

BUILDING FROM SUSTAINABLE PRODUCTS

Introducing Singapore Green
Building Product Certification Scheme



1. ABOUT SINGAPORE GREEN BUILDING COUNCIL

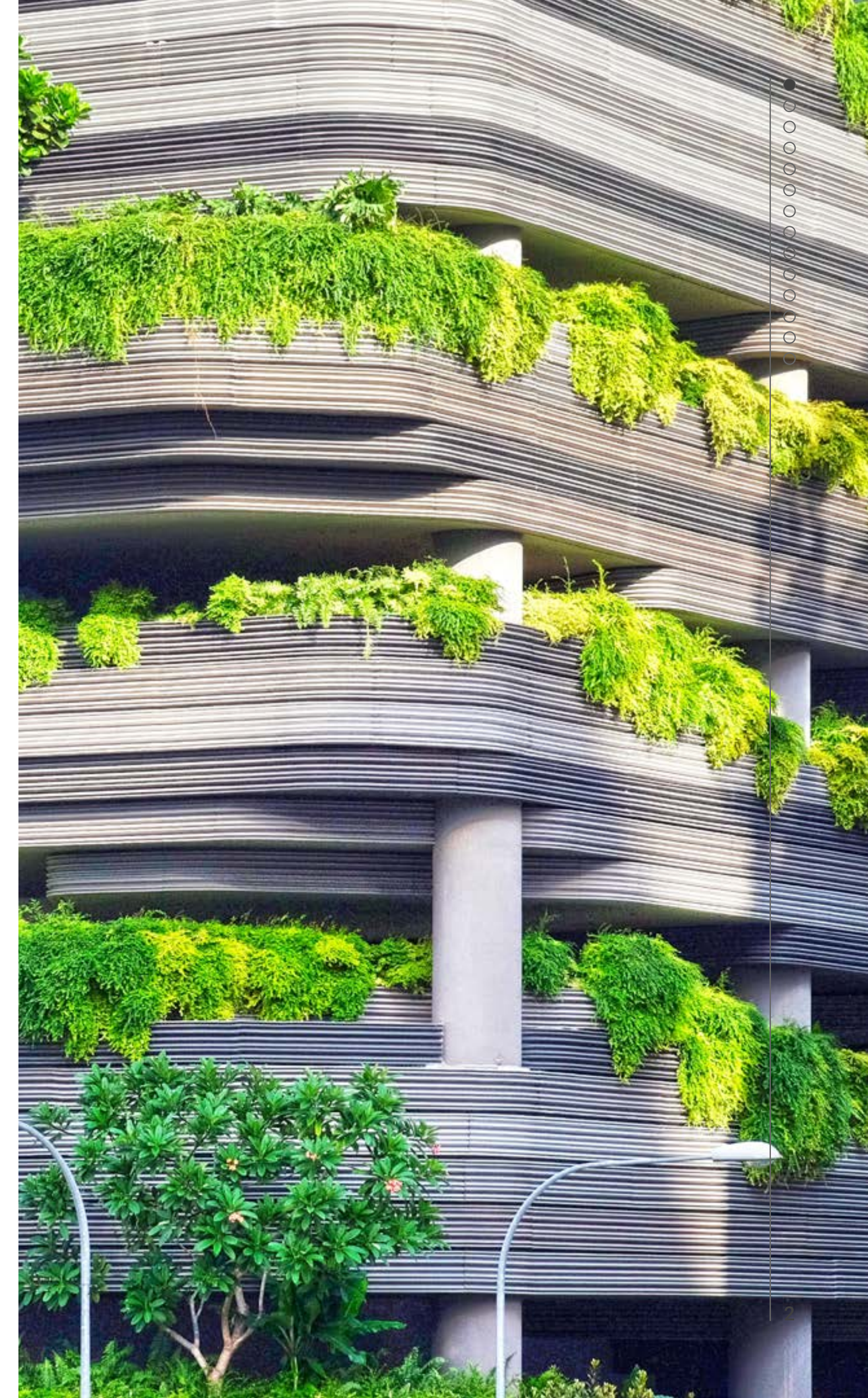
- Overview of SGBC
- Welcome Message

2. ABOUT SINGAPORE GREEN BUILDING PRODUCT (SGBP) CERTIFICATION SCHEME

- Introduction to SGBP
- Approach
- Intended Users
- SGBP Product Categories
- SGBP Assessment Criteria

