How to build a timber deck

A timber deck has many functional uses and can be an asset to any home. A deck can aid the indoor/outdoor flow and becomes an extension of the home in many cases. Your deck dimensions may differ from our design, however construction techniques usually remain the same so can be applied to your deck.

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1. Measure the width of the deck from the house, allowing 600mm.
2. Ensure your nails are set at right angles to the house, drive a 75mm fastener into the end and parts of the slats against the house.
3. Measure the width of the deck from the house, allowing 500mm for profiles.
4. Attach string line to set out nails on the house and attach to the corner profiles or posts. Using the level, position string line to ascertain deck height.

STEP 2: POSITIONING POSTS (FIG 2 & 3)
- Dig a hole at each corner and one at the centre.
- Ensure there is 12mm gap between cladding and deck bearer by ascertain deck levels.
- Complete final rule prior to laying decking.
- Measure and mark external joist at 300mm centres if using different size decking.
- Ensure a gap of 2mm (N3) is kept between decking.
- Begin from the edge of the house, 30mm from the building.
- If decking differs in length, alternate with long/short lengths.
- Spacing of posts depends on the joists size, avoid joining together at an angle, avoid uplifting timber.
- If deck height of 10mm or a slight mean slope.
- Use 100 x 50mm or 75 x 50mm box grade timber for pegs.
- Hole depth should be 450mm deep and 350mm in diameter, or dig post holes at each corner and one at the centre.

STEP 3: TRIMMING POSTS (FIG 2)
- Measure the thickness of cladding and the bearer depths.
- Use a 60mm house plate to provide support.
- Snap a string line through the plate from the top post to the plate at ground level and a slope from near the top to the plate.
- Four course accurate up to 1000mm from ground level.
- Bearers or joists supporting handrail posts must be at least 25mm from the side and length of the rails.

STEP 4: POSITIONING JOISTS
- Use coach screws with 100 x 3.5mm washers and the heads to connect the deck bearer to existing bearer, complying, masonry anchors for masonry cladding walls.
- For possible mild through the existing bearer in preference to support a corner screw.
- Ensure there is 12mm gap between cladding and deck bearer by thicknessing with a batten (Fig 4).

STEPS TO CHECK
- Points to check:
  - Joists higher than 1 metre from ground level will require a Building Consent.
  - Larger decks could possibly require boring into the foundations.
  - House pump will be required to rocket from the floor to the ground.
  - N32 0464 requires external structures within 500 metres of the coast for coastal activity to have stainless steel fasteners and fastenings.

TREATMENT OF DECK COMPONENTRY
- Sawn timber posts (in contact with ground)
  - Sawn timber posts are suitable for posts that are buried in the ground.
  - Posts being inserted into soil must be treated to H5. (provides cleaner cuts, strength and weather resistance).
- Bearsers or joists supporting handrail posts must be at least 25mm from the side and length of the rails.
- ENFILL OPTIONS BETWEEN DECKING AND HANDRAIL:
  - Plastic/wooden posts.
  - Vertical spaces must not provide footholds between 150mm and 760mm. Above and below those heights the rails must not allow the passage of a 100mm dia sphere.
- Ensure all ends of timbers are protected with a suitable timber preservative.

SAFEGUARDING MATERIALS FROM CORROSION OR DESTRUCTION
- Elevated timber: Sawn timber sizes and spans are based on W.S. 3040:1994 Amendment 2 for No.1 framing wood treated to H3.2. Posts being treated into soil must be treated to H5. Timber throughout the rest of the deck, other than ply, must be treated to H3.2 if left unpainted or H3.1 from moisture. This will protect your materials from weather damage.

MATERIAL LIFT
- Steel
- Iron
- Concrete
- Nails, coachscrews and nails, double bitted screws and washers
- Bolt (optional)
- Ring
- Nails for yellow post

TOOL LIST
- spirit level
- 2 adjustable spanners
- Cross cut
- Circular saw
- Cold chisel
- Hammer
- Hand saw
- Electric drill
- Circular saw
- Set squares
- Hand saw
- Crown
- Tape measure
- 2 adjustable spanners
- Circle saw
- Nails, coachscrews and nails, double bitted screws and washers

Although every care has been taken to ensure that the information in this How to Guide complies with existing standards and codes of practice, Carter does not accept responsibility for any errors or omissions in the project, nor for any specifications or work based on this information.

DECK FRAMING SIZES AND SPANS

<table>
<thead>
<tr>
<th>POST SIZE</th>
<th>N32 0464/1999 TABLE 6.b BEAVER</th>
<th>decking size</th>
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</thead>
<tbody>
<tr>
<td>Joist Size</td>
<td>100 x 50</td>
<td>1.0</td>
</tr>
<tr>
<td>150 x 50</td>
<td>2.0</td>
<td>2.5</td>
</tr>
<tr>
<td>200 x 50</td>
<td>3.0</td>
<td>3.5</td>
</tr>
</tbody>
</table>

Joist Sizes and Spans

Note: Deck construction is governed by both the Resource Management Act and the New Zealand Building Code, so all works check with your local Council. Although a deck may not need a Building Consent, it still must comply with the Building Code.

JOIST SPANS (MM) | DECKING SIZE |
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Max</td>
<td>Actual (mm)</td>
</tr>
<tr>
<td>Joist</td>
<td>Spacing</td>
</tr>
<tr>
<td>Max</td>
<td>Joist Spacing</td>
</tr>
</tbody>
</table>

- 400mm | 1.2 | 1.9 |
- 600mm | 1.6 | 2.5 |

- 880mm | 2.1 | 3.2 |

- 1225mm | 2.6 |

- 1500mm | 3.1 |

TREATMENT OF DECK COMPONENTRY
- Sawn timber posts (in contact with ground) | H3.1 or H3.2

- Teak and H3.2 Timber are treated timbers designed for outside, above ground level use. H3.2 must be painted and H3.2 may be left unpainted. H3 is treated and designed for structural below ground level use.

- Steel: Sawn timber sizes and spans are based on W.S. 3040:1994 Amendment 2 for No.1 framing wood treated to H3.2. Posts being treated into soil must be treated to H5. (provides cleaner cuts, strength and weather resistance).

- Elevated timber: Sawn timber sizes and spans are based on W.S. 3040:1994 Amendment 2 for No.1 framing wood treated to H3.2. Posts being treated into soil must be treated to H5. (provides cleaner cuts, strength and weather resistance).

- Timber: Sawn timber sizes and spans are based on W.S. 3040:1994 Amendment 2 for No.1 framing wood treated to H3.2. Posts being treated into soil must be treated to H5. (provides cleaner cuts, strength and weather resistance).