# AUSTRALIAN ARCHITECTS DECLARE SUSTAINABLE MATERIALS GUIDE

Version 2 - August 2025

## ACKNOWLEDGMENT OF COUNTRY

The authors of this guide recognise that we practice on the lands of First Nations peoples and acknowledge their deep, continuous connection to Country — the lands, waters, and skies that sustain life.

We honour the knowledge and custodianship of First Nations communities, not only where we live and work, but also across the diverse lands from which the materials in our built environment are harvested and products are developed.

We pay our respects to Elders past and present, and extend that respect to all First Nations peoples of Australia.

<sup>\*</sup> Please consider the environment before printing this guide

### **About this guide**

This guide supports architects and designers make more informed, values-driven decisions about the products they specify.

According to the UN, construction and the built environment account for **37%** of carbon emissions globally.

As architects and designers, we play a crucial role in shaping a more sustainable future by making informed decisions about the materials and products we specify.

However, this responsibility is not ours alone. Collaboration with manufacturers, suppliers, and builders is key to driving the change we need. This guide is a supplement to **Product Aware** and is designed to support architects and designers in navigating the complexities of responsible material and product selection.

It outlines the **Product Aware** criteria and provides an example of how they can be embedded into a selection framework for implementation within your practice. It also lists trusted resources to help firms apply the sustainability goals outlined in their Sustainability Action Plan (SAP).

When we prioritise responsible materials and products, we advocate not only for the health of the planet but also for greater transparency in the industry. This sends a clear message to manufacturers about the growing demand for openness around supply chains, production processes, and product ingredients.

By engaging actively, asking the right questions, and selecting products with credible transparency documentation, we help drive the industry toward our shared sustainability goals.

Material choices matter.
They have far-reaching impacts on the climate, ecosystems, human health, and human rights.

## What is **Product Aware?**



www.productaware.au



Product Aware is an online database that compiles supplier information on materials and products. It was developed to support climate action by improving access to transparent sustainability data within the industry.



Information presented in a standardised format, allowing easy comparison of 'apples to apples'.



A free, independent Australian platform that helps architects, designers, and suppliers simplify sustainability product selection.

### What it's not...

- A replacement for EPDs or other third party certifications
- A rating tool, or value judgment
- Substitute for thorough research and consideration

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### From criteria to evidence

Key big picture definitions of the criteria **Product Aware** uses to evaluate materials and products.

**Product Aware** defines sustainability based on 5 criteria. Each of these criteria are distilled into clear goals that guide product selection and design decisions.

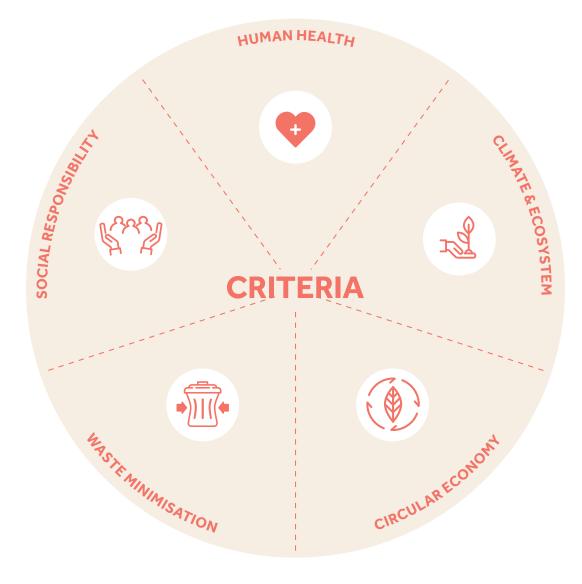
To realise these goals, indicators such as the presence of harmful ingredients, embodied carbon values, recycled content and labor practices are extracted from the questions asked on **Product Aware**.

Finally, these indicators are then validated through credible forms of evidence like certifications and declarations.

This breakdown helps translate complex criteria into practical decisions using evidence to support your conscious selections.

### The Evidence

While no single certification or declaration addresses all criteria, together they form a more complete picture of a material or product's impact, helping align your choices with sustainability values and project goals.



#### **CRITERIA**



### HUMAN HEALTH

#### **GOAL**

Enhance human health and wellbeing by eliminating harmful substances and emissions, thereby contributing to safer and healthier built environments.

#### **INDICATORS**

- Risks to human health during manufacturing, installation.
   Modification, or deconstruction 2.
- 2. Presence of ECHA Substances of Very High Concern or Living Building Challenge (LBC) Red List Chemicals
- 3. Volume of VOC emissions

#### **EVIDENCE**

- 1. Certifications
- 2. HPD (Health Product Declarations) or PHD (Product Health Declaration)
- 3. LFIA Declare Label
- 4. Manufacturer affidavits



### CLIMATE & ECOSYSTEM HEALTH

Restore and regenerate natural systems by protecting air, water, and biodiversity, while minimising environmental harm through sustainable sourcing and production practices.

- Life Cycle Assessment (LCA) scope
- 2. Embodied carbon intensity
- 3. % Recycled or reused content
- 4. Embodied water content
- **5.** Use of recycled water / harvested rainwater in manufacturing
- **6.** Risks of harm to nature throughout lifecycle
- **7.** Minimisation of transport (A4) emissions
- 8. % Certified compostable

- 1. Certifications
- 2. EPD (Environmental Product Declaration)
- 3. PCF (Product Carbon Footprint)
- 4. LFIA Declare Label
- Manufacturer affidavits



### **CIRCULAR ECONOMY**

Enable reuse, recycling, and repurposing, supporting building longevity and design for disassembly, with the goal of creating a circular construction cycle where resources remain in use for as long as possible.

