Fifty years ago BlueScope pioneered COLORBOND® steel, the galvanised and painted steel that has become an integral and iconic part of the story of Australian architecture. This year we are celebrating the 50th anniversary of COLORBOND® steel. Across the country architects are working on projects of all scales and types – from standalone houses to city-shaping infrastructure. The unlimited design possibilities that COLORBOND® offers matches this diversity and transformative capacity. At BlueScope we are striving to create products that respond to the needs of architects, their clients and our environment. The COLORBOND® steel range started off with six colours and over the past 50 years this has grown to 22. We have also added six COLORBOND® Metallic steel colours to our palette that have enhanced lustre and we continue to research and develop more and more new colours to provide you with more design possibilities. As the world changes BlueScope is constantly innovating, responding to the changing needs of architects, society expectations and industry benchmarks.
EDITORIAL
Welcome to Steel Profile 125.
This issue marks the 50th anniversary of an iconic building product that has become a mainstay of Australian construction for its versatility, durability and enduring aesthetics. As such, we are celebrating the milestone with an edition commemorating and celebrating COLORBOND® steel.
As a long-standing supporter of excellence in Australian architecture and 35-year Principal Corporate Partner of the Australian Institute of Architects, BlueScope congratulates all recipients of the 2016 National Architecture Awards – and especially applauds the National and stated-based COLORBOND® Award for Steel Architecture winners for buildings that exemplify inspirational and innovative design.
As part of our 50th Anniversary of COLORBOND® steel celebrations, we will be reaching out to you. We look forward to working with you in 2017 and beyond to help develop the best building solutions for your projects. Finally, I’d like to remind you that Steel Profile is made free to the industry.

FRANK STANISIC
Stanovic: Associates founder Frank Stanovic is a Sydney-based architect and urbanist. His work is informed by an abiding interest in the diagram and frame as a basis for architectural intervention, and the assurance of permanence. Frank's projects have been recognised with awards including Australian Institute of Architects’ Special Jury, Merit, and the Young Australian Institute of Architects’ Emerging Architect Prize.

PENNY FULLER
Penny is a partner at Silvester Fuller, established in 1988. Silvester Fuller’s first built projects have been awarded for their creativity and design-wonderfully. Penny’s work draws on experiences gained across a broad range of international projects. She is a previous recipient of the Australian Institute of Architects’ Emerging Architect Prize.

MATTHEW HYLAND
Matthew Hyland works with Woods Bagot. He relinquished a Master of Architecture from the University of Sydney, and was awarded the 2015 BlueScope Glenn Murcutt Student Prize. Having a preoccupation with enriching the locale’s material history and connecting it poetically to place, Matthew is continuing to develop this research.

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EDITORYL ADVISORY PANEL

Steel Profile has an Editorial Advisory Panel to ensure that only projects of the highest calibre are selected for publication. The panellists are:

Penny Fuller
Penny is a partner at Silvester Fuller, established in 1988. Silvester Fuller’s first built projects have been awarded for their creativity and design-wonderfully. Penny’s work draws on experiences gained across a broad range of international projects. She is a previous recipient of the Australian Institute of Architects’ Emerging Architect Prize.

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Rob Gillam
BlueScope editor, rob.gillam@steelprofile.com.au

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BlueScope Steel Limited
PO Box 961, Crows Nest, NSW 1585, AUSTRALIA
mail.correspondence@bluescopesteel.com.au

Editorial
BlueScope Steel Limited

BlueScope and the BlueScope brand mark, COLORBOND®, ‘The Colours of Australia Since 1966™’, ZINCALUME®, LYSAGHT®, TRIMDEK®, Coolmax®, CUSTOM ORB®, LONGLINE 305®, and ™ colour names are registered trademarks and ® colour names are trademarks of BlueScope Steel Limited.

For technical advice on the right product to use contact your BlueScope representative. BlueScope recommends routine preventative maintenance for eaves and other “unwashed areas” of structures which may not be regularly cleaned by rainfall. For further information please contact your nearest BlueScope office or consult steel.com.au.

BlueScope recommends the use of COLORBOND® steel or ZINCALUME® steel for the majority of external cladding applications.

Principal Corporate Partner
Australian Institute of Architects
Across five decades, amongst extreme climates and through innumerable projects, BlueScope’s iconic building material, COLORBOND® steel, has played a crucial role in Australia’s architectural evolution. In this 50th year since COLORBOND® steel’s creation, Steel Profile celebrates this colourful mainstay of our nation’s design fabric.

Words Lorenzo Logi, Rachael Bernstone
It is clear that COLORBOND® steel’s simplicity and versatility ignite architects’ imaginations. sunshine Coast, including his own house (SP25). More recently, James Stockwell’s Hunter Valley House (GP 170) was dramatically enlivened in a ‘sine curve-like’ red made from COLORBOND® Metallic steel in the colour Aries™. COLORBOND® steel has also become a common feature in the homes of everyday Australians, used not only for roofing and wall cladding but also sheds, patios and pergolas, garages and fencing. Five million tonnes of COLORBOND® steel were sold in the first 20 years of its production from 1960 to 1980, followed by another four million tonnes in the past 15 years, more than doubling the rate of sales, which continues to trend upwards. This half-century has seen COLORBOND® steel undergo corrosion testing, durability testing and application testing, where actual building conditions, including varying pitches, fire-rated materials – to meet relevant construction standards. The same innovation and sensibility to Australian conditions is shown in BlueScope’s clever water-saving goods which includes awnings to trach specific uses for different COLORBOND® steel products adjusted for distance from marine environments and end use. With such an ongoing commitment to testing and refinement, it is no wonder that COLORBOND® steel continues to expand its relevance and appeal in the Australian built environment.

Responding to another, more sobering dimension of the Australian context, COLORBOND® steel rooves, walling and rainwater goods are also compliant for use in bushfire zones, including the most severe scenarios when installed – in conjunction with other sufficiently competent fire-rated materials – to meet relevant construction standards. Moreover, the CSIRO’s research and investigation into the performance of residential boundary fencing in bushfire has been confirmed by testing and comparison against other fencing materials that “COLORBOND® pre-galvanized and metallic-coated sheet steel performed best under all exposure conditions.”

