

# 14mm ENGINEERED HERRINGBONE OAK FLOORING

## PREPARATION

### BEFORE DELIVERY

The conditions must be ideal before any flooring is fitted. Wet trades like screeds, plastering and decorating need to be complete and the building must be thoroughly dried out. Windows and doors should be fitted and watertight.

*EXPERT TIP: A rule of thumb for the drying time of a sand and cement-based screed is one day per millimetre for the first 50mm, and 2.5 days for each millimetre thereafter. So, a 50mm screed should take about two months to dry out, and a 100mm screed will take six months. Plaster takes up to six weeks to dry completely.*

### PREPARING THE SUBFLOOR

The surface immediately beneath a Woodpecker natural wood floor must be in good structural condition, free from damp rot, fungal or insect infestation, and contaminating residues. It must be flat with uneven areas not exceeding 3mm over a 2m area. Naturally, the surface should be vacuumed and totally free of debris before fitting begins. Hot pipes should be well insulated to prevent localised hotspots, which can cause wood flooring to warp or shrink.

If installing over floorboards, ensure the voids beneath have a height of 600mm from the ground to the bottom side of the joists. We recommend using a suitable Woodpecker damp proof membrane to protect the floor from moisture. Check that the voids are vented around the perimeter and that these vents are positioned to allow air flow under the entire floor. As a rule of thumb, all venting should equal a minimum of 1.5% of the total m<sup>2</sup> of the installation. Keep the vents open throughout the year too.

*N.b. The subfloor should be prepared for installation in accordance with the industry standards outlined in BS-8201-2011.*

### HEATING AND AIR CONDITIONING

The room temperature and humidity levels need to be stable before Woodpecker flooring is delivered to site. Heating and/or air conditioning systems should be on and working for at least two weeks before the floor is fitted. Make sure underfloor heating is turned off for at least 48 hours prior to fitting.

### ATMOSPHERIC CONDITIONS

The room temperature shouldn't be lower than 18°C, or the floor temperature lower than 15°C. The Atmospheric Relative Humidity should be between 40 and 60%.

*Note that wood floors are not suitable for wet rooms, or in areas where there is a regular flow of water.*

### ACCLIMATISATION

Nature is in no hurry when it produces trees, and likewise, an impressive wood floor installation is never rushed. The sealed, unopened boxes should be laid flat, in the centre of the room for three to four days beforehand. DO NOT store the flooring outdoors, in an outbuilding, or anywhere with damp or condensation problems. The conditions where the flooring is acclimatised should be as close as possible to the typical living conditions.

### INSPECTION

At Woodpecker the highest quality control procedures are in place, however our products are made from natural materials so it's essential that every plank is carefully checked before installation. If there are any problems, get in touch with us so that we can rectify them. We are unable to consider any defects after the floor has been installed.

### MOISTURE TESTING

Moisture is the enemy of natural wood, and can cause damage. Even when a subfloor looks dry, it may contain excess moisture in the substrate. Using a professional moisture meter such as the Protimeter MMS will tell you whether or not it's safe to go ahead with installation.

Readings shouldn't exceed:

- 70% Relative Humidity (RH) for cement-based concrete.
- 11% Wood Moisture Equivalent (WME) for wooden subfloors or joists.

### EXPANSION GAPS

As wood is a natural substance, it will expand and contract with changes in temperature and humidity. That's why when a wood floor is fitted, expansion gaps need to be left wherever the boards meet a wall, structural support, stairs, breakfast bar, fireplace, central heating pipe...etc. Gaps must also be considered at doorways to allow for the differing expansion between rooms. Place spacers at regular intervals when fitting and then remove them before skirting boards,

beading or trims are put in place. Allow a 2mm gap for every metre span of the floor with a minimum of 10-15mm gap regardless. For areas over 5m in width, extra provisions should be made for expansion.

## SOME EXTRA TIPS BEFORE YOU BEGIN

### LAYING THE FLOOR

All Woodpecker floors feature beautiful colour variations which naturally occur in real wood. To ensure the overall effect has a good balance of colour and details, take care to blend planks from several packs. The natural texture of Woodpecker flooring will really come to the fore if the planks are laid in the same direction as the light entering the room. However, if the floor is being fitted over existing parquet, it should be positioned at right angles to the previous flooring planks.

### FLOOR PROTECTION DURING CONSTRUCTION

Always protect the surface of the flooring during installation. Use paper or cardboard that will allow the floor to breathe and tape this to the boards. Never use plastic or polyethylene sheeting to cover the flooring as this will trap moisture and could cause damage.

### PIPES

Measure the position of any central heating pipes and mark them on the plank, considering your expansion gap. Drill a hole 16mm larger than the pipe's diameter. Saw at a 45° angle to the pipe hole. When you've fitted the board around the pipe, apply glue to the sawn out piece of wood and fit it back into the gap, again taking into account the expansion gap spacers.

