

Tasmanian Timber

Huon Pine

Lagarostrobos franklinii Formerly *Dacrydium franklinii*

Other common names: White Pine, Macquarie Pine

The Timber

Huon Pine is the prince of Tasmanian timbers. The richness of its golden colour and figure make it one of the world's most desirable furniture and veneering timbers. Its durability and workability make it one of the best boat-building timbers known. The wood contains a natural preserving oil with an unmistakable perfume, and its fine and even grain makes the wood exceptionally easy to work with hand tools.

The 'Piners' (early timber getters) searched the inhospitable wilderness of Tasmania's west coast to cut and haul out Huon Pine logs. The timber was used for everything where durability and ease of working was required; in furniture and tables, in washtubs and ships, and in machinery and patterns for casting.

The Resource

Huon Pine is a species endemic to Tasmania. It is restricted to the western and south-western parts of the state, growing along river banks, lake shores and swampy localities in mixed formations. The tree grows very slowly to about 30 m in height and 1m in diameter. A tree of this size may be one thousand years old. Study of the growth rings of larger and older pieces (dendroclimatology) is being used as one means of determining trends in global climate change.

Today, the quality of Huon Pine continues to be recognised, but its supply is carefully nurtured and controlled. Almost all Huon Pine forests are reserved and much of the resource that is available comes from logs salvaged from rivers, the forest floor and areas inundated by hydro electric schemes. Supply is about 500 m³ per year for craft and furniture industries for the next fifty years and is available from specialist saw millers on the west coast of Tasmania with a tradition in Huon Pine milling.



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Huon Pine

Tasmanian Huon Pine properties:	
Colour	Light straw, ageing to dull yellow.
Grain	Straight fine and even, sometimes with birds-eye figuring. Growth rings are conspicuous and usually wavy.
Texture	Close, uniform and smooth.
Durability	In-ground contact: Class 3. Outside above ground: Class 3. Termite resistance of heartwood: Resistant. Refer to AS 5604 – 2005 Timber – Natural durability ratings.
Lycetid susceptibility	Not susceptible.
Sizes	Undressed seasoned timber 25 to 350 mm wide by 25 to 50 mm thick. Lengths up to 5400 mm long are available.
Density	Approximately 550 kg/m ³ at 12% moisture content. Unseasoned density approximately 950 kg/m ³ .
Shrinkage (green to 12% MC)	Approximately 2.5% radial, 3.5% tangential.
Movement	Between 25% and 5% MC, radial movement is approximately 0.14% per 1% MC change; tangential movement about 0.27% per 1% MC change.
Strength groups	Seasoned SD6, unseasoned S6.
Joint group	Seasoned JD4, unseasoned J4.
Structural grades	F7 to F14 seasoned, F4 to F8 unseasoned.

Workability	
General	Huon Pine is very easily worked, may be highly polished and is a very good bending timber.
Blunting	Slight.
Sawing	Cuts cleanly and accurately with low feeding force.
Planing	Low feeding forces required. Surfaces very smooth and lustrous.
Moulding	Produces excellent mouldings.
Boring	Easy to drill. Holes are clean and to size.
Rebating + mortising	Generally produces good results.
Turning	An exceptional turning timber.
Nailing	Nails hold fairly well, except on end grain where timber can tend to split.
Gluing	Difficulties can arise due to the presence of natural oils. Preparation may require washing with an organic solvent. Formaldehyde glues usually give the best results; others may have problems.
Bending	A very good to fair bending timber. 25 mm material bends fairly well to a radius of 50 mm.
Finishing	Good results can be obtained. Use of some finishes may require washing with an organic solvent to remove some of the natural oils.



Tasmanian timber is sustainably grown, harvested and processed to meet the highest standards in quality and environmental practice.

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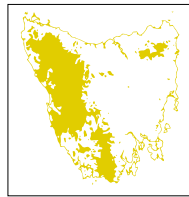
Tasmanian Timber

Huon Pine

Lagarostrobos franklinii

Forest Type

Distribution of forest type that contain these species:



Forest Type Location



Rain



Reserved

85%

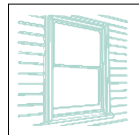
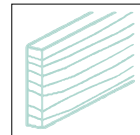
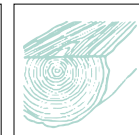
85% of total Huon Pine forest types are reserved

