THE METHOD

Installing the Oak Plank.

Every Oak Plank floor we lay follows the same method, from the first look at the site to the day we hand over the care instructions. This guide sets it out in full, for installers, builders and anyone who wants to know what happens beneath their floor. It covers all three formats, adhesive fixed and floated, over every common subfloor. Kitchens, laundries and other wet areas add a few steps of their own, set out in our Wet Area Compliance document.

The essentials

Requirement	Specification
Fixing method	Full bed adhesive fixed (preferred), or floated
Room conditions	10 to 32°C, relative humidity 40 to 70%
Subfloor flatness	Within 3mm under a 3m straight edge
Concrete moisture	Below 4.0% impedance, or below 85% in-slab RH
Timber subfloor moisture	Below 13% for plywood, particleboard and strip timber
Perimeter gap	5mm adhesive fixed, 10mm floated
End joints	Staggered at least 300mm; no board at a wall under 300mm
Adhesive	Mapei Ultrabond ECO 995, full trowel bed
Formats	190 × 1900 × 12mm, 190 × 1900 × 15mm, 240 × 2200 × 15mm

Before a board goes down

Timber is a natural product

Expect variation in colour, grain and feature from board to board, including knots and gum veins, some of which are filled at the mill. Whoever orders the floor makes sure the client understands and accepts this before installation starts. Natural character is not a defect, and our warranty says the same.

The installer places the boards

Blending boards from several cartons as you go is how a floor gets the even, mixed look most owners want. A board that doesn't sit right with the rest can go somewhere less visible, like a wardrobe, or be left out.

Skill and workmanship

Engineered flooring takes skill, experience and the right tools. Our 25 year warranty covers Oak Plank floors supplied and installed by ATS Design or our approved installers, laid to this guide.

Sunlight

Intense sunlight speeds up colour change and can affect the surface. Floors near north and west facing windows need temporary protection until awnings, tinting or curtains are in.

Wet areas

Within 1.5 metres of any sink, basin, bath, toilet, dishwasher or washing machine, the floor must meet NZ Building Code clause E3: adhesive fixed, every joint glued and the perimeter sealed. Oak Plank is never floated in a wet area.

1. Jobsite conditions

- The building should be at the stage where most other trades are finished, giving dry, clean internal conditions.
- Room conditions of 10 to 32°C and relative humidity between 40% and 70% make an acceptable internal climate. Keep boards away from moisture, heat and weather extremes, in storage and during installation.
- Store cartons flat and stacked, out of direct sunlight, on plastic if over concrete. Don't open them until you're ready to lay.
- Check for anything that could bring moisture to the floor: subfloors below ground level, gardens or patios near internal floor level, water stains on walls or ceilings, plumbing leaks and damp slab edges.
- Timber subfloors over natural ground need ground that stays dry in wet weather, proper subfloor ventilation and drainage, and timber at no more than 14% moisture content.

2. Suitable subfloors

Once prepared, Oak Plank goes down over most solid surfaces: concrete, plywood, particleboard, existing strip timber and ceramic tile. It does not go over magnesite or sand and cement screeds. Over cork or vinyl, it can only be floated.

3. Preparing concrete

- New slabs must be at least 60 days old.
- Test the slab for moisture. Below 4.0% impedance or 85% in-slab relative humidity is acceptable. Above that, get specialist advice before going further. Above 5.0% impedance or 90% in-slab RH, the slab is not suitable.
- An applied moisture vapour barrier is used on every slab-on-ground installation. Suspended slabs reading below 3% impedance and 75% RH may not need one. The barrier normally goes on before any levelling compound.
- The slab must be sound. Grind away any surface weakness and clean it to the barrier and adhesive manufacturers' instructions.
- Flat to within 3mm under a 3m straight edge, anywhere on the slab. Grind high spots; fill low spots with levelling compound over the right primer. The compound must be strong enough to take a timber floor.
- Never mix systems. Barrier, primer, levelling compound and adhesive come from one manufacturer, or a combination the manufacturers have agreed is compatible. Grind off any primer left outside the levelled areas, with dust control and the right protective gear.

