

# WAIPAPA PINE UNTREATED NO.2 FRAMING AND BOX GRADE TIMBER DESIGN AND INSTALLATION GUIDE



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## General

- This guide covers installing and maintaining Waipapa Pine Untreated No.2 Framing and Box Grade Timber (also known as Cut of Log).
- This guide is suitable for use by people with basic carpentry skills.
- Where applicable, those specifying or installing the timber must meet all Restricted Building Work provisions.
- Technical assistance is available at [waipapapine.co.nz](http://waipapapine.co.nz).
- While all reasonable efforts have been made to ensure the accuracy of the information provided, please note that it is subject to change, and this document should be considered a guide only.

## Design

### USE

- Confirm use is within the scope of the pass™.
- Waipapa Pine No.2 Framing and Box Grade Timber is for:
  - external temporary concrete boxing and structural formwork, and
  - wall and roof framing protected from the weather, in unlined and unoccupied farm buildings and outbuildings.
- The timber can also be used for general purpose uses such as pallets, boxing and bins.
- It is rough sawn (R/S) and available in sizes (mm): 75 x 50, 100 x 50, 150 x 50, 200 x 50, 250 x 50, 300 x 50 and 100 x 25 and 150 x 25.

### PRIMARY STRUCTURE COMPLIANCE

- Ensure the balance of the primary structure complies with the NZ Building Code and is suitable for the intended work.

### SELECTION AND FASTENINGS FOR USE AS FRAMING

- Use the appropriate selection tables and general requirements in section 8 of NZS 3604:2011 *Timber framed buildings* to specify the timber.
- For uses outside the scope of NZS 3604:2011 Timber framed buildings, Waipapa Pine Untreated No.2 Framing and Box Grade Timber must be specifically

designed. Refer to AS/NZS 1170.1:2002 *Structural design actions - Part 1: Permanent, imposed and other actions*.

- Adhere to size and spacing requirements and account for vertical and horizontal loads.
- For bracing demands to meet section 5 of NZS 3604:2011 *Timber-framed buildings*, refer to specific framing requirements in accordance with the bracing element selection and manufacturer's technical information.
- Select fastenings in accordance with Table 2.2 of NZS 3604:2011 *Timber-framed buildings* and Table 4.3 of NZS 3604:2011 for durability requirements.
- Specific proprietary fastening can be specified if it is established fastenings are NZ Building Code compliant, e.g., proprietary bottom-plate wall-bracing brackets and/or roof uplift connectors.

## Install

### HEALTH AND SAFETY

- Prioritise safety for yourself and others.
- Ensure proper ventilation or dust extraction during cutting or drilling.
- Ensure the timber is well supported when cutting and nailing.
- Wear appropriate safety equipment, clothing, footwear, and eye protection.
- Use all tools in accordance with relevant instruction manuals and ensure all tools are sharp.
- Plan and monitor a safe approach for working at height; select and use the right equipment.
- Clear the work area of any obstruction before work starts.
- Refer to:
  - The absolutely essential health and safety toolkit for small construction sites by WorkSafe. Download at [worksafe.govt.nz/topic-and-industry/building-and-construction/absolutely-essential-toolkit](http://worksafe.govt.nz/topic-and-industry/building-and-construction/absolutely-essential-toolkit)
  - *Health and safety at work - quick reference guide* by WorkSafe. Download at [worksafe.govt.nz/managing-health-and-safety/getting-started/health-and-safety-at-work-quick-reference-guide](http://worksafe.govt.nz/managing-health-and-safety/getting-started/health-and-safety-at-work-quick-reference-guide).

## HANDLING AND STORAGE

- Care must be taken during loading, unloading and transporting in the yard and on-site to protect the timber from pre-installation damage.
- Store timber flat on a hard, dry surface, laid flat on bearers that extend across the member's full width. Timber stored near the ground will absorb moisture. To prevent this, place a layer of plastic underneath the bearers.
- Do not expose timber to rapid changes in moisture or temperature, such as may occur from temporary heating units.
- When storage inside is not possible, remove any wrap, place spacers between each layer of timber, then re-wrap or cover with a waterproof cover.

## TOOLS AND EQUIPMENT

- Use standard carpentry tools for installation.
- Use tools in accordance with good trade practice and supplier's instructions.

## BUILDING CONSENT DOCUMENTATION

- Consult building consent documents if applicable.
- Otherwise, refer to NZS 3604:2011:2011 *Timber-framed buildings* or design specification.



## INSTALL

For use as framing:

- Ensure end cuts are plumb and true.
- Any framing that is ripped parallel with the grain shall not be regarded as structural or load-bearing.
- Ensure use is within the tolerances in Section 2.2 of NZS 3604:2011 *Timber framed buildings*.
- Ensure a damp-proof course separation layer is installed when the timber is fixed to concrete or steel.
- Where used for structural framing, studs must be at a maximum 600 mm centres (unless varied by design).
- Horizontal framing requires a minimum 35 mm seating over and under studs.
- Ensure services penetrations and notches are within the tolerances of NZS 3604:2011 *Timber-framed buildings*. Refer to Figure 7.8 and Figure 8.4.
- Fixings are to be in accordance with building consent documentation, if applicable, or NZS 3604:2011 *Timber framed buildings*. Refer to Table 2.2 of NZS 3604:2011 and Table 4.3 of NZS 3604:2011 for durability requirements. Suitable connectors include hand or power-driven nails. Proprietary fasteners (e.g., bottom-plate wall-bracing brackets and/or roof uplift connectors) may be used if they meet Building Code requirements. Confirm compliance with the manufacturer's technical literature.

For use as temporary structural formwork:

- Install formwork in accordance with NZS 3109:1997 *Concrete construction* and NZS 3604:2011 *Timber-framed buildings* (sections 6, 7, and 9) for strip foundations and foundation pads.
- Use forms and shores to provide lateral bracing to retain alignment and resist all lateral loads.

## EXPOSURE

- Do not expose timber for more than three months under construction conditions.
- Wetting during construction may lead to temporary elevated moisture content and dimensional changes.
- Once enclosed, timber will dry and equilibrate to the humidity conditions. Some expansion or swelling may remain after drying.

## Maintenance

- Timber does not require specific care and maintenance to maintain its performance.
- Where used as framing, ensure the building remains unlined.