



matthei

timbers

CERTIFIED HARDWOOD



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Introduction to Matthei Timbers



Matthei Timbers Pty Ltd has been a producer and wholesaler of certified hardwoods for over a decade now. Located between Brisbane city and the Gold Coast makes it easy for our clients and customers to reach out to us for all their hardwood needs.

Being a company in Australia that stocks FSC® 100% timbers gives us great pride. We offer select, certified hardwoods of different ranges. Our distribution is open to merchants, the construction industry, cabinet and furniture makers, contractors, architects and council work across Australia.

We have 3 species of wood on offer at our warehouse. They are all **highly durable, non-bleed, F27, BAL 29, Select grade, variably coloured** timbers. The trade and botanical names are as follows:

Pacific Jarrah (Manilkara bidentata)
Southern Spotted (Dipteryx odorata)
Pacific Crows Ash (Apuleia ferrea)

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Pacific Jarrah

F34 KD Hardwood

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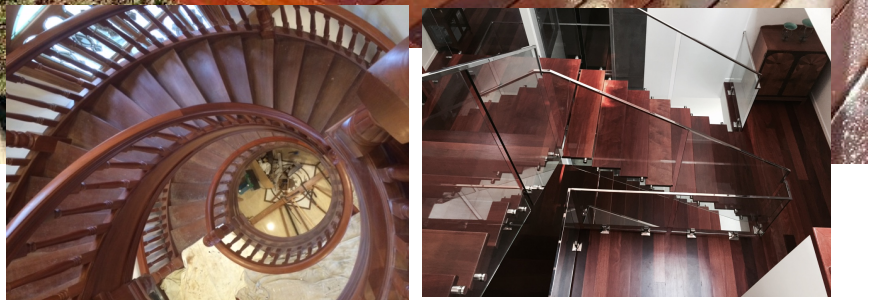
Pacific Jarrah

Pacific Jarrah has been a well-known, popular timber of choice for the last 25 years in Australia. With its common uses including: exterior/street furniture and joinery, home and penthouse decks, heavy and structural construction, flooring, mine timber and the list goes on. It has all the benefits of a stable and durable hardwood along with the FSC® 100% guarantee.

Pacific Jarrah saws, nails and screws well but does require pre-boring as the density is so high. The product is kiln-dried 10-12%.

Sapwood is pale in colour whilst the heartwood displays a deep/dull reddish brown in colour giving off a medium lustre with a smooth feel.

Pacific Jarrah is a highly durable timber with good bending qualities and high crushing strength. It is highly resistant to fungi and insect attack.



DENSITY (kg/m3)*	1040	
DURABILITY	Duro 1 in-ground	
STRENGTH GROUP	S1	SD1
MOR (MPa)	Unseasoned 103	Seasoned 158
MOE (GPa)	Unseasoned 16.3	Seasoned 18.7
JANKA (kN)	14.2	
SHRINKAGE GREEN TO 12% M.C.	Tangential 8.1	Radial 4.1
*Air Dry Density (kg/m3) is average indication only and actual value may vary. Refer to timber properties tables for strength, shrinkage and durability classifications.		

Pacific Jarrah

Manilkara bidentata

STAIRCASES – JOISTS – DECKING – FLOORING – SCREENING – DPR

Description

Sapwood is 30 to 50mm wide, whitish or pale brown and distinct, but not sharply demarcated from the heartwood which is light red when freshly cut, turning to dark reddish-brown when dry. Lustre medium. Texture fine and uniform. Grain usually straight, occasionally interlocked. Boles 15–18m long, straight, cylindrical and unbuttressed.

Characteristics

Timber is exceptionally hard, heavy, strong and tough. Moderately hard to machine because of its high density but cuts cleanly without dulling of cutting edges. Turning must be done slowly to avoid tearing. Takes a high polish. Pre-boring is necessary for nails and screws. Very resistant to fungi and termites but liable to attack by marine borers. Extremely resistant to moisture absorption. High resistance to wear.