### DOOR JAMBS

If there is a wooden door jamb, we recommend undercutting it according to the thickness of the flooring, plus the possible underlay. Install the flooring underneath the door jamb but leave the necessary expansion gaps.

### EXTRA TONGUES

The flooring square-ended boards have been designed with a groove at both ends of each plank, allowing the flooring to be fitted in a 'left-hand' or 'right-hand' configuration. Sometimes it might be necessary to insert additional loose tongues so two adjacent grooves can be joined. Please get in touch if you'd like us to supply these for you. Alternatively, they can be cut from suitably thick sheet material such as plywood or MDF. This is not required with the chevron pattern.

### INSTALLING BORDERS

When installing borders, lay the whole centre area so that it extends past the line where the border will start, then cut the surplus planks back to a straight line that is the appropriate distance from the wall. Then lay the borders as a separate operation. It may be necessary to create a groove in the cut edge so the tongues of the border can connect with the main flooring area.

### TRIMS

When fitting trims, always fix them to the walls. Never fix them to the floor itself as this will prevent the natural expansion and contraction of the flooring into the expansion space.

## INSTALLATION

*This floor can be installed in one of three ways: floated, nailed or stuck down.*

However, if you are fitting over underfloor heating the floor needs to be glued down for extra stability.

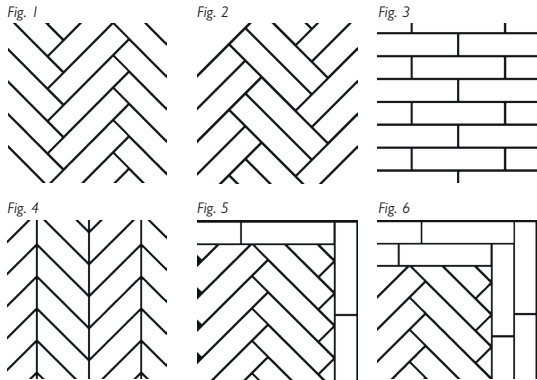
There are also some extra points to consider with underfloor heating. If the system is embedded in a solid floor then flooring can be bonded directly to the surface. The flooring is not suitable for installation over an electric foil heating system.

Make sure the underfloor heating has been running for at least a fortnight before the floor is fitted and switch it off for 48 hours before installation. Once the floor has been fitted, the underfloor heating should not be switched on for another two to three days. Then the temperature should be raised gradually at no more than 1°C per day. The temperature of the floor should never exceed 27°C.

### LAYING PATTERNS

The floorings square-ended boards can be laid in a variety of different patterns, such as single herringbone, double herringbone, and brickbond, (see fig 1 – 3). Single or double borders can also add a traditional touch, (see fig 5 and 6). However please note the additional fitting requirements for these patterns mentioned above. Careful measuring and setting out with pencil lines on the substrate is the key to a successful installation.

The flooring, (see fig 4) is a more complex shape, and there will inevitably be slight variations in the milling of each piece. It is therefore vital to obtaining a perfect overall finish that these slight variations are absorbed within the pattern in order to adhere to the marked out lines, rather than simply pushing every piece tight together which may cause the pattern to deviate. This is especially important when fitting the first row as misaligned starter rows can cause side and end gaps.



## FLOATING

A floating floor can be installed over concrete, anhydrite, existing wood floor chipboard, ceramic tiles, terrazzo, metal, PVC, linoleum, slate, marble, particleboard, OSB and plywood – but not carpet.

The type of underlay you need will depend on the subfloor condition.

However, for most installations we recommend using an underlay with a built-in damp proof membrane, such as Floormate or Aquastop.

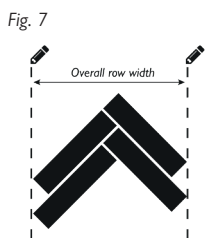
See our full range at [www.woodpeckerflooring.co.uk](http://www.woodpeckerflooring.co.uk)

Underlay should be laid edge-to-edge perpendicular to the direction of floorboards.

Stick it together with tape. If the underlay does include a damp proof membrane, use Woodpecker Vapour Tape to prevent moisture from rising between the seams. We do not recommend overlapping the underlay.

## FOLLOW THESE STEPS TO INSTALL

1. Check all planks for possible damage or defects. We can't be held responsible for imperfect boards once they've been fitted.
2. Mark two parallel lines down the middle of the room in the direction the pattern is to be laid. Ensure these lines are at a suitable distance apart to accommodate the first row of the pattern (see fig 7).



3. Start installing the first row in-between the parallel lines. Glue the joints using Woodpecker Flooring Grade PVA, taking care that you apply the correct amount of adhesive to the bottom of the groove. Applying too much will cause the adhesive to squeeze out onto the surface and too little will reduce the strength of the bond and could lead to squeaking. Our naturally inspired flooring has been precision engineered for stability but it's still important to check for a close fit at all end and side

joints, and tap or pull them into place where necessary. This is especially important when fitting the first row as misaligned starter rows can cause side and end gaps.