- **1.** Is reusable and/or designed for disassembly.
- 2. End-of-life recovery / Take back program
- 3. Recyclability at end of life
- **4.** Reprocessing into same materials vs downcycling
- 5. Installation methods to enable end of life plan

- 1. Certifications
- 2. EPD (Environmental Product Declaration)
- 3. LFIA Declare Label
- Manufacturer affidavits



### WASTE MINIMISATION

Reduce material waste across the project lifecycle by minimising packaging, leveraging modular design or smart dimensioning, supporting sustainable manufacturing, and promoting recycling and reuse to limit landfill contributions.

- Minimisation of construction waste
- 2. Minimisation of manufacturer waste
- 3. Sustainability of packaging
- 1. Certifications
- 2. EPD (Environmental Product Declaration)
- 3. LFIA Declare Label
- 4. Manufacturer affidavits



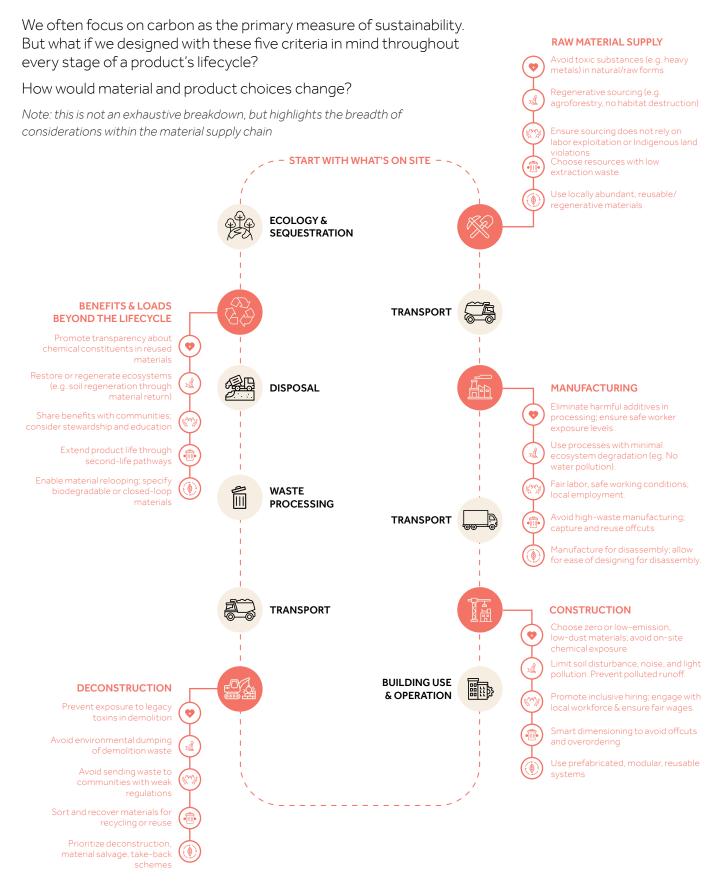
### SOCIAL RESPONSIBILITY

Uphold ethical practices by sourcing materials from suppliers committed to human rights, fair labour conditions, and the social and economic wellbeing of communities within their supply chains.

- 1. Human rights and modern slavery risk assessment
- 2. Modern slavery action plan
- Response to identified incidents of human rights impacts, labour exploitation or modern slavery
- 1. Certifications
- 2. Modern Slavery Declaration
- 3. Manufacturer affidavits

### Planning ahead

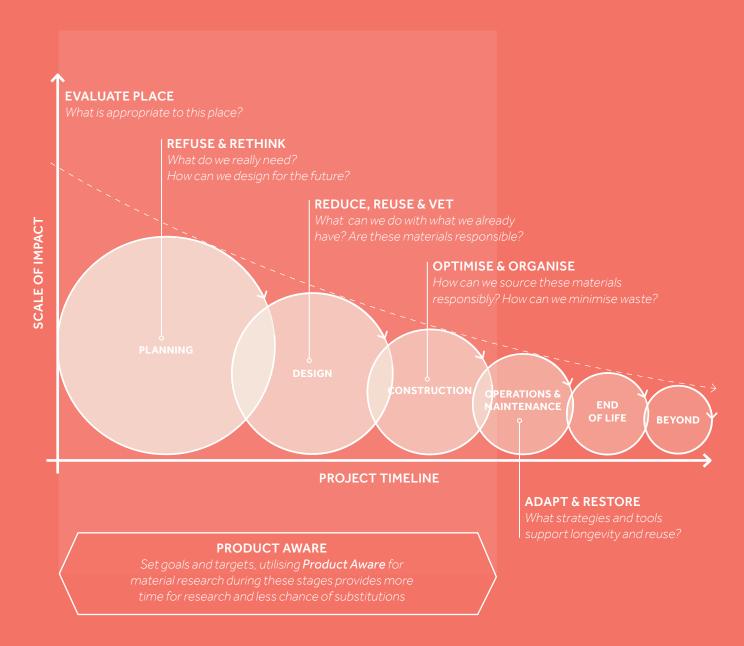
### Beyond carbon: A whole-life lens on material impacts



### Planning ahead

### Material decisions compound over time

Start strong: the earlier you engage with material selections, the more you can shape their impact. At each stage, ask how your decisions can reduce harm, support ecosystems, and enable future adaptability, setting the stage for a more responsible and resilient project.



## **Example framework** for your practice

There's no single framework or a right or wrong way to select materials and products. But sometimes, seeing one in action can be really helpful.

This is an approach you could implement to ensure each criteria is considered throughout the material and product selection process.

