

SUSTAINABLE, INNOVATIVE & HEALTHY:

How the Latest Timber
Veneer Technology is
Transforming Interior Design



INTRODUCTION

As the Australian Design and Construction sector continues to respond to new and increasingly complex challenges, the industry is turning to a new generation of innovative timber veneers products to meet them.

These challenges have driven competition and innovation in manufacture presenting designers and construction professionals with a host of new opportunities. In addition to delivering buildings and interior spaces which are well designed and fit for purpose, today's practitioners also face new demands resulting from increasingly rigorous building codes and standards, responsible sourcing and value engineering.

Sustainability, design flexibility, installation efficiency and contribution to a user's health and wellbeing are also now expected of architectural and interior design projects.

In this whitepaper, we take a closer look at the current generation of timber veneers and explore how they respond these challenges.

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SUSTAINABILITY

The environmental impact of construction materials and methods faces increased scrutiny. Environmental consciousness is vital at all stages of the supply chain from manufacture to end user. From sourcing the raw material to production and manufacture, installation, maintenance and end of life disposal, the sustainability of a product must be considered holistically.

In their joint 2018 Australian Natural Waste Report, Randell Environmental Consulting and Blue Environment Pty Ltd reported that between 2016 and 2017, Australia produced the equivalent of 20.4 million tonnes (831kg per capita) of construction and demolition waste.² In light of this, it is particularly crucial that designers and specifiers choose products and construction materials which minimise waste across their lifecycle.

By their very nature, timber veneers reduce the quantity of scarce resources used and are an excellent way to respond to the demand for environmental sustainability. Most veneers have a thickness between 0.5 and 0.85mm, meaning 1000 slices of veneer can be cut from a single metre of timber.³ As a consequence, natural timber veneer is a significantly more efficient and responsible choice than solid timber. The Timber Veneer Association of Australia reports that timber veneer has a surface coverage approximately 40 times greater than 25mm thick solid timber.⁴ Innovations in timber slicing mean that even thinner leaves of veneer can be cut increasing the yield by a factor of 120.

Legislation continues to prioritise and enforce sustainable building practices supported by a number of internationally recognised standards, including the Forest Stewardship Council Certification® (FSC) and the Program for the Endorsement of Forest Certification (PEFC). The control afforded by the timber veneer manufacturing process ensures that the ethics of planting, harvesting, processing and logistics can be closely monitored and that environmental agreements can be enforced, thus making it a reliable and responsible timber choice. Adhering to these certifications provides designers with the ability to select and specify materials sourced transparently and sustainably.

Elton Group timber products are FSC certified and sourced from FSC and Controlled Wood forests in Europe, USA and Australia. Long standing supply relationships, going back over 50 years, with companies based in rigorously legislated jurisdictions ensure transparency and authenticity of certifications.

These partnerships, based on experience and expertise provide the opportunity for Elton Group to continue to develop and source products which are at the forefront of innovation.

From rotary peeling in the production of the iconic Eveneer range to patented slicing methods enabling the longest sequenced runs of natural veneer possible in the prefinished WoodWall range, Elton Group's veneers are at the forefront of sustainable technologies.

DESIGN AND INNOVATION

As digital connectivity and technology in building design and modelling increases, architecture and interior spaces are becoming increasingly integrated and complex. In response, designers and specifiers are seeking versatile natural materials that can be applied to a range of surfaces and substrates in new and innovative ways.

