

# Victorian–Tasmanian honours home in on excellence

The latest Steel Excellence Awards for Victoria and Tasmania reflect the current housing boom with half the winners being residential projects.

Australia's first conventionally erected multi-storey apartment building using light gauge steel (LGS) won in the Buildings – Small Projects category. Originally designed in concrete, then converted to timber and finally to LGS, the design team for Number 9 Apartments capitalised on the ability to mirror unit designs in detailing software to save significant time and improve accuracy.

Australian coated steel was integral in all primary external elevations of the Steel Clad Structures winner, Valley House in Launceston which was also accorded the Tasmanian Steel Award. Inside, the abode also features custom lighting incorporating profiled coated steel product.

The redevelopment of Margaret Court Arena in Melbourne with 1500 extra seats and a retractable 'folded plate' and acoustically lined roof topped the Buildings – Large Projects category.

And an innovative structural steel system that provides an open, sweeping path for cyclists and pedestrians that weaves between a busy CDB road and the Yarra River with minimal environmental impact won under Engineering Projects.

### Buildings – Large Projects

WINNER – Margaret Court Arena  
High Commendation – 699 Bourke Street, Melbourne

### Buildings – Small Projects

WINNER – Number 9 Apartments  
High Commendation – Bunurong Memorial Park  
High Commendation – Lauriston House

### Steel Clad Structures

WINNER – Valley House  
High Commendation – Forest Hill Police Station

### Engineering Projects

WINNER – Jim Stynes Bridge  
High Commendation – Tullamarine Widening

### Tasmanian Steel Award

WINNER – Valley House

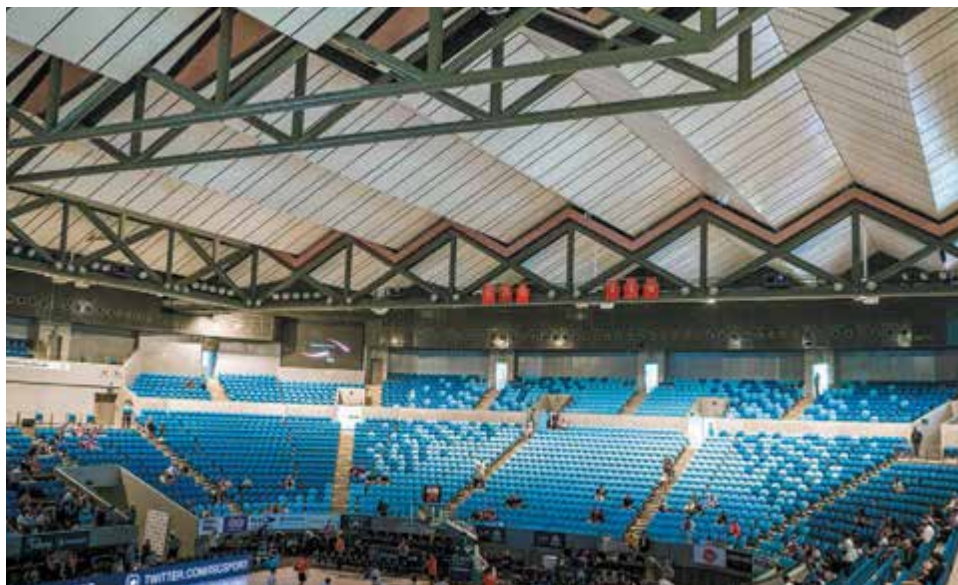
### Judges Special Award

WINNER – The Tea Room

### Judging Panel

**Russell Brown** (R I Brown and Associates)  
**Spiros Dallas** (BlueScope)  
**Professor Emad Gad** (Swinburne University)  
**Emil Zyhajlo** (Consulting engineer)

## BUILDINGS – LARGE PROJECTS Margaret Court Arena (Winner)



Responding to the growing popularity of the Australian Open, Margaret Court Arena in Melbourne Park underwent a massive facelift that included an additional 1500 seats and a retractable roof. The crowning feature of the venue is the sleek and acoustically lined operable 'folded plate' roof which can be opened or closed in less than five minutes, sheltering a multi-purpose arena with 7500 seats suitable for tennis, basketball, netball and concert events. Steelwork was used as the main structural element including a steel framed slab for the northern concourse extension and additional seating tiers built up off the existing concourse with the addition of steel strengthening beams under the existing slab.

### PROJECT TEAM

**Architects:** NH Architecture and Populous • **Structural Engineer:** Aurecon • **Head Building Contractor:** Lendlease  
**Distributor/Manufacturer:** BlueScope/Lysaght • **Steel Fabricator:** GVP Fabricators • **Steel Detailer:** Ingen3D  
**Coatings Supplier:** International Paint

## BUILDINGS – SMALL PROJECTS Number 9 Apartments (Winner)



This unique project was Australia's first conventionally erected four storey apartment building using Light Gauge Steel. It comprises 38 apartments covering 2538sqm total floor space. The LGS frames were used structurally on all apartments atop a concrete deck. The high tensile steel frames were rolled to 0.5mm tolerance by a high specification roll-forming machine. Originally designed in concrete, then converted to lightweight timber and finally to steel, the finished project used only 15 percent structural steel which made a significant weight saving. The ability to copy and mirror apartment areas in the detailing software also enabled significant time to be saved and ensured accuracy.