To its proven properties, COLORBOND® steel embodies the kind of common-sense sustainability born of experience, expertise and fragility: it is a lightweight material which is not overly costly to site and is resilient and long-lasting to help conserve resources and energy that may otherwise be invested in other products. The depth and breadth of the knowledge that the makers of COLORBOND® steel have generated over nearly four decades, via the ongoing program of testing and refinement, has ensured that COLORBOND® steel has been continuously improved over its 50-year history, with technological advances including the development and introduction of Activ8® and Thermatech® technologies. Activ8® technology – which was incorporated three years ago – resulted from almost 20 years and $100 million worth of research and development. The addition of tin to the corrosion-resistant coating to the zinc and aluminium coating – which was introduced in the 1970s – protects the base steel more efficiently by activating the aluminium in the coating to improve galvanic protection. This has enabled BlueScope to make corresponding changes to the product warranty with certain roofing applications.

The introduction of Thermatech® – a technology that reflects the sun’s heat to help roofs stay cooler – occurred in 2008, and it has now been incorporated into all of the colours in the standard COLORBOND® steel range (except Nightsky®). Another leap forward was the introduction of a cool roof material which assists in reducing building energy consumption and can contribute to the mitigation of urban heat islands. COLORBOND® Activ8® CoolSteel® steel in the colour White® is essentially a super-solar-reflective, high-thermal-emittance, pre-galvanized steel and has the highest standard reflective performance in the COLORBOND® steel range. The introduction of Thermatech® – a technology that reflects the sun’s heat to help roofs stay cooler – occurred in 2008, and it has now been incorporated into all of the colours in the standard COLORBOND® steel range (except Nightsky®). Another leap forward was the introduction of a cool roof material which assists in reducing building energy consumption and can contribute to the mitigation of urban heat islands. COLORBOND® Activ8® CoolSteel® steel in the colour White® is essentially a super-solar-reflective, high-thermal-emittance, pre-galvanized steel and has the highest standard reflective performance in the COLORBOND® steel range.

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For what might at first glance seem a prosaic material, architects wax surprisingly lyrical and their words confirm that this humble sheet of metallic-coated, paint-baked and profiled steel commands respect in their collective consciousness.
dates back more than 30 years, and over that time Australian Institute of Architects. That key partnership its position as Principal Corporate Partner of the

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The inherent flexibility of COLORBOND® steel enables architects to create unusual forms and shapes that can appear modern or traditional depending on their context and surroundings. The history of COLORBOND® steel and its place in the Australian consciousness is also powerfully conveyed in the recent television commercial commissioned to celebrate its 50th anniversary, directed by award-winning filmmaker Jeffrey Darling. Featuring dramatic shots of iconic buildings such as David Hecker’s Outpost (SP118), Peter Stutchbury’s The Hangar (SP110), dveana Architects’ Seabury Aquatic Centre (SP110) and Alain Jack-Cottier’s Moonah Island Sports Centre (SP115), the commercial captures and commemorates the quality that Australia strives for as a nation — resilience, nonconformity, innovation, and connection with nature — as it ranges from city to outback, from familiar to extraordinary. As well as having its hailstone moment in Australia’s building history, COLORBOND® steel looks to the future by continuing to refine and improve its performance and variety. Within 85 years marks a well-earned milestone at which to reflect and take pride in COLORBOND® steel. BlueScope is equally enthusiastic about the opportunities and challenges that lie ahead. Inviting designers to take a flight of design fancy, Steel Profile asked architects to harness the inherent strength and design flexibility of the product to visualise the ultimate COLORBOND® steel building, and elicited some intriguing responses. At the most abstract end of the spectrum Adrian Inwood conjured movement and lightness, envisaging that his ideal COLORBOND® steel building “will make you hover and float... or pitch and twist.” James Steelwork paired COLORBOND® with the most iconic of Australian plants, imagining that his perfect COLORBOND® steel creation “would look like sculptural, curled bark from a gum tree and it would be in the tip of some range of colours”. For longstanding Steel Profile editorial pundit Frank Stansie, the vision was one of connection with surroundings. “I see an all-COLORBOND® steel-sheeted building, finished in the colour Monument® with Oceans®-coloured cut-outs,” he says. “Imagine it would be dynamic and calm hyper-form for living, working and pleasure, with sky terraces and garden cut-out to connect with the sky.”

“Durability, longevity and opportunity – not just in its material but aesthetically and culturally”

Kerry Clare – Clare Design

But of all the responses, perhaps that of Lindsay and Kerry Clare’s is the most evocative of how powerful a tool COLORBOND® steel can be in an architect’s hands. “We have no preconceived idea regarding shape, form or colour, but COLORBOND® steel would enable us to realise just about anything.” They said. We at Steel Profile can’t wait to see what the future may hold, although we are fortunate enough to have some evidence in Clare Design’s wonderful South Coast House which features on page 28.

BlueScope looks to the future of COLORBOND® steel by continuing to refine and improve its performance and variety

COLORBOND® steel contains recycled content and is itself 100 per cent recyclable, and in some cases it can be reused without re-processing — again saving on energy and resource-use. Furthermore, no fewer than five of the colours in the COLORBOND® steel range qualify as solar reflective (light coloured) coatings — such as Monument®, Steel Blue, Ocean, Cloud and Silver. This inherent flexibility of COLORBOND® steel enables architects to create unusual forms and shapes that can appear modern or traditional depending on their context and surroundings. The history of COLORBOND® steel and its place in the Australian consciousness is also powerfully conveyed in the recent television commercial commissioned to celebrate its 50th anniversary, directed by award-winning filmmaker Jeffrey Darling. Featuring dramatic shots of iconic buildings such as

1. The Hangar by Peter Stutchbury Architecture (SP110) 2. McBride Charles Ryan’s Ivanhoe Grammar Science and Senior Year’s Centre (SP124) 3. PHAB Architects’ The Condensory (SP124) 4. Alain Jack-Cottier’s Moonah Island Sports and Recreational Centre (SP111) 5. Indira Enderby-heck Architects’ Wimbunda Elders Centre (SP121) 6. Draw Heath’s Outpost (SP110) 7. Moonah Links House by Jackson Clements Burrows (SP121)

BlueScope continues to improve and evolve, we look forward to bringing you more examples of outstanding steel buildings — and the inspired minds behind them — for many years to come.

