

Timber...

Why on earth would you build with anything else?

- Forests are renewable. Managed properly, timber will be available for all future generations.
- Wood chars when exposed to fire. Steel does not burn - but it can soften and collapse without warning.
- Termite barriers are recommended, no matter what building materials are used. For added security, timber is now available with built-in termite protection and a 25-year warranty against attack.
- Wood is an environmentally friendly material that grows with solar energy, extracting carbon dioxide from the atmosphere. It is the only common building material that is able to lock up carbon in this way.
- Timber sourced from renewable forests results in reforestation. In addition to the carbon stored in the timber, the replanted forest continues to absorb carbon at a rate which may exceed carbon absorption in mature trees.



TIMBER INDUSTRIES
Established 1919

PHONE: 08 8297 8277

Why does Australia need forest industries?

We all have timber in our homes, schools and workplaces, as a building material, as furniture and as equipment. We also use a wide range of paper products in books, magazines and newspapers, for writing, in tissues and in recyclable packaging.

Timber is a natural, renewable, energy-efficient resource, which is often environmentally preferable to aluminium, steel or plastic.

Industry facts and figures¹

Australian timber is produced from both native forests and plantations. The Commonwealth Department of Agriculture, Fisheries and Forestry (DAFF) reports that our native forests cover 162.7 million hectares, or 21% of Australia's land area. Only around 11.4 million hectares - 7% of total forest - is available for timber production and less than 1% is harvested each year.¹ Our plantations are managed intensively for timber production in a similar way to other crops.

A Natural Product

All timber production is the result of natural processes - plants harnessing solar energy to produce the valuable fibrous material we know as wood.

Large scale plantation forestry and harvesting, conducted under strict environmental protection guidelines, offers us a way of producing timber without over-committing our natural forest resources.

Fire safety - Timber has its own advantages!



This tangled mess of buckled framing is what remains of a steel-framed house after a fire in the Adelaide area.

Timber wall frames holding up melted steel frames



The steel roof trusses have sagged and lost virtually all strength after exposure to the heat of the fire, but the timber-framed stud walls still have sufficient strength to stop total collapse.

TIMBER

Managed properly is the most environmentally friendly, sustainable and renewable of all the building materials commonly used in Australia.

WE THINK SO...!

Renewable into the future

Pine plantations can be harvested and re-planted many times over and continue to generate large volumes of timber.

In fact, tree breeding programs enable improvements in growth, size and form of pines to be incorporated into new progeny so that each generation will exceed the performance of the last.

Unlike other building products such as steel, aluminium and concrete, there is no depletion of non-renewable natural resources in growing timber.

Growing pine trees involves the use of solar energy, carbon dioxide, water and soil nutrients. These nutrient reserves are not significantly reduced if plantations are harvested and replanted on the same site because 50-70% of nutrients present in a mature pine tree are stored in the crown, which remains on the site after harvesting .

Timber's environmental benefits

Table 1: Timber reduces energy use and helps restore the carbon balance

MATERIAL	ENERGY USED IN PRODUCTION (MJ/m ³)	CARBON RELEASED (kg/m ³)	CARBON STORED (kg/m ³)
Timber	750	15	250
Steel	266,000	5,320	0
Concrete	4,800	120	0
Aluminium	1,100,000	22,000	0

Source: Presented in Ferguson, I., La Fontaine, B., Vinden, P., Bren, L., Hateley, R. and Hermesec, B. 1996, 'Environmental Properties of Timber', Research Paper commissioned by the Forest & Wood Products Research & Development Corporation.

Resists corrosion

Timber is relatively unaffected by salt air, which is why so many seaside structures are traditionally made from timber (Jetties, boats and so on). Anyone building near the coast needs to be aware that manufacturers' warranties for steel house framing may not apply within 300m of the high water mark.

Because of the excellent corrosion resistance of timber, it is often the preferred material for commercial buildings where a corrosive process is carried out, for example chemical storage buildings, galvanising plants and similar structures.



TIMBER INDUSTRIES
Established 1919

856 South Rd, Edwardstown, SA 5039
PO Box 84, Edwardstown, SA 5039
Tel 08 8297 8277 • Fax 08 8297 6836
www.bonetimber.com.au

Forests, Wood and Australia's Carbon Balance²

Forests in Australia store an estimated 10.5 billion tonnes of carbon (excluding soil carbon). The carbon store has been built through the forest plants having removed almost 38.5 billion tonnes of carbon dioxide from the atmosphere, about 70 times Australia's annual net greenhouse gas emissions.

Australian plantations and commercial forests removed a net 43.7 million tonnes of carbon dioxide from the atmosphere in 2004.

The accumulated storage in Australia's forest plantations and wood products is about 323 million tonnes of carbon, of which the wood products store more than 230 million tonnes of carbon.

Wood products typically require less energy to make than alternative materials. Because energy rating schemes and environmental assessments are typically not based on full-life-cycle assessments, the comparative environmental advantages of sustainably harvested wood are not fully recognised.

The use of sustainably harvested forest biomass to generate renewable energy permanently eliminates atmospheric emissions that would otherwise have resulted from the use of fossil fuels.

There are ways to recognise better the greenhouse credentials of forests and wood products. These include burning more sustainably harvested wood and waste for energy, extending emissions trading schemes to recognise carbon stored in wood, and making full-life-cycle assessments of building materials.

By removing carbon dioxide from the atmosphere, forests, forestry, and the use of wood products are helping mitigate climate change.

References

- 1 Commonwealth Department of Agriculture, Fisheries and Forestry website www.daff.gov.au May, 2008. The full document can also be accessed via www.fwpa.com.au
- 2 Reproduced verbatim from *Wood and Australia's Carbon Balance*, published by Forest and Wood Products Australia in conjunction with the Cooperative Research Centre for Greenhouse Accounting, by permission of Forest and Wood Products Australia.