



Chartered fabricator facilitates top Green Star rating

Mills Park Centre, WA

Engaging an ASI fabricator certified to the Institute's Environmental Sustainability Charter (ESC) helped a new community centre developed for the City of Gosnells in Perth to be the first public or privately owned building in Australia to achieve 6 Star Green Star rating for Public Building Design.

The 6 Star is the highest of the ratings scale currently representing 'World Leadership' in sustainable building operations.

The multipurpose two storey community and sporting facility replaces a number of ageing facilities and nearby Beckenham Community Centre, featuring a new community hall and function centre for 300, commercial kitchen and café, meeting rooms and activity spaces, a clubroom and changing rooms for sporting groups as well as office space for staff.

The City of Gosnells received its first Green Star rating for the sustainable retrofit of its Civic Centre in 2010 and saw the new Mills Park Centre as an opportunity to go even further including sustainable features that would reduce ongoing operating costs for a minimal capital premium.

Project Manager for the City of Gosnells **Paul McAllister** said the City's initial design brief called for a minimum 5 Star Green Star rating, but it became readily apparent as the design progressed that a 6 Star rating was achievable without additional expenditure.

Construction Contract Administrator for the project builder PACT, **Tristan Box** added that whilst the 6 Star rating was achievable using readily available steel components, it was also critical to appoint a fabricator committed to the ESC program using steel from mills that are signatories to the World Steel Association's Climate Action Program to gain the extra Green Star points available to reach the 6 Star goal.

It is a requirement of Green Star that the steel manufacturer be certified to ISO14001 and have membership to the Climate Action

Program ensuring that the steel is manufactured via processes that minimise environmental impacts wherever possible. In addition the fabricator has to demonstrate a commitment to environmental sustainability and ongoing improvement.

"We needed to re-engage another fabricator after the initial one fell over very quickly due to the Green Star requirement for the contractor to be part of the ASI's Environmental Sustainability Charter," Mr Box said.

"We contacted ASI State Manager WA, **James England** for a list of compliant subcontractors of which there are three in WA and have found working with the prequalified environmental sustainability fabricator member very professional and thorough.

"Every point that we have put forward for the design rating is critical. Therefore to get the 'as built' rating we needed every point possible.

"The steel achieves a number of points including part of the bonus points for the Australian-made component."

The City committed early on to sourcing the majority of the materials, products and labour locally, making an investment not only in Mills Park, but in the local 'green collar' workforce and economy.

"By insisting that our suppliers demonstrate a sustainable chain of custody and choosing building supplies with proven green credentials, we are exposing local businesses and workers to these materials and the philosophy behind them," said the City's Chief Executive Officer, **Ian Cowie**.

"This knowledge will spread throughout the community and hopefully create new opportunities for sustainable building to be done locally and done right in the City."

Hodge Collard Preston Architects Managing Director, **Nicholas Preston** said the basic design brief for this project was for a multi-use community facility catering for a wide range of user groups whilst achieving best practice sustainable design principles.

“The steel façades are integral to the design aesthetic of the building providing a striking metallic finish utilising prefinished materials to reduce ongoing maintenance for the City and the steel framed roof system has provided large volumed function areas to the first floor,” he said.

He said that the use of steel framed roofs and façades fitted well with the design brief that favoured prefabrication of construction components.

He added that the specification of Green Star compliant steelwork was essential to the new building’s rating with steel framing supporting external shading devices adding to the passive design of the building.

Passive architecture combined with low-energy lighting and heating, air-conditioning and ventilation systems is expected to reduce the energy needed to power the development by up to 30 percent while a 300 kilowatt solar panel array will supply up to 15 percent of the main building’s annual requirement with renewable solar energy. All told, the City will potentially save up to \$145,000 in utility costs annually with annual energy consumption expected to be up to 370 megawatt hours lower than a comparable standard building.

ASI National Manager Marketing **David Ryan**, who manages the ASI program, said that the Charter has enabled small-to-medium businesses to also look at making real improvements to their environmental footprints.