*Activate® technology is not available for COLORBOND® steel in the Metallic range of colours. For more information see our website www.steel.com.au/products/activate.

† See more about fire protection at www.colorbond.com/why-fire-coated-steel/colourbond-coolmax-steel

**For more information see our website www.steel.com.au/products/coated-steel/colorbond-steel/colorbond-coolmax-steel

***Warranties subject to exclusions, application and eligibility criteria. For full terms and conditions and to determine the eligibility of products for the warranty, visit http://www.colorbond.com/au/warranties or contact us on 1800 800 789.

****For more information see our website www.steel.com.au/products/coated-steel/colorbond-steel/colorbond-coolmax-steel

††For more information see our website www.steel.com.au/products/coated-steel/colorbond-steel/colorbond-coolmax-steel

†‡See more about the protection at www.colorbond.com/au/why-colorbond-steel
This house on a Tasmanian hill by Philip Dingemanse overcomes its modest proportions to magnify perceptions of space, fully immersing its occupants in the bucolic landscape.

Words: Peter Hyatt  Photography: Luke Hesketh; Peter Hyatt
It's easy to view the Valley House on Launceston's rural fringe at St Leonards as a quirky take on the great rural tradition. The risk with quirky design borrowings is an uneasy alliance with client, site or climate. But the upside, when it all works, is fresh and original architecture.

Philip Dingemans's signature in steel is one of those rare needles-in-the-haystack of country Australia, much like the always-elusive and now extinct Tasmanian Tiger. Rather than replica homestead or display-home box, this house exhibits a convincing design conviction.

Instead of ignoring the surroundings, this dark and handsome box telescopes the experience near and far, welcoming the immediate landscape and distant views into the very heart of the house. Corrugated cladding made from COLORBOND® steel in LYSAGHT TRIMDEK® profile in the colour Monument® gives the house the appearance of a cranked spyglass, the sort of instrument one might use if searching for the distant and elusive.

As well as tying in with the moody landscape, the house's distinctive steel cladding—apart from a roof made from unpainted ZINCALUME® steel—provides the context for exterior and interior paint finishes, reinforcing the continuity of the design throughout. Viewed from every angle, the house's striated steel coat—which resembles the striped back of the thylacine—is central to the making of a handsome beast indeed.

COLORBOND® steel in LYSAGHT TRIMDEK® profile in the colour Monument® gives the house the appearance of a cranked spyglass.

Perched high on a hillside, the structure mimics an elongated body at rest—one that speaks to the distant skyline and valley floor, the far horizon and immediate surrounds. This celebration of place opens the way for interiors that are both expansive and intimate, public and private. Designed for a young family with plans to remain for the long haul, Dingemans was determined to deliver an enduring quality to meet those wishes.

It's clear the architect has much more up his sleeve than one or two highlight moments. Working carefully from the inside out and ground up, his materials, spaces and volumes all flow in the same direction and towards the same, thoughtful end.

The LYSAGHT TRIMDEK® profile made from COLORBOND® steel in the colour Monument® is a near perfect gift-wrap for the building, with bold openings precisely where needed. Sensibly to the elevation is an art not always fully grasped. Dingemans works against the fortress mentality of so much housing that denies setting and the wider environment.
The result has a hear-aided lightness rather than the weight of the excavated, filled-in site. This attitude alone contributes a certain lightness and being through empty-ness that rather than forceful presence. “There’s both a graphic allure that I’m interested in and the rigor of understanding why something is the way it is – challenging perceptions, perhaps, of what people think something should be,” Dingemanse says.

Springing from the house’s ‘exist’, a pair of virtually counterbalanced doors are pivoted by the architect to continue the spatial flow and feather into the landscape. In the north, the deck acquires a provisionally quality for entertainment, play and casual seating, before cascading to pastures. Despite an undeserved reputation for frequently hostile or dreary weather, the region enjoys one of Australia’s most temperate climates. Rather than designing as if working with armour, Dingemanse likens the slender, cranked, linear form to a proscenium quality for entertainment, play and activate the home. “The dark steel facade has elements to provide shielding wings with the exposed parts being visually light – a conceptual connection to embrace winter and ventilation,” he says.

Dingemanse treats steel as a tailor would cloth: “to create lightly, elegantly stitched clothing for a comfortable, year-round fit.” This attribute alone contributes a certain ‘rightness’ to the steel cladding “reinforces a subtle link to country shed typology”. “That is quite critical. A key discussion early in the design was the smooth resolution of cladding junctions, detailing – and a good builder – will ensure that I’m interested in and the rigour of understanding why something is the way it is,” Dingemanse says. “The composition of the building is as a singular, functioning object. It includes the workshop, home office space, laundry, bathroom and a couple of bedrooms. That’s it for one whole floor of the building.”

The rest of the house, the more utilitarian areas, are as efficient and minimal as possible, yet still provide the core functional requirements.”

A case in point: a custom interior light fitting in the dining area clad in folded flat sheet made from COLORBOND® steel in the colour Monument® adds overhead drama to the spaces without incurring great expense. The same colour is also used to adorn non-steel kitchen features such as a fridge alcove and range hood.

Notwithstanding its angularity, the house has deceptively fluid, organic connections. The shift in direction near its centre were the cranked plan produce a useful shield against the south and entrance to the north. When the weather turns bad, occupants can easily withdraw into the generous double-height central volume.

