

# Tasmanian Timber

## Celery Top Pine

*Phyllocladus aspleniifolius*

Other common names: Celery Top

### The Timber

Celery Top is a natural, durable and tough fine grained timber. The wood is creamy white when freshly cut and darkens to a mellow rosy gold hue over time and with exposure to sunlight. The timber has distinct annual rings with pronounced latewood. Slowly grown, it has a hardness, strength and density not normally associated with conifers.

Celery Top is easy to work. It turns well and has long been employed in the traditional crafts of boat building and spindle turning. The timber is valued for its durability and it withstands exposure well, especially out-of-ground contact. A tough wood, it provides a hard-wearing surface for flooring and has an attractive fine-grained appearance. Features such as knots and other figure provide character to furniture constructed of Celery Top. Knots are sound and hard, the timber planes and sands well and accepts varnish, stains, and paint readily.

### The Resource

Celery Top is a conifer native to Tasmania. It is named for its distinctive celery-like leaves. The tree is readily recognised by its bark, which is a dark reddish brown and occurs as thick tessellated plates with numerous raised pores. The leaves are dark green, thick and leathery, about 2 cm broad and 5 cm long.

Both male and female cones are small and the female cone is quite distinctive. The black seed is encased in a soft white sheath above a red fleshy aril. The fruit has the appearance of a diminutive yew cone and is thought to be attractive to birds as germinants are often found beneath roost trees.

The species can be found over much of the forested area of Tasmania from wet areas in the drier forests of the north-east, to the rainforests of the far south-west. It forms an understorey component of wet forest or is dominant on wet soils with poor fertility. The diameter of mature trees ranges from 40 to 85 cm and they can reach 40 m in height and live for up to 800–900 years; ages of less than 350 years are common.

The tree can be seen in Mt. Field National Park in the south of Tasmania or most other mature wet forests across the State.



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## Celery Top Pine

Tasmanian Celery Top properties:	
Colour	Varies from white to pale straw. Darkens with age.
Grain	Grain is straight, fine and even with clearly visible growth rings.
Texture	Close and uniform.
Durability	In-ground contact: Class 3. Outside above ground: Class 2. Termite resistance of heartwood: Resistant. Refer to AS 5604 – 2005 Timber – Natural durability ratings. The above ground durability of the heartwood is very good.
Lyctid susceptibility	Not susceptible.
Sizes	Undressed seasoned timber 25 to 300 mm wide by 25 to 50 mm thick. Unseasoned timber is available in similar sizes, or cut to order.
Density	Approximately 650 kg/m <sup>3</sup> at 12% moisture content. Unseasoned density approximately 1050 kg/m <sup>3</sup> .
Shrinkage (green to 12% MC)	Approximately 1.6% radial, 3.1% tangential. May undergo longitudinal shrinkage up to 0.3% if compression wood is present.
Movement	Between 25% and 5% MC, radial movement is approximately 0.11% per 1% MC change; tangential movement about 0.19% per 1% MC change.
Strength groups	Seasoned SD5, unseasoned S4.
Joint group	Seasoned JD3, unseasoned J3.
Structural grades	Most commonly available structural grade is number 3; F11 seasoned, F8 unseasoned.
Toughness (Izod)	7.6 Nm unseasoned, 6.5 Nm seasoned.
Hardness (Janka)	3.9kN unseasoned, 4.5kN seasoned.

Fire hazard properties: flooring (AS ISO 9239.1)	
Critical radiant heat flux	> 2.2 and < 4.5 kW/m <sup>2</sup>
Smoke development rate	< 750%.min
Workability	
General	The close grain and resilience of Celery Top make it an easy timber to work.
Blunting	Moderate.
Sawing	Usually cuts cleanly and accurately. Moderate feeding forces required.
Planing	Planes well “with the grain”. Tends to chip and flake when working “against the grain”, which can be a problem near knots.
Moulding	Straight-grained material produces good mouldings.
Boring	Holes are clean and to size.
Rebating + mortising	Usually produces good results.
Turning	Turns well. Care needs to be taken to avoid chipping near fine edges.
Nailing	Difficult to nail when seasoned. Pre-drilling recommended.
Gluing	Glues satisfactorily with most common adhesives.
Bending	An excellent bending timber. 25 mm material bends very well to a radius of 50mm.
Finishing	Readily worked to a smooth, flat surface. Most finishes adhere very well.



