

Trustworthy Timber

The Journey to Responsibly-Sourced Wood Flooring



Introduction

As long as humans exist, there will be a need for timber products. Of the many forest products around the world, timber flooring is among the most popular. Industry reports indicate that timber flooring represents approximately 25% of the flooring market.¹ This is no surprise as the installation of a timber floor can raise the appeal of a space almost instantly.

While its aesthetic and performance benefits are well-known, and it is itself a natural and renewable material, the environmental impacts of timber are not straightforward. The timber needed to meet growing construction demands is one of the major contributors to deforestation. According to the World Bank, we have lost 1.3 million square kilometers of forests since 1990, which is the equivalent of losing 1,000 football fields of forests every hour.²

Forests are well known for their significant environmental functions, so the continued loss of forested landscapes is a major global concern. Deforestation can lead to biodiversity loss when animal species who live in forests lose their natural habitats. As much as three-quarters of the Earth's freshwater comes from forested watersheds, so the loss of trees can affect water quality.³

Clearing and burning forests releases the carbon they store, while also diminishing an important carbon sink, both of which contribute to climate change. There are also broader socio-economic impacts, including displacement of forest communities, loss of cultural heritage, and poor working conditions experienced by labourers in deforested areas.

Architects, designers and specifiers can minimise the construction industry's impact on our forests by specifying timber products sourced from sustainably-managed forests. Not only is this the more environmentally friendly approach, but it also allows the industry to keep pace with changing market attitudes. More than ever, Australians have a desire to live sustainably, and this is reflecting in the types of products and brands they want to be associated with.

In this whitepaper, we take a look at the journey to responsibly-sourced timber flooring – from the importance of sustainably-managed forests to choosing the right timber floor that will last you a lifetime.

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WHY SUSTAINABLE FORESTRY MATTERS

The only realistic way to conserve our forests while meeting the huge global demand for forest products is to apply sustainable forest management practices. In short, sustainable forestry focuses on caring and managing forests to provide the natural resources we need now and into the future. This encompasses conserving the natural habitat of forest fauna and flora, respecting the rights of forestry workers and local communities, and reducing the environmental, social and economic impacts of deforestation.

Sustainable forestry reflects a change of mindset – from the traditional methods of logging and clearing to a focused practice of growing trees as a crop. In this way, forestry is essentially long-term agriculture, but with a few added dimensions. The Australian Standard for Sustainable Forest Management defines sustainable forest management against a set of nine criteria:⁴

- **Systematic Management.** Forest management shall be undertaken in a systematic manner appropriate to the nature and scale of the enterprise and provide for continual improvement.
- **Stakeholder Engagement.** Forest management shall demonstrate proactive stakeholder engagement.
- **Biodiversity.** Forest management shall maintain or enhance biodiversity.
- **Forest Productive Capacity.** Forest management shall maintain the productive capacity of forests and land.

- **Forest Ecosystem Health.** Forest management shall maintain forest ecosystem health and vitality.
- **Soil and Water Resources.** Forest management shall protect soil and water resources
- **Forest Carbon.** Forest management shall maintain or enhance forests' contribution to the carbon cycle
- **Cultural Values.** Forest management shall protect and maintain, for Indigenous and non-Indigenous people, their natural, cultural, social, recreational, religious and spiritual heritage values.
- **Social and Economic Benefits.** Forest management shall maintain and enhance long-term social and economic benefits.

Meeting demand for construction through sustainable timber production is an effective way of mitigating the industry's environmental and climate impacts. Timber is renewable and recyclable, and the process used to produce it can yield useful by-products. While a forest is growing, its trees remove CO₂ from the atmosphere and stores it in the form of wood. Carbon is also stored in timber products long after they are harvested.⁵ In fact, around two-thirds of Australia's total greenhouse gas emissions are stored in timber products, such as furniture, house frames and flooring.⁶ By comparison, traditional building materials, such as cement and steel, emit much higher levels of CO₂ over their entire lifecycle.



SUSTAINABILITY SELLS!

Consumer attitudes towards sustainable timber products

In recent years, timber has become viewed as the 'greener' choice in building materials. As the effects of climate change and deforestation become more apparent, Australian consumers have developed a growing awareness of environmental issues and the impact of their product choices on the sustainability of the planet.

In an Australian study published in 2012 surveying homeowners in the city of Sydney, timber (62%) was overwhelmingly viewed as the most sustainable building material followed by bricks (19%) and reinforced concrete (12%).⁷ In the same study, homeowners affirmed their willingness to pay extra for sustainable building solutions when purchasing a new home.⁸ In an earlier study, Australian consumers ranked forest certification as the second most important product attribute when choosing wood products.⁹

This attitude is backed up by surveys conducted in 2021 which found that the majority of Australian consumers are more likely to purchase ethical and sustainable products and also want brands to be more transparent about the sustainability of their products.¹⁰ However, while the growing consumer preference for sustainability is evident, some barriers remain.

While timber is the clear sustainable favourite, there are negative perceptions about its durability and cost in building applications. Poor product choice and craftsmanship, and the use of timber flooring products unsuited to the Australian climate are contributing factors as they reduce the durability and lifespan of a timber floor, causing the need for replacement and repairs. The high cost and limited availability of some certified timber solutions may also be a factor.