In all, the house appears and feels light, despite its ‘under-essay’ surface. While the singular colour scheme might sound like it could run the risk of seeming monotonous, the roll-formed surface of the COLORBOND® steel in the colour Monument® is forever changing in response to the ambient lighting conditions. Dingemanse says that while steel can be a very flexible material to work with, it ‘clearness all is clear in the early design and detailed drawing stages to avoid any construction issues.’ Precise drawings and detailing – and a good builder – will ensure the smooth resolution of cladding junctions, connections and flashings,” he says.

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PH PANEL SAYS

Far from being a stereotypical Australian bush house, the Valley House aligns vernacular materials – COLORBOND® steel cladding, cement sheet and timber – to new heights. Situated on the crest of a hill, the house offers views down the slopes to the city and river beyond. Essentially, it presents as a singular object in the landscape, the profiled steel claddingforming two cranked wings that extend from the centre at entry point.

The interiors reveal a complex manipulation of sequences, thresholds and views that magnify the sense of space intrinsic to a modest footprint. “There’s a large workshop/storage area which negates the need for a separate shed, for instance,” Dingemanse says. “The composition of the building is as a singular, functioning object. It includes workshops, home office space, laundry, bathroom and a couple of bedrooms. That’s it for one whole volume of the building.”

“Even then, there’s usually scope for ingenuity. It might be a central window to the sky, or some small fragment, or gesture, and you think, ‘Wow, that’s been thought through. Even then, there’s usually scope for ingenuity. It might be a central window to the sky, or some small fragment, or gesture, and you think, ‘Wow, that’s been thought through. It’s as if that window is so brilliant. These moments rarely occur in conventional building,” he notes.

This spirit of the investigated opportunity is alive in the main upstairs bedroom where a picture-frame window faces north so that Dingemanse describes as ‘the big sky’, and the twinkling lights of the city beyond. While it is principally about these views, a tree canopy to the north contributes to the experience and reminds the viewer of that is more immediately within reach.

Dingemanse says the LYSAGHT TRIMDEK® profile of the steel cladding “reinforces a subtle link to country shed typology”.

“Even then, there’s usually scope for ingenuity. It might be a central window to the sky, or some small fragment, or gesture, and you think, ‘Wow, that’s been thought through. It’s as if that window is so brilliant. These moments rarely occur in conventional building.” Dingemanse says that while steel can be a very flexible material to work with, it ‘clearness all is clear in the early design and detailed drawing stages to avoid any construction issues.’ Precise drawings and detailing – and a good builder – will ensure the smooth resolution of cladding junctions, connections and flashings,” he says. That is quite critical. A key discussion early in the design was the smooth resolution of cladding junctions, detailing – and a good builder – will ensure the smooth resolution of cladding junctions, connections and flashings,” he says. That is quite critical. A key discussion early in the design was the smooth resolution of cladding junctions, connections and flashings,” he says. That is quite critical. A key discussion early in the design was the smooth resolution of cladding junctions, connections and flashings,” he says. That is quite critical. A key discussion early in the design was the smooth resolution of cladding junctions, connections and flashings,” he says. That is quite critical. A key discussion early in the design was the smooth resolution of cladding junctions, connections and flashings,” he says. That is quite critical. A key discussion early in the design was the smooth resolution of cladding junctions, connections and flashings,” he says. That is quite critical. A key discussion early in the design was the smooth resolution of cladding junctions, connections and flashings,” he says. That is quite critical. A key discussion early in the design was the smooth resolution of cladding junctions, connections and flashings,” he says. That is quite critical. A key discussion early in the design was the smooth resolution of cladding junctions, connections and flashings,” he says. That is quite critical. A key discussion early in the design was the smooth resolution of cladding junctions, connections and flashings,” he says. That is quite critical. A key discussion early in the design was the smooth resolution of cladding junctions, connections and flashings,” he says.
Defined by its crisp, charcoal-toned steel ensemble, the house echoes a lineage of distinguished corrugated steel houses that speak authentically to place.

“The steelwork on this house needed to be seamless. Making adjustments and fine-tuning early in the process paid dividends.”

Defined by its crisp, charcoal-toned steel ensemble, the house echoes a lineage of distinguished corrugated steel houses that speak authentically to place.

“If this sounds too easy and obvious, the evidence across much of Tasmania, and farther afield for that matter, is the grand-scale absence of environmentally aware building designs. With only a fraction of housing designed by architects, it is no wonder truly fitting design is in such short supply.

And it’s this hard-won, sleeves-up design work that iron out the bumps and creases that compromise so much residential work. Such design diligence is key and responsible for the irritations avoided and pleasures realised.

It’s a distinction between architecture and building. One is more internalised, whereas architecture tends to be very mindful of the wider environment, and to open itself to that opportunity.

“Essentially my clients engaged me to develop a home that they’re going to live in for the rest of their lives,” Dingemanse says. “That’s an indication of their commitment to this place. They’re a young couple. They have a young child so it’s all about a long-term plan for them.”

Dingemanse’s design is that rarest of find. Such consideration is scarcely sighted let alone captured, much like a Tasmanian Tiger fleeing extinction.

An inclined soffit appears to salute the sunset. A sweeping steel balustrade offers privacy and shelter to bedrooms beyond the central living zone. Broad decks north and south and full-height doors create huge flexibility.

As Karl Hughes says, the steel skins the concrete like a negative. It’s weighty in appearance, yet lightweight building permits exemplary lightness, whether in the family room (top) or the narrow-waisted kitchen and meals area that fearlessly dissolve structure to ensure preeminence for the natural over the artificial.

LEFT: Although ‘weighty’ in appearance, the steel skin and lightweight build permit exemplary lightness, whether in the family room (top) or the narrow-waisted kitchen and meals area that fearlessly dissolve structure to ensure preeminence for the natural over the artificial.
This sporting hub’s use of steel as its primary construction material has been generated by the context of Port Augusta’s industrial heritage.

Words Leanne Arveda  Photography Daniel Trinkell
South Australia’s Port Augusta is described as being at the crossroads of Australia in most tourist brochures and travel guides. The small seaport town — located 322km from Adelaide on the head of Spencer Gulf — acts as the gateway to the Flinders Ranges and Nullabor Plain. It’s hot, dusty and dry during the summer months, and laid-back in the way a rural centre of not-quite 14,000 people typically is.

