



**Timspec Hardwood Decking
Installation Manual.**

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1. SCOPE

1.1 INTENDED USE

This Hardwood Decking Guide is designed as guide for the correct installation of Timspec Ltd. hardwood decking species.

The Timspec hardwood decking shall be installed over a substrate constructed in accordance with NZ Standard 3604(2011).

1.2 HARDWOOD SPECIES

1.2.1 DURABILITY

The expected serviceable lifespan will depend on the timber specified. Refer to table 1.1 for expected serviceable lifespan.

Specie	Above ground (Years)	In ground (Years)
Blackbutt	Class 1 (40+)	Class 2 (15-25)
Vitex	Class 2 (15-25)	Class 3 (5-15)
Kwila	Class 2 (15-25)	Class 3 (5-15)
Accoya	Class 1 (50+)	Class 1 (25+)
Jarrah	Class 2 (15-40)	Class 2 (15-25)

Table 1.1

(Source: Timber Service Life Design Guide. Forest and Wood products Guide, 2007)

1.2.2 COATING REQUIREMENTS

To achieve the above serviceable life for the various species, all faces (hidden and exposed) must be coated with a minimum of one coat of a suitable penetrating oil or stain and all cut ends, and exposed timber must also be coated to ensure the timber is envelope sealed.

1.2.3 MAINTENANCE REQUIREMENTS

The above serviceable life assumes regular maintenance. Appearance will degrade over time unless timber is coated and both the coatings and all aspects of the decking system are maintained.

Maintenance requirement will vary, depending on the species of timber, site, location, aspect, exposure, and coating selected, but in general terms, annual cleaning of the deck should be carried out to ensure the surface is free from moss, mould, fungal and organic growths, and airborne pollutants.

This should be carried out using water and a mild detergent and soft brush, ensuring all the residue is washed away. Avoid using harsh chemicals, and high pressure waterblasters as these may damage the surface of the timber.

Periodically relocate outdoor furniture, pots, and planters etc. to reduce risk of water trapped on deck surface.

Reapplication of the stain or oil finish, to the cleaned decking, should be carried out in accordance with the coating manufacturer's instructions.

2. HEALTH AND SAFETY

2.1 CUTTING OF TIMBER

Cutting of timber is to be done in a well ventilated area and a suitable dust mask, eye protection, and ear protection must be worn.

2.2 COATING

Timspec recommends that all deck timber species should be envelope coated before installation, including all cut ends and exposed fresh timber.

Avoid coating the top surface only, once installed as this will likely cause movement (cupping) in the timber surface.

Coating or priming is to be done in a well ventilated area, refer to the coating/primer manufacturers requirements for all matters relating to health and safety. Ensure all of the coating manufacturer's requirements are be adhered to

3. SITE PREPARATION

3.1 STRUCTURE AND FRAMING

3.1.1 NEW ZEALAND STANDARD 3604

Generally, the timber substrate and framing must comply with NZS 3604 (2011) (Timber-framed buildings), however where specific engineering design is required the framing shall be at least of equivalent stiffness as the framing provisions of NZS 3604.

3.1.2 LAYOUT

Joists or bearers must be spaced at a maximum of 450mm centres, (for ex 25mm thick profiles) and maximum 600mm centres (for ex 50mm thick profiles)

3.1.3 MOISTURE CONTENT

The moisture content of the framing must not exceed 20% at the time of fixing the decking as problems may occur later due to excessive timber movement if framing is too wet.

4. PRE-INSTALLATION

4.1 ON-SITE STORAGE AND HANDLING

Care must be taken to ensure that timber and accessories are kept clean and dry, and are not damaged whilst in storage awaiting application.

Extra care is to be taken while handling timber profiles to ensure that they are not damaged.

Upon delivery, timber is to be stacked flat and level on bearers/dunnage that are a maximum of 900mm apart and at least 100mm off the ground. Timber should either be stored inside an enclosed building or covered with an additional waterproof layer and protected from the elements when stored outside.

4.2 DOCKING OUT DEFECTS

Before coating or installing boards, check for any defects that may require docking out.

Important: All docked ends of coated decking profiles will require coating with a minimum of one coat of primer or stain.

4.3 PRIMING AND SEALING (APPLIES TO STAINED OR PAINTED PROFILES ONLY)

Apply the first coat of stain or primer to all faces, sides and edges of the decking prior to installation. Remember that all docked ends will require coating or priming as noted above. Follow the coating manufacturer's directions and ensure further coats are applied as required.