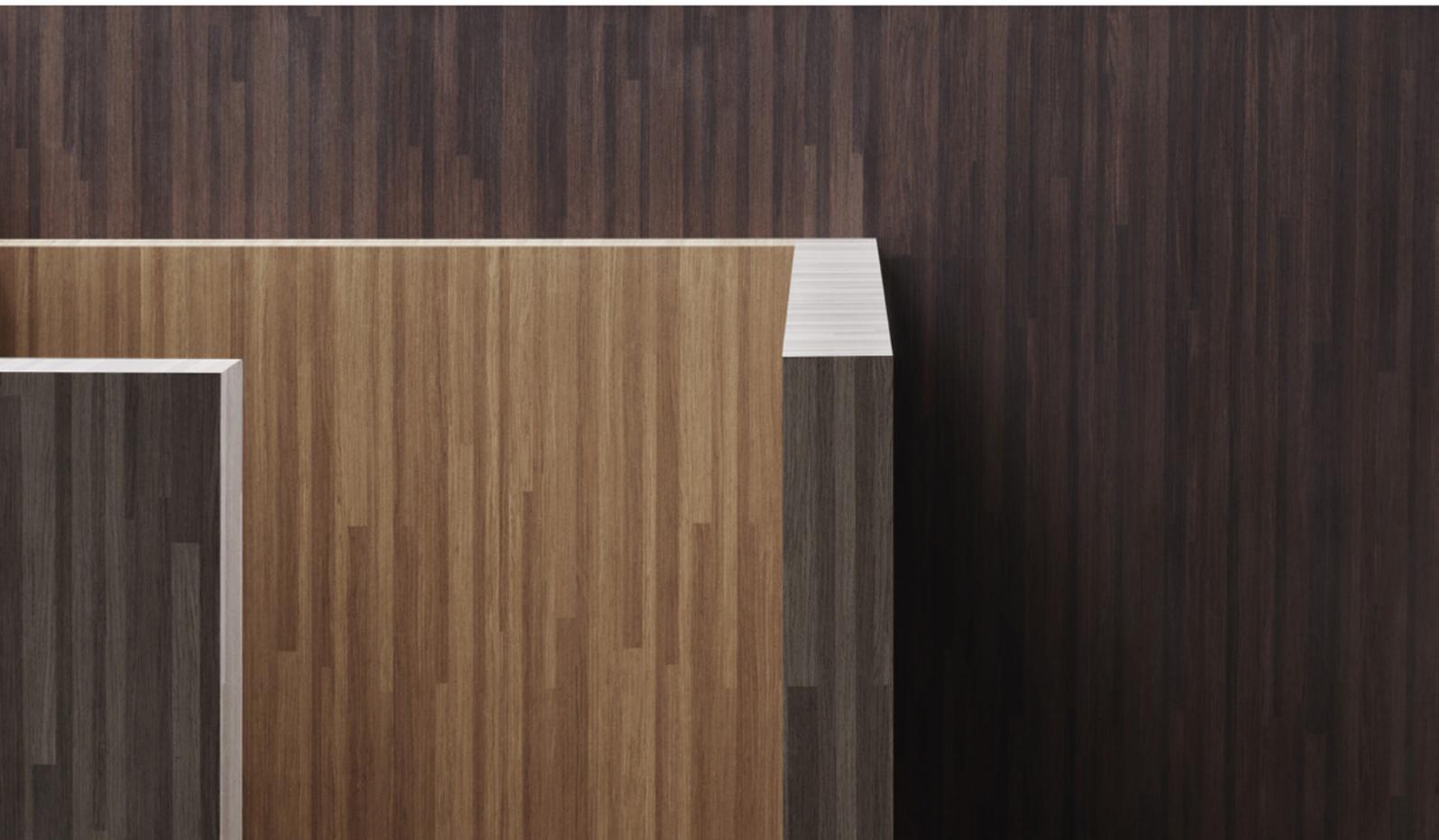
The characteristic flexibility of timber veneer allows application and lamination in increasingly unique ways. Beyond typical joinery and panelling, the new generation of more flexible veneers can be applied to suspended structures, columns, corners and tight radii, bulkheads and complex curves or be applied as a lightweight skin to wall and ceiling linings. Reconstructed timber veneers have been specifically developed to utilize plantation grown fast growing timbers to replicate endangered and slow growing species and cover large surfaces with consistent grain and pattern, providing predictable and sound surfaces, free from knots, splits and discolouration, saving time and cost.

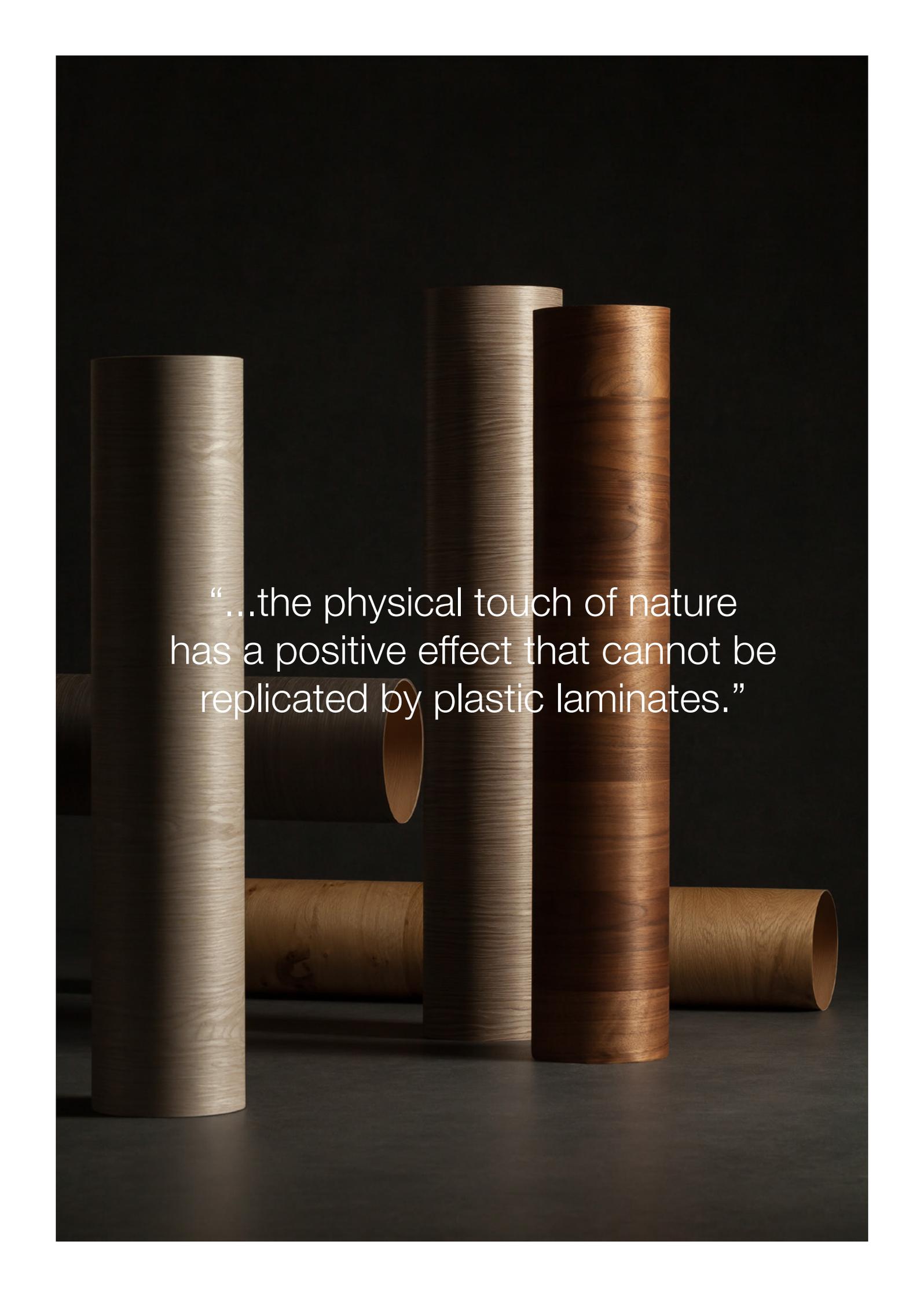
Elton Group's Eveneer range of reconstructed veneers comprises a palette of versatile timber grains and colours designed to suit modern joinery and our ongoing research into timber finishes produces natural surfaces with enhanced appearance and wear characteristics. Our partnership with Alpi in Italy has brought us directly in contact with some of the world's leading designers who have developed unique and highly distinctive timber

grains, patterns and products. The manufacture of the veneer also enables its production in bespoke quantities, species and colours to meet design requirements and tailor its application for the desired design outcome.

Their innovative WoodWall® veneer is a versatile, high quality, prefinished real-timber veneer wall covering suitable for a wide range of direct applications including plaster, plasterboard, MDF, steel and acrylic that can be affixed to curved surfaces down to a radius of 1mm. Group 1 fire-rated it can be used in a wide variety of applications including those not normally open to the use of timber veneer. In lieu of shipping cumbersome timber panels to site, WoodWall® is supplied in boxes of 10 sheets that can cover an area of approximately 28m² and be easily carried by one person. Installation equipment is equally easy to transport to site for it is as simple as a pot of glue, a brush and a flattening tool. Rapid and easy installation allows spaces to be completely transformed with minimal delay or downtime, and at less than half the cost of conventional timber panelling.