The recent closure of its 60-year-old coal-fired power plant sees the town enter a new chapter, especially if a proposed solar thermal power station for the region receives approval. In a tight-knit community any new development has the capacity to personally impact everyone, and any growth or expansion is regarded with vested interest. So it is not surprising Port Augusta City Council openly consulted with the community in the early stages of the Central Oval Community Sporting Hub redevelopment, which borders Braddock Park and is clearly visible from the eastern side of the Augusta Highway.

Design architect and co-director of Adelaide-based Studio Nine Architects, Tony Zappia, was given the straightforward brief to deliver a community facility with surrounding infrastructure, to serve local basketball, volleyball, netball and football teams. An old grandstand formerly occupied the site, and Zappia had it demolished to make way for a new stadium. The disused trotting track was also removed, allowing the Studio Nine team to reconfigure the existing southern oval to comply with current AFL standards.

It’s an ambitious project because of complex programmatic requirements that essentially determined the two-storey, multi-use stadium’s large scale. The building measures 5992m² and accommodates three basketball courts with retractable seating, a 350-capacity function room, members’ bar, meeting rooms, clubrooms and change rooms. It’s also the regional headquarters for the South Australian National Football League (Tribunal hearings are held there), yet the program’s greatest efficiency lies in the ground-floor change rooms’ flexible plan, a zone enabling cross-season use by players from various sports and codes.

The Port Augusta area informs the building’s design concept and the use of steel as the primary construction material was generated by context. Steel is synonymous with the industrial town and figures repeatedly in the local architectural vernacular. This Studio Nine-led project is a celebration of the history and tradition of Port Augusta, as well as being a respectful and sensitive recognition of place. Zappia also needed a robust material that could withstand the region’s harsh environmental factors. As he explains: “This isn’t a five to ten year (fivepant) project – it’s a 50 to 100 year one. So we had to develop a building that was sustainable and required minimal maintenance.”

During the 12-month construction period the steel components were prefabricated offsite, making the building process much more efficient. Also with the advantages of prefabrication in mind, Zappia chose to clad the building with 150mm-thick Boral Equitilt® insulated panels made from COLORBOND® Ultra steel in traditional Slipjoint finish, in the colours Monument® and Shale Grey™ for the interior, and the COLORBOND® Metallic steel colours ‘Facade’ and ‘Axiom’ for the external walls. While the finishes are resilient against dust and heat and also in proximity to marine environments, Zappia chose the material for the diversity of its colour palette. Cladding the exterior in four different shades of opalescent colour visually deconstructs the building, reducing its scale.

So rather than appearing as an imposing monolith in a neighbourhood of modest single-storey homes, it has a lightness of form that is sympathetic to its surrounds. These colour finishes also reflect the natural environment, further minimising the building’s scale by visually softening its edges and allowing it to politely blend in. “The reflections enable a beautiful patina to come through and on every day the building looks different,” says Zappia. “On a sunny day it sparkles and on a cloudy day it’s hue is much darker.” The COLORBOND® Metallic steel shades provide a complementary muted background to a small section of weathering steel cladding, while balancing the generous use of glazing.

Full-height windows on the southern elevation enable clear views of the oval and the cranked facade is an elegant architectural flourish.

“<It’s an ambitious project because of complex programmatic requirements that essentially determined the two-storey, multi-use stadium’s large scale>”
The building demonstrates a lightness of expression in its use of minimal steel structure and steel cladding panels, which is a sustainable approach to material usage. Wall panels clad with COLORBOND® steel are joined by fine steel sections that taper delicately to support an elegant parapet roof made from COLORBOND® steel in the almost-spitting-golden ARAMAX FreiPad profile. This light-handed approach to form can also be seen in the plan, which has been cleverly managed to produce a building that is responsive to its environment. Located on a prominent corner in the town of Port Augusta, Central Oval provides a civic identity for the town while welcoming all visitors, be they sportspartisans or spectators.

The building’s significance is also apparent in its energy efficiency. The orientation also plays a major role in helping to assist in reducing the building’s active cooling load, while minimising solar penetration and the positioning of glazing. The overhang’s dramatic expression is reiterated inside the building through the use of trusses made from tubular steel that hang above the basketball courts. “As big and deep as these trusses are – and we’ve used many of them – they read as being quite light and that’s the beauty of steel,” says Zappia. The function room, members’ bar and meeting rooms are located upstairs at eye level with the delicate trusses, as is the internal viewing platform overlooking the courts.

Zappia and the Studio Nine team have succeeded in articulating a highly functional building that exhibits a thoughtful response to its setting. As well as offering largeness and comparatively low maintenance over its lifespan, the robust material palettes prove that lightweight outcomes can be achieved, regardless of size or scale. For Zappia, the showcases a store for Port Augusta and a well-resolved redevelopment that thoroughly serves the needs of its community.

The regional sporting hub combines many programmatic objectives in its co-location of various sports and codes, but despite these disparate elements the correlation results in a remarkably cohesive whole thanks to the precise application of different kinds of steel. The building demonstrates a lightness of expression in its use of minimal steel structure and steel cladding panels, which is a sustainable approach to material usage. Wall panels clad with COLORBOND® steel are joined by fine steel sections that taper delicately to support an elegant parapet roof made from COLORBOND® steel in the almost-spitting-golden ARAMAX FreiPad profile. This light-headed approach to form can also be seen in the plan, which has been cleverly managed to produce a building that is responsive to its environment. Located on a prominent corner in the town of Port Augusta, Central Oval provides a civic identity for the town while welcoming all visitors, be they sportspartisans or spectators.

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Part armour, part leaf, a cloak of COLORBOND® steel provides the perfect fit to embrace and, when necessary, resist the elements at this beach house by Clare Design.

Words: Peter Hyatt  Photography: Peter Hyatt
Modest beachside dwellings are something of a rarity in an age when many are Kremlin contenders. This recently completed beach house on the New South Wales south coast is remarkable if for no other reason than it resists the temptation to flirt with profligacy. The only architecture of excess here is the luxury derived from connecting so poetically to qualities of place—the sights and sounds of sea, sun, sand and native bush.