3. BECOMING AN INDUSTRY LEADER

- Certification Process Timeline
- Key Benefits of the SGBP
- Alignment with similar schemes and programmes



ABOUT SINGAPORE GREEN BUILDING COUNCIL

The Singapore Green Building Council (SGBC) enables sustainability across the building and construction value chain, championing capability development and innovative solutions that support industry transformation through our Membership, Certification and outreach programmes. The repository of proven green building solutions helps to enable green procurement in the industry, profiling leading and innovative solutions that go towards building a greener, healthier built environment. Together with a growing pool of industry-recognised Green Mark Accredited Professionals, SGBC addresses every touchpoint of the green building ecosystem. For more information, please visit www.sgbc.sg

ABOUT SINGAPORE GREEN BUILDING PRODUCT CERTIFICATION SCHEME

Singapore Green Building Product (SGBP) is a certification for green building products and materials. It is based on scientific and engineering principles and built upon the collective knowledge and expertise of the building and construction industry.

The SGBP certification scheme advances the built environment to one that is greener and more carbon-efficient while facilitating sustainable procurement. The certification ensures that sustainability is integrated throughout the design and manufacturing process of products.



WELCOME FROM SINGAPORE GREEN BUILDING COUNCIL

SGBC'S VISION FOR GREEN BUILDINGS

Welcome to the SGBP certification scheme guide. We are delighted to be publishing this guide as it supports SGBC's mission of enabling sustainability in the built environment and is an important step towards further collaboration and ongoing refinement of the scheme.

The SGBP certification scheme advances the built environment to one that is greener and more carbon-efficient while facilitating sustainable procurement. The certification ensures that sustainability is integrated throughout the design and manufacturing process of products.

Aligned with the World Green Building Council's vision of green buildings for everyone, everywhere, SGBC aims to make the spaces we live, work and play in healthier, more sustainable, and more resource-efficient. We recognise the need for green building products, materials and solutions to support this mission.

With the SGBP certification scheme, we've set a high benchmark for sustainable building products and materials. This ensures sustainability targets are met while providing transparency and credibility to the products we choose to use when building green into our spaces and places.

“ We want our built environment to consist of sustainable spaces. The SGBP certification scheme enables products to ensure their superior sustainability performance, making building and designing sustainably easier.”

INTRODUCTION TO SGBP



OVERVIEW

The SGBP Certification Scheme covers a wide range of products and assesses them based on their sustainability performance.

Environmental and health impacts can occur across a product's lifecycle, from raw material extraction or cultivation, through manufacturing, use and end-of-use management. The SGBP Certification Scheme looks at the whole lifecycle of products to account for the full impact.

METHODOLOGY

The SGBP Certification Scheme assesses products and materials on their sustainability performance.

The assessment criteria is categorised into common criteria which apply to most products and specific criteria which apply only to relevant products.

Our team at SGBC will identify for each applicant which assessment criteria are most suitable for their products.

For some products, the assessment against criteria covers the whole product lifecycle, while for other products, the assessment criteria focuses on a select few lifecycle stages across raw material extraction

or cultivation, manufacturing, distribution, use, and end-of-use.

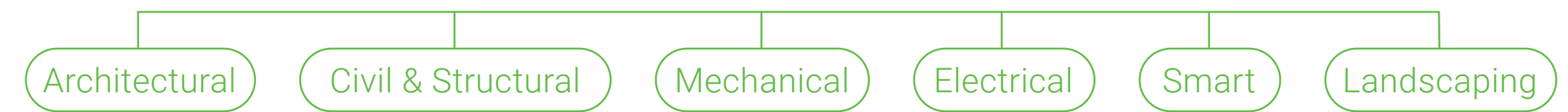
Our team of assessors at SGBC will assess the degree to which your product meets the assessment criteria. For some products, the applicant will need to show proof of laboratory test results or other documentation to verify the product's alignment with some criteria. A list of lab partners is provided [here](#) to assist applicants if third party tests are required.

