



InfraBuild

Building futures through sustainable steel

Constructing a sustainable future

How to utilise the sustainability credentials of InfraBuild Products

OCTOBER 2020



www.infrabuild.com

With the update of InfraBuild's Environmental Product Declarations, construction and infrastructure projects throughout Australia can enhance their sustainability rating tool points.

This Guide provides a framework for how designers, specifiers, sustainability professionals and procurers can utilise the environmental credentials of InfraBuild products.

Originally released in 2016, InfraBuild has updated, rebranded and released a suite of Environmental Product Declarations (EPDs) which provide the environmental credentials of structural and reinforcing steels typically used in construction and infrastructure projects. These product-specific EPDs provide transparent and independently verified information about the environmental impacts of structural and reinforcing steels throughout their life cycle. Rating tools reward products with EPDs as they allow the market to make an informed choice about materials they use to improve the sustainability of their projects.

EPDs are recognised by the Green Building Council of Australia (GBCA) and the Infrastructure Sustainability Council (ISC). Both GBCA and ISCA rate InfraBuild's EPDs higher than industry-wide EPDs because InfraBuild's EPDs are product-specific.

InfraBuild has five EPDs, all independently verified and registered:

- Reinforcing Bar and Mesh (InfraBuild Reinforcing)
- Reinforcing Bar and Mesh (ARC)
- Reinforcing Rod, Bar and Wire (InfraBuild Steel)
- Hot Rolled Structural Products (InfraBuild Steel Centre)
- Hot Rolled Structural and Merchant Bar (InfraBuild Steel)

Liberty Primary Steel, based in Whyalla SA, also released an EPD for:

- Hot Rolled Structural and Rail Products.

What is the GBCA and the Green Star tool?

The GBCA drives the adoption of sustainable practices in the Australian property industry.

The GBCA's Green Star Rating tools include the 'Design & As Built' tool, which covers a building's design and construction. This tool assesses 'building materials', one of nine categories contributing to points.

This Guide addresses how InfraBuild steel products can gain Green Star points via the current "Design and as Built v1.3" tool. The GBCA is preparing to release the next version of Green Star ("Green Star for Buildings") in late 2020, which may change the availability of points and how they are acquired.

How can you acquire points in the Green Star tool

The Green Star tool consists of five Credits that apply to materials:

- 1) Life Cycle Impacts: Steel (Credit 19B.2)
- 2) Responsible Building Materials (Credit 20)
- 3) Sustainable Products (Credit 21)
- 4) Construction and Demolition Waste (Credit 22)
- 5) Innovation (Credit 30B)

InfraBuild's products and services can facilitate the rewarding of points in all of these Credits.



"InfraBuild has been an early leader in transparency with their commitment to carbon neutrality by 2030, and is showing an ongoing commitment to sustainability with their updated Environmental Product Declarations. The new suite of EPDs clearly verify the sustainable solutions that InfraBuild

are offering to the market."



Davina Rooney
CEO, Green Building Council of Australia



Life Cycle Impacts

There are two pathways for life cycle impacts assessment:

I. Performance Pathway: A comparative full life cycle assessment of all the material used in the building, using a reference building and the actual building.

II. Life Cycle Impacts – Steel: Directly relates to steel and uses a deemed-to-satisfy approach. Life Cycle Impacts is simpler to implement and claim points. One point is available for reducing the mass of steel in a building.

For reinforcing steels: one Green Star point can be achieved by demonstrating a reduction of five per cent in the steel used when compared to a reference case, as defined in the Green Star tool.

For structural steels: one Green Star point can be achieved by demonstrating a five per cent reduction in the steel used when compared to a reference case, as defined in the Green Star tool. The alternative method is to use at least 95 per cent of Category A High Strength Steels and at least 25 per cent Category B High Strength Steels.



CATEGORY A		CATEGORY B	
Type	Minimum Strength	Type	Minimum Strength
Roof Sheeting	550MPa	Hot-rolled steel sections	350MPa
Wall Sheeting	550MPa	Hot-rolled plate	350MPa
Profiled Steel Decking	550MPa	Cold-formed hollow sections	450MPa
Purlins	450MPa	Welded sections	400MPa
Girts	450MPa	InfraBuild has a range of products and guides to facilitate designers optimising the quantity of both reinforcing and structural steels.	
Light Steel Framing Systems	450MPa		

Responsible Building Materials

The Green Star tool rewards projects where the steel used has come via a responsible and sustainable supply chain. InfraBuild products meet the two mandatory Compliance Requirements (20.1.0) of a 'Responsible Steel Maker' by complying with the following:

- A current valid and certified ISO 14001 Environmental Management System in place for the manufacturing facility where the steel is produced
- A current member of the worldsteel (WSA) Climate Action Programme (CAP).