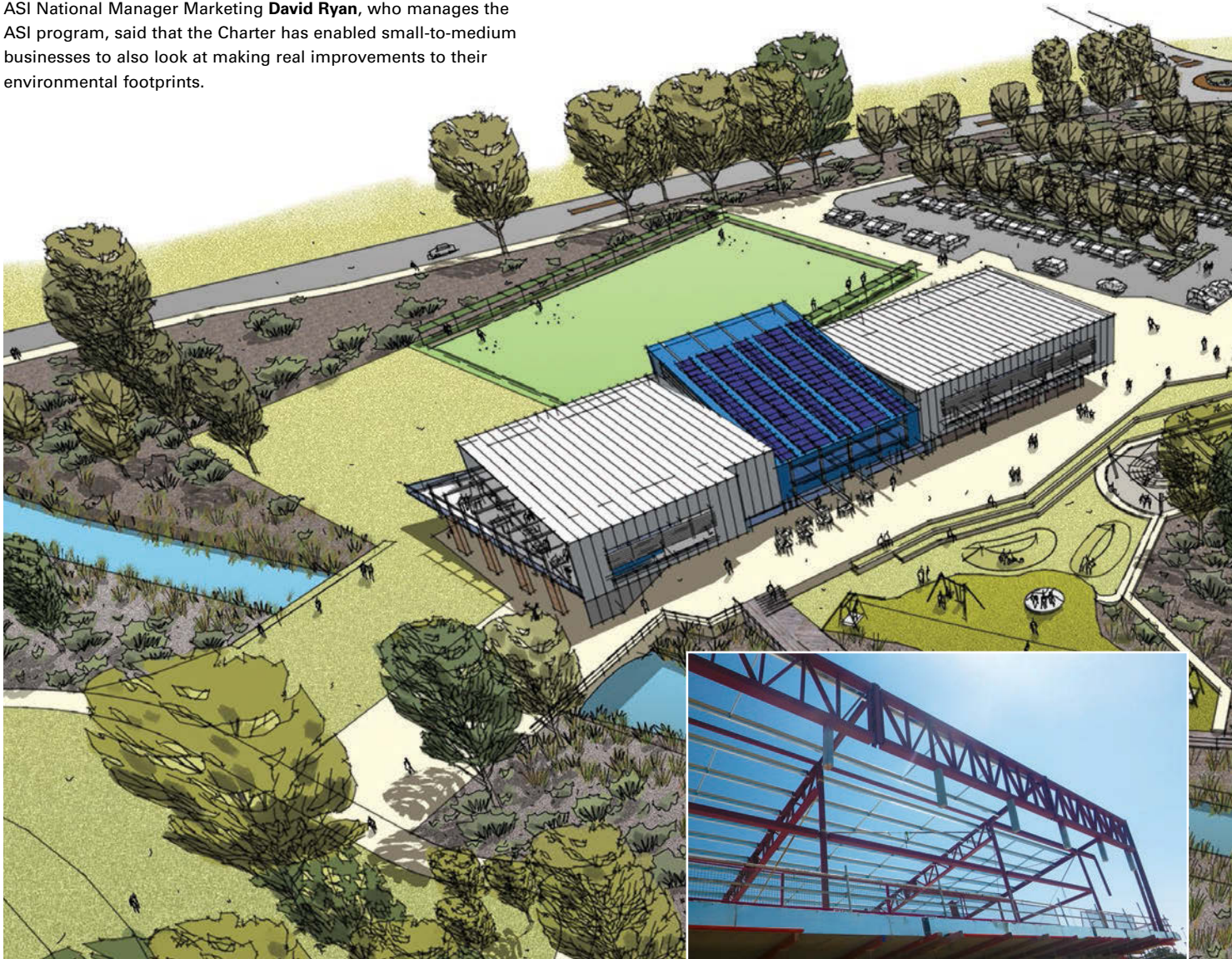
The steel package for the project was awarded to ASI ESC member Cays Engineering which has attained Silver level accreditation following its previous audit demonstrating sound environmental management throughout the organisation along with continual improvement.

Cays Engineering Commercial Director, **Lee Ascroft** said as a result of working towards accreditation to the ES charter, the company had to develop procedures and documentation that have prompted greater environmental awareness among management and staff.

“The accumulation of both current and previous data going back three years on consumption has allowed us to analyse and consider where we can be more cost effective as well as reducing environmental impacts in our use of fuel, electricity, water and gas,” he said.

“The current project required greater forward planning to source 100 percent locally which could have potentially affected both lead-times and costs. There is also full traceability on the project so extra diligence was required with obtaining and maintaining documentation.

“The ESC requirement to document evidence demonstrating environmental awareness has meant that we have had to focus on processes and consider where improvements can be made with cost implications analysed and potential cost savings taken into consideration.”



Mike Edwards 2014

Mr Ryan said that by measuring their sustainability efforts, Charter members can understand the relationship between good environmental practice and good business practice.

“The Charter has established a culture of continuous improvement around sustainability and helped many businesses understand that sustainable business practices are as much about productivity and efficiency as about environmental improvement,” he said.

“It has helped organisations look at their operations through a ‘sustainability lens’ and take action to reduce their impact, future-proof their businesses and gain competitive advantage.

“The industry was keen to be more sustainable, but the revised Green Star ‘steel’ credit provided the incentive and the business case.”

Cays secured the project in June and commenced fabrication with steel delivered to site mid-October and completion of the works scheduled for the end of November. Cays supplied approximately 80 tonnes of hot rolled steel and 21 tonnes of cold formed sections.

Anyone wishing to contact an ESC member for more information, visit <http://steel.org.au/asi-committees/environmental-sustainability-charter>

PROJECT TEAM

Client and Project Management: City of Gosnells

Architecture: Hodge Collard Preston

Builder: PACT Construction

Structural Engineering: Wood & Grieves

Environmental Consultant: Aecom

ASI Steel Fabricator: Cays Engineering

Erection: Cays Engineering, Slew Rig

ASI Steel Distributor: Southern Steel (WA)

ASI Steel Manufacturers: BlueScope, OneSteel