After the assessment, your product will be awarded between 1 and 4 ticks, based on its' performance. 1 tick indicates good performance, while 4 ticks indicates leading industry performance.

WHAT THE PRODUCT CERTIFICATION SCHEME IS

WHAT THE SCHEME IS AND HOW IT WORKS

PRODUCT CATEGORY



ASSESSMENT OF PRODUCT

We look at core and product specialized criteria - some are mandatory, others are optional.

We use a tick rating system (1-4 ticks) to assess each product.



PRODUCT IS CERTIFIED





APPROACH

OUR SUSTAINABILITY APPROACH

The SGBP Certification Scheme takes a holistic approach to sustainability. We certify building products for their performance across five areas of environmental and health impacts over the whole lifecycle of a product, from extraction or cultivation of raw materials through to end-of-use management.

The SGBP Certification Scheme rigorously and independently assesses products, providing your customers with the assurance that your sustainability claims are credible.

WHY USING SUSTAINABLE PRODUCTS MATTERS

The built environment is responsible for a large proportion of the world's carbon emissions and consumption of materials. Integrating sustainability into the built environment is a key strategy to mitigate climate change, environmental degradation, and biodiversity loss.

In addition to minimising the environmental impacts of the built environment, sustainable buildings also provide healthier, more comfortable and more inclusive spaces for us to live and work.



INTENDED USERS

HOW CAN THE CERTIFICATION PROGRAM HELP YOU?

IF YOU'RE A PRODUCT SUPPLIER:

- Analysis of your product's sustainability performance by experts and certification by a credible source.
- Opportunity and insight into how to further develop your products to be more sustainable.
- Greater awareness of your product for use in our current and future buildings.

IF YOU'RE A DESIGNER/SPECIFIER:

- An overview of products that are certified sustainable.
- An understanding of how a product stacks up against others in terms of their sustainability performance.
- Easier decision-making when choosing more sustainable products.

IF YOU'RE A BUILDER/OWNER:

- An overview of products that are certified sustainable.
- Data around the environmental properties of the products you use.
- A unique selling point for your building projects.

IF YOU'RE A TENANT/OCCUPANT:

- An understanding of how sustainable the spaces you live and work in are.
- Health benefits of living/working in a greener building.

HOW THE CERTIFICATION IS USED

Once a product is certified, SGBC will issue the product a certificate. The certified products will be listed on the SGBP Certification Interactive Directory on the Singapore Green Building Council's website.

This Interactive Directory is actively used by building industry professionals such as consultants, contractors, building developers and owners.

Stakeholders can demand that products/materials used for a building are **SGBP certified.**

Certified products can gain credits under various green building rating tools.



THE PRODUCT CATEGORIES

Products are grouped into six categories based on their use in buildings. Each group has a similar set of assessment criteria.