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

### For further information contact:

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## Celery Top Pine

*Phyllocladus aspleniifolius*

### Forest Type

Distribution of forest type that contain these species:



Forest Type Location



Wet Eucalyptus



Rain

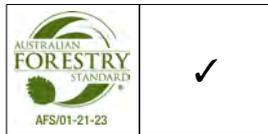


Reserved

82%

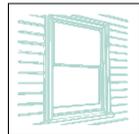
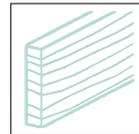
82% of total Celery Top Pine forest types are reserved

### Certification



### Carbon Storage<sup>2</sup>

286  
kg/m<sup>3</sup>

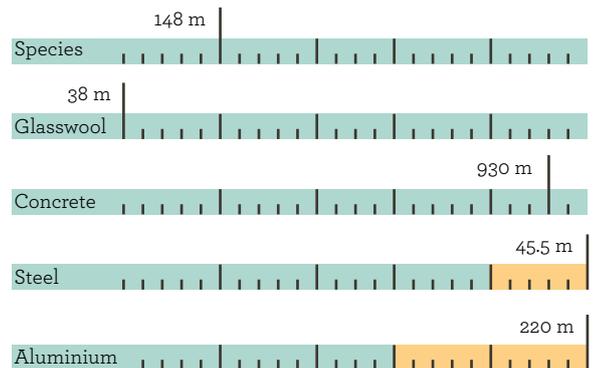


### Availability

Rare Limited Readily Freely

### Thermal Resistance<sup>3</sup>

Thickness required to achieve a value of R1



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## Celery Top Pine

### Appearance

A renowned native conifer of Tasmania, Celery Top Pine's growth is regular and symmetrical, with the foliage grouping at the end of branches. It reaches a height of 15–40 m, and a trunk width of 85 cm. Named as a pine, it does not resemble pines in appearance and is related to yew trees.

**Flowers:** the striking flowers of the Celery Top are a form of cone; with a black seed encased in a white sheath above a red fleshy aril. They are monoecious, with flowers being either male or female, but both sexes can be found on the same plant.

**Leaves:** the Celery Top was named for the celery-like appearance of its leaves. These are not leaves but flattened stems or cladodes. Pale green juvenile growth occurs in spring and autumn, while adult leaves are dark green, thick and leathery. The leaves contain numerous oil cavities.

**Bark:** the bark is dark grey or dark reddish brown. On older trees it splits into rectangular plates. It contains numerous pores, which give it a knobby appearance.

### Forest

Celery Top is common in cool temperate rainforests. It can grow as an understorey tree or, in the right conditions, become a dominant species. Growing between 0–800 m above sea level, it tolerates a wide spectrum of soil types, except for really dry or poor quality soil. It is sensitive to climatic conditions and prefers a wet environment.

**Growing constraints:** Celery Top is very sensitive to fires, and can be eliminated by the continual occurrence of bushfires. It grows very slowly, and trees with a 60 cm diameter are around 400 years old. Celery Top can grow readily from cuttings. While its seeds are hard to germinate under horticultural conditions, germination is quite prolific with natural dispersion.

**Distribution:** Celery Top occurs mainly in the west and south-west of the state, and in small communities on the east coast, Maria and Bruny islands, the Tasman Peninsula, and in the north-east blue tiers. The total forest type for Celery Top in reserve is 82%.

### Environmental

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

**Sustainable management<sup>1</sup>:** 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 storage<sup>2</sup>:** 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 Values<sup>3</sup>:** 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:** Celery Top Pine's availability is limited, and is constrained by location and style of harvesting operations.