### PROJECT TEAM

**Architect:** ADG Architects • **Structural Engineers:** Vert Engineering and Structerre • **Head Building Contractor:** EVO Construction  
**Steel Fabricator:** Dynamic Steel Frame • **Steel Detailer:** Sylvia Weber Design • **Metal Building Contractor:** Dynamic Steel Frame

## STEEL CLAD STRUCTURES Valley House (Winner)



Coated steel is an integral component of the project with all primary elevations clad. Its striation lends a varying and subtle decorative quality to the façades in changing light conditions while the dark colour selection lessens the visual impact of the building in its rural context. The product selection reinforces a link to the rural shed typology, yet elevates the modest material in its blending with residential architecture. Selected for its longevity and ease of installation, the low maintenance product is installed over a batten to form a ventilated external skin. The roof is also a coated steel product. A custom interior light fitting in the dining area incorporates folded sheet.

### PROJECT TEAM

**Architect:** Philip M Dingemans • **Head Building Contractor:** Streefland Homes • **Structural Engineer:** AJL Consulting Engineers  
**Structural Steel Fabrication:** Travenco Engineering Co • **Steel Cladding Installation:** Streefland Homes • **Steel Cladding Supplier:** Inter-Roof

## ENGINEERING PROJECTS Jim Stynes Bridge (Winner)



The curved nature of the path due to site constraints required a unique structural solution. The cantilevered deck in conjunction with the curved truss imposes a downwards twisting force on the bridge structure under self-weight and applied loads, resisted by a coupling force at the top and bottom of the truss. The coupling force is uniform along the full length of the structure and is itself resisted from the top by a circular tensioned catenary, the only shape suitable to manage this load pattern. And the coupling force at the base is resisted by a compression arch. The result is a structural system that provides an open, sweeping path for cyclists and pedestrians while having minimal interference with the river.

### PROJECT TEAM

**Architect:** Cox Architecture • **Head Building Contractor:** Fitzgerald Constructions • **Client:** State Government of Victoria in partnership with the City of Melbourne • **Design Concept:** Cox Architects, Oculus • **Structural Engineer:** Aurecon Australia  
**Non-destructive Testing:** ALS Industrial, Gippsland NDT Services • **Steel Detailers:** Quantech Design, CADRAW Professional Drafting Services  
**Steel Fabricators:** Focus Engineering & Construction, Fitzgerald Constructions Australia • **Transport to Site:** Atkins Transport • **Coatings Supplier:** International Paint • **High Tensile Steels:** Interlloy • **Steel Distributor/Manufacturer:** BlueScope, OneSteel

## JUDGES SPECIAL AWARD The Tea Room (Winner)

The floor consists of a composite metal deck slab supported on composite steel beams. The floor beams are supported by prefabricated wall trusses that cantilever out of the original factory. To minimise the impact of the new construction on the old brick walls, a 'V' column was added externally to provide independent support. Steel rod 'stays' were added to provide lateral stability to the new construction. Whilst the cantilever towards the street is an immediately striking feature, not so obvious is the much larger cantilever at the back required to keep the existing workshop column-free. One edge is located over the driveway entrance so again supports were set back requiring cantilevers.

### PROJECT TEAM

**Architect:** PHTR Architects • **Structural Engineer:** WebbConsult • **Head Building Contractor:** Inbuilt Construction  
**Steel Fabricator:** BWS Industries • **Steel Detailer:** SDC Service

## Entrants

### BUILDINGS – LARGE PROJECT ENTRIES

**Arup** (Melbourne and Olympic Park Redevelopment Administration and Media Building)  
**Aurecon** (Margaret Court Arena)  
**WSP Parsons Brinckerhoff** (699 Bourke Street, Melbourne)

### BUILDINGS – SMALL PROJECT ENTRIES

**Architectus** (The Mandeville Centre, Loreto)  
**David Luck Architecture** (The Grass House, North Fitzroy)  
**Dynamic Steel Frame and Hamilton Marino** (Botanica Apartments, Banbury Village)  
**Dynamic Steel Frame and Sylvia Weber Design** (No.9 Apartments)  
**Fiona Winzar Architects** (Dreamcatcher)  
**Hume Steel** (Ormond College Wade Institute)  
**Hume Steel** (Wade Institute of Entrepreneurship)  
**Perrett Simpson** (Villa Marittima, St. Andrews Beach)  
**Skrobar Engineering and Surdex Steel** (Bunurong Memorial Park Chapel)  
**Seeley Architects** (Lauriston House)  
**WebbConsult** (The Tea Room)

### STEEL CLAD STRUCTURE ENTRIES

**bamford-architects** (Forest Hill Police Station)  
**Coy Yiontis Architects** (The Corner, Wellington Village)  
**McBride Charles Ryan** (Ivanhoe Grammar Senior Years and Science Centre)  
**Philip M Dingemans Architecture + Design** (Valley House)

### ENGINEERING PROJECT ENTRIES

**Aurecon** (Jim Stynes Bridge)  
**Australian Rollforming Manufacturers** (Kensington Overpass Lloyd Street)  
**Fleetwood Urban** (Webb Point Observation Tower)  
**Ishtar Networks and Spanz** (Citylink Tulla Widening – Temporary Demolition Gantry)  
**WebbConsult** (Penguins Plus)