PRODUCT CATEGORY	ARCHITECTURAL	CIVIL & STRUCTURAL	MECHANICAL	ELECTRICAL	SMART	LANDSCAPING
DESCRIPTION	Products used in a building's interior and on a building's envelope.	Products used in a building's structure and form.	Products that address a building's ventilation, plumbing and sanitary requirements.	Products that enable the delivery of electricity for a building and provide electric mobility within a building.	Products that optimise building operations to enhance efficiency.	Products used for the provision of greenery in both outdoor and indoor spaces
WHY IT'S IMPORTANT FOR THESE PRODUCTS TO BE SGBP CERTIFIED:	To provide a comfortable indoor environment. Products must satisfy material toxicity levels to qualify for certification.	To provide a safe structural form while maximising the efficiency of materials and minimising embodied carbon.	To facilitate climate control and create a space that is better for the environment as well as for occupants.	To satisfy a building's needs in an energy efficient manner to reduce impact on the natural environment.	To optimise building operations, minimise environmental impact and use resources efficiently.	To create a balanced lifestyle with nature and create functional spaces using low carbon materials.
PRODUCT EXAMPLES	<ul style="list-style-type: none"> – Interior finishes – Paints/coatings – Façade/ glazing – Sealant/adhesives – Termite protection 	<ul style="list-style-type: none"> – Steel – Concrete – Pre-case products – Cement – Engineered timber 	<ul style="list-style-type: none"> – ACMV equipment – Pumps/Motor – Pipes/Fittings – Cooling tower water treatment – Plumbing and sanitary 	<ul style="list-style-type: none"> – Cable – Busbar – Switchboard – Energy storage system – Escalator – Elevator 	<ul style="list-style-type: none"> – Sensor – Controller device – Smart lighting hardware – Smart digital platforms 	<ul style="list-style-type: none"> – Hardscape – Green roof/wall – Drainage cell – Slope stabiliser – Rainwater harvesting





SGBP ASSESSMENT CRITERIA

The assessment criteria are designed to assess products on their performance over their lifecycle.

There are 12 common criteria which apply to most products. These cover low environmental impact and quality manufacturing, avoidance of hazardous materials, carbon footprint reporting and reduction pathways, and innovation.

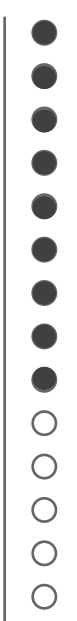
In addition to common criteria, specific criteria apply to relevant products only.

For example, the specific criteria applying to Interior products are different from the specialised criteria applying to Outdoor products due to the different functionality and use of these products. Some of the specific criteria for Architectural products

include volatile organic compounds (VOC) content and air emissions performance for instance. An example of the specific criteria for Mechanical products would be energy efficiency.

For both the common and specific assessment criteria, some are mandatory, and others are optional.

The assessment criteria have been drafted by industry professionals and experts. We continually review the criteria to ensure they reflect the current science, engineering and best practice.



COMMON ASSESSMENT CRITERIA

CORE REQUIREMENTS ACROSS MOST PRODUCT	PRODUCT LIFECYCLE STAGES			
	RAW MATERIAL EXTRACTION	MANUFACTURING	USE	END OF LIFE
COMMON				
Energy management of manufacturing facilities		●		
Water management of manufacturing facilities		●		
Waste management of manufacturing activities		●		
Quality management system		●		
Avoidance of hazardous substances	●	●	●	●
Avoidance of heavy metals	●	●	●	●
Carbon footprint evaluation	●	●	●	●
Greenhouse gas awareness	●	●	●	●
Green innovations	●	●	●	●
PRODUCT SPECIFIC				
Energy efficiency			●	
VOC emissions (indoor air quality impact)			●	
Recycled content & circularity	●	●		

This guide is for general purposes and the assessment criteria will change depending on your specific product. See glossary of terms for definitions.



CERTIFICATION PROCESS TIMELINE





KEY BENEFITS OF SGBP

ENVIRONMENTAL BENEFITS

- Products with a lower carbon footprint and embodied carbon
- More durable products with a longer lifespan
- Better energy efficiency
- Reduced water wastage
- Minimise waste

BUSINESS BENEFITS

- Increased asset value
- Lower operational costs
- Greater market exposure and global access
- Unique selling point in a crowded market
- A competitive edge

HEALTH BENEFITS

- Avoidance of hazardous substances
- Improved wellbeing of occupants
- Safeguard human health



