**Forest Type**

DISTRIBUTION OF FOREST TYPE THAT CONTAIN THIS SPECIES

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**Certification**

28% of the state's plantations are Radiata Pine

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**Carbon Storage**

242 kg/m³

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**Availability**

RARE  LIMITED  READILY  FREELY

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**Thermal Resistance**

THICKNESS REQUIRED TO ACHIEVE A VALUE OF R 1

<table>
<thead>
<tr>
<th>MATERIAL</th>
<th>THICKNESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLASSWOOD</td>
<td>139mm</td>
</tr>
<tr>
<td>SPECIES</td>
<td>88mm</td>
</tr>
<tr>
<td>CONCRETE</td>
<td>230mm</td>
</tr>
<tr>
<td>STEEL</td>
<td>45.5m</td>
</tr>
<tr>
<td>ALUMINIUM</td>
<td>220m</td>
</tr>
</tbody>
</table>
Appearance
Radiata Pine is a medium-sized tree that reaches heights of 40–50m, with a diameter of about one metre. In plantations, trees have straight trunks with a shallow crown. Radiata Pine is a fast growing tree. The annual growth rate in plantations averages 18m³ per hectare per year.

FLOWERS Female pine cones grow on very short stalks. They start out small and green but soon become quite large (8–14 cm) and brown. Male cones are fairly inconspicuous, remaining small and hidden among the pine needles.

LEAVES Leaves are characteristically dark green pine needles, generally 5–13 cm long.

BARK The bark of Radiata Pine is grey to red brown. Thick, rough and deeply fissured, the bark can be 6cm deep by the time a tree is 40 years old. It only sheds in small flakes. Tannins from the bark can be used to make adhesives.

Forest
A native of North America, Radiata Pine is grown as a plantation timber in Tasmania. The species prefers cooler climates and is unsuitable for the subtropics and more humid coastal areas. It is frost and cold hardy, but can be damaged by snowfalls, and grows best between the coast and 1,000m above sea level. Radiata Pine prefers sloping, well-drained sites and will not grow well in heavy clay soil.

GROWING CONSTRAINTS Radiata Pine has been chosen as a plantation species because it is easily raised and planted. It provides larger yields of usable timber in a shorter time than many native species. It seeds readily and, in exposed sunny positions, a seed may still fall and sprout a year or two after ripening. It can be susceptible to Dothistroma needle blight. Radiata Pine is generally harvested at about 35 years.

DISTRIBUTION Radiata Pine plantations in Tasmania are largely concentrated in the north-west of the state. There is currently around 71,500ha of pine plantations which equates to 28% of Tasmania’s total plantations.

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

SUSTAINABLE MANAGEMENT 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 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 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 Radiata Pine is freely available and is continuously harvested.
Characteristics

**Colour**
Heartwood is reddish-brown varying to shades of yellow. Sapwood is usually pale yellow to white.

**Grain**
Generally straight with fine but uneven texture, where knots are common. An often pronounced difference in colour between earlywood and latewood results in a very distinctive figure when backsawn.

**Features**
1 & 2 Knots
That portion of a branch or limb that has been surrounded by subsequent growth of the stem. The shape of the knot as it appears on a cut surface depends on the angle of the cut relative to the long axis of the knot.
Applications

Tree

- Grey to red brown
- Thick and rough
- Deeply fissured

- Male cones remain small and green
- Female cones grow large and brown

The tree:
- can grow to 40-50m
- has a straight trunk
- can grow to 1m in diameter

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.