Sited on a bluff with ocean and sky views veiled by native bush, the house exhibits all of Lindsay and Kerry Clare’s signature skills. Set back from its east-facing ocean-front allotment, the house is bordered by heavily treed bush to the immediate south and a conventional brick veneer house on the adjacent northern side.

After an absence from residential design—the Clares have recently completed larger civic projects including Melbourne’s Docklands Library—this is a welcome return to a type upon which the couple built their reputation over two decades on the Sunshine Coast.

Here is the beach house not as trophy home but one carefully stitched into its setting as willed assembly rather than sudden impact. From its street-front elevation, the house appears to ‘retreat into its shell’ primarily in the name of bushfire protection. While this elevation suggests ‘enclosure’, the experience within is one amply filled with daylight.

Once more the material palette that helped propel the Clares throughout their career was chosen for its economy, function and environmental subtlety. In this instance sections of wall cladding are made from COLORBOND® steel in LYSAGHT CUSTOM ORB® profile, in the colour Monument®.

Roofing is made from COLORBOND® steel in LYSAGHT CUSTOM ORB® profile, in the colour Dune®. As well as contributing to a resulting feeling of great calmness and serenity, the rippling steel skin feels convincing and imparts a presence that is neither camouflaged nor apologetic.

Architecture is comprised of many arts. One is to make complexity appear as effortless as gulls gliding on a coastal breeze. Such apparent ease of effort—and, ultimately, use—refers to great design. Let’s call it ‘ergonomic architecture’ that looks and feels fully moulded for its occupants.

The Clares enjoy a reputation for projects large and small that punch well above their weight. Think of Brisbane’s Gallery of Modern Art (GoMA) delivered for a stunningly effective $107 million—an absolute steal price in terms of social and cultural benefit.
"The key to this house is really its simplicity. That is different to minimalism because simplicity can still have richness. You can have richness with the way a house is used and its level of operability."

Kerry Clare agrees that style is the consequence of careful process. “Style isn’t just visual. It’s the way you go about problem-solving to create a result,” she says. “Over the years, we have developed a way of problem-solving that we bring to every building.”

"Searching for answers to assemble the puzzle that is every project, the Clares brought a sharp sensibility for how to creative cases, including nature flora and fauna. She access via a deep, heavily planted and treed allment reveals the owners’ love of the botanical. Native groundscapes, native trees and grasses have been added to the underyard around specimen eucalypts, and tea tree is landslide as preserved serendipity.

Many seedpods, trees and grasses require extreme weather events for germination and removal. This adaptability is place for a beach house, from its external steel cladding with tough seedpod-like skin, through to the economical, broad structural spans of exposed hot-dipped galvanised columns.

The planning configuration and shape responds to the landscape and ocean. The western elevation here uses more contained and discreet glazing because of solar loads, privacy to the street and bushfire issues, while the opposite is true on the eastern elevation, which maximises views. Cross-ventilation is another key consideration throughout.

In many respects this seems to be the perfect architect/client relationship: the client’s love of nature and the Clares’ ability to make peace with settings more typically transformed by alienates, the passer-by.

The Clares’ preference for crafted subtraction over addition offers an intrinsic sustainability rather than the applied, or bolted-on variety. The duo’s extensive residential design catalogue is far more practical, yet never bland. Old houses designed by the Clares still manage to appear new. It typifies their passion for the direct, rather than the applied, or bolted-on variety.

The South Coast House is a reminder of how much better coastal housing should, and can, be. Rather than the grandiose, the architects find the ultimate inspiration is nature itself. The ‘beach’-house engaged with gadgets isn’t their style. Even with modest budgets, they bring out the best in traditional building techniques to create the memorable.

"Don’t move that chair, don’t touch that thing. 'You've upset my composition.'" Kerry Clare explains. "That is different to minimalism because simplicity can still have richness. You can have richness with the way a house is used and its level of operability. 'Minimal' tends to imply a more fixed state such as: 'Don't move that chair, don't touch that magazine. You've upset my composition.'"

"The key to this house is really its simplicity," he explains. "It is the way you go about problem-solving to create a result," she says. "Over the years, we have developed a way of problem-solving that we bring to every building."

"Searching for answers to assemble the puzzle that is every project, the Clares brought a sharp sensibility that is every project, the Clares brought a sharp sensibility for how to be a house at the beach. There is this fundamental difference in terms of the way you approach the design of the beach house," she asserts. "The ideas about how to occupy and use a house are a bit more robust or less precious. The living patterns are also a little different, being more relaxed and informal in a beach house."

"The concept here is to bring in a style. The conceptual idea about this house as belonging to the beach rather than florid or overheated variety. The South Coast House is a reminder of how much better coastal housing should, and can, be. Rather than the grandiose, the architects find the ultimate inspiration is nature itself. The ‘beach’) house engaged with gadgets isn’t their style. Even with modest budgets, they bring out the best in traditional building techniques to create the memorable."

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Responding to the material history of the site and locale, Shaun Lockyer Architects has re-envisioned domesticity for a young family in suburban Brisbane. The result is a determined celebration of functionality that embraces moments of poetry along the way.

Words: Margie Fraser Photography: Paul Bradshaw, Scott Burrows
buena Vista House, as the name suggests, takes advantage of a buenas view from its high perch, capturing a slice of central Brisbane’s skyline. In real estate parlance, the ridge-top is indeed a ‘premier location’ in a ‘dress-circle position’, and the local housing stock has – over the years – been a reflection of its well-to-do owners seeking imposing dwellings from which to observe the sparkle of the city towers just 10 clicks away.

The Spanish catchphrase also accords with the street’s housing history, where solid brick masonry buildings with stucco skins and ‘tin’ roofs were for many decades the dominant feature. Now and then, a touch of rococo flamboyance appears in exterior applications, while intact interiors running down from the ridge are more prosaic post-war ‘tin’, brick and timber homes, neatly centred on patches of lawn.