Utilise databases such as **Product Aware** to help you compare options

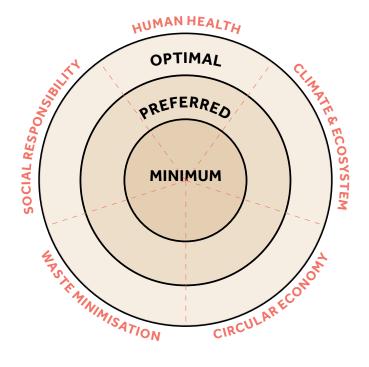
Always remember that the best products and materials are those that already exist, so preference reclaimed or salvaged where possible.

### 1.

Evaluate the 5 criteria and their indicators and set goals for your practice. Consider a tiered system setting minimum, preferred and optimal goals per criteria.

### What are the non-negotiables?

This may vary by location, project type, etc



### 2.

## Organise the supporting evidence needed to meet these goals for your practice.

This may be a combination of declarations, certifications or other transparency documentation

- Preference third party verified certifications
- Certifications and declarations recognised by the Green Building Council of Australia (GBCA) for Responsible Product Value (RPV)

Material & Product
Certifications
Hierarchy

Define your variables per scope

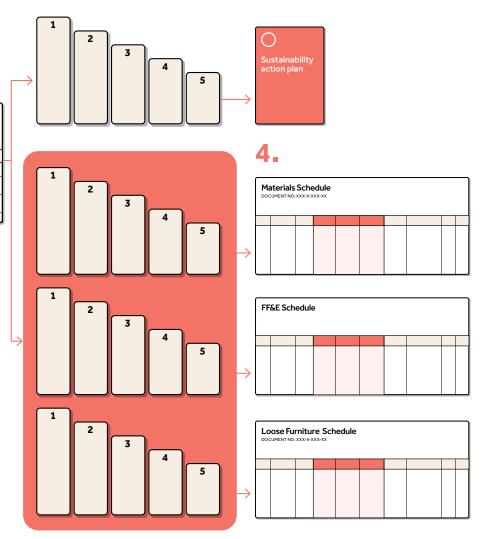
### **3.**

## Develop a hierarchy of these indicators to achieve the goals set by your practice.

### 3a.

### Integrate into your Sustainability Action Plan (SAP)

This ensures sustainable, consistent, and trackable decisions.



### Example framework for your practice

### A step-by-step breakdown

### Step



### Create a Material & Product Evidence master database

Start by creating a database of supporting evidence (certifications and declarations) needed to meet the goals set by your practice. This may depend on the location of your projects and your practice's values. Review annually to ensure it's kept up to date.

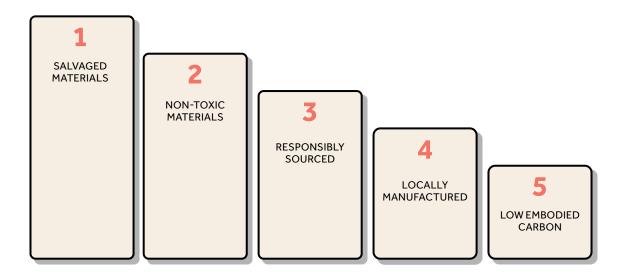
Material & Product Evidence Hierarchy						
LOGO	CERTIFICATION/DECLARATION	3RD PARTY VERIFIED	INDICATORS	ASSESSMENT CRITERIA	MATERIAL CATEGOR	
			<b>V</b>			

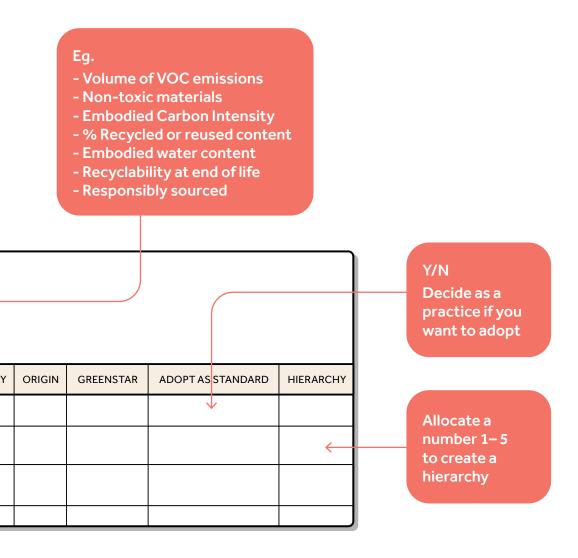
### Step



### Material & Product hierarchy

This is a suggested hierarchy of indicators you could use to allocate supporting evidence against to inform your material and product selections.





### Step

**2**a

### **Sustainability Action Plan**

Formalising this process and framework into your SAP is pivotal to steer projects towards environmentally responsible and sustainable outcomes.



### **Example framework for your practice**

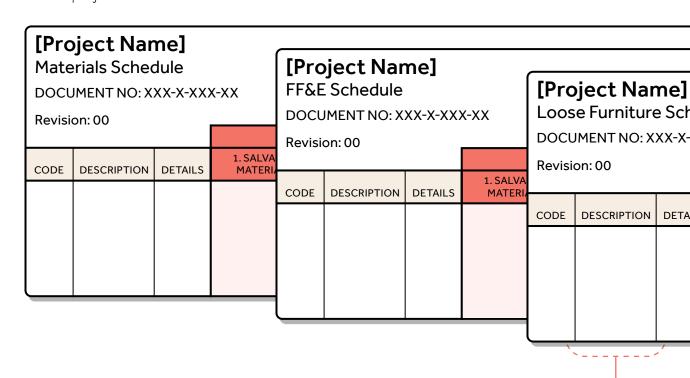
### A step-by-step breakdown

### Step

3

### Implement in your Materials, Fixtures, Fittings & Equipment (FF&E) and Loose Furniture schedules

This step ensures that the evidence hierarchy you established is embedded within documentation and your workflow. This also allows you to track metrics across projects.