4. Plywood and particleboard

Plywood over a concrete slab

- Lay 200 micron polythene first, lapped 200mm with the joints sealed by water resistant tape, and turned up at the walls to floor height.
- Fix non-structural plywood, at least 12mm thick, in a brick bond pattern with 50 × 6.5mm spike anchors (Powers, Ramset or similar): four rows of seven per sheet, evenly spaced, about 75mm in from the edges.
- STRUCTApanel flooring underlay can be used instead, installed to its manufacturer's instructions.

Sheet flooring on joists

- Sort out any noise before installation, by screwing the sheets down or attending to the framing.
- Moisture content must be below 13%. If in doubt, ask.

Both

- Flat to within 3mm under a 3m straight edge.
- Rough sand to remove swollen joints, surface contaminants and, on particleboard, the wax layer.

5. Existing strip timber

- If the floor is dry (13% moisture content or less), shows no seasonal movement and is flat to within 3mm under a 3m straight edge, a rough sand is all it needs.
- If its movement or surface is in doubt, sort out any structural or noise issues, then lay a plywood slip layer about 6.5mm thick. Glue it down with beads of flooring adhesive 100mm apart, or a full trowel bed, and staple it: 12mm in from the edges, 75mm apart around the perimeter and in a 100mm grid across the sheet.

6. Other hard surfaces

- Ceramic tile: remove any hollow sounding tiles, grind the surface flat and clean, then apply a cement based levelling compound.
- Floating hard floors, such as laminate or hybrid, come up first.

7. Underfloor heating

Oak Plank suits hydronic heating in the slab. Full bed adhesive fixing is the preferred method: the boards are made at a lower moisture content for it, and the thinner system moves heat better. The heating itself is installed by your own heating contractor.

- Preheat the slab for two weeks before installation to lower its moisture content, then switch it off and let it cool before laying.
- Change the slab temperature by no more than 2°C per day, in and out of the heating season.
- Keep rooms at 18 to 24°C and 40 to 65% relative humidity.
- The underside of the boards is never held above 27°C, and the slab surface never exceeds 28°C in service.
- Some shrinkage, gapping and minor surface checking while the heating runs is normal. It doesn't affect performance and has to be accepted.
- Rugs come off while the heating is on.

8. Acoustic underlays

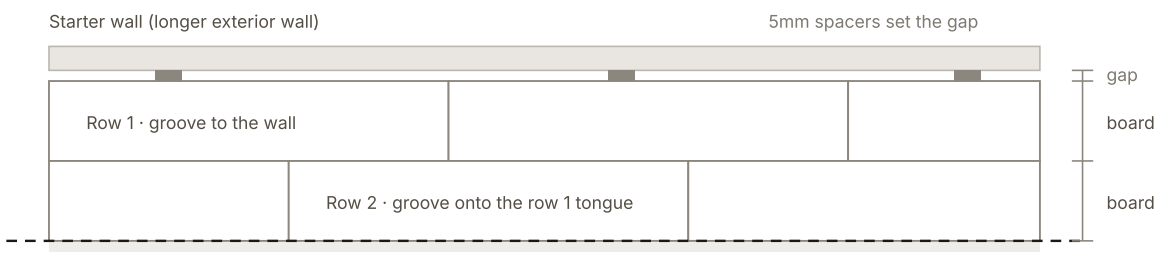
- Use a firm, flat acoustic underlay, adhesive fixed to the subfloor. The flooring is then adhesive fixed to the underlay, or floated over it.
- Confirm the underlay and adhesive manufacturers accept each other's products, and that the underlay is designed for engineered flooring and the installation method.
- When floating over an acoustic underlay, add the recommended floating underlay on top.

Apartments, without the underlay. Our 15mm boards, adhesive fixed straight onto the slab with no underlay, measured L'nTw 43 in field impact testing in a real apartment building. Your project's acoustic consultant has the final say.

