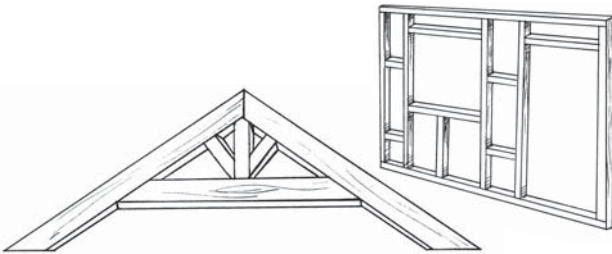




Products from Timber

Solid Timber Mills

Large solid timber mills deal with mass production of timber products – such as flooring, construction grade timber, furniture components and lining – with lower grade products marketed for pallets, and waste sold as wood chips. These mills are designed to produce large volumes of standard products, and, as with any mass produced item, the aim of production is to ensure a standard quality and performance, low cost, fast production time and large output.



Timber used for building materials.

A typical log processing operation includes the following steps:

1. Logs are cut, using a large bandsaw or twin circular saws, into manageable sized pieces.
2. Another saw then cuts the boards into standard thicknesses (e.g. 16mm, 25mm or 50mm).
3. The third saw (*the 'edger'*) – trims the heartwood and sapwood off each board.



Firewood and wood chips.

4. Some boards are then turned on their edge and split down the middle.
5. Boards are sorted and stored in racks according to their thickness and length.
6. Racks are moved to an area for pre-drying, reconditioning and final drying.
7. After final drying, racks are stacked in a yard until closer to the time of sale.
8. Sometimes boards are cut to size or dressed (*planed, moulded, tongue-and-grooved*) and packed for individual customers.

Plywood

Plywood was the first type of 'engineered wood' to be invented. Engineered wood is manufactured by binding together wood particles or fibres with strong glues.

Plywood is made from thin sheets of wood, called plies, which are stacked together at right angles to each other and then bonded under heat and pressure. It is generally used in furniture manufacture, construction, boat building, flooring, panelling and concrete formwork because it is stronger and less likely to crack, shrink, twist or warp than natural wood.

Plywood meant for indoor use uses cheaper urea-formaldehyde glue which has limited water resistance, while outdoor and marine-grade plywoods are designed to withstand rot and are made with a water-resistant phenol-formaldehyde glue.

Veneer

When veneer logs arrive at the mill they are graded, cut into standard lengths, and graded again. They are then cut into slices called flitches, using special laser-guided saws. The flitches can have different patterns, depending on how they are placed in the saw.

Find Out More

Forest and Wood Products Research & Development Corporation - www.timber.org.au



Products from Timber

The flitches are then heated in large vats of water to make them easier to slice and stop them rolling up into tight balls. They are 'grooved' with a chainsaw, to stop them ripping during handling, and then sliced into leaves that are only 0.6mm thick.

The leaves are dried, stacked, cooled, graded, trimmed and either sold as they are for further processing, or glued together for uses such as flooring and furniture.

Pulp, Paper and Particleboard

The production of these items is often carried out simultaneously by large companies which obtain supplies from their own plantations, other forests and sawmills, or from overseas.

Timber can be processed into pulp either chemically or mechanically. The wood fibres have to be separated from each other and then re-formed into 'mats' of various thicknesses, with additives such as bleaching agents, glues, colouring pigments, preservatives or fire retardants.



Books and packaging, including cellophane.

High-quality printing paper is produced by processing eucalypt, radiata pine, or imported hardwood pulp, while newsprint combines radiata and eucalypt pulp with recycled fibres.

Particleboard is a reconstituted product made by coating wood particles in resin and forming them into sheets under heat and pressure.



Indoor and outdoor furniture.

Preserved Timber Products

Timber is preserved to help ensure that it can withstand rain, frost, sun, decay and fungal and insect attack when used outside.

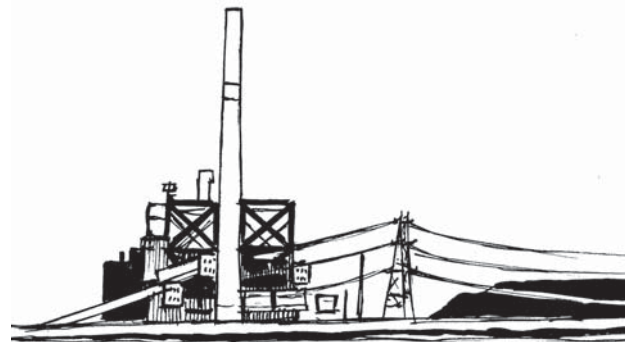
Softwoods are more prone to decay and rot than hardwoods, but they also absorb preservatives more easily. More recently the less toxic arsenic-free treatment (*tanalith*) is used to preserve timber.

Preserved timber is used for framing, flooring, weatherboards, decking, window frames, fences, landscaping, playgrounds, power poles and boats.

Other Uses for Wood

Timber can also be used for pallets, packaging, craft items, toy and instrument making and furniture production.

Timber is also made into artworks, packing cases, wine barrels, cellulose batts for insulation, cardboard, firewood, mulch, fibre adhesives, packaging and pet litter.



Wood used as fuel to generate electricity.