### Step



### **Tracking**

From here you could set a minimum number of materials and products to target that fits within your hierarchy to keep project teams accountable. Establishing regular catchups with project teams to discuss selections is also a useful way of educating and sharing challenges and wins.

Embedding this information adds another layer of consideration for project teams and criteria for contractors to consider when offering alternatives.

A Responsible Product Value (RPV) is the 'score' given to an initiative after assessment against the Responsible Products Guidelines.

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XXX-XX

	MATERIAL AND PRODUCT HIERARCHY				<b>\</b>		
S	1. SALVAGED MATERIALS	2. NON-TOXIC MATERIALS	3. RESPONSIBLY SOURCED	4. LOCALLY MANUFACTURED	5. LOW EMBODIED CARBON	RPV	REV

### **DESCRIPTION**

**Product:** 

Supplier:

Manufacturing Location:

Composition: [% Recycled Content]

Colour:

Code:

Size:

Thickness:

**Performance:** [eg. Fire Rating, Slip Rating, NRC, R Value]

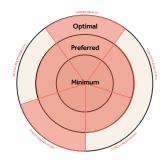
End of Life:

Location:

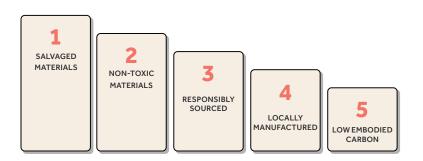
Embodied Carbon: [m²] Embodied Water: [m²]

### **Project example**

1. Your practice has a new multiresidential project. Based on location, scope and scale, you set the following goals per criteria.



2. In order to achieve these goals, the team determines the following hierarchy of indicators supported by evidence.

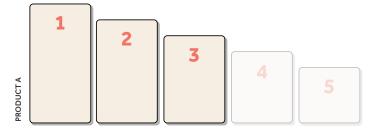


Use Product Aware to compare Product A, Product B and Product C

#### 3a.

This product has 1, 2 and 3 and therefore meets preferred criteria.





### 3b.

This product only has 3, 4 & 5, and therefore doesn't meet the preferred criteria.





### 3c.

Innovative material exception. Using due diligence, you may decide the material meets enough criteria to select even with minimal evidence.



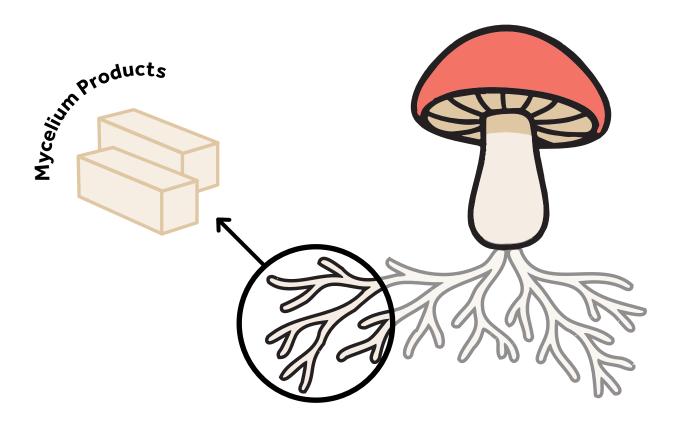


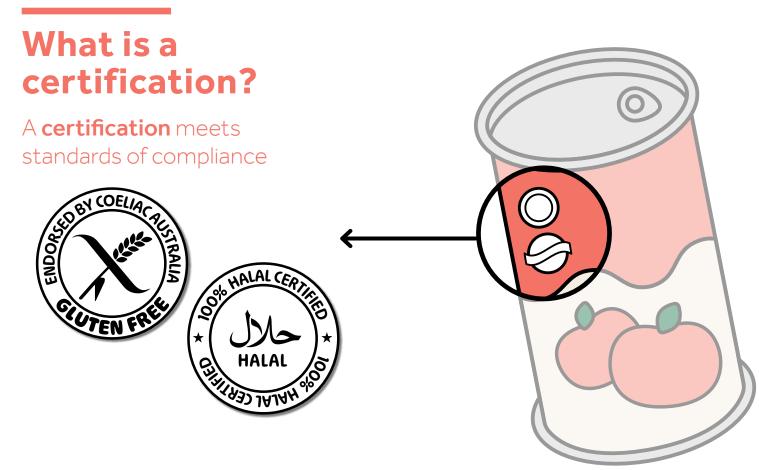
## Innovative materials spotlight

Like anything, there are often grey areas. We want to ensure that innovative materials are encouraged and considered, even if they don't have the certifications or declarations as evidence to support their claims. These materials may still perform well across some, or many, of the 5 criteria of **Product Aware** indicators so it's worth asking questions and having an open dialogue with the supplier.

As the industry becomes more knowledgeable and skilled at asking suppliers the right questions – a wider variety of bio-based and innovative materials will become available to specify.

In short: lack of certification isn't a dealbreaker, but it requires extra scrutiny, transparency, and caution.





### What CERTIFICATIONS do:

A material or product certification verifies that it complies with specific environmental, health, or performance standards.

### TIP:

Look for third-party verified certifications that have been independently assessed or audited.