Uses

Structural (Heavy) timber, flooring, decking, mine timber, ship and boat building, vehicle body, furniture, cabinet work, handles and ladders, sporting goods, sleepers, poles, turnery.

Grade	Select
Durability	1 in-ground
Janka (KN)	14.2
Structural Grade	F34 KD (AS 2082)
FSC	FSC 100%

Density	Green	Strength
1140 Kg/m ³	1450 Kg/m ³	S1 – SD1

Moisture Conditions	Modules of Rupture		Modules of Elasticity x10		Maximum Crushing Strength		Maximum Shear Strength	
	MPA	LBF/in	MPA	LBF/in	MPA	LBF/in	MPA	LBF/in
Green	103.0	15000	16.3	2360	51.7	7500	13.1	1900
12% KD	158.0	23000	18.7	2720	81.3	11800	18.7	2720

Tangential Green to 12% Moisture Cont.	Radial Green to 12% Moisture Cont.
>8.1	>4.1



Southern Spotted

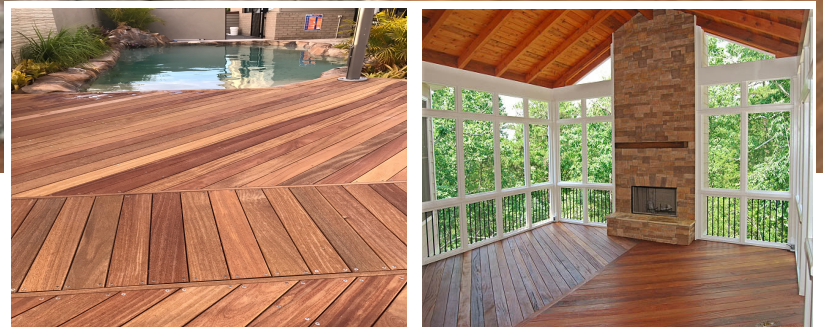
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Southern Spotted

Southern Spotted timber is used in larger dimensions and heavy construction becoming an ideal hardwood of choice for public space developments in applications such as wharfs, bridges and boardwalks including other structural end uses such as heavy exterior furniture and shelters.

Its increasing residential use for exposed beams and rafters, as well as for pergolas and solid posts etc. has become quite popular over the last several years.

In addition to its environmental accreditation, it is favoured for its superior characteristics of strength and durability but also its attractive brownish colour and weathering properties.

Being a kiln-dried product (10-12%) excluding the posts, the timber must be properly sheltered from the different weather conditions; be it sun or rain, at all times until properly sealed for installation. It is still recommended that the posts are cared for in the same way regardless.

DENSITY (kg/m3)*	1140	
DURABILITY	Duro 1 in-ground	
STRENGTH GROUP	S1	SD1
MOR (MPa)	Unseasoned 132	Seasoned 188
MOE (GPa)	Unseasoned 18.3	Seasoned 21.0
JANKA (kN)	16	
SHRINKAGE GREEN TO 12% M.C.	Tangential 7.0	Radial 4.0
*Air Dry Density (kg/m3) is average indication only and actual value may vary. Refer to timber properties tables for strength, shrinkage and durability classifications.		

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Southern Spotted

Dipteryx odorata

STAIRCASES – SOLID POSTS – JOISTS – DECKING – FLOORING – SCREENING – DPR

Description

Sapwood is 25 to 50mm wide and yellowish or brown in colour. Heartwood reddish-brown or purplish-brown when freshly cut with attractive paler streaks, turning to a uniform light brown on exposure. Texture is fine, lustre medium and grain irregular, often interlocked. Wood is characterised by prominent vessel lines and narrow strikes on radial surfaces.

