



**Atkinson & Kirby**

Real Wood Flooring for Professionals



## LAYING GUIDELINES

### Secret Nailed Installations

Solid & Engineered Hardwood Flooring (Minimum 18mm thickness)

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**Engineered flooring is suitable for laying over (certain types of) underfloor heating systems. Please contact your supplier for technical information prior to laying.**

**WE DO NOT RECOMMEND THE INSTALLATION OF SOLID HARDWOOD FLOORING OVER ANY TYPE OF UNDERFLOOR HEATING**

#### PRE-INSTALLATION

To keep the wood in excellent condition it is imperative that the humidity level be controlled at all times, from delivery to laying the floor, and during the years that follow installation.

The optimal humidity range for hardwood flooring is 45–60%; temperature should be maintained at about 18°C.

Flooring should never be stored outdoors, on a cement floor, in a garage or in any damp conditions. Care should be taken to store the wood flat; packs should never be lent against a wall. Pre-finished boards should be left in the packaging in the room where it is to be laid until you are ready to lay the floor (at least overnight). Unfinished flooring packs should be open and the boards spread around the room in which they are to be laid for at least 5 days. In a new constructed building, the heating must have been in operation for at least 10 days, prior to the minimum 5 day acclimatisation period required for unfinished flooring. For pre-finished flooring, this can be laid after the 10 day period mentioned. Upon delivery, check wood flooring moisture content with a moisture meter to establish a baseline for required acclimatisation. All flooring contractors should possess a moisture meter.

In a new construction all windows and doors etc should be installed and all wet trades should be completed. Surface drainage should direct water away from the building. Basements and crawl spaces must be dry. For further information regarding crawl spaces, please contact Atkinson & Kirby. It is not recommended that any solid hardwood floor be laid below ground level. Test concrete for moisture. A Damp Proof Membrane must also be present underneath the concrete subfloor, if present, as well as over. This must not exceed 5% and the humidity of the building must not exceed 60%. Prior to installation, ensure that wood flooring is within acceptable range of moisture content with the wood subfloor. If not within the acceptable range, then a suitable Damp Proof Membrane should be installed, over the wood subfloor, prior to installing nail down wood flooring. In on ground applications, always add a suitable Damp Proof Membrane. All subfloors must be flat, clean, dry and structurally sound, free of squeaks, and free of protruding fasteners. All subfloors should be flat to within 3mm over a 3 metre length, or 2mm over a 2 metre length.

When nailing onto panels, these should have a 3mm expansion space around the perimeter of each panel, with panels fastened every 300mm along intermediate supports. Hardwood Flooring should not be secret nailed or glued to a Chipboard subfloor. For solid flooring wider than 150mm, screw and plug at end joints, alternating at staggered locations and intervals along each board.

Solid board subflooring should consist of boards no wider than 150mm. Thin classification solid strip flooring (overlay/parquet panels) must have a 12mm or better plywood underlayment installed over solid board subflooring. For glue down installations, contact Atkinson & Kirby for separate guidelines.



Due to the variety of installations we can only generalise. We would always recommend that the floor layer satisfy themselves of the suitability of the conditions before laying the floor.

Do not lay the flooring in areas that are wet or humid, e.g. bathrooms, shower rooms etc.

It should also be remembered that the floor layer is the last person to inspect the flooring. Care should be taken to ensure that a balanced look is maintained when laying out the floor; any pieces that are suspect should not be laid. The manufacturer cannot be held responsible for defects due to incorrect installation or boards with defects that have been installed. A waste factor of 5% should be taken into account. As a general rule we recommend at least 12-18mm expansion around the perimeter of the room and at doorways. At least 12-18mm expansion must also be left where the floor comes in to contact with any other vertical surfaces. These expansion gaps can be covered by mouldings after installation. If the floor area is greater than 5m wide, it is advisable to leave a washer gap of 2mm every 6-7 rows to allow for extra expansion across the floor. Allow 15mm minimum expansion space at all vertical obstructions.

In areas where the flooring comes into contact with a fireplace, stove, heating system or un-insulated hot air vents a layer of asphalt or wax paper should be laid first. This will prevent excess drying out of the wood flooring. Adequate ventilation must exist beneath the wood flooring e.g. air bricks around the perimeter of the building.

### **Hardwood Flooring should not be secret nailed or glued to a Chipboard sub floor.**

- Joists or battens should not be more than 350mm apart and should be firmly fixed and free of decay. All timbers used for joists or battens should have moisture content not exceeding 14%. They should be treated against insect and fungal attack.

- Suspended joists should be free from rot. The usual cause of infestation is moist or damp air trapped beneath the floor. To alleviate this problem adequate ventilation is essential. If joists are hung over concrete there must be a gap of at least 150mm between the concrete and the joist. If joists are hung directly over earth slabs the slabs should be waterproofed with a surface D.P.M. The surface DPM should be placed on top of the softwood subfloor. In all cases joists should be fixed with maximum centres of 350mm.