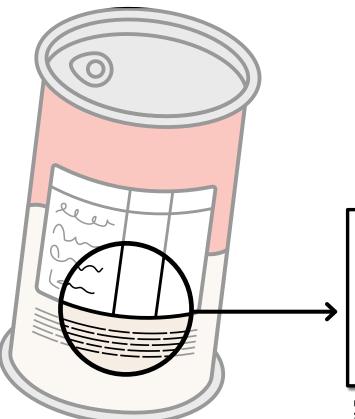
- Who issued this certification, and are they credible?
- What specific sustainability issues does it address?
- Is it current and independently audited?
- Does it help meet practice or project goals (e.g. Green Star, LBC, WELL)?

### Understand what's actually certified

 Is it the entire product, just a component, or the manufacturer's processes?
 Example: A timber product may be FSC-certified, but only the timber content—not adhesives or finishes.

### Scrutinise the certification level

- Many certifications have tiers (e.g. Cradle to Cradle Bronze/Silver/Gold/Platinum).
- Lower levels may only meet basic compliance – not necessarily best practice.
- Make sure the level aligns with your project's goals.
- Understand whether a "basic" level allows potentially harmful ingredients or unverified carbon claims.



## What is a declaration?

A **declaration** discloses information about a material or product

NUTRITION INFORMATION			
SERVINGS PER PACKAGE: 3.4 SERVING SIZE: 250G	AVE QUANTITY PER SERVING	% DAILY INTAKE (PER SERVING)	AVE QUANTITY PER 100g
ENERGY	399kJ	4.6%	160kJ
	(95 Cal)		(38 Cal)
PROTEIN	2.2g	4.4%	0.9g
FAT, TOTAL	0.3g	0.4%	0.lg
- SATURATED	0.lg	0.4%	Less than 0.1g
CARBOHYDRATE	19.7g	6.3%	7.9g
-SUGARS	15.7g	17.5%	6.3g
DIETARY FIBRE	2.lg	7.0%	0.8g
SODIUM	865mg	37.6%	346mg
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INGREDIENTS: Tomato Puree (85%), Sugar, Onions, Modified Tapioca Starch [E1442], Salt, Garlic, Acidity Regulator (Sodium Bicarbonate), Thickener (Xantham Gum), Food Colour (Paptrika Extract), Herbs, Natural Flavour, Spices.

### What DECLARATIONS do:

Disclose detailed information about a product's composition, performance and environmental or health impacts in a standardised format.

### What DECLARATIONS don't do:

Prove a material or product is a good choice or more sustainable than other alternatives. You need to analyse the information to make an informed choice.

### TIPS:

### HPD (Health Product Declaration)

- Cross reference the LBC Red List if any ingredients have been flagged.
- Aim for 100% disclosure by weight down to at least 100 ppm (parts per million).

### PCF (Product Carbon Footprint)

 Carbon component of an EPD and covers product stages A1-A3 of an LCA.

### **EPD (Environmental Product Declaration)**

- Closely tied to Life Cycle
   Assessments (LCAs), which
   evaluate the environmental
   impact of a product across
   each stage of its life cycle.
- Check if it's an industry-wide (broad) or product-specific (with brand/manufacturer listed)
- Look at the "Geographical Scope" section to confirm locational data for the most accurate info on local manufacturing, energy mix, and transport

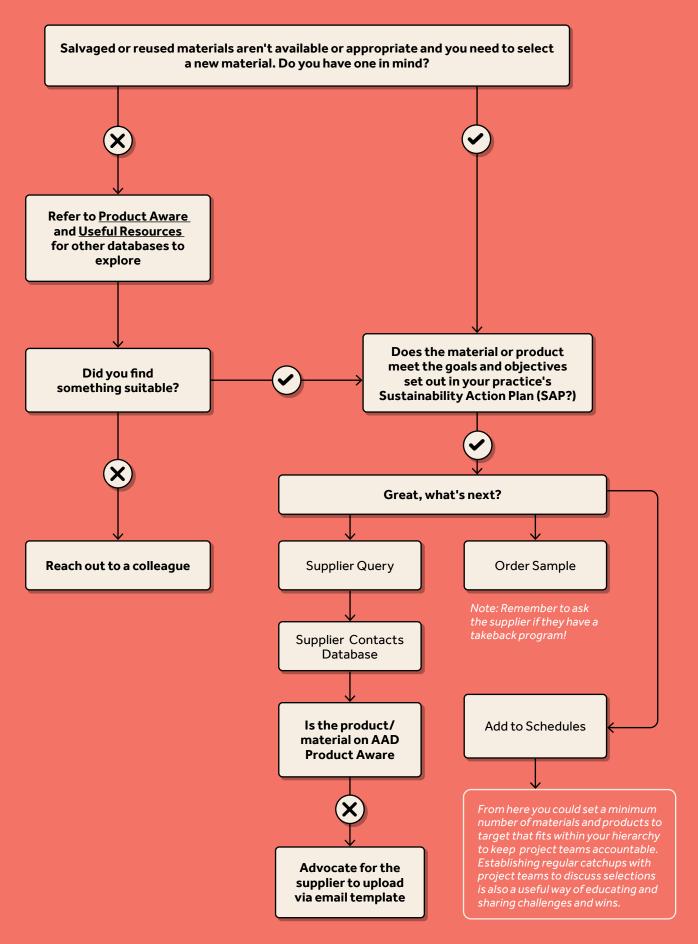
- If in doubt, request a regional specific EPD from the supplier.
- Utilise EPDs for quantifiable data on embodied carbon and water

#### LFIA Declare Label

- Utilise to see if the materials contains any LBC Red List ingredients
- Utilise to check end of life options
- Utilise to see where the product comes from

## Selection cheat sheet

This is an example flow chart for material and product selection, illustrating where **Product Aware** and your SAP fit into the process and where the role of advocacy comes into play.