Characteristics

Timber is exceptionally hard, heavy, strong and tough. Relatively easy to season considering density. Hard to saw and bore, but clean edges and holes can be obtained. Planes and finishes to a smooth surface and takes a high polish. Resistant to termite and marine borer attack. Heartwood very resistant to preservative treatment.

Uses

Structural timber (Heavy), flooring, mine timber, ship and boat building, vehicle body, cabinet work, handles and ladders, sporting goods, sleepers, poles, piles, decking.

Grade	Select
Durability	1 in-ground
Janka (KN)	16.0
Structural Grade	F34 KD (AS 2082)
FSC	FSC 100%

Density	Green	Strength
1140 Kg/m3	1450 Kg/m3	S1 – SD1

Moisture Conditions	Modules of Rupture		Modules of Elasticity x10		Maximum Crushing Strength		Maximum Shear Strength	
	MPA	LBF/in	MPA	LBF/in	MPA	LBF/in	MPA	LBF/in
Green	103.0	15000	16.3	2360	51.7	7500	13.1	1900
12% KD	158.0	23000	18.7	2720	81.3	11800	18.7	2720

Tangential Green to 12% Moisture Cont.	Radial Green to 12% Moisture Cont.
5.6-7.0	3.1-4.0



Pacific Crows Ash

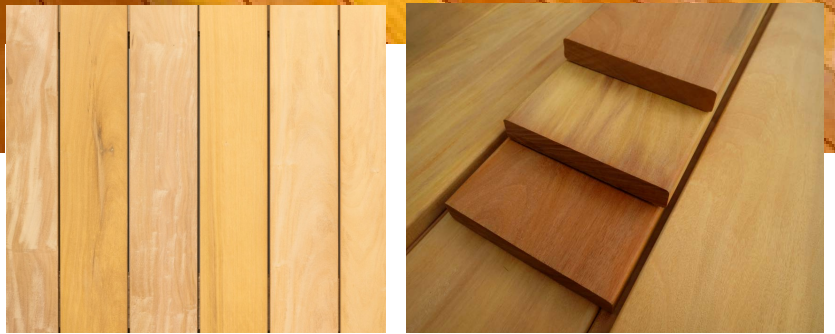
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Pacific Crows Ash

Pacific Crows Ash is a popular timber of choice for smaller dimension applications. These include but are not limited to; exterior furniture and joinery, public boardwalks and domestic decking. It has all the benefits of a stable and durable hardwood, with the added features of being from an environmentally responsible source and having negligible tannin release.

P.C.A saws, nails, screws and also glues well. The product has been kiln-dried 10-12% excluding the solid posts that are Green-off-sawn (GOS)

Avoid contact with iron filings as this will discolour the timber black. If this does occur staining can be removed with a light scrub using oxalic acid.

P.C.A is a strong and tough timber with high bending and crushing strengths. It also has a high silica content.

DENSITY (kg/m³)*	910	
DURABILITY	Duro 2 in-ground	
STRENGTH GROUP	S2	SD2
MOR (MPa)	Unseasoned 89	Seasoned 138
MOE (GPa)	Unseasoned 14.0	Seasoned 16.2
JANKA (kN)	8.4	
SHRINKAGE GREEN TO 12% M.C.	Tangential 6.5	Radial 3.5
*Air Dry Density (kg/m ³) is average indication only and actual value may vary. Refer to timber properties tables for strength, shrinkage and durability classifications.		

Pacific Crows Ash

Apuleia ferrea

STAIRCASES – SOLID POSTS – JOISTS – DECKING – FLOORING – SCREENING – DPR

Description

Sapwood is narrow, whitish and sharply demarcated from the honey coloured heartwood. No taste but a slightly rancid odour is present in some specimens. Texture fine. Grain interlocked producing a mild stripe figure on radial surface. Rather lustrous. Bole usually 12 – 15m long. Species reaches its best and is most commonly found on rich, moist but well-drained clay soils. Occurs mixed hardwood forest.

