural choice to meet project durability requirements and most importantly client expectations.

TACKLING THE PROJECT

Barry Byrne of Homefab, on winning the project arranged a meeting with the contractor, Alan Jenkins. The agenda – devise a plan to minimise time on site. There was no room for error with a site 12 hours travel away.

A steel floor system of C purlin joists on batch galvanised RHS bearers and stumps was adopted as it minimised the amount of concrete required on site. This is a very expensive item in remote locations where you may have to mix on site or truck in from Weipa. Steel wall frames and trusses were chosen for their speed of construction, strength and termite resistance.

Four trucks were required to transport the material to site: Truck load 1 - floor framing systems for the three buildings; Truck 2 - steel wall frames and roof trusses for the Well-being Centre; Truck 3 - steel wall frames and roof trusses for the two staff houses; and Truck 4 - the hardware - windows, doors, sheeting etc for all three buildings.

Before loading commenced, a comprehensive job check list was prepared by Homefab and broken down into four truck loads to ensure no components were left behind. Photos were taken of each load to confirm quality and content.

Thorough planning and development of the design with the client, and preparation of the dispatch check list paid off in dividends. Work commenced on site on 12 October and in 10 days all the steel frames on all three buildings were installed together with the roof cladding. The finished project of the Well-being Centre and the two staff houses was handed over to the owner on 13 November. A total on site construction time of only five weeks.



Well-Being Centre



Staff accomodation



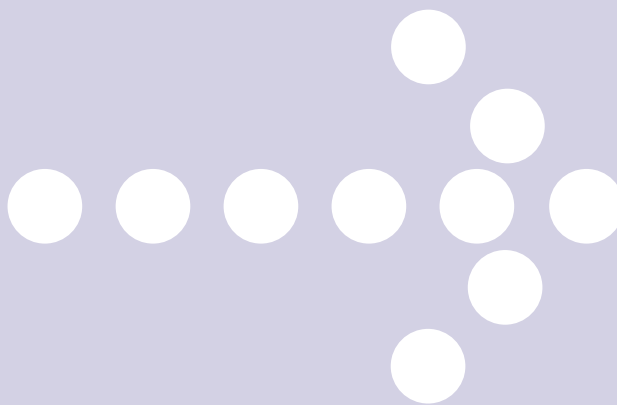
NEW NASH DISPLAY AT VICTORIAN HOME IDEAS CENTRE

The NASH display at the Clayton Home Ideas Centre has been upgraded to better reflect the competitive position of steel framing today. The centre catchment is the growing south west of Melbourne, split between new home buyers doing their research at the start of their project, owners selecting their finishes and renovators looking for ideas.

As well as raising the profile of steel framing, the display provides a steady stream of leads to fabricator members. Over 90% of the leads are from owners at design stage of their project. 55% of the enquiries relate to new homes, 34% to renovations and extensions and 7% relate to owner builders.

NASH would like to thank BlueScope Steel and Steel Frame Solutions for their contributions to the upgrade of the display.

A NASH display can also be visited at the Brisbane Home Ideas Centre.



NASH DIRECTORS

DON MCDONALD

Don McDonald is an invited sponsor member of the National Council of NASH and has been on the NASH Council for 10 years. He has also held for 10 years the position of Chief Executive of the Australian Steel Institute, and its predecessor the Australian Institute of Steel Construction (AISC).

Don's career spans 34 years comprising 14 years in the steel industry and 20 years in engineering and construction, with a substantial involvement in steel design and construction. He holds an MBA, Degree in Civil Engineering and post graduate qualifications in structural and municipal engineering.

Prior to his appointment in 1998 with AISC, Don was employed by BHP Steel for 4 years as Market Development Manager – Engineering and Construction. Before his BHP appointment, he held senior positions with leading companies where he participated in the successful implementation of a number of very large and complex projects in resources, heavy engineering and building construction.

The Australian Steel Institute (ASI) promotes the use of Australian steel in manufacturing and construction, with a specific vision to influence profitable growth for the complete Australian steel value chain. ASI promotes increased use of Australian steel and improved industry competitiveness by providing representation, technical and marketing leadership, industry development and an independent industry forum.



