

# Green Star™ Rating and BlueScope Steel Products

BlueScope Steel is committed to continual improvement of environmental performance and the efficient use of natural resources. Our objective is to produce a range of versatile steel building products and steel solutions that are innovative, durable, safe and aesthetically pleasing.

## Key Facts

- Green Star™ is a rating system for the environmental performance of buildings not materials.
- BlueScope Steel products can help achieve higher Green Star™ ratings.
- BlueScope Steel recycles about 1 million tonnes of steel scrap per year.
- The recycled content of BlueScope steel produced in Australia is approximately 17 - 20%.
- Steel is the most recycled material in the world – the average recovery rate for steel in buildings is greater than 85%.

## What is Green Star™?

Green Star™ is a voluntary rating system developed to evaluate the environmental design, efficiency and performance of Australian buildings. A common misconception is that the system is used to evaluate individual building materials or products. This is not the case - Green Star™ rates the overall environmental performance of a building and is currently most commonly applied to larger commercial or high-rise building structures.

The Green Star™ Rating System was introduced to Australia by the Green Building Council of Australia and is derived from the North American LEED rating system and the British BREEAM system. It contains a number of environmental measurement criteria, which collectively determine the environmental rating for a building. These criteria include energy and water efficiency, indoor environmental quality and resource conservation.

There are specific Green Star™ modules for various categories of building for example Office Design, Shopping Centre Design, Healthcare, Office as Built, Office Interiors and Education. Green Star™ ratings can be obtained at various levels from 4 Star Green Star™ to 6 Star Green Star™, the higher the star number the more sustainable the building is rated by the model. The building has to accrue a certain number of points to achieve a particular star rating.

## **Why was it introduced?**

Green Star™ was introduced to help promote green building programs, technologies, design practices and operations through achievement and recognition of superior environmental performance.

Green Star™ seeks to establish a common standard of measurement for comparing buildings, promote integrated building design, raise awareness of green building benefits and ultimately transform the built environment.

## **BlueScope Steel products and Green Star™**

BlueScope Steel products have a significant role to play in both new building design and rebuilding existing structures and can help achieve higher Green Star™ ratings.

A small part of the points system used in many of the Green Star™ evaluation tools is dedicated to materials use and specifically their recycled content. BlueScope Steel products themselves will not earn any direct points in the material evaluation tool as within Australia BlueScope Steel's recycled content is less than 60%. However, the strength and versatility of steel in preserving and re-using existing structures is unmatched by many other materials.

Specifically, steel can potentially help achieve higher scores in the evaluation tool by:

- Reuse of façade - helping to reinforce and stabilize existing facades.
- Reuse of structure - helping to reinforce and stabilize existing structures.
- Recycled content of steel and concrete – no points based on recycled steel content for steel buildings, however there is an opportunity to assist with achieving points in combination with other products such as in structural steel for flooring. If a combination of structural steel decking and steel reinforcing is used for the floor construction, the recycled content average may be over 60%.
- Additionally BlueScope Steel can contribute to points obtainable in the Recycled Concrete category through the use of our by-products in making some concrete products, increasing the recycled content of concrete.
- Design for disassembly and adaptability – Steel is versatile and superior over many products as fixing techniques often use non-permanent fasteners. Steel can be disassembled without loss of strength and adapted to a variety of building situations.
- Reused products and materials – steel can be used over and over; it is 100% recyclable and additionally many steel products are reusable.

## Why steel is an environmentally responsible building product

Steel is acknowledged as the world's most recycled material. In fact, it is 100 percent recyclable, which means its life cycle is potentially continuous.

Steel scrap is a necessary component in the production of new steel, BlueScope Steel recycles around 1 million tonnes of scrap steel per year.

The average recycled content of BlueScope's steel produced in Australia is approximately 17 - 20%. The manufacturing process and the amount of scrap material available limit the recycled content of new steel. Overall steel recovery at the end of life is estimated to be above 85%. When a building is demolished the recovery rate of steel is very high.

Steel is ideally suited to today's built environment. The advantages of using steel include:

- Steel can be engineered to precise specifications resulting in minimal on-site wastage.
- Steel products can be used to reduce a building's cooling and heating requirement, leading to a reduced load on energy infrastructure.
- Steel products are light and can be easily transported, enabling a lower transport greenhouse intensity.
- Steel is the most recycled material in the world.

## Steel – its place in an environmentally conscious future

BlueScope is working with other steelmakers, the Australian Government and a range of stakeholders to increase the amount of recycling, reduce energy intensity and research product improvements. The endless recycling properties of steel may, in many cases, far outweigh the higher percentage of recycled content in alternative building materials. This unique attribute is not fully recognised in rating systems such as Green Star™, but will over time gain increased recognition in an environmentally conscious future.

***Steel - the versatile alternative.***



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