Characteristics

Timber is hard, tough and strong. Air-dries moderately fast with very little surface checking and warping. Works well with most tools. Turns and carves easily. Polishes and glues well. Reported to be very resistant to marine borers. Weathering characteristics excellent. Bark is used for tanning. High silica content.

Uses

Structural timber (Heavy), flooring, mine timber, ship and boat building, vehicle body, furniture, cabinet work, handles and ladders, sporting goods, sleepers, poles, turnery, decking, joinery.

Grade	Select
Durability	2 in-ground 1 above-ground
Janka (KN)	8.7
Structural Grade	F27 KD (AS 2082)
FSC	FSC 100%

Density	Green	Strength
910 Kg/m3	1200 Kg/m3	S2-SD2

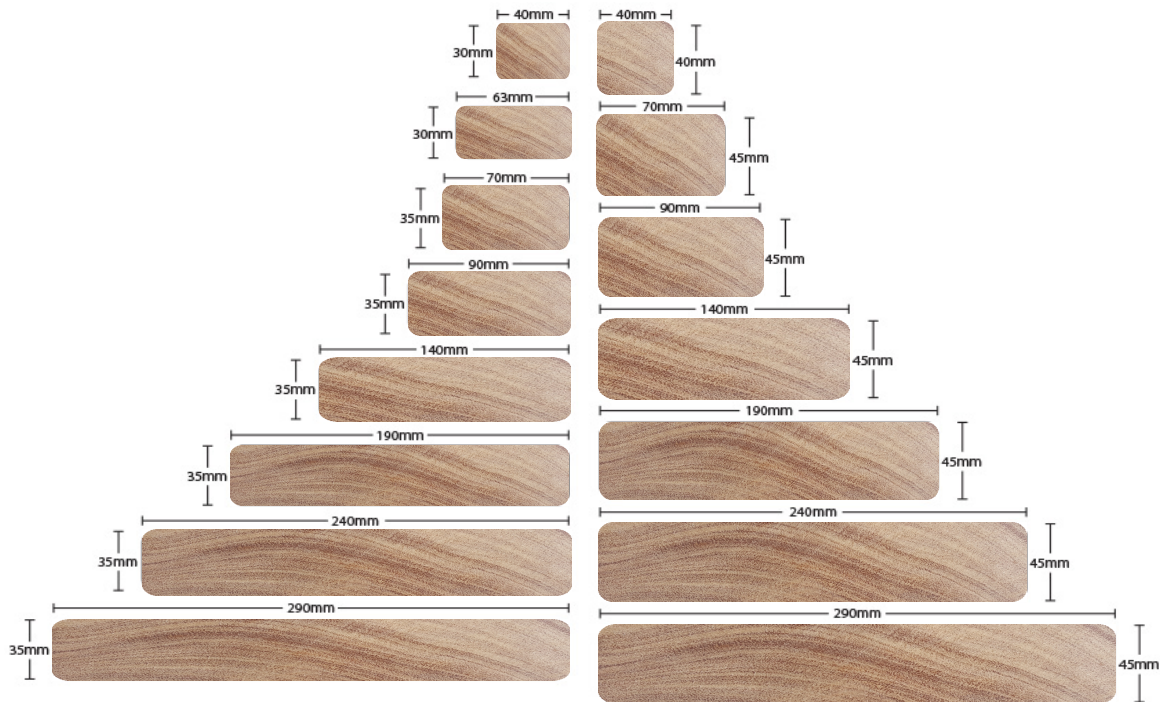
Moisture Conditions	Modules of Rupture		Modules of Elasticity x10		Maximum Crushing Strength		Maximum Shear Strength	
	MPA	LBF/in	MPA	LBF/in	MPA	LBF/in	MPA	LBF/in
Green	86.1	12500	14.2	2060	43.4	6300	11.0	1600
12% KD	134.0	19500	16.3	2360	71.0	10300	16.7	2430

Tangential Green to 12% Moisture Cont.	Radial Green to 12% Moisture Cont.
5.6 – 7.0	3.1 – 4.0

We offer many different sizes in our 3 species. These include: Decking & Screening, DPR (Dressed Pencil Round), Posts in R/S & DPR, Flooring and R/S (Rough Sawn) timbers.