ALIGNMENT WITH SIMILAR SCHEMES AND PROGRAMMES

SGBP RECOGNITION BY GREEN BUILDING RATING TOOLS

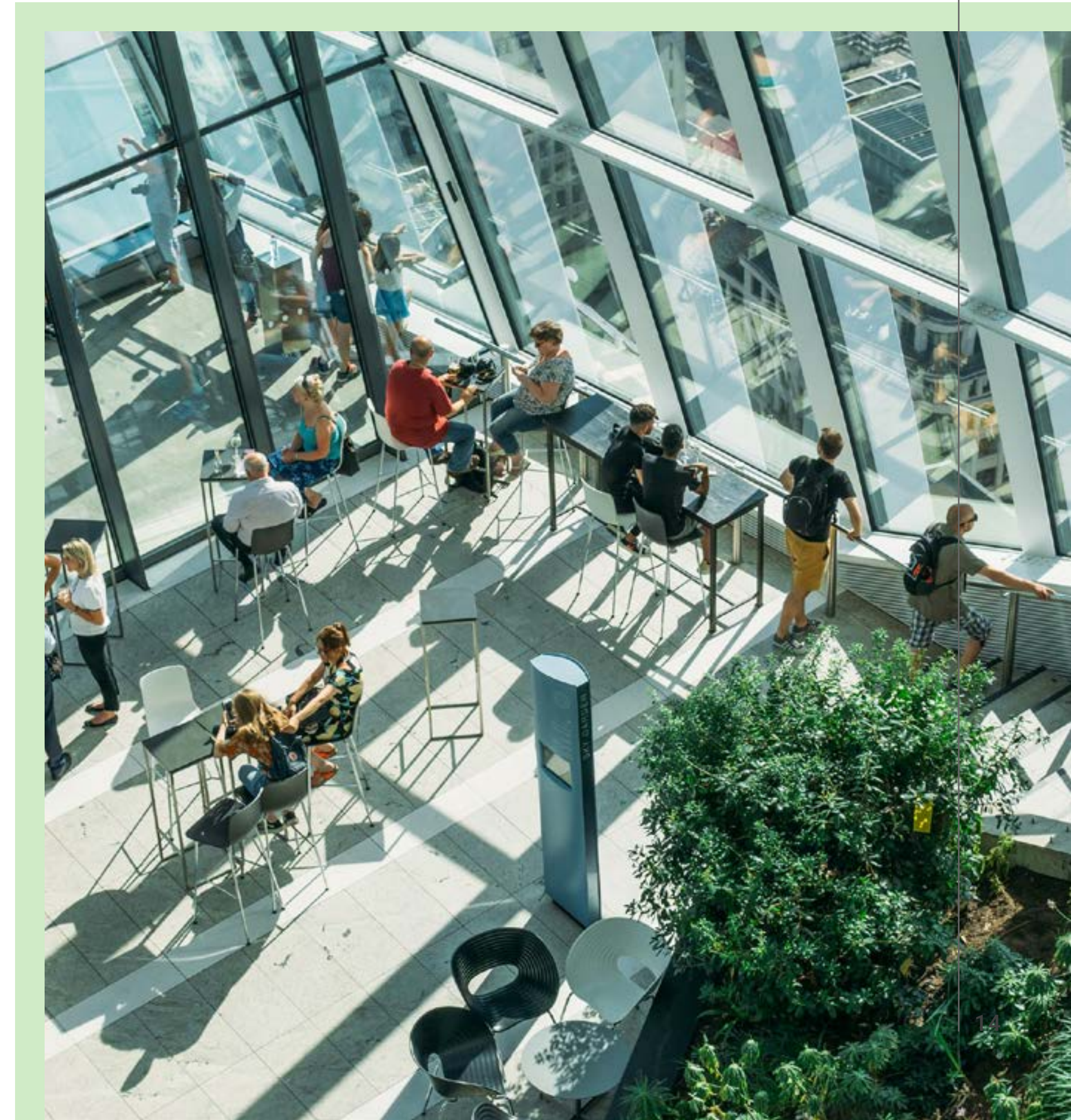
SGBP is one of the key standards and benchmarks for green building products in the building and construction industry.