CONTRIX ACOUSTIC CONSULTANCY · REPORT 3890C · APRIL 2025

9. Planning the layout

- Run the boards parallel to the longest walls and down main hallways. It looks best and helps the floor handle expansion. Watch how low light from windows and doors falls across the floor; it shows up any unevenness.
- Walls are rarely parallel or square. Keep boards ripped lengthwise at walls as wide as the set-out allows, and balance the widths either side of hallways.
- End joints stagger by at least 300mm, and no board at a wall finishes shorter than 300mm. Avoid regular, repeating patterns unless the client asks for one.
- Remove skirtings and undercut door frames. If the skirting is too narrow to cover the expansion gap, undercut the wall lining or add a scotia.
- If a board arrives damaged or with a finish fault, set it aside and let us know. Don't lay it.
- Have everything on site before starting: adhesive, spacers, trims and, for floated floors, underlay.



Chalk line: one board width + gap + one more board width, marked at both ends of the wall
Adhesive is spread from the chalk line back to the starter wall (shaded)

SETTING OUT THE FIRST ROWS · PLAN VIEW · NOT TO SCALE

10. Adhesive fixed installation

The preferred method, and the only one we use in wet areas. Adhesive goes down as a full trowel bed: beads can leave hollow spots. Barrier, levelling compound and adhesive always come from the same system. We specify **Mapei Ultrabond ECO 995**, a one component moisture curing urethane that controls moisture vapour and reduces sound in a single coat.

1. Confirm the jobsite checks and subfloor preparation are complete, especially if someone else did the prep.

2. Floors larger than 12m wide and 14m long need intermediate expansion joints, 5mm wide, filled with cork or caulked.

3. Snap a chalk line down the centre of the hallway and through the open areas to check alignment and balance widths. Starting from a centreline is often better than starting from a wall.

4. Dry lay the first row along the longer exterior wall. Cut the last board to at least 300mm, leave the expansion gap at both ends, and start the next row with the offcut.

5. If needed, rip the first row narrower from the groove side, scribe it to any wavy or bowed wall, and remove the tongues facing the wall.

6. Keep a perimeter gap of at least 5mm to every vertical surface: walls, door frames, pipework and cabinetry fixed to the subfloor. Set it with spacers along the lengths and ends. The skirting covers it at the end.

7. With the first row in place, measure out from the wall one board width, plus the gap, plus one more board width. Mark both ends, snap a chalk line, and lift the boards.

8. Trowel adhesive from the chalk line back to the starter wall, with the trowel the adhesive manufacturer specifies, held at 45 degrees.

9. Lay the first row groove to the wall, seated into the adhesive with spacers in place. Fit the second row's groove onto the first row's tongue and press it down firmly. Never slide a board through the adhesive: it has memory, and will pull a slid board back toward where it first touched. Close joints with a tapping block, and clean off excess adhesive. Straight boards temporarily fixed along the chalk line help keep these rows true; take them up once the first two rows have cured.

10. Carry on across the room, spreading adhesive two or three boards wide along the full row, never left exposed longer than 35 to 45 minutes. Lift a board now and then to check coverage, and weight any that need help making full contact. Keep foot traffic off fresh boards, and clean adhesive off the face straight away. Scribe and rip the final row to fit.

11. Remove the spacers and fit the skirtings, fixed to the wall and never to the floor. A bead of flexible sealant between skirting or cabinetry and the floor is fine on an adhesive fixed floor, as movement is minimal. We specify Bostik Seal N Flex Advance. Never use silicone: its residue gets in the way of any future recoat.

12. Protect the finished floor from the trades that follow with a breathable temporary cover. Damage can still happen under a cover, so it pays to keep traffic light.

11. Floated installation

The boards are glued to each other, not to the subfloor, over a foam underlay that makes the floor slightly softer underfoot. Never in a wet area.