Shaun Lockyer of Shaun Lockyer Architects was careful to honour the material context of the area in this new build on a sought-after north-facing corner block. With an imperative to establish good economy, and owners who were keen to pursue an industrial aesthetic of sorts, Lockyer has developed an unassuming materiality that draws on its context in a clever and pleasing way. “We have reversed the vernacular of brick and tin project homes, using steel and brick in their place,” says Lockyer. “The local terracotta roofs are a reference in our use of brick, but the house design is really all a by-product of the steel roof.”

The roof, constructed of COLORBOND® steel in Stramit Longspan® profile in the colour Monument®, satisfies part of the clients’ central drive in the brief for functionality and low maintenance. Inside, expressed gang-nail trusses support the roof, while outside its angular topography threads together the home’s subtly articulated three distinct wings. Cladding made from COLORBOND® steel in LYSAGHT LONGLINE 305® profile in the colour Monument® wraps down and over the walls, as if spilling over from the roof above. Seen at its most expressive on the prow-like north-eastern elevation, this distinctive carapace that meets the brickwork is nevertheless nicely recessive with its dark aubergine hue.

“The main manoeuvre was to raise the living spaces to the first floor while retaining a sense of anchoring”
The act of wrapping is emphasised by the device of the steel elements being inserted into and over the brick walls, so that the metal appears as cut-out, applied as sections to the masonry core. The precision of the “cut-outs” is celebrated in the machined exactitude of the expressed, custom-made L-bracket window awnings, the balustrades and the steel cladding, as well as the expressed custom-made rainwater heads. Flashings are also made from COLORBOND® steel in the colour Monument® while eave gutters and downpipes are made from ZINCALUME® steel. A nice rhythm is established where the metal elements peel away from and frame the brick walls and fenestrations in a jigsaw of varied shapes.

While a counter to the praising of the bespoke, the hand-built, and the crafted that occupies much architectural dialogue today, this metalwork is in itself a form of specialist construction and design that offers beauty in its simple formality.

Balustrades that double as wall sections are profiled to match the vertical lines and proportions of the LYSAGHT LONGLINE 305® profile cladding. This rhythm is nicely orchestrated by Lockyer through the contrast of the steel cladding’s vertical lines, interrupted by the brick’s subtle raked joints and horizontality. Custom-made steel soffits and window reveals have a robust and timeless elegance, and introduce exterior elements to the interiors.

Unevenly dispersed banks of louvres along the eastern bedroom wing (the side of the tower) mix horizontal and vertical patterning that subtly emerges from the conjunctions of dark brick and steel. The same LYSAGHT LONGLINE 305® profile cladding – again made from COLORBOND® steel in the colour Monument® – has been used to build the house’s custom-made garage door, which is a dominant feature of the entry and eastern elevation. In all, it’s a refined essay in steelwork, well aided by the skill of the builder, Crowley MDR (now Michael De Re).

The original home on the site, a 1950s brick and tile slab-on-ground bungalow, sat squatly in position, squaring up with the street frontage and straddling a diagonal angle across the rear of the wedge-shaped block. While admired by the owners, it had dark interiors and suffered from rising damp. From its low setting, the outlook to the city to the north-west was obscured. Lockyer skewed the new plan to address the northern corner rather than the street frontage, and wrapped the house into a shallow U-shape to form a northern courtyard.

The main manoeuvre, though, was to raise the living spaces to the first floor, while retaining a sense of anchoring. Large expanses of glazing along the edges of the living spaces create indoor verandahs at the edge of each of these north-facing rooms. There is a wonderful sense of light and space as one progresses through these rooms.

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The northeast corner of the upper level shows the “serendipity of the irregular site,” says architect Shaun Lockyer. Here the narrow end of the wedge – where the master bedroom ensuite (below) captures a view to the city. The skinny, narrow cut-out window is a nice contrast with the broad horizontal lines of other elevations.

The floating piano nobile allows for a series of undercroft rooms and an open, shaded space at ground level. A capacious garage that now houses the owners’ significant stable of collectable cars can in future become a second living room for children. The open area below the eastern wing of bedrooms is a barbecue and outdoor dining space. Adjacent to the grassed courtyard, these spaces frame and engage with a future-planned.
swimming pool. The entry is nestled into the elbow of two wings, forming a small, tiled plaza with easy orientation towards inside, outside and upwards to the light-filled hub of the home. Brick walls extend to the earth as thick plinths along the elevations, creating a strong grounding to the site. Even with ample garage space the footprint of the three-bedroom home is by today’s standards small, and Lockyer is keen to promote the idea of the smaller home that devotes more space to the garden. He is also part of the anti-folly brigade, and Buena Vista is a fine example of functionality. In this sense, it echoes the no-nonsense practicality of the original home that the owners had first admired and contributes to a new domesticity that is averse to overbearing architectural statements. “It is small. It has a sturdy steel roof and with brick veneer has a project home construction,” says Lockyer, somewhat modestly. While resolving the simple plans, some pleasing and surprising angles evolved – as well as some moments of delight in a few quirky shapes. And what pleases Lockyer most is the meeting of the budget and time-frame. “This is the most economical house we have ever built, costing 25 per cent less than our practice’s per-square-metre average and the house was also built on time without any cost variation. The savings were a function of using standard economic materials such as steel that were readily available, easily installed and familiar to our subcontractors, however the savings also stemmed from our overall approach to the design.” Steel is undoubtedly the hero, and the visible structural element that threads together the brick and timber, both inside and out. SP

ABOVE AND BELOW: A quiet library occupies adjacent to the main hub of living space. Above is a more diminutive study for contemplation, retreat, cocktails at dusk, or rest.

PANEL SAYS

This brick and steel-clad house challenges many of the rules about what a suburban dwelling might look like and how it might function. Alas a brick base, a steel carapace acts as an abstraction with COLOURBOND® steel cladding cascading down from the roof to form the upper level walls. It’s this unexpected composition and the accentuation of its unique form that makes the building appear to skip and spin as it is read from various vantages. On an almost triangular shaped block, the design balances privacy and prospect by elevating the main living spaces, offering rich diversity of spatial environments such as loft-like social areas and cocoon-like retreats, and leaving the ground plane free as an informal external setting. It confidently challenges the local suburban vernacular, to great effect.

