TIMBER HUB

For independent advice and inspiration

TIPS ON LAYING A DECK

A Practical Information Sheet Provided by TMA Timber Advisory Service, a FREE service available by phone 03-9875 5010 or email :advisory@timber.asn.au or visit our Timber Products Showroom, 180 Whitehorse Road, Blackburn 3130, open Monday-Friday 9.00am—4.30pm, Saturday 9.00am—4.00pm, Closed Sunday.

***Decking season is upon us and we thought it would be timely* to offer some recommendations that you can offer your clients.**

BOARD PREPARATION

Oil based preservative coatings are recommended to be applied to all surfaces including the trimmed ends, prior to installation. By coating all around you are reducing the amount of moisture penetration and the risk of the boards 'cupping'. A second coat is required to the exposed surfaces after Installation is completed. Typical true oil based coatings are CUTEK CD50, SIKKENS Cetol HLS/Deck and Haymes Decking Oil; Semi-oil based is HAYMES Dexpress. Clear coatings will not stop the natural 'greying off' process to occur (even if you apply a refresher coat every 9 months), however using a tinted (coloured) coating will help to prevent this natural greying process and recoating should be done every 1 1/2 to 2 years maintain the coating and retain the timber colour.

DECK GAP

Plan to leave a sufficient gap to allow the boards to expand and contract. Boards 130mm and wider will expand approximately 0.5mm for every 1% increase in moisture content. Usually during winter the increase in moisture content is around 4-6%. Hence each board could expand 2-3 mm. Recommended gaps for boards up to 90mm is approx. 4-5mm and for boards 130mm approx. 6 –7mm.

VENTILATION

A deck structure must have good sub deck ventilation. Allowance should be made for good cross flow ventilation. Avoid solid perimeter walls as a damp sub deck will cause the bottom of the boards to take up moisture and develop cupping. If there are solid perimeters, specially designed vents and fans should be installed to provide cross ventilation.

INSTALL A MEMBRANE OVER THE JOISTS

An important step in Deck Construction is to install a waterproof membrane on the top of the joists underneath the deck boards. This helps to keep the joint dry, limits the chance of rotting and gives better fixing for your nails or screws. Custom U shaped plastic based products are available as well as the bitumen based Malthoid (that has been used as a dampcourse material for 100 years).

PRE-DRILLING

Drill a pilot or countersunk hole then drill holes to facilitate the decking screws. This will assist in reducing the stress the decking will experience during seasonal movement changes in the overall deck. This procedure should limit the chance of boards cracking and splitting. If using a decking nail, ensure the board ends are pre-drilled.

TYPE OF FIXINGS

Always specify specially designed decking nails and screws. They should be hot dipped galvanised or if you are close to saltwater, use stainless steel . For 19mm decking, nails (such as 'Timberdeck') and screws should be at least 65mm length. With decking screws , a minimum 10 gauge x 65mm is recommended for Treated Pine (softwood) joists. For 130mm and wider boards, screws and nails must be 65mm length min. and Type 17 - 14 gauge galvanised (counter sunk head) is recommended.

CONSTRUCTION HINTS

When using decking nails or screws, always offset the fixings as putting them in the same line can cause the timber joist to split and the fixings may not hold properly. You will inevitably be making some butt joins over a joist, so remember to skew the nails rather than on the vertical for a nice tight joint. The placement of the fixings is also important, eg: for 90mm width no more than 15mm in from the board edge and for the wider 130/140mm width, no more than 20mm from the board edge; this will help keep the boards from tending to cup etc.

Figure 5: Nailing at intermediate locations

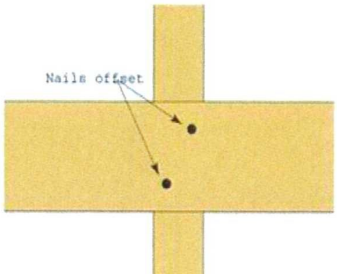


Figure 6: Nailing at board ends

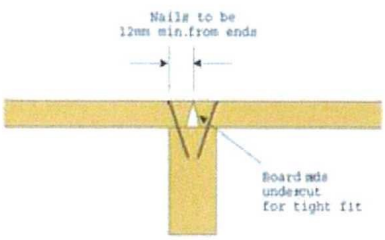
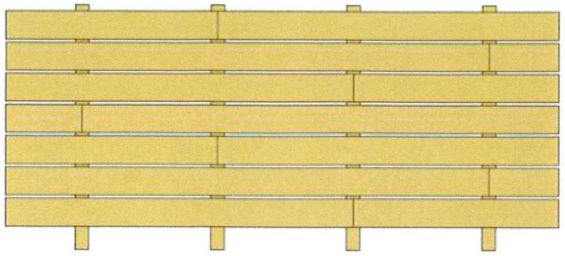


Figure 4:Staggered deck board ends



As most timber decking is supplied in random lengths, always remember to stagger the joins on alternate boards, never have board joins on adjacent rows

USING STEEL BEARERS/JOISTS There is a trend to using galvanised RHS steel for the sub-floor instead of timber and this requires a different fixing regime and, mostly, the boards are the wider size ie: 130/140mm. There is no need to try and use self drilling screws (such as Wingteks) as they are not easy to use. The best fixing is to use the Type 17 batten screws, 14g x 100 0r 75mm with a countersunk head and hot dipped galvanised (can use 12 gauge as well). Pre-drill both the timber and the steel RHS (or 'C' section) with a drill the same size as the shank of the screw (not to be confused with the actual thread diameter). Type 17 screws have ribs under the head and will countersink themselves into the timber surface, obviating the need to pre-countersink. Where a join may be necessary over a joist crossing, a 90 x 45mm treated pine timber block should be fixed to the side of the channel to allow fixing of one end of the board to the steel RHS/PFC with the recommended fixing and the adjacent board screw fixed to the timber block.

TIMBER SPECIES SELECTION

The most popular timber for decking is Merbau, a tropical hardwood from South East Asia. Contains natural oily substances that give it great durability for a deck application. Rated as Durability Class 1 with an expected life up to 50 years above ground. It has less shrinkage/expansion than the Australian durable hardwoods such as Spotted Gum, Blackbutt etc. One downside is that Merbau has a natural tannin that will bleed out and stain exposed concrete, brickwork etc., very hard to remove as well. Therefore, best to apply 1 coat of the selected finish all round prior to installing to seal the timber, then apply 1 or 2 finishing coats after completing installation. This tannin bleeding also applies, to a lesser extent, to Spotted Gum timber so treat in the same way.

Merchant: