

How to Build A Deck

This brochure is focused on the generally process of building your deck. Having appropriate tools and previous building experience will always provide answers to many assumed knowledge gaps in this overview.



Clearly dependent upon your own conditions your approach may vary from the simplified we have tried to provide in this fact sheet.

Reasons to consider building your own deck are normally one of two reasons: –

1. Save money \$\$\$'s
2. Willingness and appeal to build and achieve personal satisfactions by “Doing it myself”

Both the above reasons are valid provided you plan well, purchase good material and execute good workmanship.

I point this out, as any main building work to your home is extremely important that the outcome is a “plus” to your main financial investment. Saving money then doing a poor job will cost significant money in not realizing all the benefits from your project.

For this example I’m assuming a level area, shape will not be important rather the rules we ask you to consider as your approach to be employed for your own deck size. We also assume deck below a height of 800mm from ground level as a range of other building code and safety issues arise when the deck height exceeds 800mm above ground level (commonly referred to as NGL = natural ground level)

The key uses are

Strength – don’t apply too bigger spans for the timber sizes your using. Bigger span will result in bounce in your deck either from your bearer spaces or your joist’s spaces. Bottom–line – always stay within normal building code limits

Flat deck – use your levels. A flat deck will always feel better and it’s impossible to check if a deck is level without running’s levels. Get this right and your off to a great start.

Measure twice Cut Once – we all know this one, so your been told. Check your measurements and take your time.

Finally, have fun with your building and you will get the satisfaction from the process as well as the result.

Ok, lets get started.....

SETTING OUT OF YOUR DECK

1. Post & Stump position –

Mark out positions of support posts & stumps based on a 1.5 x 1.5 Mt. grid system. If this does not conform to your overall size, make grid smaller rather than larger if using size indicated above.

If bearer and joist span too greater distance, the deck will be too springy.

Use a string line and line level to ensure post / stump heights are the same. To ensure corners are square use the “3,4,5” method.

(Refer to <http://www.wikihow.com/Use-the-3-4-5-Rule-to-Build-Square-Corners>)

Possible post and stump materials include:

Stumps – Concrete, treated pine dry (H4) and cypress pine. Generally all sizes 100 x 100mm are usual.

Posts – these will be used for extending up through the deck area to become Verandah or handrail supports. Common sizes 90 x 90, 115 x 115, 135 x 135mm

Note: We don't recommend wet treated pine for use in any structural application.

Post & Stump Hole size

Depth can vary but generally approx. 500mm deep in a 350 square hole.

Note: A minimum required is to ensure your concrete pad is into clay by a min 100mm. If a site is unstable, in an easement etc., different depths may be required.



2. Ledgers & Bearers –

(a) Ledgers – If deck is attached to home a ledger-bearer generally is attached to side of wall fixed at maximum 700mm intervals.

Use minimum 10mm Masonry Bolts to brick wall or coach screws or bolts fixed into house bearers if timber wall.

Note: This method is common for deck below 1.5mtr height from ground. Above this height other methods will needed to be considered.

(b) Bearers – These are your main support timbers. If we have the wrong size for spans then the performance of our deck will suffer. In the example we following here timber size such as treated pine F7 2 x 90 x 45 nail laminated together will be acceptable in a 1.5 matrix deck.

Greater spans between stumps and bearers between bearers will mean bigger sizes of timbers as bearers need to be considered.

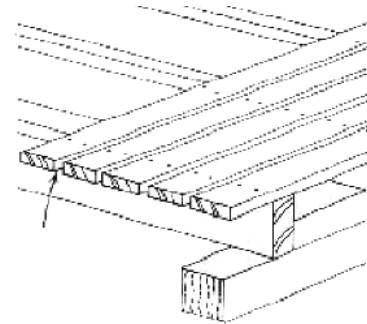
Refer to latest Australian Standards 2006 AS 1684 Residential Timber-Framed Construction Standard is based on the loadings contained in the Loading Code AS1170.1 – 1989. The current Loading Code, AS/NZS 1170.1:2002

BUILDING THE DECK

To establish the correct position of bearers and joist's mark down from the finished height of the deck, allowing for heights of decking, joist's and bearers.

