

Only Natural:

Specifying Genuine Timber Flooring to Maximise Wellbeing



The mark of
responsible forestry

Only the products that are identified as
such on this document are FSC certified.



INTRODUCTION

The modern architecture and design industries recognise the vital role of well designed spaces in promoting wellbeing. Across the world, designers and specifiers are increasingly embedding the principles of biophilic design within their projects. At its core, biophilic design recognises that being closer to nature within the built environment - especially interior settings - improves the overall wellbeing and health of those who dwell within¹. Biophilic design involves the incorporation of plants and natural materials, as well as window space and maximising natural light in order to bring the outdoors inside. Research indicates that biophilic design can increase productivity in the workplace², improve health outcomes in hospitals³ and increase relaxation in homes.

Taking an even more holistic view of the effects of building design on wellbeing, the green building movement accepts that buildings that are fully sustainable in their design and construction - as well as containing elements of nature - have a profoundly positive effect on wellbeing. Green buildings take a whole-of-design approach to using sustainable, recyclable materials to create energy efficient spaces⁴ while also reducing the stress of the occupants through lower energy bills⁵.

Prior to the outbreak of COVID-19, the Australian Government recognised that Australians spend up

to 90% of their time indoors⁶, and it is reasonable to expect that amount has significantly increased since the pandemic began. At the same time, the changes of the past few months have exposed just how impactful human existence is to the planet. Since the beginning of the pandemic, Europe has seen drops in carbon dioxide emissions of up to 40%, seismic noise has dropped to the lowest level on record and wildlife has returned to urban areas worldwide⁷. The forced changes to living conditions have highlighted the importance of wellbeing and sustainability in the home - and crystallised the importance of connection with the natural environment.

An effective way to increase connection in the home and maximise the benefits of biophilic design is to specify timber and wood products where possible⁸. Of particular effect is wood flooring, as this will cover the greatest surface area of the space and create a warm, grounding effect within. Despite common misconceptions, ethically sourced wood flooring is a highly sustainable, environmentally-friendly flooring option for residential or commercial spaces.

This whitepaper will take a detailed look at the sustainability credentials and material properties of ethically sourced timber flooring and how it can contribute to overall wellbeing in a range of applications.



PRODUCT: FSC® certified (C009500) HW16602 Notte Chevron. DESIGNER: Christina Reed Interiors. PHOTOGRAPHER: Live by the Sea Photography



There are a number of third-party certifications such as Cradle-to-Cradle™ or Forest Stewardship Council® certification that provide peace of mind to specifiers that the timber has been ethically sourced.

ETHICAL TIMBER: MAKING A GENUINE DIFFERENCE

Ethical Certification

For many years, there has been a perception that logging of forests is only done in an uncontrolled, unsustainable manner. It is true that this may have occurred in the past, and that if products are not sourced from reputable suppliers it may still be the case, however Australia has strict domestic controls to reduce the import of illegally harvested timber products into the country⁹. Illegal products are generally those that have been felled illegally, are of a protected species or come from a protected location, or do not have the required certification¹⁰. However, by purchasing from reputable suppliers it is easy to get sustainably sourced, environmentally friendly timber. There are a number of third-party certifications such as Cradle-to-Cradle™ or Forest Stewardship Council® certification that provide peace of mind to specifiers that the timber has been ethically sourced.

Cradle-to-cradle certification recognises products that are made with sustainability in mind and maximise their contribution to the circular economy. Products are assessed across five categories: material health, material reutilisation, renewable energy and; carbon management, water stewardship and social fairness¹¹. The Forestry Stewardship Council is an international not-for-profit organisation established in 1993 to promote the sustainable management of the world's forests¹².

FSC Certification is widely considered to be the 'gold standard' of ethically sourced timber certifications across the world, focusing on chain of custody as well as forest management¹³. Certifications of this kind ensure that trees are felled with sustainability of environment and local community front of mind. The timber is sourced from well-managed forests and only trees of a certain age are felled. Saplings are replanted to replace the trees that have been felled. Often the preservation of habitats for local flora and fauna is considered, and where possible members of local communities are employed and paid fair wages. Finally, the timber is processed to ensure minimal wastage and any finishes applied are also environmentally friendly.