If you don't see a specific size you require from the following options, we can organize to have your request machined down from our larger options to suit your needs. We welcome any and all custom requests for specific or unique jobs regardless of size or quantity.

DPR (Dressed Pencil Round)

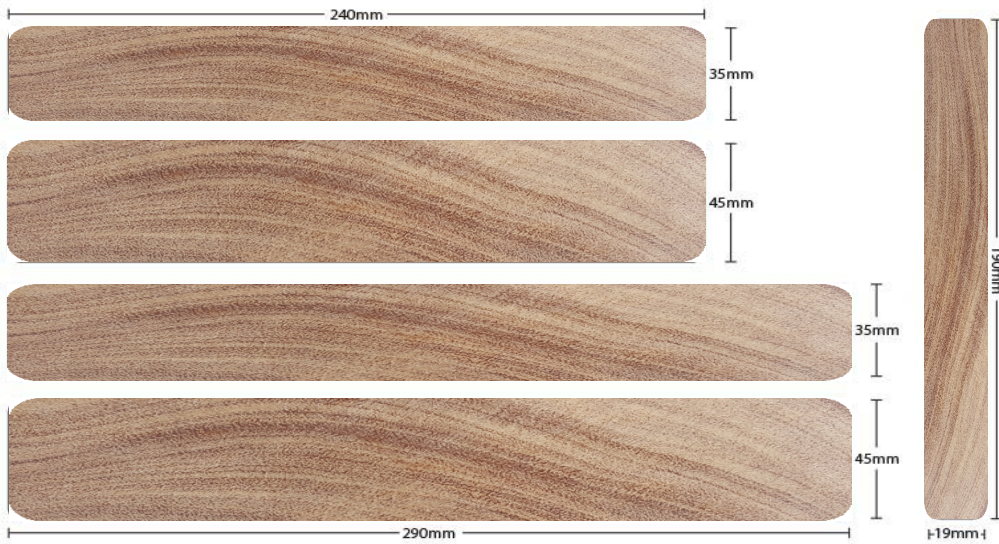


Decking & Screening



Treads & Risers

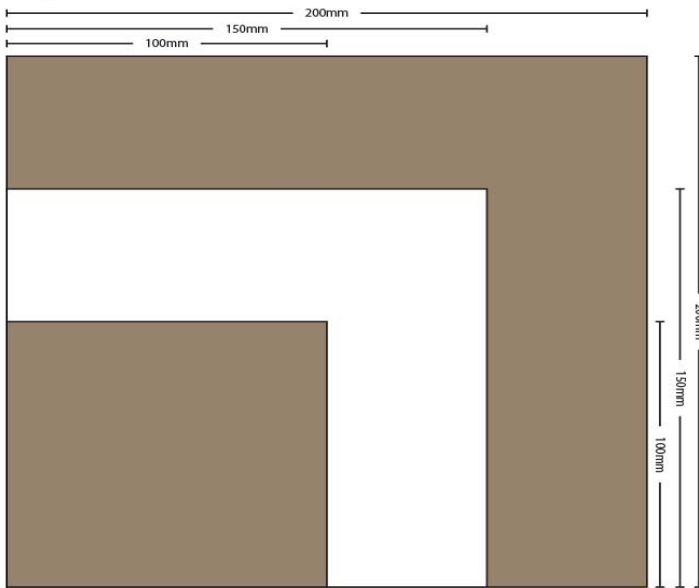
Treads



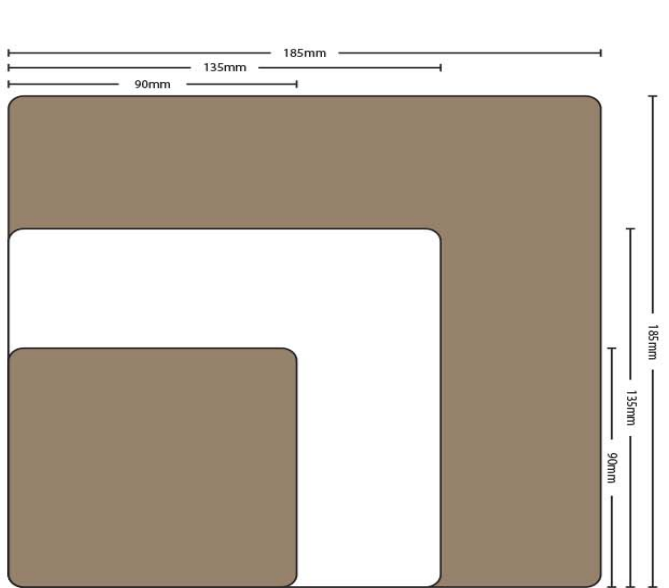
Risers

Posts - R/S & DPR

Rough Sawn Posts



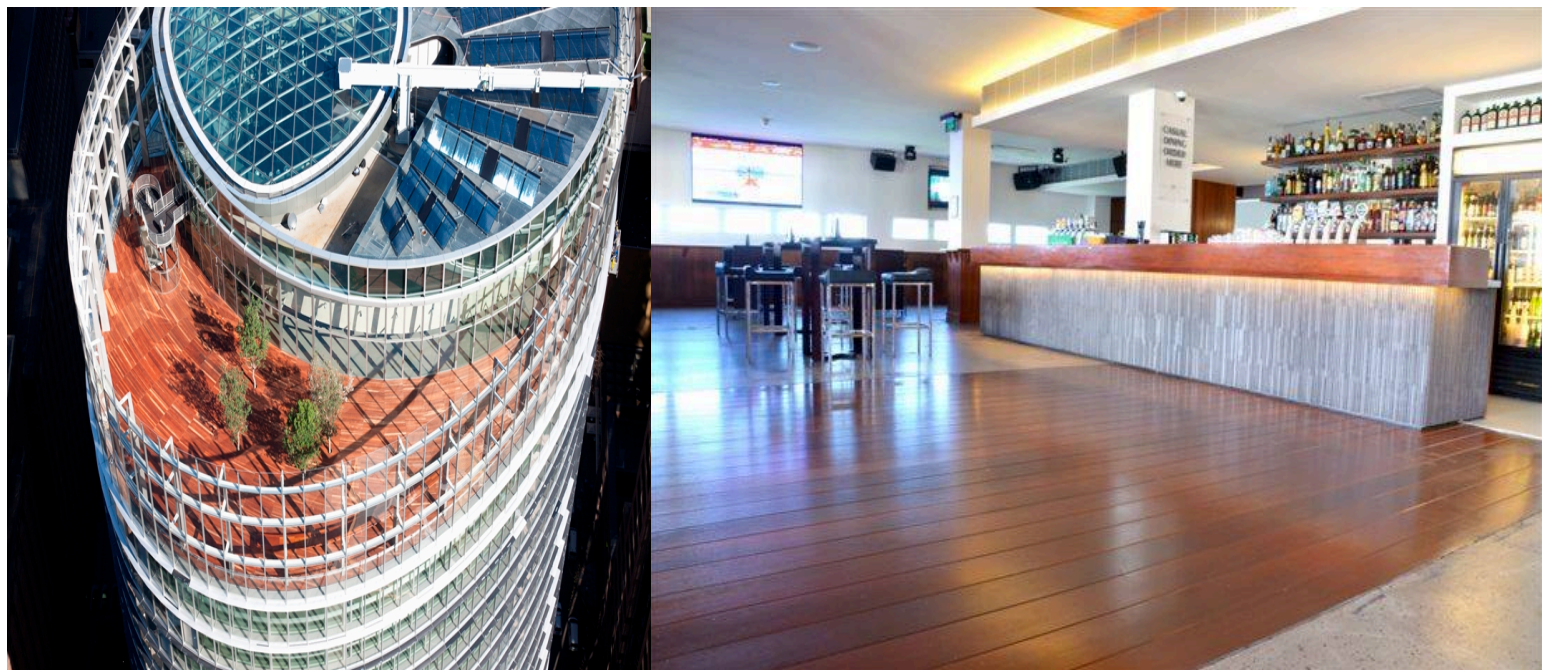
Dressed Posts



Flooring



Guidelines for Decking/Hardwood Installation



Installation & Handling

Keeping all decking dry prior to installation is imperative. Storage of decking on site should be in a dry, cool place, where no direct sunlight can reach the timber, elevated approx 100mm from ground.

Span:

The maximum recommended span for 19mm thick hardwood decking is for joists to be at 450mm centre.

Board spacing:

Spacing between boards should allow for proper air circulation and drainage as well as taking into account the seasonal movements. All timbers shrink as the timber dries and swells as it takes on moisture.

The degree to which this occurs varies depending on timber species and conditions on site, particularly relating to the degree of ventilation provided.

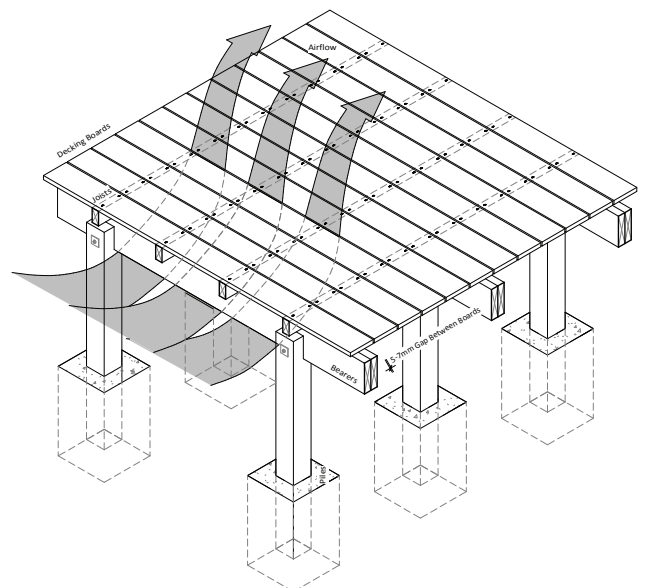
As a guide to allow for this movement, space boards as follows:

Board width	Kiln-dried spacing
90mm	Min 4mm
140mm	Min 6mm

Drainage & Ventilation:

Adequate ventilation of the deck is essential for long term stability. Allowing air to freely circulate around the deck will reduce the moisture differential between the top and underneath of the boards, minimising the likelihood of cupping and distortion following installation.

To achieve proper ventilation the deck should have at least 450mm clearance from the ground. Adequate drainage of the ground is also essential.



Guidelines for Decking/Hardwood Installation Continued

Fastening:

All decking boards should have two pre-drilled pilot holes per joist. Pilot holes should penetrate through the decking and not the joist. It is highly recommended that hardwood of F17 rating or higher is used for the joists. This is to greatly reduce the risk of the timber distorting.

For fastening 140x19mm decking it is recommended to use 10x65mm stainless steel decking screws. Pilot holes should be 15mm from the edge. These recommendations are also acceptable for our 140x22mm and 140x25mm decking sizes.

For fastening 90x19mm decking, 10x50mm stainless steel decking screws can be used or alternatively 65mm annular grooved decking nails. If nailing, pilot holes should be 12mm from board edge.