Note: It is usually easier to order your decking profiles to arrive on-site preprimed/precoated.

5. FIXINGS

5.1 DECK FIXINGS

5.1.1 MATERIAL

Depending on species selected, deck fixings can be either: Galvanised or Stainless Steel (316).

5.1.2 COMPATIBILITY

Refer to the table below to check the compatibility of fixings materials:

Specie	Stainless Steel	Galvanised Steel
Blackbutt	Yes	No
Vitex	Yes	Yes
Kwila	Yes	Yes
Accoya	Yes	No
Jarrah	Yes	Yes

6. FIXING DETAILS FOR DECKING

6.1 INSTALLATION

6.1.1 FIXING METHOD

Align profiles perpendicular to joists. Pre-drill all fixing holes, using a drill bit that is slightly smaller than the screw or nail shank, to reduce the risk of splitting and ensure a snug fit.

Fixing placement for a 90mm wide board to be 12.5mm in from each edge of profile, and for a 135mm, or wider, board, 15mm in from each edge of profile.

Timspec Ltd recommends using stainless steel, countersunk twin thread decking screws for all decking profiles. Fixings must be long enough to achieve a minimum 30mm framing penetration.

Using a cordless drill and driver bit, apply screws to the decking profile and finish the head of the screw just below the profile surface. Ensure boards are fixed straight to assist with correct alignment of subsequent boards.

6.1.2 BOARD SPACING

Allow a gap between boards to ensure free draining during wet periods.

As a general guide a gap of 3 – 8mm should be allowed for between boards, but the size of gap will need to be determined by species, board width, site, location and coating.

Refer to table below.

Species	90 – 120mm profiles	130 – 140mm profiles
Blackbutt	4mm	6 – 8mm
Vitex	4mm	6 – 8mm
Kwila	4mm	6 – 8mm
Accoya	3 – 4mm	4 – 6mm
Jarrah	5mm	8 – 9mm

6.1.3 JOINING BOARDS

For joining boards, use a butt join over a joist, ensuring there are fixings in each board on either side of join. Fixings may need to be on a slight angle to ensure correct penetration of the joist.

7. SITE CLEAN-UP

After completion the installer is to leave the site in a clean and tidy manner, including:

1. Replacing or repairing any damaged or marked items; and
2. Removing all rubbish, debris and unused items from the building site.

Any treated and/or coated timber off-cuts or rubbish are to be disposed with according to local council requirements.

Note: Accoya[®] wood is not treated with dangerous chemicals and can be disposed by burning, or as untreated timber at refuse sites.

8. ON-GOING MAINTENANCE

It is the building owner's responsibility to ensure that the decking system receives regular maintenance so that it continues to perform at its required level.

8.1 MAINTENANCE INTERVAL

For most areas (especially coastal, industrial, and inner-city area) maintenance should be performed at least once every 12 months. Maintenance may be required as often as once every six months, depending on the level of pollution, dirt and dust in the environment.

For sheltered, inland locations, maintenance should be performed once every 12 to 18 months.

8.2 MAINTENANCE REQUIREMENTS

Regular maintenance is to include the following 5 steps:

1. Wash all exterior surfaces with low pressure water to remove dust, dirt and other contaminants;
 - a. Extra attention should be given to areas that are not exposed to rain such as sheltered areas below eaves where contaminants may not be washed away;
 - b. Do not direct high pressure water at any part of the hardwood timber.
 - c. Do not use harsh or abrasive chemicals on deck surface.
2. Use a soft bristle brush or broom with water and an appropriate cleaning agent (refer to paint manufacturer for correct cleaning agent specific to their coating system) to remove stubborn or persistent dirt and contaminants.
3. Inspect all surfaces and junctions for signs of damage, wear-and-tear, or coating breakdown. Where coating surface has broken or remedial action is required:
 - a. Remove all damaged or loose coating (may involve sanding back to solid timber);
 - b. Spot prime any bare timber (if repairing paint);
 - c. Recoat with minimum two coats of the product originally used to initially overcoat the timber.
4. Repairing or replacing any damaged or deteriorated items:
 - a. Small isolated areas of dry rot in timber can be cut out and filled then primed and coated;
 - b. For larger areas of deterioration: remove and replace either the damaged section or the entire board. Prime and coat the replacements as required;
5. Where a coating is applied, periodic recoating is required to ensure the integrity of the coating is sustained. This will generally mean applying another exterior coat every 4 to 10 years (dependant on the coating used and building location) after washing and maintenance.