Products and materials certified by the SGBP Scheme are highly recognised under the Green Mark Scheme (Singapore's national green building rating tool administered by the Building and Construction Authority), which allows certified products to accrue points that count towards a project's Green Mark rating. The more highly rated a product is under the SGBP Scheme (i.e., the more ticks it has achieved), the more points are awarded towards the Green Mark rating.

SGBP Certification Scheme is also widely accepted by regional green building rating tools for its coverage of product's sustainability performance. Examples include GreenRE, a rating tool set up by the Real Estate & Housing Developments' Association (REHDA) of Malaysia, and LOTUS, Vietnam Green Building Council's rating tool. The SGBP complies with many of the requirements

in ISO 14024 Environmental labels and declarations – Type I environmental labelling. We are always working to improve our Scheme's quality and usability.

The SGBP Certification Scheme is similar to internationally leading eco-labels, such as Cradle2Cradle, DECLARE, Global Green Tag, Good Environmental Choice Australia, Korea Environmental Industry and Technology Institute. Future versions of the SGBP Certification Scheme may provide additional recognition for products that excel in addressing social issues, circular economy, and low embodied carbon, and reorganise the Scheme's governance to allow for products certified under our Scheme to be recognised under other eco-labels.



GLOSSARY OF TERMS

1. Carbon footprint	The amount of carbon dioxide released into the atmosphere as a result of the activities of a particular individual, organisation, or community.	8. Heavy Metals	The term heavy metal refers to any metallic chemical element that has a relatively high density and is toxic or poisonous at low concentrations. Examples of heavy metals include mercury (Hg), cadmium (Cd), chromium (Cr), and lead (Pb).
2. Circular economy	This concept describes an economic framework where materials are considered highly valued resources, products are kept in use for longer, waste is not created, and natural systems are regenerated.	9. ISO 14024 Environmental labels and declarations – Type I environmental labelling	This is the International Standard that describes best practice principles and procedures for developing Type I environmental labelling programmes, including the selection of product categories, product environmental criteria and product function characteristics, assessing and demonstrating compliance, and the certification procedures for awarding the label.
3. Embodied carbon	This refers to the carbon footprint of a product, usually calculated from the 'cradle to the grave', i.e., for the whole lifecycle of a product from the raw extraction or cultivation of materials through to the end-of-use treatment of its component materials.	10. Lifecycle	A life cycle is a course of events that brings a new product into existence and follows its growth into a mature product and eventual critical mass and decline.
4. Energy management	The process of tracking and optimising energy consumption to conserve usage in a building.	11. Quality management system	A quality management system (QMS) is a set of policies, processes and procedures, commonly demonstrated by ISO 9001 certification, and required for planning and execution in the core business area of an organisation.
5. Environmental management system	A set of processes and practices that enable an organisation to reduce its environmental impacts and increase its operating efficiency, commonly demonstrated by ISO 14001 certification.	12. Volatile Organic Compound (VOC)	VOCs are a group of carbon-based chemicals that easily evaporate at room temperature. Many common household materials and products, such as paints and cleaning products, give off VOCs.
6. Greenhouse Gas	A greenhouse gas is a gas that absorbs and emits radiant energy within the thermal infrared range, causing the greenhouse effect. The primary greenhouse gases in Earth's atmosphere are water vapor, carbon dioxide, methane, nitrous oxide, and ozone.	13. Waste management	Waste management includes the processes and actions required to manage waste from its inception to its final disposal.
7. Hazardous Substances	Hazardous substances have the potential to cause large scale damage, are highly toxic and pollutive and/or generate toxic wastes that are difficult to dispose. The SGBP Scheme prohibits hazardous substances, for example agents with carcinogenic risk classified by the International Agency for Research on Cancer (IARC) and those listed under the European Union Directives on the Restriction of Hazardous Substances (RoHS) in electronic and electrical equipment and the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) on substances of very high concern (SVHCs). The assessment criteria for each product provides specific requirements in relation to hazardous substances. For example, it may be required to show a certificate of compliance with REACH.	14. Water management	The activity of planning, developing, distributing and managing the optimum use of water resources.