The ultra-thin technology used in the composition of WoodWall® veneer allows maximum yield from raw materials as one log of wood can produce approximately three times more WoodWall® veneers than average timber veneers, thus ensuring outstanding material efficiency and minimum waste. and deliver the biophilic effects of timber surfaces.





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HEALTH AND WELLNESS

The growing focus on sustainability coincides with a broader appreciation and commitment toward health and wellbeing. Against this context, the success of a building is dependent on its positive impact on the people who inhabit it. It is now well documented and recognised that human health and wellbeing are enhanced by contact with nature, yet increasing urbanisation means most city dwellers have little chance of interaction with the natural world. Research has shown that wood has positive psychological effects on people and a similar stress-reducing effect to nature. A study from Planet Ark suggests that timber furnishings contribute to reduced stress and anxiety while boosting creativity and productivity.

Biophilia or 'bringing nature indoors', replicates the mental and physical benefits of being in touch with the living world. Designers are recognizing the critical role of bringing natural materials, forms and textures into our living and working environments. In our living spaces, wooden furniture and timber surfaces bring a calming effect, and make a room feel warmer and more inviting. Employers are realising that providing a workplace designed on biophilic principles significantly increases employee commitment, enhancing creativity and

increasing productivity and engagement in our work— as evidenced in the increasing importance placed on WELL Building ratings.⁵

The physical touch of wood has a positive effect on humans that cannot be replicated by timber look alternatives such as vinyl and plastic laminates. Laminate and melamine, containing phenol and formaldehyde, involve toxic chemicals and glues, which can contaminate air, land and water, posing health risks to humans and animals – even in relatively low concentrations. In contrast timber veneers contribute to improved indoor air quality, improving air by modifying humidity, absorbing pollutants whilst also acting as a long-term store of carbon, helping to fight climate change. In terms of physical health, timber products are easy to clean and require little maintenance to ensure spaces are kept dust and mildew free. Timber surfaces are also shown to breakdown viruses 2 – 5 times faster than non-porous surfaces such as metal and plastic.

With a focus on reducing and eliminating VOCs and chemicals from our environments, timber surfaces bring natural beauty, warmth and texture to modern interiors.

CONCLUSION

Elton Group offers an extensive range of timber veneers and wood-based surfaces to bring warmth, texture and vitality to any space. Their products represent a balance between art and science, and embody their commitment to responsible forestry practices, sustainability, quality and beauty. From wood to wood, Elton Group's surface ranges encourage designers and specifiers to push boundaries with a curated collection of unique and innovative products; from signature Eveneer® timber veneers through to unique WoodWall® wooden wallcoverings and healthy, non-toxic soy glue Plywood, Elton Group is committed to partnering to deliver exceptional environments.

Elton Group has led the Australian timber veneer market with high quality interior architectural products for more than 80 years. This leadership is bolstered by a consistent drive toward innovation, sustainability and responsible use of materials.

Learn more about how Elton Group timber veneers can improve the sustainability and wellness ratings of your project – visit eltongroup.com or contact us at sales@eltongroup.com



REFERENCES

- ¹ https://www.constructors.com.au/wp-content/uploads/2019/11/construction_outlook_Nov2018.pdf
- ² <https://www.environment.gov.au/system/files/resources/7381c1de-31d0-429b-912c-91a6dbc83af7/files/national-waste-report-2018.pdf>
- ³ <http://timberveneer.asn.au/wp-content/uploads/2014/02/Manual.pdf>
- ⁴ ibid
- ⁵ <https://www.wellcertified.com/>
- ⁶ Kellert, Stephen R., What Is and Is Not Biophilic Design, Metropolis Magazine, October 26 2015.
<https://www.metropolismag.com/architecture/what-is-and-is-not-biophilic-design/>
- ⁷ <https://www.architectureanddesign.com.au/news/timber-makes-you-feel-good-and-helps-you-heal-says>

All information provided correct as of April 2020