FITZGIBBON COMMUNITY CENTRE

STEEL AWARDS 2012 WINNER CASE STUDY



STEEL-CLAD STRUCTURES NATIONAL WINNER 2012

AUSTRALIAN STEEL INSTITUTE



ARCHITECTURAL MERIT

This centre for the new community of Fitzgibbon Chase is a response to the common suburban landscape within which it is sited. The regenerated bushland fringe of the site has been used as an unregulated dumping ground for vehicles and other refuse, which has over time degraded the landscape. The Fitzgibbon Community Centre design responds to this treatment in built form, by redefining and redeeming this relationship to the landscape as a piece of artwork within the environment.

The building addresses its street frontage without being sited on the street, with its facade line modified to incorporate the rare remaining trees on site. This in turn helps with the building programme of a mixed use cultural centre incorporating allied health, offices, meeting spaces, retail and community halls.

The building materials are hard-wearing, requiring little or no maintenance, and provide longevity that is an imperative for all contemporary public buildings.

The form of the building has an elegant lineality while making provocative use of materials, which highlight it as a future landmark in the community.

The building is fringed by sculptural blades of weathering steel, a material that responds to the corroded car bodies once found on site. These blades form a rippled screen to the street which reveals glimpses through the building when approached by vehicle. Behind this oxidised metal screen, the building is clad in stained plywood with ample operable glazing to allow natural ventilation, and large overhangs to provide natural lighting without overheating. This use of naturally weathering materials and passive climate controls allow the Fitzgibbon Community Centre to evolve and respond over time to its suburban landscape.

INNOVATION IN THE USE OF STEEL

The design phase for the Fitzgibbon Community Centre was undertaken conscious of the need for delivering an efficient building. All elements of the building were rationalised from the building's structural systems, framing and cladding, which resulted in the ease of construction, economy of materials and limited wastage.





EFFICIENT USE OF STEEL PRODUCTS

Bluescope[®] 'XLERPLATE' weathering steel was used to clad the building, which is a highly durable and cost-effective material, and removes the need for the steel to be coated.

The choice of Bluescope[®] 'Longline' steel as a roof material was also significant when considering efficiency. The unique locking system of this product fixes the cladding to the clip so that no fasteners need to pass through the roofing. As the fixings are concealed, there are no penetration points, providing a great degree of weathertightness.

The unique locking system of Bluescope 'Longline' steel roof panelling fixes the cladding to the clip so that no fasteners need to pass through the roofing. As the fixings are concealed, there are no penetration points, providing a great degree of weathertightness.

ENVIRONMENTAL PERFORMANCE

Apart from ESD strategies such as energy efficiency, rainwater harvesting, natural daylighting and mix-mode ventilation, the Fitzgibbon Community Centre is also a resilient building. The building materials are hard-wearing, requiring little or no maintenance, and provide longevity that is an imperative for all contemporary buildings, particularly ones in the public domain.

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BUILDABILITY

The Fitzgibbon Community Centre continues RKA's tradition of designing and documenting in 3D. This process enables clarity in communicating ideas in the early design phases while providing invaluable assistance in the construction process.

RKA's 3D CAD model was utilised to generate all levels of information, from photo-realistic visualisations, production of working drawings and review of shop drawings. This level of exactitude was particularly important in coordinating precise detailing with fabricators and detailers.

In order to ensure efficiency of construction, a rigorous prototyping phase was undertaken first off-site and then on-site to test the design and connections of the weathering steel blades. Prototype blades were first manufactured off-site, where the bolted connections could be tested in a controlled environment, then installed on-site to ensure the correct aesthetic and fit was achieved.

PROJECT TEAM

Architect:	Richard Kirk Architect
Structural Engineer:	Cardno
Head Building Contractor	: Grindley Construction
ASI Manufacturer:	Bluescope Steel
Fabricator:	Lowline (cladding), Kyst Engineering (structure)
Steel Detailer:	Lowline (cladding), Kyst Engineering (structure)
Coatings Supplier:	International Protective Coatings