“The act of wrapping is emphasised by the device of the steel elements being inserted into and over the brick walls, so that they appear as cut-out, applied as sections to the masonry core”

PROJECT Buena Vista House CLIENT Michael Earl and Ellen Rozis ARCHITECT Shaun Lockyer Architects PROJECT TEAM Shaun Lockyer, Lucy Jeffries STRUCTURAL & CIVIL ENGINEER Westera Partners BUILDER AND STEEL FABRICATOR Crowley MOR ELAGING CONTRACTOR Mycladers PRINCIPAL STEEL COMPONENTS Roofing made from COLORBOND® steel in Stramit Longspan® profile in the colour Monument®. Wall cladding made from COLORBOND® steel in LYSAGHT LONGLINE 305® profile, in the colour Monument®. Flashings, gutters and garage door made from COLORBOND® steel in the colour Millennium®. Even doors and windows made from ZINCALUME® steel. Structural steel including 120mm x 6mm CHS steel column

PROJECT TIMEFRAME Six-month design, 11-month build BUILDING SIZE 380m² TOTAL PROJECT COST $920,000
Looking Back

From rising stars to Gold Medallists, Steel Profile has chronicled the latest and most innovative developments in steel buildings. Here, as we mark the 50th anniversary of the birth of COLORBOND® steel, we celebrate some of the outstanding projects – and their architects – that helped to establish steel as an essential part of Australia’s architectural vernacular. Words Alex Taylor

“Many of our houses use steel as shelter to allow the rest of the house to be fabricated and constructed. The steel frame and cladding becomes a frame of reference for everything else. If the steelwork is accurate you don’t get mistakes, but rather a very systematic way of building.”

Glenn Murcutt

“We went with a repeated portal frame and COLORBOND® steel allowed us to skin the house economically. Being so lightweight meant we could lift the house off the ground with minimal footings and keep a fire-resistant underside.”

Jesse Judd,
Judd Lysenko Marshall Architects

“This architecture is like a series of little surrealist boxes sitting on stilts, sort of wobbling around in the trees. They are not earthy buildings… they are light and ethereal, and they whisper off into the distance. We rely on the rich surfaces of the steel materials to achieve that outcome.”

John Mainwaring,
JMA Architects

“We had a relatively low pitch on the roof, and the Kingklip offers economy and a pleasing aesthetic for the use of a box within the steel frame: it’s a very simple roof. We also wanted it to be non-combustible, and I like the patterns of light and shade that you create by using a profiled steel sheet. I also like the fact that it relates to traditional rural building forms.”

Max Pritchard,
Max Pritchard Gunner Architects

“Not just for the architecture but because – as the first convention centre in the world to get a 6-star Green Star Rating – it is so environmentally sustainable and contributes to Melbournians’ pride of place.”

Hamish Lyon,
NH Architecture

“Over a sustained period of architectural practice, [we aim to design] buildings that are by definition economical and utilitarian. If we can also make buildings delightful, useful, and meaningful to their inhabitants and the general public, we achieve guaranteed satisfaction.”

James Jones,
Jones Moore Architecture
“When used intelligently, steel is a remarkable material. Its weight-to-span ratio is incredible. In our architecture, we use it for lightness – because its strength is so much more reliable than other materials. In projects such as The Hangar, our direct connections meant that when the building was half up it was wobbling and falling over, but once we bolted all the roof sheets to it, and the gutter and truss extensions, it became rigid.”

Peter Stutchbury, Peter Stutchbury Architecture

“We wanted to ignite the imaginations of young boys and also provide a functional, sustainable and lasting legacy and we looked at the context of our site. The street frontage for our building is largely federation in nature. We examined the streetscape and the role of the institution in a residential street.”

Debbie-Lyn Ryan, McBride Charles Ryan Architects

“There’s a lot of information to assist the industry in product selection these days. We compared our site conditions and proximity to the water against BlueScope’s product charts and it was obvious that we should choose COLORBOND® Ultra steel.”

Michael Heenan, A+J+C

“I see this scheme as an aggressive construction – our early name for it was ‘Desert Storm’, because, in a way, it’s like an outpost of humanity. The big cantilevers of the deck and the roof give the building a sense of aggression, like it is perching on the edge of the cliff, ready to leap off. But the spans and the overhangs are lightweight. The structure is simple and although this is a low budget building, there is a sense of elegance in that simplicity.”

Drew Heath, Drew Heath Architects

“The roof works in several ways to keep the rain out and the sun off. That’s one of the innovations of steel: it allows us to do big spans – this is not a cyclonic wind region – to create a strong architectural element. As for the roof, cladding and soffit, steel cladding is easy to cut and adapt to shape, it’s very durable, easy to maintain and very cost-effective, so it’s still our material of choice for regional and remote area work.”

Finn Pedersen, Iredale Pedersen Hook Architects

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Lindsay Clare, Clare Design

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Kerry Clare, Clare Design
CELEBRATING 50 YEARS

Fifty years ago BlueScope pioneered COLORBOND® steel, the galvanised and painted steel that has become an integral and iconic part of the story of Australian architecture. This year we are celebrating the 50th anniversary of COLORBOND® steel.

Across the country architects are working on projects of all scales and types from remarked houses to city-shaping infrastructure. The unlimited design possibilities that COLORBOND® steel offers, matches this diversity and transformative capacity.

At BlueScope we are striving to create products that respond to the needs of architects, their clients and our environment. The COLORBOND® steel range started out with six colours, but over the past 50 years this has grown to 22. We have also added six COLORBOND® Metallic steel colours to our palette that have enhanced lustre and we continue to research and develop more and more new colours to provide you with more design possibilities.

As the world changes BlueScope is constantly innovating, responding to the changing needs of architects, community expectations and industry benchmarks.