Example:

Bearer	height	90mm
Joist	height	90mm
Decking	thickness	19mm
Total height is 199mm of material.		



Note: distance from bearer to NGL should be 200mm

Generally bearers will be placed to the top of intermediate stumps and to side of end post (particularly if outer post come through deck).

If passing over timber stump nail fasten using galvanized Nails or batten screws. They should be fastened in a skewed fashion to provide both holding and bracing strength's using two nails per connection..

If placed to side of posts use galvanized coach bolts (2 x 10 mm Coach Bolts) through bearer and post to get a firm and solid hold. Bearer should have a minimal hold to side of post of 10mm. If joining bearers always do this at a post or over a stump

Note: Always ensure bearers are level so re check before finalizing this segment of your project.

Use spirit levels to ensure the top of the joists are level and flat. Running string lines and where possible maintaining these throughout the build will also provide a means of ensuring deck sub-floor is level.

LAYING THE DECKING

It is common to have approx. 5 mm spacing between decking boards. *In bush fire areas this should be reduced to 3mm.* This spacing is generally to allow for expansion of your decking timbers due to sun, rain and wind. All boards should be joined at joists and staggering the joints provides for a stronger and more visually appealing deck.



If you are dealing with a full range of different lengths them working out the combination of preferred lengths to be together will cut down a lot of work.

Laying 5 to 10 rows then checking to see that the deck is remaining square is recommended. Try to blend your lengths to avoid all lengths finishing in the same area.

Use a chalk line to see where to apply your nails will help make straight lines of nails or screws and make the deck more visually appealing.

Method Summary

1. Place preferred combination on to deck
2. Start from dwelling moving out
3. Pine deck board end middle end for a start
4. Ensure both ends a properly cut to have neat joining sections over a joist.
5. Check boards for straightness after 10 boards
6. When deck area covered start by pre-drilling, straighten boards by using a spacer, then nail or screw along the full length.
7. Start procedure again

Note: Always pre-drill the decking to avoid splitting unless using special decking screws that may elevates this requirement (check manufacturers specifications and instructions)



WHEN THE DECK IS DOWN

With any timber you will need to protect the timber from weathering from sun and rain.

Although timber selected may be durable from rot and decay this still is required to be undertaken to ensure the surface of the timber remains protected ie: reduce incidence of splitting and maintaining is appearance etc.

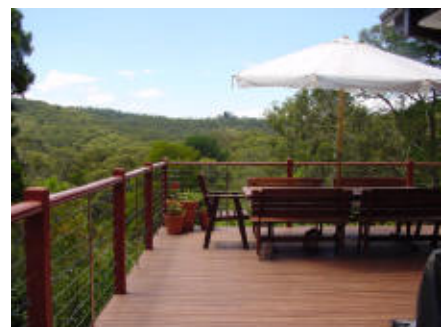
WHEN TO APPLY DECKING OIL :

After a period of approx. 3 – 4 weeks applying a decking stain preferably with an oil base should be undertaken. Waiting will ensure decking has weathered (dried) during this period is relative to non- kiln dried timbers. This period is to allow the timber tannins to leach and the timber surface to enough dry to accept oil penetration.

A natural finish or a colour can be applied to stain.

If your decking is already dry then its ready to stain.

Note: Check with product instructions as to best method to apply, any surface preparation required and number of coats recommended.



Building Permits

Yes, Building Permits are required as you are building a structural building project.

Other issues can be items such as over looking, handrail types and requirements and steps rules and minimum building codes, council overlays and safety requirements to consider.



So to ensure you don't have to amend your project and incur considerable cost in trying to "save" your deck we highly recommend consulting a registered building practitioner prior to begin building your deck.

The Project Centre provides its clients with a full service in drafting and Building Services.

These include applying for any council permits and arranging for a building permit.

If doing the project as an owner builder you may be required to obtain Building Commission consent if the value of the project is estimated to exceed \$12,000.

Many clients prefer to have their own building permit application to ensure an independent process of inspections from their selected builder is maintained.

DISCLAIMER

This fact sheet is provided only as a guide to plan your deck. No responsibility is accepted or acknowledged if a building permit and a building practitioner are not consulted or obtained prior to commencing works. Owners and builders should consult the latest copy of building and material codes to ensure that any works will comply to current requirements.