Low Carbon Emissions

The world's forests and soils store about one trillion tonnes of carbon - more than twice as much as is in the atmosphere¹⁴. Forests also play a crucial role in absorbing and storing atmospheric carbon, with the potential to store 10-20% of the predicted global emissions between 2000 and 2050¹⁵. However, as trees age, their ability to capture and store carbon decreases. If trees are not harvested and removed, eventually they will die and begin to decompose, releasing that carbon back into the atmosphere in the process. This means that responsible harvesting is an incredibly eco-friendly way to manage forests. In fact, when this process is properly completed

and the harvested areas are left as forests, timber is considered to be carbon-neutral 16 . In addition, timber is a relatively lightweight material to transport, resulting in fewer carbon emissions through the transportation process.

Renewable Material

It would be fair to say that timber is not broadly considered a 'renewable' resource within the modern lexicon. However, examining the realities of a sustainably managed resource shows that it is one of the most renewable building materials in existence. Timber forests are managed in a cyclical process whereby trees are harvested and regenerated continuously. For each tree that is harvested, a number of young trees are planted in its place. Over time, some of these trees will become dominant, maximising sunlight and canopy space for themselves, and some of the other trees will die naturally in the process. By the time a forest reaches maturity, only a small number of the original trees will have survived. Overseeing this process and mechanically assisting with thinning where necessary is essential to the regrowth of healthy forests, and is one of the important signifiers of sustainably sourced wood.

Cost Effectiveness

In the past, it may have been cheaper to specify less ethical timber as regulation within the industry was tightened. But now the supply of ethically sourced timber has met demand, bringing prices down and making it a highly cost-effective and luxurious material. While there still may be a minor pricing difference between ethically certified and non-certified timber products, the value is regained through the improved quality, longer life and peace of mind that come from these products.

Low Maintenance

Timber flooring is a low-maintenance yet luxurious flooring option. With a range of local and international hardwoods and durable, ethical and low VOC finishes available, modern timber floors can be expected to have lifespans in excess of 10-15 years before resanding is required.

Timber is easy to clean - it can be swept or vacuumed to remove larger dust and grit particles and can be mopped with warm water and a basic timber cleaning solution to provide a finer clean. By looking after the floor in this way the lifespan can be even further prolonged.



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PRODUCT: RECM2025 Reclaimed Barn Oak. DESIGN: Patricia Stewart

CERTIFIED SUSTAINABLE TIMBER FLOORING

It is important to note that only genuine, sustainably certified timber products will provide the benefits described above. Imitation timber products will not convey the same health benefits, nor will they provide the same feel, durability or sustainability credentials of a genuine product. In addition to decreasing stress by providing a sustained connection to nature in indoor environments¹⁷, sustainably sourced timber products can be considered carbon neutral - unlike other common flooring materials such as cement, which is responsible for an estimated 5% of global CO₂ emissions¹⁸.

Other common flooring options such as vinyl floors are non recyclable and emit volatile organic compounds (VOCs) which are widely attributed to a number of health issues including aggravated respiratory problems or headaches¹⁹. Additionally, these materials contribute to landfill and excess wastage. Timber flooring can be refinished and resanded to prolong lifespan, and if no longer needed can be reclaimed and reused for other projects.

HAWWOODS

Hawwoods genuine timber flooring is made from sustainably sourced, eco-certified timber. With Cradle-to-Cradle™ and Forest Stewardship Council® (FSC-C009500) certification for the vast majority of products, Hawwoods' timber is certified at the highest levels, contributing to the circular economy and lowering global carbon emissions.

Hawwoods' genuine timber flooring is ideal for improving wellbeing through greater connection with nature. In line with the tenets of biophilic design, wood flooring can lower stress, decrease anxiety and increase calmness. With a broad range of styles for any application or budget, Hawwoods ensures these benefits are widely available for people of all walks of life.

Hawwoods stays at the forefront of innovations in timber and engineered timber flooring, building and expanding expertise across product ranges, installation and maintenance methods in order to pass those benefits to customers.

References

- ¹ ASoderland, J. "The Rationale for Biophilic Design". October 2019. Accessed August 8 2020. https://www.researchgate.net/publication/336655242_The_Rationale_for_Biophilic_Design
- ² Topgul, S. "The Impact of Biophilic Design on Workers Efficiency". December 2019. Accessed 8 August 2020. https://www.researchgate.net/publication/338111192_The_Impact_of_Biophilic_Design_on_Workers_Efficiency
- ³ Wynhorst, N. "Biophilic design in health care". 29 January 2019. Accessed 8 August 2020. <https://www.hospitalhealth.com.au/content/design-in-health/article/biophilic-design-in-health-care-1494624725#axzz6UULn4nb3>
- ⁴ National Geographic. "Green Buildings Could Save Our Cities". 24 January 2017. <https://www.nationalgeographic.com/environment/urban-expeditions/green-buildings/benefits-of-green-buildings-human-health-economics-environment/>
- ⁵ Plastow, K. "Energy prices a cause of stress as summer looms". The New Daily. 19 Nov 2019. Accessed 8 August 2020. <https://thenewdaily.com.au/finance/your-budget/2019/11/19/energy-prices-summer-save>
- ⁶ Australian Government. "Indoor Air". Department of Agriculture, Water and the Environment. Accessed 8 August 2020. <https://www.environment.gov.au/protection/air-quality/indoor-air#:~:text=It%20is%20generally%20recognised%20that,%2C%20offices%2C%20or%20inside%20cars.>
- ⁷ Watts, J. "Climate crisis: in coronavirus lockdown, nature bounces back – but for how long?". The Guardian. 10 April 2020. Accessed 8 August 2020. <https://www.theguardian.com/world/2020/apr/09/climate-crisis-amid-coronavirus-lockdown-nature-bounces-back-but-for-how-long>
- ⁸ APA. "Nature in Design: The Biophilia Effect". Accessed 8 August 2020. <https://www.apawood.org/designerscircle-nature-in-design-the-biophilia-effect>
- ⁹ Australian Government. "Illegal Logging". Department of Agriculture, Water and the Environment. Accessed 8 August 2020. <https://www.agriculture.gov.au/forestry/policies/illegal-logging#:~:text=If%20you%20import%20wood%2C%20pulp,logs%2C%20these%20laws%20affect%20you.&text=Under%20Australian%20law%2C%20illegal%20logging,where%20the%20timber%20is%20harvested',.>
- ¹⁰ *ibid.*
- ¹¹ Cradle to Cradle. "What is Cradle to Cradle certified?". Accessed 8 August 2020. <https://www.c2ccertified.org/get-certified/product-certification>
- ¹² Forest Stewardship Council. "About Us". Accessed 8 August 2020. <https://fsc.org/en/about-us>
- ¹³ Forest Stewardship Council. "Forest Management Certification". Accessed 8 August 2020. <https://fsc.org/en/forest-management-certification>
- ¹⁴
- ¹⁴ Timber NSW. "Timber in the Carbon Economy". Accessed 8 August 2020. <https://timbernsww.com.au/timber-in-the-carbon-economy/>
- ¹⁵ *Ibid.*
- ¹⁶ Above n14.
- ¹⁷ Watchman, M., Potvin, A., & Demers, C. "A Post-occupancy Evaluation of the Influence of Wood on Environmental Comfort". October 2017. Accessed 8 August 2020. https://www.researchgate.net/publication/320240800_A_Post-occupancy_Evaluation_of_the_Influence_of_Wood_on_Environmental_Comfort
- ¹⁸ Kilvert, N. "Timber can be more sustainable than other building materials, but it comes with some caveats". ABC News. 24 Jan 2019. Accessed 9 August 2020. <https://www.abc.net.au/news/science/2019-01-24/timber-can-be-more-sustainable-than-other-building-materials/10736496>
- ¹⁹ Australia State of the Environment. "Volatile Organic Compounds". Accessed 9 August 2020. <https://soe.environment.gov.au/theme/ambient-air-quality/topic/2016/volatile-organic-compounds>

All information provided correct as of August 2020.