### Strategies for integrating into Sustainability Action Plans (SAPs)

In a Sustainability Action Plan (SAP), materialrelated goals are pivotal in steering projects towards environmentally responsible and sustainable outcomes.

These goals are instrumental not only for individual projects but also in fostering broader industry-wide transformations as the demand for sustainable materials often drives supply chain innovation and market shifts. By prioritising sustainability, companies can influence suppliers to develop and offer greener and more socially responsible alternatives, thereby setting new industry standards

These goals encompass strategies to evaluate the entire lifecycle of materials – from extraction and production to disposal or reuse. You can set clear guidelines for your practice and establish benchmarks to track against, similar to energy and water. You can commit to educating and advocating for better practices, ensuring that all stakeholders, from engineers and builders to clients and end-users, are aware of the benefit of sustainable material use. Your SAP can foster a cultural shift towards more responsible consumption.



### Sustainable

Neutral Impact (Not causing harm or improvement)

+

### Degenerative

Buildings cause deterioration, decline or loss of function of the environment and human well-being

### Regenerative

Buildings have a positive impact on the environment and human well-being

An embedded system that seeks to leave a place better than it was found – giving more to the environment and community than it takes.

#### **TOP TIPS FOR REALISING YOUR GOALS:**

- Don't expect change overnight. If you haven't already, set a timeline for realising 'material related' goals and break them down into incremental milestones. Develop a plan for 1, 5 and 10 year cycles.
- Increase your collective awareness. Training and education are key for this, dedicate time for it. Give people the assets and knowledge to keep up with emerging technology, strategies, tools and resources and feel confident to lead discussions and ask tough questions.
- Create or refresh your firm's materials library and policies. Consider adopting or developing your own material standards and update your material library to comply with these standards. Make it easier for designers to choose responsible materials from the onset. In addition, consider forming a materials working group that can help sustain the library's upkeep and product vetting.
- Advocate for industry change; promote transparency. Manufacturers respond to demand. Ask and work with them to produce and provide the necessary information to comply with your standards. Set standards for which product reps are allowed to present to your fellow colleagues. Pre-vet their products and be prepared to ask tough questions to mitigate the risk of greenwashing.
- Integrate responsible material selection into your workflow. Set goals early with stakeholders and generate an agreement to ensure follow-through. Utilise a tracking tool as you select materials and gather sustainability documentation in tandem. Set 'good, better, best' criteria to vet against per specification section and prioritise the use of materials that qualify as 'best'.

#### **EVALUATION AND REPORTING**

- Consider the firm's targeted milestones, when determining what teams will track and report and how often.
- Allow for additional time per project for tracking and reporting.
- Create a methodology for evaluating materials (eg. Determine the criteria your teams will vet against, what tools will be used, what to prioritise, etc.) Consider creating or integrating a 'Matrix' into your workflow.
- Certification programs such as GreenStar, LBC, WELL, etc are great tools for helping guide responsible material outcomes. Include their performance criteria such as Responsible Product Value (RPV) even if not pursuing formal certification.
- Benchmark your projects to determine appropriate baselines to improve on. Measure and track progress.
- Choose one or a few chemicals of concern to eliminate in the firm's standard specifications.
   Start with your firm's most commonly used materials and provide good, better, and best options.
- Use **Product Aware** to perform comparative analyses of materials to identify the most sustainable options.

#### Reference:

Australian Architects Declare resources on the creation of Sustainability Action Plans

Find them here

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### **Useful resources**

Here are some further useful Australian and International resources that provide guidance and education based on the 5 criteria set out in **Product Aware** 



HUMAN HEALTH



CLIMATE & ECOSYSTEM



CIRCULAR ECONOMY



WASTE MINIMISATION



SOCIAL RESPONSIBILITY

<sup>\*</sup> Highlighted circles denote the primary focus of the resource – this doesn't necessarily mean other topics aren't also covered.











### **AUSTRALIAN INSTITUTE OF ARCHITECTS**





Australian Institute of



- SONA Sustainability Snacks
- Ground Matter Series
- **Embodied Carbon Curriculum**
- Zero Carbon Design Series













### FIVE MILE RADIUS WITH UNIVERSITY OF QUEENSLAND - SUPPLY CHAIN MAPS





From March-June 2020 Five Mile Radius conducted a subject in The University of Queensland's School of Architecture entitled 'Materials Matter'. Twenty-two students took part in the subject.

### Part One: Materials Overviews

Fact sheets on specific materials and processes including raw material extraction and manufacturing processes.

### Part Two: Material Maps

Tracing of materials from local suppliers, the manufacturing point and back to a raw material encouraging supply chain transparency.

### **Part Three: Material Handouts**

Detailed reports on specific materials into easily understood handouts.

The information provided has been gathered by students and has not undergone peer review. Please consider it as a guide only.











### **GREEN SCIENCE POLICY INSTITUTE (SIX CLASSES)**





The Six Classes Approach was developed by the Green Science Policy Institute using scientific expertise to develop education and solutions for reducing harmful chemicals in products.

### **Useful resources**











### **BREATHE ARCHITECTURE'S SUSTAINABLE MATERIALS GUIDE**





Breathe's Sustainable Materials Guide is a practical framework designed to assist in making environmentally and socially responsible material choices. Developed through Breathe's own project experiences, the guide emphasises functionality, longevity, and ethical sourcing in material selection.