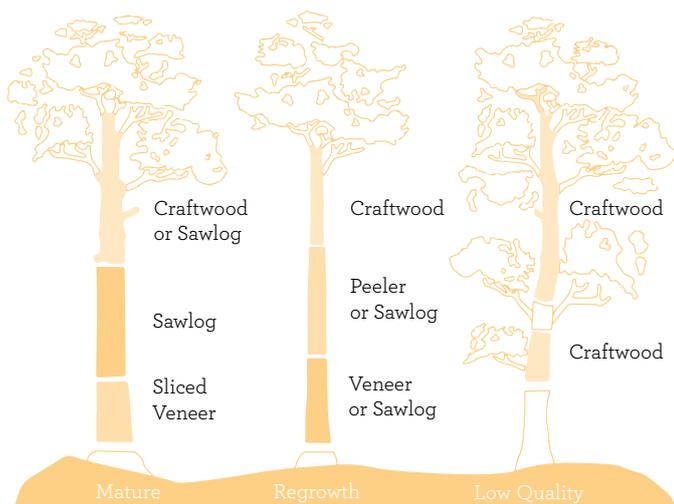
# Tasmanian Timber

## Celery Top Pine

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

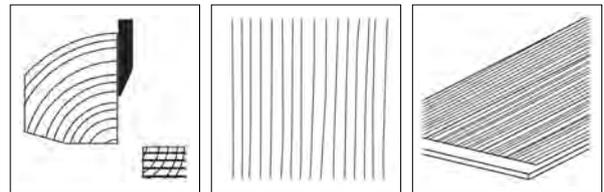
### Tree Product

Mature Eucalypt Profile Shown

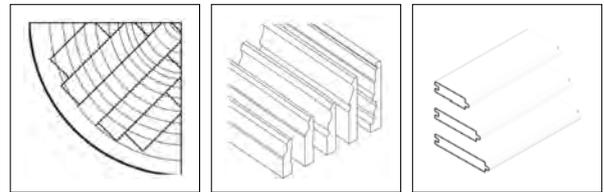


### Products Appearance

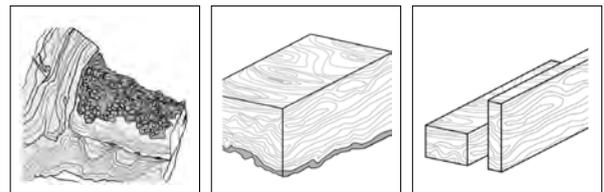
Quarter Sawn Veneer



Sawn Solid

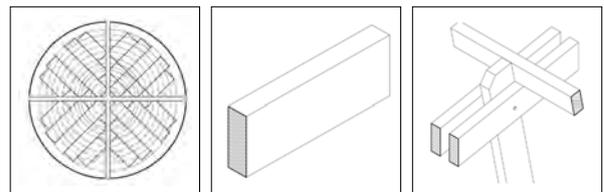


Craft Wood



### Products Structural

Sawn Solid



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### Characteristics



#### Colour:

The heartwood is pale yellow to pale brown, while sapwood is narrow and not clearly distinguishable. Almost creamy white when freshly cut, it darkens to a mellow rosy gold hue over time with exposure to sunlight.



#### Grain:

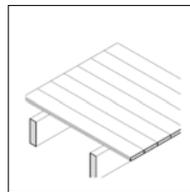
usually straight, with conspicuous growth rings very close together. Texture is fine and even with visible knots.



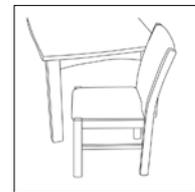
#### Features:

1. Crown Cut: a method of slicing veneers whereby the average inclination of the growth rings to the wide face is tangential or less than 45 degrees.
2. Quarter Cut: a method of slicing veneers whereby the average inclination of the growth rings to the wide face is greater than 45 degrees.

