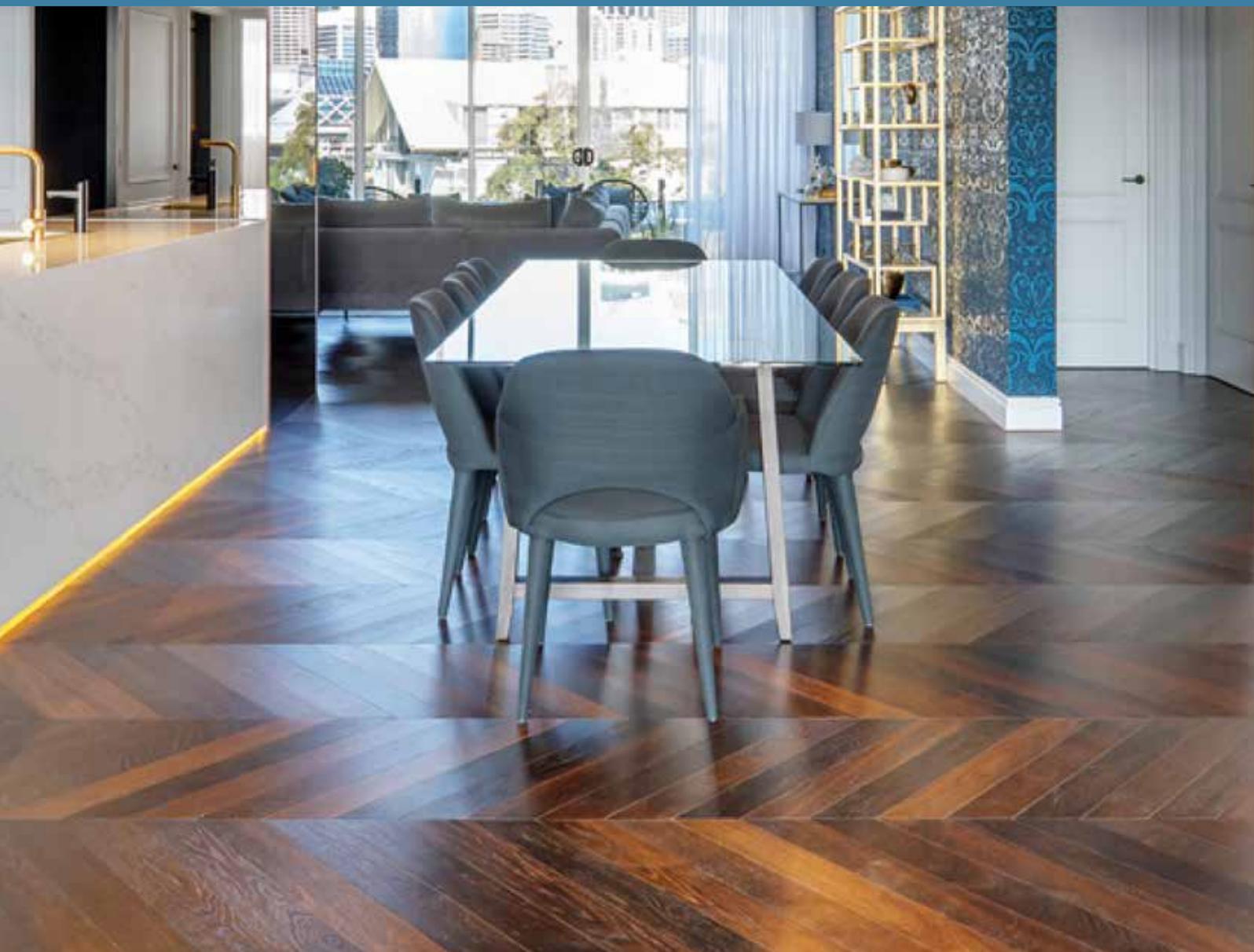


Wood and Wellbeing: The Health Benefits of Choosing Timber



Introduction

The World Health Organisation (WHO) defines health as “...a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”.¹

While physical health has long been well-understood, the other two parts of this equation – the mental and social aspects of wellbeing – are often not fully acknowledged. Even though almost half of all Australians aged 16 to 85 years will experience mental illness at some point in their lives,² there is unfortunately still a stigma surrounding the subject.³

However, things are starting to change, not only in Australia but globally. According to the UN Department of Economic and Social Affairs, “There is growing recognition within the international community that invisible disabilities, such as mental health is one of the most neglected yet essential

development issues in achieving internationally agreed development goals.”⁴

Around the world, as the issue begins to be properly addressed it has become clear that there are many factors involved in mental health. In addition to more immediately obvious things, like family history, drug use or socio-economic status, mental health is also affected by factors such as how we interact with the built environment.

Academics and the broader architectural community are beginning to understand the extent to which the buildings we live, play and work in affect our health and well-being.⁵ This whitepaper outlines the evidence that has led them to this conclusion. It then focuses on wood and its ongoing presence as a sustainable, healthy building material.