### WAM - LOW CARBON DESIGN GUIDE





The 'Go Zero' guide provides a clear, actionable framework for sustainable design, outlining:

- Why sustainable design matters, and why it's critical to invest in it
- Practical design strategies that can be implemented in realworld projects
- Ways to measure and track carbon reductions











### **BUILDING GREEN**





Building Green is a treasure trove of resources spanning product research, sustainability science and professional guidance to help teams select materials that are healthier, lower impact, and aligned with green building goals and the Mindful Materials Common Materials Framework.











### **BURWOOD BRICKWORKS GREENSHEET**





Burwood Brickworks Shopping Centre in Victoria created a Greensheet as part of their Living Building Challenge® petal certification process.

The list of products and materials includes what was specified and vetted against the LBC Red List (banned ingredients list) at the time of the design.

The Greensheet was based on research available at the time so it's important to do your own due diligence, but it's a great starting point and example on what's possible when selecting materials for projects and the importance of material transparency.

The International Living Future Institute updates its LBC Red List annually.

Refer to their website for the latest version.

















The Ellen MacArthur Foundation is a global leader in promoting the circular economy, offering valuable frameworks and resources for specifying materials that are regenerative, low-impact, and designed for reuse.

















Rebuilt is a product carbon verification platform for suppliers as well as a database of low carbon building materials allowing specifiers to assess and compare products.

### **Useful resources**





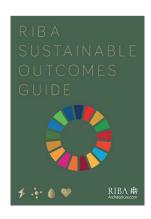






### **RIBA SUSTAINABLE OUTCOMES GUIDE 2019**





The RIBA Sustainable Outcomes Guide is a practical framework developed by the Royal Institute of British Architects to help design teams deliver sustainability through measurable outcomes across a project's lifecycle. It outlines eight key outcomes aligned with the UN Sustainable Development Goals.











#### ACAN CIRCULAR ECONOMY DESIGN GUIDE





The "Circular Economy in the Built Environment" report by the Architects Climate Action Network (ACAN) is a call to action and guidance document for embedding circular economy principles in architecture and construction. It focuses on reducing waste, conserving resources, and rethinking how buildings are designed, constructed, and deconstructed.











### **DESIGN FOR FREEDOM – GRACE FARMS**





Design for Freedom by Grace Farms is a movement and initiative that aims to eliminate forced labor from the building materials supply chain. It raises awareness about the ethical and human rights dimensions of material sourcing and challenges the industry to take action toward transparency and accountability.











### PARSONS HEALTHY MATERIAL LAB





Parsons Healthy Materials Lab is a research and education initiative based at Parsons School of Design in New York. It serves as a resource to make informed decisions about materials that are healthier for people and the planet while being both an educational platform and an advocacy hub











### LIVING FUTURE REGENERATIVE MATERIALS NOW – A PLAYBOOK FOR DESIGNER & SPECIFIERS





Regenerative Materials NOW: A Playbook for Designers and Specifiers is a comprehensive guide developed by Living Future. It offers 40 actionable strategies to assist design professionals and material specifiers in adopting regenerative materials within the built environment. By addressing key sustainability criteria, it facilitates the transition toward a built environment that is not only sustainable but also restorative and equitable.











### **FUTURE MATERIALS**





Future Materials is a discovery engine showcasing design-led, low carbon, bio and circular building materials - a place to empower designers, champion suppliers and accelerate change.

### **Useful resources**











### **MINORO**





Developed by Grimshaw, in partnership with the World Business Council for Sustainable Development, Minoro provides a stepwise approach to carbon management, identifying key actions and responsibilities at each stage of a project's life cycle. It provides a clear action plan for asset owners, investors, design teams, consultants, contractors and building operators, supported by latest guidance and resources.











#### GBCA - RESPONSIBLE PRODUCTS SCORE CHECKER





GBCA seeks to reward the use of products that have lower environmental impact, are transparent, respect human rights, and reduce carbon content. Such products are an active part of the solution for a better future with a more healthy, resilient, positive and circular built environment.

A Responsible Product Value (RPV) is the 'score' given to an initiative after assessment against the Responsible Products Guidelines.











### LFIA DECLARE DATABASE





Declare is part of the International Living Future Institute's (ILFI) suite of programs that catalyse a socially just, culturally rich and ecologically restorative future. This trusted public database and product labeling program answers 3 key questions:

- 1. Where does the product come from?
- 2. What it is made of?
- 3. Where does it go at the end of its life?

A Declare label displays compliance (or otherwise) with the stringent criteria of the Living Building Challenge (LBC) Materials Petal and Healthy Interior Performance Imperative, which helps specifiers and clients make informed choices for healthier buildings. They can be likened to nutritional labels that make understanding product ingredients easier.





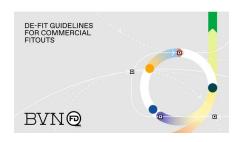






#### **BVN DE-FIT GUIDE**





The De-fit Guide is a practical framework to support a circular approach at the transition between commercial fitouts. It provides material pathways, removal strategies and advice. Use this framework to find common ground between stakeholders, inform discussion on project methodology and assign responsibilities to each team member. The Guide is not a prescriptive set of rules, rather, it is a framework to support stakeholders in achieving a mutual goal of eliminating waste.











### SUSTAINABLE BUSINESS MATTERS GUIDE TO ENDING MODERN SLAVERY AND EXPLOITATION IN THE FITOUT INDUSTRY





Design for Dignity is a starter's guide to ending modern slavery and labour exploitation in the fitout industry, developed by Modern Slavery & Labour Exploitation Advisor, Libby Staggs.











### INFORMED™ PRODUCT GUIDANCE





Many professionals may not be aware that the building products they specify can have environmental justice impacts. Building product manufacturing often involves the use and release of toxic chemicals, impacting human and environmental health and contributing to environmental injustice.