- For joists / Battens to concrete (whether laid on or level with the concrete screed) ventilation is unnecessary but a surface membrane is still required. Care must be taken when fixing through the membrane and an additional D.P.M. is required if the surface membrane is punctured.

### **POST INSTALLATION**

The appearance of spaces between boards indicates a drying out of the wood and an insufficient degree of humidity.

The appearance of waves or noticeable swelling in the finish of the wood floor indicates the presence of excessive humidity. Heating systems may have to be utilised throughout the year to maintain the correct humidity level. The installation of a humidifier or an air exchange system can prove indispensable in controlling humidity.

Above all don't forget that wood is a natural, living material and that we must look after it for life. A proper maintenance program should always be carried out

Barrier matting should be placed at all exterior doorways.

Remember that pets running round, stiletto heels, and dirt and grit left on the floor can scratch wood; regular maintenance should be carried out to prevent this.

For full maintenance guidelines please refer to the individual maintenance guidelines that apply to the finish of your floor.

**ATKINSON & KIRBY RECOMMEND FITTING BY A PROFESSIONAL FLOORING CONTRACTOR.**

## **LAYING THE FLOOR**

### **STEP 1: ESTABLISH A STARTING POINT**

- Before beginning the actual installation, spread out short and long lengths equally over the area where the floor is to be installed.

**Remember: Flooring is to be installed at right angles to the floor joists and if possible in the longest dimension of the room.**

- Work out of several packs at a time to ensure an even colour and shade distribution over the whole floor.

- Align the first row of planks to be sure that you have a good straight line from one side of the room to the other. Put a chalk line at the desired distance from the wall to help align the planks. The end joints of the flooring can be glued with PVA glue and should be staggered (minimum of 150mm) to achieve the best appearance in the finished floor.

**Important:** Leave at least 12-18mm for expansion at all doorways and vertical surfaces. With large areas it is advisable to use 2mm thick spacers between strips at 1m intervals.

### **STEP 2: INSTALLING THE FLOOR**

- Align the first piece on the chalk line. The groove side and end will be facing the starting wall. Pre-Drill holes and drive 7D or 8D finish nails or screw type flooring nails into the face of the board every 300mm approximately 12–18mm from the edge closest to the starting wall and within 50–75mm from the ends and in the darker grain of the wood.

- Edge nail the plank by driving the same type nails at a 45° angle through the tongue of the first piece, spacing the nails every 250–350mm and within 50-75mm from the ends. This process should be repeated for each piece in the entire first row. Upon completion of the first row, go back and sink the face nails with a nail punch. If it appears that the holes will not be covered by the wall base or quarter round trim, fill the holes with hardwood flooring putty, which blends with your floor.

- Begin installing the second row by repeating the edge nailing. **(Do not face nail as in the first row).**

Note: Typically the first few rows must be edge nailed by hand rather than with a nailing machine, due to vertical wall obstruction. When clearance allows, an edge nailing machine, which drives 50mm fasteners with an appropriate mallet, can be used to simplify and speed up the nailing process.

- Install each succeeding row of planks by edge nailing and tongue side every 250-350mm to within 50–75mm from the board ends. Be attentive to staggering the ends of the boards at least 150mm in adjacent rows to avoid the clustering of end joints. Any short boards should be locked in either side by longer boards ensuring that at least one end is nailed to the joist.

- Upon reaching the last row to be installed, the planks should be ripped to allow a 12-18mm expansion space. The last row must be fastened by face nailing approximately 12–18mm from the back edge of the board every 300mm. The same process of counter sinking the face nails and applying hardwood putty should be repeated.

It should be remembered that the floor layer is the last person to inspect the floor. Care should be taken to ensure that a balance is maintained when laying out the floor; **any pieces that are suspect should not be laid.** A waste factor of 5% should also be taken into account.

## **SPECIAL CIRCUMSTANCES**

It is important to leave expansion gaps around the perimeter of the room, in doorways between rooms and at all vertical surfaces.

### **PERIMETER OF THE ROOM**

If the skirting board has not been removed, the expansion gap can be covered using a Scotia or Quadrant moulding.

### **DOORWAYS**

At doorways the floor should be broken with an expansion gap. The expansion gap should be covered with a Twin or Ramp moulding this will allow individual rooms to expand and contract within their own areas. Which moulding to use is determined by the floor covering on the other side of the doorway. Floors equal in height a Twin should be used, if floors have differing heights a ramp should be used.

### **PIPES, VENTS AND OTHER FIXED OBJECTS**

Each can be unique, but the general rule is to measure very carefully before you cut and remember to leave a 12-18mm expansion gap between the object and the flooring. Cover the expansion gap with mouldings, vent covers or pipe rings when the floor is complete.

### **INSTALLATIONS ON STAIRS**

Flooring on stairs must be fully nailed to the stairs. Stair Nosing mouldings should be installed using either screw type fasteners or nails.

A FULL RANGE OF HARDWOOD TRIMS ARE AVAILABLE FROM ATKINSON & KIRBY TO FINISH YOUR FLOOR.