Certification



Carbon Storage²

242
kg/m³

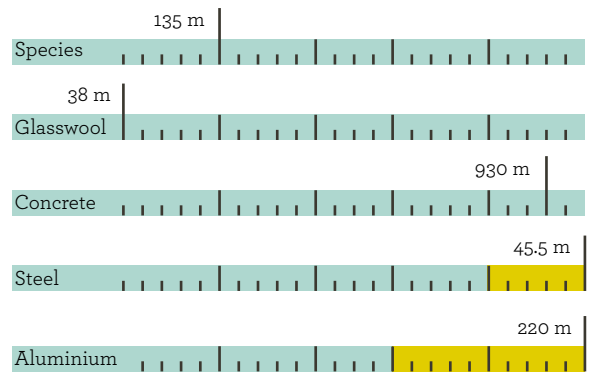


Availability

Rare Limited Readily Freely

Thermal Resistance³

Thickness required to achieve a value of R1



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Huon Pine

Appearance

A conifer, Huon Pine is probably Australia's longest lived species; individual trees have been identified as over 2000 years old. It has an incredibly slow growth rate of about 0.3–2 mm per year, taking approximately 1000 years to reach a height of 30 m and a diameter of 1 metre. Huon pine has a straight trunk but is often forked at the crown. It is recognisable by its feathery foliage and drooping lower branches. When the tree grows near rivers it is often scruffy looking, with the branches hanging into the water and covered in lichens.

Flowers: Huon Pine produces pollen and seeds in small inconspicuous cones about 3 mm long. These are somewhat fleshy when mature. Male and female cones grow on separate trees. Reproduction occurs every 5–7 years. A mass of seeds is dispersed a short distance around the tree.

Leaves the drooping light green foliage is made up of tiny scale-like leaves, spirally arranged on twigs. The leaf tips are blunt and ridged on the outer surface and scattered with white stomatal pores.

Bark: the bark is light brown and rather scaly.

Forest

Huon Pine is found in Tasmania's cool temperate rainforests and is commonly associated with Myrtle, Sassafras, Celery Top and Blackwood. It grows along riverbanks, lakeshores and swampy locations—it generally likes its feet in the water. It can be found from sea level to about 800 m, but mainly below 150 m.

Growing constraints because Huon Pine grows very slowly, it has limited availability. Reproduction usually occurs vegetatively; where a branch falls or touches the ground it forms roots and begins to shoot. Seedling regeneration does occur, but is less common as reproduction only occurs every 5–7 years.

Distribution this species distribution is restricted to areas in the west and south-west of Tasmania. Huon Pine does not cope with fire or drought. Preferring moist and wet conditions, it grows in rugged, hard-to-access areas, along riverbanks, lakeshores and swampy locations. 85% of the area of forest types containing Huon Pine in Tasmania is reserved.

Environmental

The aim of environmentally sustainable and responsible building practice is to consume minimal resources during construction, operation and eventual demolition.

Sustainable management¹: the National Forest Policy Statement identifies three principles for sustainable forest management: preserve biological diversity, maintain ecological processes within forests, and community benefit. Species sourced and processed in Tasmania from certified native forest and plantations are considered to be sustainably managed.

Certification: certified forests are managed in line with internationally recognised performance-based standards and are subject to third party audit. Most forests in Tasmania are certified to the Australian Forest Certification Scheme (AFCS). This requires compliance with AS 4708 (for forestry growers) and AS 4707 for Chain of Custody (forest to consumers). AFCS is internationally recognised by the program of the endorsement of forest certification schemes (PEFC) and certifiers are independently accredited by JAS-ANZ.

Chain of Custody: ensures that timber supplied is from a certified forest source. It requires controlled labelling and an auditable trail from the forest along the supply chain involving forest managers, processors, manufacturers, and stockists.

Carbon storage²: the growth of trees absorbs carbon, other emissions and particles from the atmosphere; converting them into wood and other biomass. Some carbon is released by harvest and processing, but the carbon stored within the recovered wood is contained for the life of the material.

R Values³: a material's resistance to the flow of heat is calculated as its R Value. The R Value of the building envelope is the sum of individual building components. The insulation (R Value) properties of building materials are important considerations in the design of energy efficient structures.

Availability: Huon Pine's availability is rare, and the resource is limited by quotas or predominant reservation.



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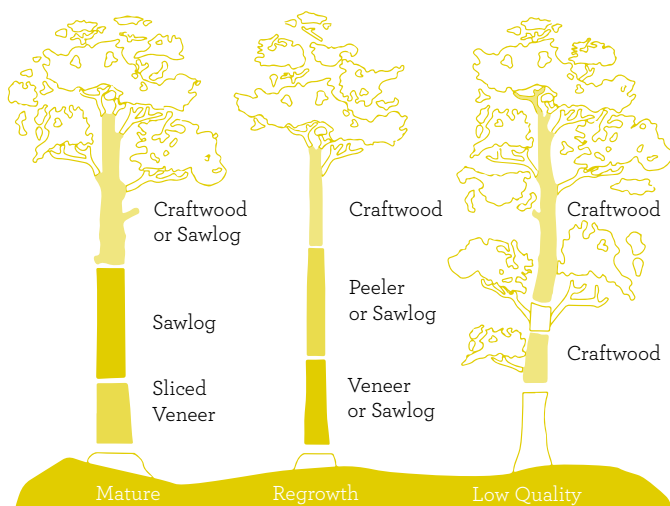
Tasmanian Timber