Subfloor

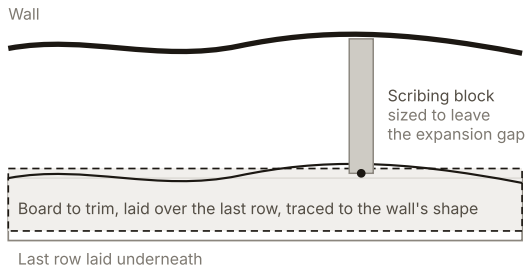
- Solid, never soft (such as carpet), and never over another floating floor.
- Flat to within 3mm under a 1.0 to 1.2m straight edge. If it's out, prepare it as for an adhesive fixed floor.
- Scrape off raised contaminants such as plaster, then vacuum up every bit of debris.

Laying the floor

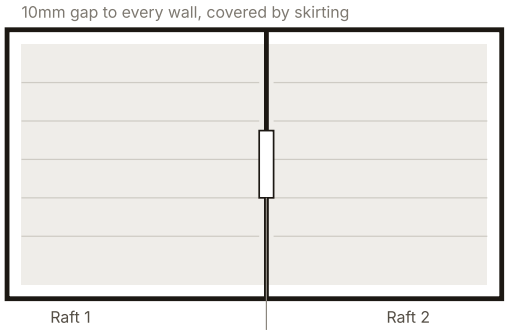
1. Confirm the jobsite and subfloor requirements are met.

2. Plan the floor as rafts no bigger than 10m wide and 12m long, joined by control joints at doorways between major rooms and wherever seasonal movement calls for one. Cover each control joint with an H trim or similar.

3. Snap a chalk line down the hallway centre and through open areas, as for adhesive fixing.



SCRIBING THE FINAL ROW



FLOATED FLOORS · RAFTS & CONTROL JOINTS

4. Lay a damp proof floating underlay, HUSHwalk or EVERwalk, or one of equal thickness and properties. Run the first length along the starter wall with its moisture barrier film turned up the wall.

5. If needed, rip the first row narrower from the groove side, scribe it to the wall, and remove the tongues at the walls.

6. Keep a perimeter gap of at least 10mm to every vertical surface, set with spacers. The skirting covers it at the end.

7. Lay the first row with the tongue away from the wall, the last board cut to at least 300mm. Glue every joint, sides and ends, with a full 3mm bead of cross-linked PVA along the underside of the upper groove edge. A broken bead leaves a joint that crackles. Wipe glue off the face straight away and close joints with a tapping block. After three rows, slide the floor away from the wall and set the spacers.

8. Carry on across the room, peeling the tape on each underlay overlap and sticking it to the next run. For the final row, lay the boards over the second last row, tongue to the wall, and scribe the wall's shape onto them at a distance that leaves the perimeter gap. Cut, glue the groove edges and ends, and pull the boards home with a pull bar.

9. Fix trims to the subfloor, never to the floor, with room for each raft to move. Don't caulk around the perimeter of a floated floor: it holds the floor in place and can make it buckle. Lay the floor around heavy fixed items like kitchen benches, never underneath them.

10. Remove the spacers, fit the skirtings, and protect the floor as for adhesive fixing.

Handover & care

Once the floor is down, the people looking after it get our care instructions. The short version:

- Sweep or vacuum regularly to keep grit off the surface.
- Clean with a well wrung microfibre mop and pH-neutral timber floor products. Wipe spills promptly.
- Never use a steam mop, bleach, wax, oil based cleaners or abrasive products.
- Felt pads under furniture; never drag heavy items.
- Keep indoor humidity between 40% and 70%.

Specified products

Role	Product
Flooring adhesive & moisture barrier	Mapei Ultrabond ECO 995
Primers & levelling compounds	Per the adhesive manufacturer's system
Floated joint adhesive	Bostik PVA Indoor Outdoor (D3 rated, cross-linked)
Floating underlay	HUSHwalk or EVERwalk damp proof underlay
Perimeter sealant, adhesive fixed floors	Bostik Seal N Flex Advance

The rest of the file

This guide sits alongside our Oak Plank specification sheet, the Wet Area Compliance document, the certification overview and the 25 year warranty. Ask, and we'll send any of them over.

atsdesign.co.nz/contact