

# 5-Star green rating project attains all possible steel points

Sherwood bus depot, Brisbane

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It's not often that a design can take a clean sweep of all the points available for both steel as a material and steel in design but the new Sherwood bus depot for the Brisbane City Council (client Telstra Super Fund) can rightly claim that accolade by attaining its targeted 5-Star Green Star rating.

Designed by **Grant Roe** of Costin Roe in conjunction with Commercial and Industrial Products and built by ASI Environmental Sustainability Charter (ESC) member Steel Structures Australia, not only is this structure top of the pops in Green Star points, it has been entered into the ASI design awards. The regional bus depot provides an array of facilities including a service centre, administration, maintenance and refuelling facilities.

The client brief was to provide for a Green Star building in both design and 'as built' modes. The Green Star point system for steel as a material was amended in 2010 to reward builders sourcing from environmentally responsible steel manufacturers and downstream steel contractors. There is also a point available for dematerialisation through the use of high tensile materials.

In the design points area a designer is also rewarded through being able to demonstrate a reduction in material use by efficient design.

Costin Roe has been able to demonstrate a very efficient structural steel design improving the original steel content by greater than 25 percent. This exceptional attention to detail in the design has secured for the building all two material points available under MAT-5 and the design point under MAT-9.

A significant component of the design point was to reduce the mass of the building (based on a previously constructed bus centre) by approximately 30 percent through attention to detail. The use of 450 grade tubular steel for bracing in particular enabled the dematerialisation point around high tensile steel use.

ESC member, Steel Structures Australia was employed to fabricate and erect the shelter complex. This enabled the project to gain the ESC credit point. The trick in gaining Green Star points was to have a Green Star professional in-house and to work closely with the Green Star auditor.

Through astute design, Costin Roe was able to not only scope all possible steel points, but end up well in front of budget largely led by the use of more efficient lighter materials.

This demonstrates:

1. Steel can provide good environmental outcomes for building structures.
2. Engineers can obtain Green Star points through astute design and dematerialisation using high strength materials.
3. The steel manufacturers and steel contractors can provide an environmentally credentialed supply chain.
4. Sustainability chartered steel contractors are being recognised and rewarded by the new Green Star point system.