Huon Pine

Environmental Summary	
Resource Available from sustainably managed sources ¹	✓
Reserves A percentage of this species is reserved	✓
Certification This species is available with forest certification	✓
Chain of Custody Product with Chain of Custody is available	✓
Appearance Product for appearance use is available	✓
Structural Product for structural use is available	✗

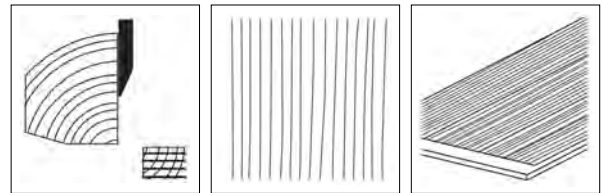
Tree Product

Mature Eucalypt Profile Shown

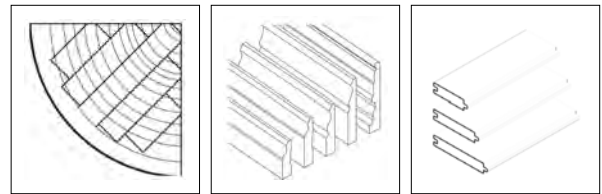


Products Appearance

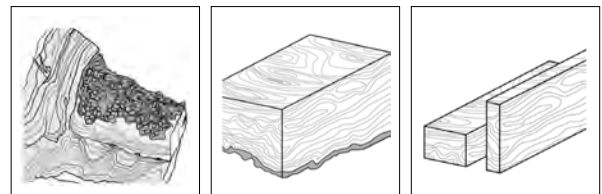
Quarter Sawn Veneer



Sawn Solid



Craft Wood



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Characteristics



Colour:

Heartwood is pale straw becoming yellow-gold after long exposure, while sapwood is narrow and hard to distinguish.



Grain:

Straight, with very fine and even texture and closely spaced growth rings.



Features:

1. Birds Eye: numerous round markings in the grain of the wood that resemble small eyes. These are caused by sharp, localised depressions in annual rings, and usually accompanied by grain distortion.
2. Burl: an outgrowth on the side of the tree caused by wounds or abnormal growth. These create a localized distortion of the grain that displays as a cluster or grouping of clusters.

Credits:

Maps: Tasmanian Government Department of Primary Industries and Water; **Tree Product Illustration:** Forestry Tasmania; **Forest Type Illustration:** Fred Duncan, Forestry Tasmania; **Forest Image:** Tasmanian Timber Promotion Board; **Species Illustration:** Vicky Dewsbury; **Species Application Image:** CSAW

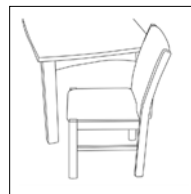
1. National Forest Policy Statement, daffa.gov.au

2. 2004: Ximenes, F.A. and Davies, I. "Timber CAM – A carbon accounting model for wood and wood products in Australia". dpi.nsw.gov.au/forests/info/timbercam

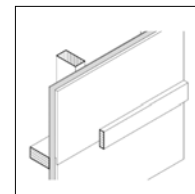
3. R Value Comparison Calculations -AS2878:2000, and ASHRAE, 2005 Physical Properties of Materials.

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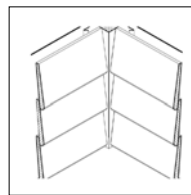
Applications



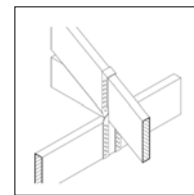
Furniture



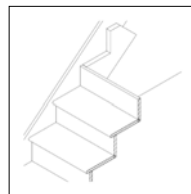
Fitting & Trims



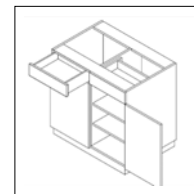
Lining & Cladding



Framing



Windows Doors Stairs



Joinery



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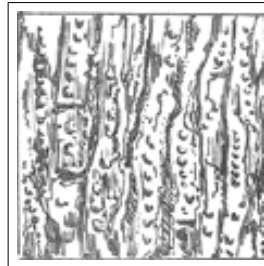
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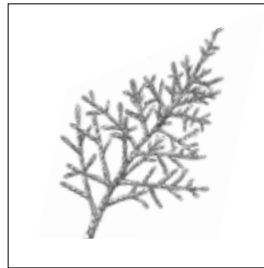
Huon Pine

Tree

Grows to 30 m tall
Drooping branches
Straight trunk
Diameter of 1 m



Bark
Light brown
Scaly



Leaves
Light green
Tiny scale-like leaves
Blunt tips & ridged outer surface



Flowers
Small, fleshy cones
Produces pollen & seeds



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