There are also persistent concerns about the sustainability of sourcing wood as a building material and its link to deforestation.¹¹ Illegal harvesting, fake certification and misleading environmental claims can cause consumers to be wary of using wood products. Some wood products also use harmful finishes containing volatile organic compounds that are harmful to people and the environment.

In light of these issues, the journey to responsibly-sourced timber floor must include three key steps: choosing a timber floor that is fit-for-purpose for the proposed application; ensuring the timber flooring comes from a sustainable source; and high quality installation of the floor to extend its service life.

FROM THE SUSTAINABLE FOREST TO YOUR FLOOR

Type of timber flooring

While wood is the eco-friendly option, not all timber products are equal. Longevity is a form of sustainability – the longer a building product or material remains useful, the less energy and resources are needed to repair, replace or dispose of it. Choosing a timber flooring product that is unsuited for the expected conditions in service can lead to a floor that degrades quickly in both performance and aesthetics.

In the volatile Australian climate, solid timber flooring is susceptible to movement. In response to temperature and humidity fluctuations, solid timber can warp, buckle, shrink or expand, all of which can affect the appearance, mood and performance of the floor. Due to its high dimensional stability, engineered timber has become the new standard for flooring applications. Unlike solid timber, which are single planks of wood that are milled and dressed from timber logs, engineered timber is comprised of multiple layers, bonded together with the grain running in different directions. This construction gives engineered timber flooring more stability than its solid timber counterpart, making it suitable for a wider variety of climatic conditions.

High quality engineered timber flooring is also one of the more sustainable and eco-friendly timber products you can choose for flooring when you consider how it is manufactured. Solid timber flooring uses only a limited section of each tree whereas engineered timber flooring is constructed using multiple thinner planks, allowing for a greater amount of each tree to be utilised in its construction. Engineered timber flooring therefore makes optimal use of a precious resource and results in far less wastage.

For even higher sustainability values, designers and specifiers may consider reclaimed engineered timber, in which the top layer is made of timber that has been taken from a previous location, such as abandoned wooden structures, and reused for flooring.

Certification of timber products

Due to shifting environmental attitudes, recognised environmental certification for building products and materials is no longer optional, but a necessity. When specifying timber flooring, ensure the supplier has supporting documentation that the timber comes from a sustainably-managed forest with globally-recognised certification.

Choosing timber flooring with official certification ensures that deforestation played no part in how the timber was

sourced. It also ensures that ethical and responsible practices were followed in harvesting the timber, including replanting trees after each harvest, responsible wildlife and species management, and ethical working conditions and wages. It is also advisable to consider the business practices of the supplier. Do they have strict quality control and minimise their environmental impact throughout the product lifecycle, from responsible sourcing through to installation?

In Australia, forest and tree plantations can only be certified as sustainably managed after an independent, third-party audit. The two main certification bodies are the Programme for the Endorsement of Forest Certification (PEFC) scheme and the Forest Stewardship Council® (FSC®). Forest managers can also seek certification under the Responsible Wood Certification Scheme, which is recognised under the PEFC.

Forest certification schemes take into consideration environmental factors and sustainable management practices as well as local community input, economic and social factors, and local laws and regulations. Chain-of-custody certification under both schemes is the mechanism used to ensure the traceability of wood material from a certified forest to any point along the supply chain, and is required to substantiate any claim that the timber product has been obtained from a certified forest and supplier.¹²

Installation

As noted above, longevity is another form of sustainability, which is why quality of construction and installation matters. The majority of issues and job recalls for timber flooring can be traced back to mistakes made during the installation process. This can be attributed to several factors including incorrect flooring product selection; poor product storage and handling; detrimental site conditions, such as excess humidity, moisture, or heat; or poor sub-floor preparation.

There are a variety of engineered timber flooring products on the market, each with their own unique performance properties. When installing a flooring product, the site conditions should be carefully assessed to identify the needs of the application including environmental factors, levels of foot-traffic, sub-level preparation, underfloor heating and so on. It is important to check with your supplier to ensure the product you have selected and your chosen installation method will not lead to issues during the floor's service life.

HAVWOODS

Superior Sustainability with Genuine Reclaimed Barn Oak

With over 40 years' experience in sourcing the very finest engineered timber flooring and cladding, Havwoods' passion for delivering fit-for-purpose and fit-for-budget solutions has made them leading suppliers for residential, commercial, high-volume retail and hospitality projects across Australia and around the world. With extremely stringent requirements as to the provenance and sustainability of any timber which bears their name, the company is also committed to delivering timber products that are undeniably good for the environment.

Over recent years, Havwoods have substantially reduced their offerings of exotic timbers, the species which are most likely to suffer from illegal harvesting, and now offer a large range of sustainably-certified products (FSC® certified (C009500) and Cradle to Cradle Certified® BRONZE), along with an increasingly popular collection of genuine reclaimed engineered timber flooring that combine a beautiful, aged look with incredible stability and can be used for flooring, internal feature walls and joinery.

Sourced from old barns across America, Genuine Reclaimed Barn Oak has been carefully and expertly crafted for a new life as engineered timber flooring. Built wholly from local timber primarily transported by river, the barns served their original purpose until well into the 20th century. Over the years as the population left the countryside to head for the cities, these impressive structures became abandoned and disused. Havwoods has given these materials a new home, enabling designers to achieve striking architectural features that perform in the most challenging conditions.

"Longevity is a form of sustainability – the longer a building product or material remains useful, the less energy and resources are needed to repair, replace or dispose of it."

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