Healthy Buildings

As defined by Hal Levin, a “healthy building” is “one that adversely affects neither the health of its occupants nor the larger environment”.⁶

Taking this definition further, according to Ed Suttie “a building should go beyond eliminating negative impacts on our health to be a building that has positive impacts on our physical health...”⁷

So, what makes a building healthy? In short, it is a structure that includes features like windows that let in plenty of daylight and open fully for ventilation; sufficient storage that enables functional living; sound insulation to prevent disturbance between neighbours and a sense of privacy; and open plan spaces to encourage social interactions.

With atmospheric levels of carbon dioxide now at levels not present for at least 800,000 years, the continued existence of organised human society has been brought into question. Therefore, the healthy building concept prioritises sustainability, not just in terms of materials and construction, but also in terms of efficiency. Healthy buildings, by definition, are part of the climate change solution.

Biophilia, a term first used in the 1970s by psychoanalyst Eric Fromm⁸ is important to consider. Defining it as a

“passionate love of life and of all that is alive...whether in a person, a plant, an idea, or a social group”, Fromm found that – more than just an aesthetic preference or inclination – the love of nature is a biological instinct.⁹ As such, biophilia has influenced scientists and philosophers alike and been applied to many fields, including architecture.

The concept of biophilic design refers to buildings that achieve a connection to nature through design and choice of materials. Having achieved this connection, they are intended to deliver health benefits to their occupants.¹⁰ By using either direct techniques (like specifying large open windows, timbers, indoor plants, etc.) or indirect ones (like taking inspiration from organic shapes and materials), designers seek to bring the outside in.

On a practical level, the International Well Building Institute (IWBI) has formulated a method to identify pathways to healthy building design.¹¹ WELL v2, the latest version of the WELL building standard provides tools for architects to transform buildings and communities in ways that help people thrive. It focuses on ten factors: air, water, nourishment, light, movement, thermal comfort, sound, community, materials, mind, and community.¹²



Wood – a healthy building material

Healthy buildings prioritise the use of healthy materials – i.e. materials that have low chemical content and low (or zero) embodied carbon; are fire resistant; hygroscopic; breathable; flexible; and recyclable. Sustainably sourced wood scores well on all these measures.

Wood has sometimes been linked to harmful Volatile Organic Compounds (VOCs). However, a study conducted at a hospital in Norway found that the use of wooden wall panels in hospital rooms had no effect on the amount of harmful VOCs in the indoor environment.¹³ Indeed, wood has been found to contain alpha-pinenes (beneficial VOCs that have beneficial health effects).¹⁴

Research has confirmed the biophilic benefits of timber. In one Planet Ark study examining the health and wellbeing benefits of wood in the Australian context, participants were asked how they perceived a range of materials including wood, brick, concrete, steel, aluminium and plastic. In response, wood scored the highest in five out of six categories. For example, 93% of respondents said wood created a natural look and feel and 92% felt wood creates a warm and cosy environment. (Both responses were at least 30% higher than the next closest response).¹⁵

Another study of 1,000 Australian indoor workers found that natural-looking wooden surfaces in the workplace are strongly associated with increased employee wellbeing and satisfaction.¹⁶ Those surveyed reported improvements in personal productivity, mood, concentration, clarity,

confidence and optimism. They were also more likely to find their workplaces relaxing, calming, natural feeling, inviting and energising.

Elsewhere, uncoated wood has been found to be pleasant to the touch¹⁷ and wood has been found to potentially improve the energy-efficiency of buildings.¹⁸

The health benefits of wood interiors are many.¹⁹ They include reduced blood pressure, heart rate and stress levels, improved attention and focus, improved emotional state and level of self-expression, greater creativity, quicker recovery, and reduced pain perception.

The future of wood and wellbeing

Considering these many benefits, the future of wood as a building product is looking bright. Projects like the construction of world's tallest 'hybrid timber' tower in Sydney are testament to this fact.²⁰ As TRADA notes, "Timber has quietly jostled its way to the front of the queue to become architecture's material of choice."²¹

In Australia, the use of timber is regulated by the Building Council of Australia (BCA). Covering material and workmanship, structure, fire and safety, site preparation, resistance to contaminants and moisture, resistance to sound, installation, and more, these regulations are comprehensive. They pave the way for the expected increased use of timber products in this country to follow a creative and safe path.

Havwoods

For more than 40 years, Havwoods has led the timber flooring market for high quality engineered timber flooring and cladding solutions for commercial, residential and hospitality projects. The company's focus on innovation, sustainability, and quality is bolstered by a commitment to improving occupant health and safety through effective biophilic design.

The Havwoods catalogue comprises almost 200 products and is carefully curated from around the world to include ranges certified by the Forest Stewardship Council (FSC); Cradle to Cradle (a certification ecolabel that is growing in terms of both perception and acceptance); and the Program for the Endorsement of Forest Certification (PEFC, which is the world's largest forest certification system). As such, they represent not only the best biophilic choice but also an assured sustainable product.

All quality manufactured and made with ease of installation in mind, Havwoods products serve a variety of design requirements. All are suitable for use as flooring, bespoke cabinetry or joinery, and for use on walls and ceilings. And, with ten product ranges available, there is a product to suit every application.

The biophilic benefits of timber flooring are well-established. Havwoods delivers a dynamic engineered timber flooring solution that boasts diversity of design, ease of installation, a range of accessible price points, and a flexible scale.

For more information on how Havwood's timber range can enhance your project, visit www.havwoods.com.au.





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