JOE BALLESTER

Joe Ballester, Victorian Chapter Chair, joined the steel industry in the mid 1980s, after studying Civil Engineering at Swinburne University. He worked several years with Stramit Industries as a Design and Development Engineer and later as Project Manager on various commercial and industrial projects in Melbourne. In 1992 he joined Lysaght as State Engineer for South Australia and the Northern Territory. This role brought contact with practitioners and applications spanning the full range of Lysaght structural products. In 1994, Joe was appointed Business Development Manager for South Australia, Victoria and Tasmania for the expanding Lysaght House Framing business. When Lysaght decided to cease its frame manufacturing operations in 1997, Joe joined CSR for a time and in 1999 teamed up with John King of JG King Homes to establish Steel Frame Solutions where he is Managing Director, based in Ballarat.

With operations in South Australia and Victoria, Steel Frame Solutions is a national leader in the design and supply of steel framing solutions to the residential construction sector. Joe believes that the dedication of his team and attention to reliability, quality and customers' needs will ensure continuing growth for the business.

Now living in Melbourne with his young family, Joe hails originally from the City of Geelong, which naturally enough qualifies him to be a passionate and one-eyed Cats supporter!



NEW PRODUCTS

UNDERFLOOR INSULATION BREAKTHROUGH DOUBLES AS MOISTURE MANAGEMENT SOLUTION

With energy efficiency and sustainable living on everyone's lips, extra efforts are being made to insulate roofs and walls. But what about floors? Up to 20% of heat can be lost through uninsulated floors according to the National Australian Built Environment Rating System (NABERS) website. This in itself presents a challenge for suspended flooring particularly given the rise of the 5 Star energy efficiency benchmark around Australia.

Conventional underfloor insulation systems are available, but there is the added challenge of dealing with moisture that gets trapped between the flooring and the insulation. For bulk insulation, moisture has a significant negative impact on performance. But regardless of the type of insulation, over time excess moisture can contribute to the growth of mould and lead to rising damp, potentially affecting both the flooring material and overall indoor health.

Air-Cell Insulation has launched Permifloor™, an insulation innovation designed specifically for suspended framed floor applications delivering both an insulation and water-permeable moisture management solution.

Air-Cell Technical Manager, Keith Anderson, explains: "Permifloor™ is an ultra-thin physically cross-linked, closed-cell foam insulation sandwiched by highly

reflective foil surfaces and perforated with tiny, evenly-spaced holes. These perforations allow water and vapour to permeate through preventing moisture that can often collect under flooring when using conventional underfloor insulation systems such as bulk insulation or rigid polystyrene boards."

He adds that Permifloor™ also acts as an effective draught stop while improving energy efficiency. "By insulating your sub-floors you're preventing cold air draughts from leaking into the building, improving your indoor comfort levels. And the highly reflective foil surfaces of Permifloor™ re-radiate heat back in that would otherwise be lost through the floorboards, reducing the need for extra heating."



Demonstrating water permeability of Permifloor

FRAMECAD SOLUTIONS RELEASES THE NEW GENERATION TF350 ROLLFORMER

The next generation of the Framacad TF350 steel frame manufacturing plants has been recently upgraded to increase speed and productivity. New motion control software systems in the roll former delivers high finished steel frame of up to 950 lineal metres per hour.

Framacad Solutions' TF350 saves its users' time and money by roll forming steel coils into fully processed steel framing ready for assembly. It gives customers the opportunity to manufacture steel trusses and roof panels, steel studs and ready to assemble steel frames. Framacad roll formers are designed and manufactured to produce different shapes such as C and U sections and they are capable of producing framing between 0.55mm – 2mm depending on the machine configuration.

Framacad Solutions ship roll formers and design software to customers all over the world.

The 3D design, detailing, engineering and factory control software is integrated with the rollformer. The use of Framacad Solutions' rollforming plants result in efficient manufacturing operations, increased productivity and reduced downtime.

Framacad also provides support and back-up for their customers including professional detailing and drafting services, especially useful in areas where detailing skills are in short supply.



Framacad TF350 Roll former

NASH MEETINGS

The last couple of months have been hectic with NASH Chapter meetings held across all states and the National Annual General Meeting held in Melbourne.

