

This checklist covers the installation of overlay timber flooring that is to be installed in accordance with the installation instructions, refer to <http://coffshardwoods.com.au/product/flooring>. Installation is to be undertaken by competent timber floor installers.

### PRODUCTS COVERED

80 x 13mm, 130 x 14mm

### PRIOR TO INSTALLATION

- **Transport and storage practices** – Ensure these have not adversely affected board moisture content. Floorboard widths and moisture contents should be checked for a sample of boards from each pack supplied, and results recorded.
- **Locality and specific building site** – Consider where the flooring is to be laid and the expected floor movement (shrinkage and swelling) after installation. Floor expansion allowance needs to be provided to the perimeter of the floor, with additional intermediate allowance in wider floors (> 6m) and in locations that experience periods of more consistent higher humidity.
- **Subfloor and subfloor space** (as applicable) – Ensure that the subfloor and subfloor space is suitable for accepting the timber floor. When fixing into the subfloor, it needs to be adequately flat and dry, and with adhesive use, both clean and sound. This includes the integrity of strip timber subfloors and also particleboard where protective wax in the surface is to be removed. Possible movement in timber (and sheet) subfloors can telegraph to floor above and if considered a risk a thin plywood underlay should be considered. Floors elevated above natural ground must be sufficiently ventilated and not subject to damp or wet soil conditions that would maintain high humidity beneath the floor.
- **State of building completion** – The building must be complete to the stage of being closed in, weathertight and the flooring protected from adverse effects from wet trades and more extreme direct sunlight etc. Floor protection and temporary window coverings may be needed after laying. Maintain internal conditions as close as possible to lived-in conditions and note that prolonged high temperatures in locked up buildings can adversely affect floors.
- **Acclimatisation** – For moderate internal climates acclimatisation is generally not needed, and noting that thinner overlay flooring is prone to respond to humidity changes more quickly than 19 mm thick flooring and can distort with the traditional acclimatisation practices. Following installation overlay flooring should be left for about 2 weeks prior to sanding and coating, to accommodate minor shape changes that can occur after laying as the flooring becomes accustomed to the building environment. If traditional acclimatised practices are to be considered, then additional care is needed.

### FIXING ALTERNATIVES TO SUBFLOORS

Overlay flooring must be laid over a structural subfloor which can include sheet subfloors (plywood and particleboard), existing timber floors and in some instances direct to concrete. These products are intended for secret fixing to sheet and timber subfloors that have been fixed on joists or over a concrete slab. Some flooring contractors with specific knowledge and in specific localities will adhesive and mechanically fix direct to concrete slabs.

### SUBFLOOR REQUIREMENTS AND FIXING PRACTICES

- **Concrete slab moisture and moisture vapour barrier** – Slab moisture when assessed by impedance meter is to be below 4% prior to installing a 0.2mm polyethylene moisture vapour barrier, lapped 200mm, joints taped with water resistant plastic tape, and edges brought to the height of the floor. Alternatively, an applied moisture vapour barrier may be provided in accordance with the manufacturer's instructions.
- **Sheet and timber subfloor moisture** – These subfloors need to be within 2 and 3 percent of the flooring being laid. Note that moisture meters have reduced accuracy in sheet subfloors and oven dry moisture content testing may be required.
- **Joist and sheet subfloor fixing** – In moderate to high humidity localities, when higher density flooring is installed, it is necessary to ensure that the subfloor and subfloor framing is adequately fixed, including sheet subfloors being screwed to joists. Inadequate fixing can lead to buckling of the sheet flooring or subfloor framing.
- **Subfloor flatness** – Concrete slabs receiving plywood or battens need to be flat to within 3mm under a 1.5m straight edge. Floors direct to joists or sheet flooring to joists should be sufficiently flat as to have no visibly obvious undulations.
- **Plywood subfloors on concrete slabs** – Plywood sheets are to be staggered 900mm and fixed with hand driven 50 mm long drive pins (e.g. Powers spikes, Ramset drive pins or other equivalent) to manufacturer's recommendations and not closer than 50mm to sheet edges. For 15mm thick plywood, fix with 4 rows of 5 spikes and for 12mm thick plywood, fix with 4 rows of 7 spikes.
- **Expansion allowance** – A min. 10 mm expansion gap at all internal or external wall structures is to be provided, except where board ends abut doorways (where a 2mm gap to prevent rubbing can be provided (filled with flexible sealant (not silicone))). No intermediate expansion allowance is needed for floors up to 6m wide, if there is moderate in-service board movement. Over 6m or if extra expansion allowance is required, a 12mm wide cork intermediate expansion joint or a series of smaller gaps (1 - 2mm wide) can be provided at about 800 to 1000mm apart or combination of these methods.