MAINTENANCE:

Uncoated timber:

Maintenance of your hardwood deck will vary depending on the location of the deck, its construction and many other factors like aspect, drainage, coating, profile and usage etc. Your deck should be cleaned twice annually to remove debris, accumulated dirt and surface mold etc. A hard bristled brush or low pressure water blast will give best results. Chemical cleaning products that can be effective are also available at your local hardware store.

End sealing:

End checking and splitting can occur when decking boards are cut to length. After you cross cut the decking, it is recommended to re-seal the cut ends. Seal the ends immediately after cutting with a suitable end grain sealer to prevent this issue from occurring.

Kiln Dried 10-12%:

When the timber is Kiln dried, this means that the moisture content in the wood has been artificially controlled via heat, air circulation, and humidity. All of our timber with the exception of our posts are Kiln dried.

This means that the timber must not be exposed to the different weather conditions until it is properly sealed both before and after installation. We recommend this to prevent surface checking, warping, cupping and all around distortion of the timber.

Coating:

Decking should be coated on all four sides prior to installation. Any coating used should be tested first on a small sample to ensure compatibility and always follow the manufacturer's application instructions.

Coated timber:

Maintenance is the same as for an uncoated deck but also inspection of the deck at least once a year for signs of peeling, discolouration or excessive wear to the coating is recommended.

In order to get your full money's worth of your investment and to keep any ongoing costs to a minimum, it is recommended that as the coating shows signs of wear; apply a fresh coat or two of the last product used as per the product manufacturer's application instructions.

These guidelines should be read in conjunction with the Australian Standards for construction.

Please note that should these recommendations and guidelines not be acknowledged, the chances of the timber having any of the mentioned issues are greatly increased. We only recommend all information including the above as a guide to prevent the possibility of any malfunctions with the product.

Timber Properties

Strength Groupings

Minimum values for strength groups (unseasoned timber)			
(units are Mpa = 145 lb/sq.inch)			
Strength Group	Modulus of rupture	Modulus of elasticity	Max crushing strength
S1	103	16300	52
S2	76	14200	43
S3	73	12400	36
S4	62	10700	31
S5	52	9100	26
S6	43	7900	22
S7	36	6900	18

Minimum values for strength groups (seasoned timber)			
(units are Mpa = 145 lb/sq.inch)			
Strength Group	Modulus of rupture	Modulus of elasticity	Max crushing strength
SD1	150	21500	80
SD2	130	18500	70
SD3	110	16000	61
SD4	94	14000	54
SD5	78	12500	47
SD6	65	10500	41
SD7	55	9100	36
SD8	45	7900	30

Shrinkage Classification

Description of Shrinkage	Shrinkage from Green to Kiln-dry (12% MC)	
	(%) before reconditioning	
	Tangential	Radial
Very Low	0 - 3.5	0 - 2
Low	3.5 - 5.0	2 - 3
Medium	5.0 - 6.5	3 - 4
High	6.5 - 8.0	4 - 5
Very High	> 8.0	> 5

Durability Classifications

Grade of Durability	Approx. service life (years)		
	Fully Protected	Above Ground, Exposed	In-Ground, Exposed
Very Durable	> 50	> 40	> 25
Durable	> 50	15 - 40	15 - 25
Moderately Durable	> 50	7 - 15	5 - 15
Non-Durable	> 50	0 - 7	0 - 5



The mark of responsible forestry

All Matthei Timbers Pty Ltd stock is sourced with full FSC® 100% environmental certification and is supplied with specific documentation relating to each dispatch.

Matthei Timbers as a timber producer/wholesaler acknowledge the importance of conserving the world's greatest renewable resource.

FSC® certified timber undergoes independent, third-party audited certification procedures at every step of the supply chain. This provides designers, specifiers, architects and consumers absolute assurance that those forest and wood products labelled as FSC® certified originate from legal sources, which are managed to rigid social, economic and environmental standards.

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