



TIMBER SPECIES 4

Through its R D projects, QFRI is finding solutions to plantation establishment, management and protection, wood quality and processing technologies for hardwood and softwood timbers.

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SPECIES	Silver ash
Botanical Names	<i>Flindersia bourjotiana</i> , <i>F. schottiana</i>
Family Name	Rutaceae
Local Names	Queensland silver ash (<i>F. bourjotiana</i> only), northern silver ash, southern silver ash, cudgerie, bumpy ash.
TREE DESCRIPTION AND OCCURRENCE	<p>A medium sized, slim boled tree attaining a height of 35 m and 1 m stem diameter. The trunk is usually well formed and circular in cross-section. The bark, which is approximately 15 mm thick, is fairly smooth or finely warted. The tree can usually be recognised by bumps (swellings) on the tree bole covering overgrown circles of broken-off limbs, hence the local name of “bumpy ash”.</p> <p>Distributed mainly in the rainforest areas of northern New South Wales, southern Queensland and northern Queensland.</p> <p><i>F. bourjotiana</i> – Mt Fox (south-west of Ingham) to Cooktown;</p> <p><i>F. schottiana</i> – northern New South Wales to Gladstone; areas of the Atherton Tableland.</p> <p>Timber of these species is now of limited commercial availability as the main areas in which they occur have received World Heritage listing.</p>
WOOD APPEARANCE	<p>Colour. The heartwood ranges from silver-white to pale yellow shades. There is no noticeable colour difference between sapwood and heartwood.</p> <p>Grain. Open and predominantly straight. Slight grain deviation may occur associated with bumps on the log surface. There is no pronounced figure but a characteristic of the species is its long straight vessel lines on longitudinal surfaces.</p>
WOOD PROPERTIES	<p>Density. 640-675 kgm⁻³ at 12% moisture content; approximately 1.5 m³ of seasoned sawn timber per tonne.</p> <p>Strength Group. S4 unseasoned; SD5 seasoned.</p> <p>Stress Grades. F7, F8, F11, F14 (unseasoned); F8, F11, F14, F17 (seasoned). When visually stress graded in accordance with AS 2082:2000, ‘Visually stress-graded hardwoods for structural purposes.’</p> <p>Shrinkage to 12% MC. <i>F. bourjotiana</i>: 5.5% (tangential); 3.0% (radial). <i>F. schottiana</i>: 4.8% (tangential); 3.1% (radial)</p> <p>Unit Shrinkage. 0.29-0.31% (tangential); 0.20-0.21% (radial), respectively. These values apply to timber reconditioned after seasoning.</p> <p>Durability. Class 3 - Moderately resistant to decay when fully exposed to the weather, clear of the ground and well drained with free air circulation. Not recommended for in-ground applications.</p> <p>Lyctid Susceptibility. Untreated sapwood susceptible to lyctid borer attack.</p>

	<p>Preservation. Sapwood readily accepts preservative impregnation but penetration of heartwood is negligible using currently available commercial processes.</p> <p>Seasoning. Can be satisfactorily dried using conventional air and kiln seasoning methods.</p> <p>Hardness. Firm (rated 4 on a 6 class scale) in relation to indentation and ease of working with hand tools.</p> <p>Machining. Machines and turns well to a smooth surface.</p> <p>Fixing. No difficulty has been experienced with the use of standard fittings and fastenings.</p> <p>Gluing. Can be satisfactorily bonded using standard procedures.</p> <p>Finishing. Will readily accept stain, polish and paint.</p>
USES	<p>Decorative. Furniture, plywood, laminated beams, laminated bench tops, shop and office fixtures, flooring, lining, joinery, mouldings, parquet flooring, turnery, carving, picture frames.</p> <p>Others. Boat building, marine plywood, structural plywood, coach, vehicle and carriage building, aircraft construction. Has been used for tool handles (axe, adze, pick), scaffold planks, sporting goods (baseball bats, archery bows, billiard cues, cricket stumps, skis), bentwork, draughtsperson's implements, gun stocks, drum sticks, dowelling, fishing rods, boat oars, walking sticks, brush stock, broom handles.</p>
IDENTIFICATION FEATURES	<p>GENERAL CHARACTERISTICS</p> <p>Sapwood. Creamy-white to pale yellow, indistinguishable from the heartwood.</p> <p>Heartwood. Creamy-white to pale yellow.</p> <p>Texture. Medium and uniform, without figure but possessing a sheen.</p> <p>WOOD STRUCTURE</p> <p>Growth Rings. Absent.</p> <p>Vessels. Medium to small in size, arranged in short radial multiples; sometimes containing yellowish deposits. Vessel lines visible on longitudinal surfaces.</p> <p>Parenchyma. Mostly in irregularly spaced apotracheal bands.</p> <p>Rays. Visible without a lens.</p> <p>OTHER FEATURES</p> <p>Burning Splinter Test. Match size splinter burns to a full white ash.</p>

For more information and publications about growing, processing and pests and diseases of Queensland hardwood timbers, visit www.dpi.qld.gov.au/hardwoodsqli or call the DPI Call Centre: 132 533

Further reading Ilic, J. 1991. CSIRO Atlas of Hardwoods. Crawford House Press.
Tree Talk, Inc 1994. Woods of the World Pro. CD Rom.
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