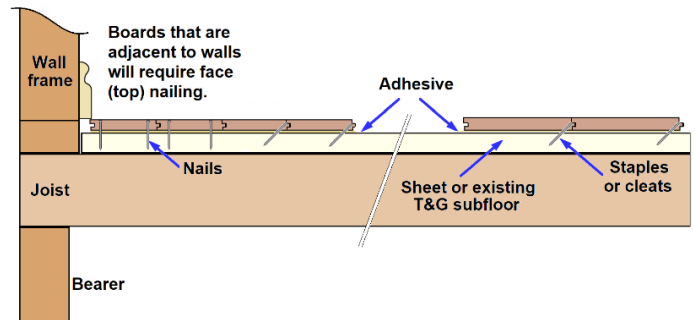
## INSTALLATION TO RECOGNISED INDUSTRY STANDARDS AND PRACTICES

Floor installation is to follow recognised industry practice as outlined in Coffs Harbour Hardwood's installation instructions <http://coffshardwoods.com.au/product/flooring> and with further details as outlined in the ATFA Industry Standard – Solid Timber Flooring. Provided below are aspects relating to the fixing of overlay flooring.

### OVER TIMBER AND SHEET SUBFLOORS ON JOISTS

**Secret fix and adhesive beads 80x13mm** with 35x15 gauge staples or 32x18 gauge cleats: spaced at 225mm and a 6-10mm zigzag bead of flooring adhesive (i.e. polyurethane or polymer) between fixing points OR spaced at 450mm and 6-10 mm bead of flooring adhesive, between and at fixing points.

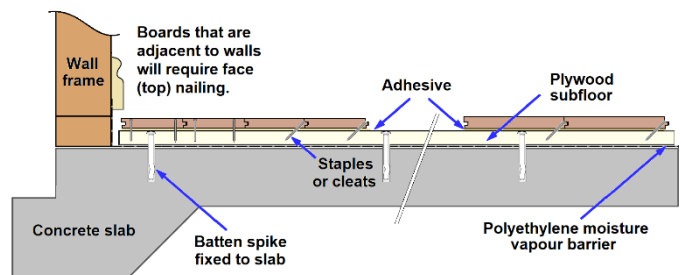
**Secret fix 80x13mm and 130x14mm with a full trowel adhesive bed** of flooring adhesive (i.e. polyurethane or polymer) applied to the adhesive manufacturer's instructions and with 35x15 gauge staples or 32x16 gauge cleats at 300mm centers.



### OVER PLYWOOD SUBFLOORS ON CONCRETE

**Secret fix 80x13mm with beads of flooring adhesive** with 35x15 gauge staples or 32x18 gauge cleats: spaced at 225mm and with a 6 to 10mm zigzag adhesive bead between fixing points OR spaced at 450mm spacing and with a 6 to 10mm adhesive bead between and at fixing points.

**Secret fix 80x13mm and 130x14mm with a full trowel bed of adhesive** and 35x15 gauge staples or 32x16 gauge cleats at 300mm centres.



### DIRECT ADHESIVE FIX TO SLABS

In some locations it is common to install overlay flooring by direct adhesive and mechanical pinning to concrete slabs. Perth, where this method is mainly used, has hot dry summers that are suitable for this method as opposed to some states in the west with warm humid summers. This method is only recommended where flooring contractors have specific knowledge and experience in this method of installation.

## SANDING AND COATING

Timber floor finishes include oils and hard wax oils, oil modified urethanes, solvent and water-based polyurethane. When choosing a floor finish it is necessary to consider aspects that include the following: wear and ongoing maintenance, the effects that different types of coatings can have (e.g. edge-bonding, tram lining, colour changes), the desired gloss level and health aspects during application. A finish similar to that of fine furniture should not be expected, as site sanded and coated floors are not finished in a factory environment and different pieces of flooring will sand differently. The home environment is also not dust free and subject to greater variations in temperature and humidity. However, the finished floor can be expected to be of a high standard and have an even appearance. A minimal level of contaminants, minor sanding marks and other minor imperfections may be visible. Some finishes will also 'yellow' with time and if rugs are moved, a contrast in the depth of colour can occur.