

## What is Green Star SA?

Green Star SA is a voluntary environmental rating system that evaluates the environmental design and construction of buildings. Green Star SA tools were developed to provide the property industry with an objective measurement for green buildings and to recognise and reward environmental leadership in the property industry.

The objectives of the Green Star SA Rating Tools are as follows:

- Establish a common language and standard of measurement for green buildings;
- Promote integrated, whole-building design;
- Raise awareness of green building benefits.
- Recognise environmental leadership;
- Reduce the environmental impacts of development.

## How does Green Star SA work?

Green Star SA consists of nine separate environmental impact categories under which specific key criteria are grouped and assessed. These nine categories are:

- Management
- Indoor Environmental Quality
- Energy
- Transport
- Water
- Materials
- Land Use and Ecology
- Emissions
- Innovation

The categories are divided into credits, each of which addresses an initiative that improves or has the potential to improve a design, project or building's environmental performance. Points are awarded in each credit for actions that demonstrate that the project has met the overall objectives of Green Star SA and the specific aims of the Green Star SA rating tool. Once all credits in each category are assessed, a percentage score for the category is calculated. A Green Star SA

environmental weighting factor is then applied to each of the project's category scores to reach a single score. Green Star SA environmental weighting factors vary across rating tools to reflect differing environmental concerns and imperatives for different building types and lifecycle phases.

## **Materials Category**

The Materials Category of the Green Star SA rating tools consist of Credits which target the consumption of resources through selection, use, reuse and efficient management practices. The credits reward reduction, reuse and the use of recycled and recyclable materials wherever possible. The credits aim to address and improve the environmental impacts of building products and materials by taking into consideration issues pertaining to the lifespan, lifecycle and approach towards the use of these resources within the building fabrics of Green Star SA certified projects. The various environmental and human health impacts arising from building materials are reduced when use of virgin materials is limited and special attention is given to the selection of ecologically and health-preferable materials. Aspects of the materials and resource use that are rewarded under the Green Star SA include, but are not limited to: sustainable timber, reuse of building façade and structure; recycled content of steel and concrete.

## **Indoor Environment Quality (IEQ) Category**

The IEQ Category of the Green Star SA rating tools consist of Credits which target the wellbeing of the occupants. The credits address how the heating and cooling systems, lighting, indoor air pollutants and some building attributes contribute to a healthier indoor environment quality. Health issues such as minimisation of indoor volatile organic compounds, asbestos and formaldehyde emissions as well as ventilation are addressed in this category.

## Credit Summary

Credit Number	Credit name	Aim of Credit	Tools
<b>Mat-5</b>	Concrete	To encourage and recognise the reduction of embodied energy and resource depletion occurring through use of concrete.	All tools
<b>Mat-6</b>	Steel	To encourage and recognise the reduction in embodied energy and resource depletion associated with reduced use of virgin steel.	All tools
<b>Mat-7*</b>	PVC Minimisation	To encourage and recognise the reduction in use of Poly Vinyl Chloride (PVC) products in South African buildings.	Office v1 and Retail Centre v1
<b>Mat-8</b>	Sustainable Timber	To encourage and recognise the specification of reused timber products or timber that has certified environmentally-responsible forest management practices.	All tools
<b>Mat-9</b>	Design for Disassembly	To encourage and recognise designs that minimise the embodied energy and resources associated with demolition.	All tools
<b>Mat-10</b>	Dematerialisation	To encourage and recognise designs that produces a net reduction in the total amount of material used.	All tools
<b>Mat-11</b>	Local Sourcing	To encourage and recognise the environmental advantages gained, in the form of reduced transportation emissions, by using materials and products that are sourced within close proximity to the site.	All tools
<b>Mat-13</b>	Masonry	To encourage and recognise the reduction of embodied energy and resource depletion associated with a reduction of virgin material in masonry units.	Multi-Unit Residential and Public & Education Building
<b>IEQ-13</b>	Volatile Organic Compounds	To encourage and recognise specification of interior finishes that minimise the contribution and levels of Volatile Organic Compounds in buildings.	All tools
<b>IEQ-14</b>	Formaldehyde Minimisation	To encourage and recognise the specification of products with low formaldehyde emission levels.	All tools

**Note:** the credits and points available might vary across the suite of Green Star SA rating tools.

\* Please refer to the GBCSA's PVC Communiqué for detailed information <http://www.gbcsa.org.za/rating-tools/products-materials/>

## **Product testing**

The Green Building Council of South Africa (GBCSA) will not test, review or certify products or materials. Instead, the Green Building Council will rely on credible, third party certification bodies as and when such bodies are formed.

## **Product Marketing**

Product suppliers are welcome to market their product as contributing to a project's Green Star SA rating provided that the language neither states nor implies endorsement by the GBCSA or the Green Star SA system. Green Star SA credit requirements specify product performance of products in aggregate, and do not certify individual products or brands but whole buildings. As such, a product cannot be Green Star SA certified, Green Star SA rated, or in any other way officially approved by Green Star SA. The GBCSA does not endorse any claims. Therefore, products that meet the Green Star performance criteria can only contribute towards earning points needed for Green Star SA certification; they cannot be said to earn points towards Green Star SA certification on their own. For all products, the project team will need to validate the environmental merit of a product or material in a project's submission for Green Star SA assessment as per the requirements of the Green Star SA technical manuals.

## **Revision of credits**

The Green Building Council of South Africa (GBCSA) is committed to continuously improving the Green Star SA environmental rating tools for buildings. As such, the GBCSA conducts periodic credit reviews based on stakeholder feedback and research and consultation. This is done to establish the appropriateness of current credits, identify best practice benchmarks and provide clear guidance to suppliers, manufacturers and Green Star SA project teams on the compliance requirements.

Updates to the Green Star SA can be as a result of a Technical Clarifications (TC) and or a Credit Interpretation Request (CIR). The Green Star SA Technical Clarifications, Credit Interpretation Request (CIR) Rulings and Errata provide an essential source of information to all projects undertaking Green Star SA certification.

**Technical Clarifications** represent the GBCSA's answers to technical queries and complement Green Star SA Technical Manuals (e.g., the Assessment Team will use the Technical Clarifications as public precedent). They do not amend but clarify the Credit Criteria or Documentation Requirements. They are an extension of the Technical Manual; it is the responsibility of the project teams to stay up to date with this section of the website.

A **Credit Interpretation Request** is submitted to the GBCSA if a project team wishes to advocate for an alternative yet equivalent method of meeting the Aim of Credit. Each Technical Manual outlines a number of options for meeting the Aim of Credit, but if the project team has developed an alternative design solution or an alternative form of documentation, it may wish to submit a CIR. If the CIR is granted, it will be made available to every registered Green Star SA project and be incorporated into subsequent versions of the Green Star SA rating tools.

This TC and CIR database is an essential component of each Green Star SA tool and project teams are advised to check the GBCSA website regularly for the latest TC and CIR rulings. More information on the TC and CIR rulings can be viewed on the GBCSA's website (<http://www.gbcsa.org.za/rating-tools/technical-clarification-cir-rulings-erratum/>).