Our ISO 14001 certification is available here: [InfraBuild](#) and [Whyalla](#)

Our membership of the worldsteel Climate Action Programme is available [here](#).

For concrete framed buildings, the use of InfraBuild's reinforcing steel and mesh products, produced using Polymer Injection Technology (PIT) is awarded one Green Star point in this sub-category. PIT is acknowledged by the GBCA as an energy reducing process for the manufacture of steel.

One Green Star point is awarded for steel framed buildings which have at least 60 percent of the structural steel supplied by a 'Responsible Steel Fabricator' or steel contractor who uses InfraBuild's products and is a current member of the Environmental Sustainability Charter Group of the Australian Steel Institute.

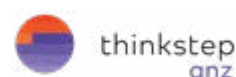
Sustainable Products

The Green Star tool rewards sustainability and transparency initiatives including specification and procurement of products with EPDs. Using InfraBuild's range of products with EPDs, can contribute to the three points available in the Green Star 'Sustainable Products' sub category.

Recognising the increasing focus on the Circular Economy as a key aspect of sustainability, Material Circularity Indicator (MCI) metrics has been developed for all the products covered by the EPDs. The inclusion of MCI data in the relaunched EPDs provides sustainability professionals with additional information and allows for benchmarking of InfraBuild processes as a more circular manufacturing model evolves throughout the business.

“The MCI tool is invaluable for measuring circularity. When an MCI and EPD are combined, it ensures that a full environmental picture is communicated. InfraBuild have shown real leadership by becoming the first company in Australasia to build the MCI into their EPDs.”

Barbara Nebel
CEO, thinkstep-anz



Construction and Demolition Waste

The Green Star tool rewards projects which recycle building materials in order to reduce construction waste going to landfill. InfraBuild's recycling business, InfraBuild Recycling can help by accepting a range of structural and reinforcing steels from building sites.

VIRIBAR® Viribar® – A new high-strength reinforcing steel

Viribar®750 is InfraBuild Construction Solutions' new range of 750 MPa grade, Class N (750N) bars for fitments in smaller diameters which are equivalent in force capacity to the existing 500 MPa grade, Class N (500N) bars.

This equivalence means that the new Viribar®750 fitments can be substituted for the existing 500 MPa fitments for standard reinforced concrete columns.

By using Viribar®750, the 33% reduction in the mass of steel fitments has the potential to significantly improve the sustainability credentials and constructability of a project. Projects that use Viribar®750 fitments can be awarded one (1) Green Star Innovation point. [Click here](#) for more information.

Click the link for more information on [Viribar®750 fitments](#).



What is ISC and the IS Rating Scheme?

ISC is the peak body for advancing sustainability in national infrastructure projects. The Council developed and now administers the Infrastructure Sustainability (IS) rating scheme, which evaluates sustainability across infrastructure design, construction and operation. ISC also looks at the environmental, social, economic and governance aspects of infrastructure projects and assets.

How can you acquire more IS Rating Scheme points?

It's now possible to secure up to six points in the material category of the IS Rating Scheme.

Up to three points are awarded for reducing the life cycle environmental impact of materials used. InfraBuild has a range of products and services designed to minimise the impact on the environment.

These include:

- Design guides and advice on optimising designs to minimise the quantities of material consumed
- Designs and products that reduce wastage such as prefabricated reinforcing cages and mats
- Material-efficient products such as high-strength and ductile steels.

Further points are available to encourage the procurement of materials with environmental product labels, such as an EPD. ISC recognises that InfraBuild's EPDs provide valuable impact data which is third-party verified and compliant with EN15804.

The use of InfraBuild structural steel or reinforcing products with EPDs on an infrastructure project may help your project achieve ISv2.0 Rso-6 and ISv1.2 Mat-2 credits. The IS Rating Scheme may also award additional points if there are sufficient materials used that have a recognised EPD, such as those associated with InfraBuild products.

ISC ISupply

ISC's ISupply Directory connects sustainable products and services with projects and assets undertaking an IS rating. InfraBuild has been part of the ISupply Directory since its inception. Our listing within the ISupply directory can help your project or asset achieve sustainability outcomes rewarded under the IS rating scheme. [Click here](#) to access InfraBuild's listing in the Directory.



“Congratulations to InfraBuild on the release of a further six Environmental Product Declarations which transparently communicate the life cycle impact of these products. InfraBuild continue to take action that aligns with their organisational values and mission to drive nation-building infrastructure using local resources and more sustainable solutions.”



Ainsley Simpson
CEO, Infrastructure
Sustainability
Council

For information on InfraBuild's steel products and services and how we can help you achieve greater sustainability credits for your projects visit www.infrabuild.com