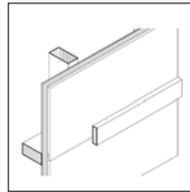
### Applications



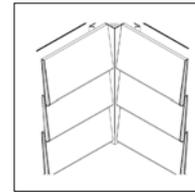
Flooring



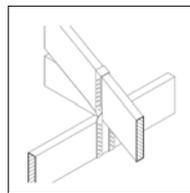
Furniture



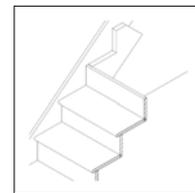
Fitting & Trims



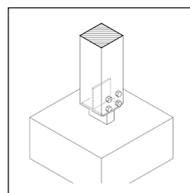
Lining & Cladding



Framing

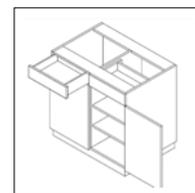


Windows Doors Stairs



External Structures\*

\* when protected and not in ground contact



Joinery

### 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:** Australian School of Fine Furniture

1. National Forest Policy Statement, [daffa.gov.au](http://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](http://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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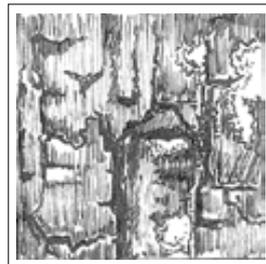
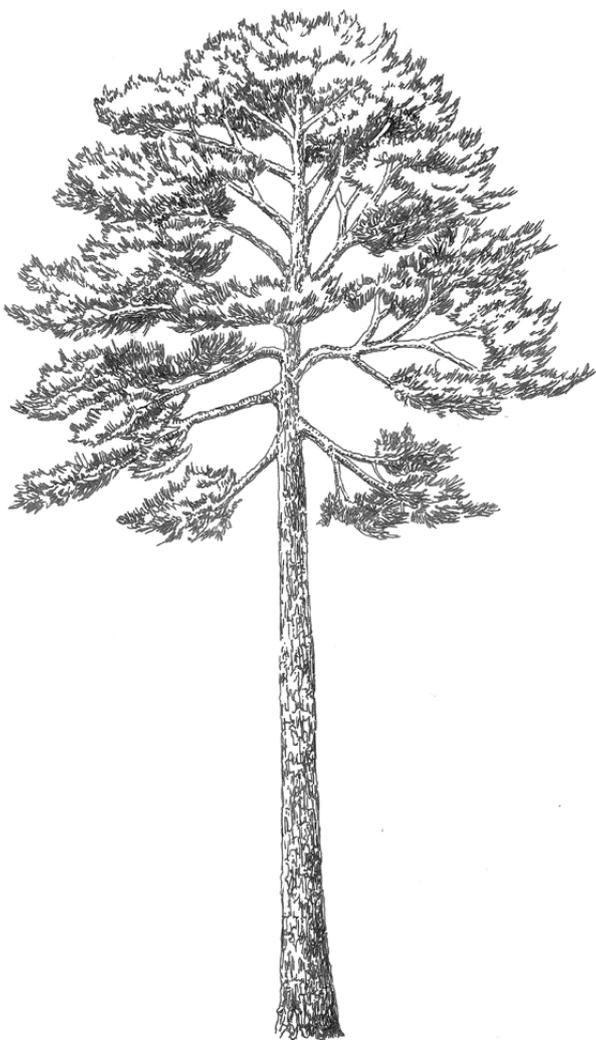
## Celery Top Pine

### Tree

Grows 15–40 m

Foliage group at end of branches

Grows up to 85 cm in diameter



### Bark

Dark grey-reddish brown

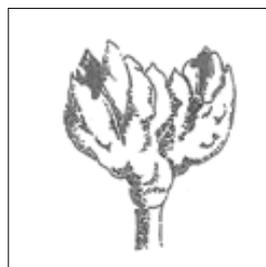
Knobby



### Leaves

Pale green in juvenile

Dark green in adult



### Flowers

Flowers in the form of cones

Black seeds

Red fleshy aril in white sheaf



Funding assistance was provided through the Tasmanian Community Forest Agreement Industry Development Program, a joint initiative of the Australian and Tasmanian governments and administered by the Australian government Department of Agriculture, Fisheries and Forestry.

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