The Queensland Chapter met in Brisbane at the Technology Centre, Eight Mile Plains, in late October. Greg Anderson from Structerre Consulting Engineers, resigned as Chapter Chairman and Paul Rixon from Rigid Steel Framing was elected to the vacant Chair. We would like to thank Greg for his contributions to NASH at both the Chapter and National levels over the last 3 years. However, Greg's experience will not be lost to the industry as he has agreed to stay on the Chapter Vice-Chairman. Tony Mason from BlueScope Steel was elected Secretary.

The Western Australian Chapter met next at the Mt Lawley Golf Club. Ken Watson presented some of the results of the benchmarking study, stirring up some lively discussion around a broad range of issues affecting the industry.

The South Australian Chapter met at the HIA boardroom in Adelaide. Gary Scott from Steel Frame Solution was elected Chairman and Craig Nagel from Steel Building Systems was elected Vice-Chairman. Peter van Loggem from BlueScope Steel was elected Secretary.

The Victorian Chapter met at the Home Ideas Centre in Clayton – scene of the recently upgraded NASH display. Joe Ballester from Steel Frame Solutions was elected Chairman, James Trenergy from CMC Coil Steels was elected Vice-Chairman and George Plionis from BlueScope Steel was elected Secretary. An additional Office to facilitate trade training saw Cameron Hall from Steel Frame Solution nominated as the Trade Development contact person.

The New South Wales Chapter met at the BlueScope Steel boardroom at Jones Bay Wharf Pyrmont. Chelsey Scarr from Steel Building Systems was elected Chairman and Campbell Flower from Webhall Frames and Trusses was elected Deputy. At the previous meeting Mark McCarthy from BlueScope Steel was elected Secretary and Walter Suber from Onesteel George Ward was elected Treasurer.

All the Chapter meeting were well attended with an average of about 20 people. Chapter meetings provide an opportunity for members to be brought up-to-date with the latest developments and to network with fellow industry members.

The National Annual General Meeting was held in Melbourne this year at ITW Buildex's premises. The meeting was well supported by the local members creating some lively and interesting discussions about future activities.

The following office bearers were elected:

President

Will Osmo (TOP Consulting)

Vice-President

Mark Eckermann (BlueScope Steel)

Immediate Past President

Les McGrath (TGM Group)

Fabricator Representative

Arthur Hosking (Custom Steel)

Invited Sponsor Representative

Don McDonald (Australian Steel Institute)

In addition to these office bearers, the Chapter Chairmen are members of the National Council.



MEMBERS

NASH welcomes the following new members:

Company	Chapter	Activity	Contact
Prydra Australia	National	Nail plate supplier	Graham Cooper Afzal Laphir
AusSteel	NSW	Steel wall and truss fabricator	Darren Onley
Avro Steel Frames	VIC	Steel wall and truss fabricator	Roy Simon
Backbone Steel	WA	Steel wall and truss fabricator	Eric Durnthaler
Epicure Homes	WA	Builder	Justin Edmondson Ben Gow
Machine Man Fencing	WA	Steel wall and truss fabricator	Damon Brooks

CHRISTMAS REFLECTIONS

We would like to wish all NASH members and their families a wonderful Christmas and New Year!

Whilst the outlook for the next six months is very uncertain, the feedback that I have received at Chapter meetings is that the industry is quietly confident of the longer term outlook. Whilst the HIA is forecasting a reduction of 7% in dwelling starts this financial year, they are predicting annual growth rates of 4-5% over the following two years. Multi-unit developments are particularly being hit by the tighter credit regime.

The number of dwellings being constructed has not kept pace with the underlying demand over the last few years. Last financial year the dwellings started only met about 80% of the underlying demand and this gap is predicted to widen.

The market downturn has caused members to reevaluate their business systems and practices and their designs. This is already reported as providing efficiencies and making our product more competitive.

The steel framing market has maintained about 17,000 starts of Class 1a buildings (houses, townhouses, units etc) over the last 3 years despite the overall reduction in the number of dwelling starts and it has been picking up an increasing share of the commercial market.

Therefore as we head off on our breaks at this festive time, I trust that you'll return fully recharged and ready to take on the challenges of the New Year to build a stronger industry.

Ken Watson
Executive Director