The intuitive red-to-green color ranking compiles decades of comprehensive research about the health impacts of chemicals on building occupants, fenceline communities, and workers throughout the product life cycle.

## Glossary of terms

\* The definitions in this glossary are intended for general guidance and may vary depending on context or application.

### **Operational Carbon**

The emissions produced from energy used to run a building over its lifetime, such as heating, cooling, lighting systems, hot water, ventilation, equipment and lifts.

### **Embodied Carbon**

Refers to the carbon emissions resulting from the production of materials and construction. This includes any processes, materials or products used to construct, maintain, repair, refurbish or demolish a building.

### **ECI (Embodied Carbon Intensity)**

A metric that measures the amount of embodied carbon per unit of material or functional output, often used to compare material impacts (e.g., kg  $CO_2e$  per m<sup>2</sup>).

### **Net carbon**

The net result of a project or material's operational and embodied carbon after subtracting carbon benefits or energy generation. This provides a measurement of a project's true climate impact.

### **Carbon Credits**

Tradable permits representing one tonne of carbon dioxide either removed from the atmosphere or prevented from being emitted, used to offset emissions elsewhere.

### **Carbon Benefits**

Positive climate impacts of a material, design, or process that reduce or remove carbon from the atmosphere, such as materials that store or sequester carbon.

### Certifications

Indicator that confirms a product or material has met specific sustainability or performance standards and benchmarks

### **Declarations**

Standardised document that provides transparency on a product or materials characteristics for example, environmental criteria, harmful substances, health criteria, embodied carbon, energy use, water use, waste generation.

### **EPDs (Environmental Product Declarations)**

Standardised documents that provide transparent data about a product's environmental impacts across its life cycle, based on a Life Cycle Assessment (LCA).

### **HPDs (Health Product Declarations)**

Reports that list the chemical ingredients in a product and their potential health impacts, supporting transparency in material health.

### **PCF (Product Carbon Footprint)**

Cover the same lifecycle stages as they would in other LCA analyses. For most product manufacturers this is the product stage A1-A3 or cradle to gate

### **Manufacturer Affidavit**

A manufacturer affidavit is a formal, written statement provided by a product manufacturer. It certifies or attests to specific information about a product, such as: Country of origin, material composition, compliance, no harmful substances, recycled content or embodied carbon data

### **LFIA Declare Label**

Declare is a platform to share and find healthy building products. Manufacturers voluntarily disclose product information on easy-to-read Declare labels, which are accessible on a free database, disclosing ingredients, sourcing and end of life options.

### **LBC Red List**

The Living Building Challenge (LBC) Red List is a list of chemicals representing the "worst in class" substances prevalent in the building industry that pose serious risks to human health and the environment.

### **Biodiversity**

The variety of living species in an ecosystem, which sustainable design seeks to protect and regenerate by reducing habitat destruction and pollution.

### Life Cycle Assessment (LCA)

A method for evaluating the environmental impacts of a product or process across all stages of its life—from raw material extraction to end-of-life disposal or recycling.

### Regenerative Design

A design approach that seeks not only to do less harm but to actively restore and enhance ecosystems, communities, and natural systems.

### **Circular Economy**

A system of production and consumption that keeps materials and products in use for as long as possible through reuse, recycling, and regeneration, minimising waste and resource use.

### **Adaptive Reuse**

The process of reusing a site or building for a purpose other than the original purpose for which it was built or designed.

### **Agroforestry**

A system of land use in which harvestable trees or shrubs are grown among or around crops or on pastureland as a means of preserving or enhancing the productivity of the land.

### **Biophilia**

The innate, evolutionary connection between human beings and nature and other living organisms.

### Chain of Custody (COC)

COC certification traces the path of wood from forests through the supply chain, verifying that FSC-certified material is identified and separated from non-certified and non-controlled material as it makes its way from the forest to the market. The COC process ensures every stage of processing, manufacturing, and distribution is FSC certified.

#### **Deconstruction**

The systematic removal of materials from a project (building and site) for the purpose of salvage, reuse, and/or recycling.

### **Recycled Materials**

Post-industrial or post-consumer materials that have been significantly processed or altered from their previous form before reaching their current form.

### **Salvaged Materials**

Used building materials that can be repurposed wholly in their current form or with slight refurbishment or alterations.

### **Modern Slavery**

Modern slavery refers to situations where people are exploited and cannot refuse or leave because of threats, violence, coercion, deception, or abuse of power. It includes practices such as forced labour, debt bondage, human trafficking, deceptive recruitment and the worst forms of child labour.

## Credits & acknowledgments

### The **AAD Sustainable Materials**

**Guide** was created by Australian Architects Declare to help signatories convert their declaration into meaningful action and support momentum within their practice.

This guide is intended to be a live, working document that helps educate and assist those when specifying materials and products.

We expect this guide to evolve and be refined in future iterations. Additional supporting parts may also be created, as our understanding and new resources are developed and we find new innovative solutions to these challenges.

We encourage our signatories and other architectural practices or built environment practitioners to contact us with feedback on this version, which will inform future versions.

This guide has been developed to set out a process for selecting materials, products and finishes sustainably. However, each project, practice and client may have their own priorities. It is designed to be flexible to meet specific needs.

Where suppliers, certifications and frameworks are named, these are to provide examples, and the list is not exhaustive. We encourage practices to do their own due diligence on other alternatives.

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## We want your feedback

If you'd like to contribute to the next iteration of this guide, please get in touch with info@architectsdeclare.com.au

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Steffen Welsch Company Secretary 2025

# AUSTRALIAN ARCHITECTS DECLARE SUSTAINABLE MATERIALS GUIDE

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