4. Continue to install further rows of the pattern on either side of the middle row until you reach the edges of the room.
5. Allow the adhesive to cure for approximately 2 hours before permitting light foot traffic, and 24 hours before moving furniture onto the floor.

**NOTE:** Never use a rubber mallet or hammer directly on the flooring to fit the tongue and groove. This can damage the flooring and/or finish.

## NAILING DOWN

The flooring can be secret nailed to an existing timber subfloor including solid wood flooring, plywood, and OSB.

The subfloor needs to be of a suitable structural thickness in order to hold 50mm cleats fired into it at a 45° angle. Joists should be kiln dried to avoid cupping or expansion and must be spaced in accordance with building regulations. The space between joists is predetermined but we recommend a maximum of 400mm intervals otherwise.

When secret nailing to the subfloor, always use the Woodpecker Moistop Barrier Paper, overlapping it by 200mm. The bitumen backing self-seals around the nail punctures to prevent moisture transfer. Use Woodpecker Vapour Tape to secure the joints in the paper.

Flooring should be fitted at 45° or 90° to existing floor boards if possible. Cleats should be no more than 150mm apart.

**EXPERT TIP:** Never use adhesive to glue between boards if they are being nailed down. The glue will inhibit the natural flexibility of the flooring and could cause cracks.

Check that your nailing equipment does not have any sharp burrs which could scratch or damage the flooring, and make sure the pressure on the nailer is adjusted to allow the nail/cleat to be fully seated within the groove. At no time should the staple be driven into the flooring far enough that it causes the wood flooring to crimp or the cleat to be counter-sunk below the surface of the tongue. Always refer to the manufacturer's instructions for the complete setup and operation guidelines.

We advise that you only use the manufacturer's recommended cleats. The length of the nail/cleat will depend on the type of subfloor but make sure it's long enough to allow ½ of its overall length to be secured into the subfloor. The cleat must be seated flush with the groove but should not extend through the subfloor. Take care to adjust the compressor so the nails are properly set in the groove. If improperly set, the cleat will not be positioned correctly and may cause dimpling, peaking, squeaking, or cracking in the floor.

## FOLLOW THESE STEPS TO INSTALL

1. Check all planks for possible damage or defects. We can't be held responsible for imperfect boards once they've been fitted.
2. Mark two parallel lines down the middle of the room in the direction the pattern is to be laid. Ensure these lines are at a suitable distance apart to accommodate the first row of the pattern (see fig 7).
3. Start installing the first row in-between the parallel lines. Engage the nailer onto the tongue side of the plank, nailing 25mm from the end of each plank. Take great care with the alignment as misaligned starter rows can cause side and end gaps.
4. Once you're sure the first row is straight and secure, continue to install further rows of the pattern on either side using the same nailing pattern.
5. It will not be possible to use the nailer on the last few rows so fasten the planks into place manually by nailing into the tongue or face-nailing through the surface.

**NOTE:** Never use a rubber mallet or hammer directly on the flooring to fit the tongue and groove. This can damage the flooring and/or finish.

## GLUING DOWN

The flooring can be glued directly to concrete, ceramic tiles, terrazzo, metal, slate, marble, OSB or plywood. Ensure the existing surface is 'rough' or porous. Pre-sand any slick or sealed surfaces – gypsum and anhydrite screeds especially need to be abraded to remove the soft surface laitance.

When gluing to concrete, we recommend using Woodpecker IIP Surface Primer to ensure a strong bond between the subfloor and adhesive. For gypsum, or anhydrite screeds, additional preparation will be required, involving removal of the soft surface laitance and refinishing with Woodpecker Level-X Primer and Level-X leveling compound.

Designed specifically for our natural wood flooring, Woodpecker MS Parquet adhesive will hold the floor after a short open time of 30 minutes but remain flexible to allow for the expansion and contraction of timber between seasons. It's essential that there's a full bond between each floorboard and the surface beneath.

## FOLLOW THESE STEPS TO INSTALL

1. Check all planks for possible damage or defects. We can't be held responsible for imperfect boards once they've been fitted.
2. Mark two parallel lines down the middle of the room in the direction the pattern is to be laid. Ensure these lines are at a suitable distance apart to accommodate the first row of the pattern (see fig 7).
3. Spread Woodpecker MS Parquet adhesive within the lines. Use a 3 or 4.8mm notched trowel, depending on the condition of the subfloor.
4. Start installing the first row in-between the parallel lines. Our naturally inspired flooring has been precision engineered for stability but it's still important to check for a close fit at all end and side joints, and tap or pull them into place where necessary. This is especially important when fitting the first row as misaligned starter rows can cause side and end gaps.
5. Once you're sure the first row is straight and secure, wait for the adhesive to fully cure. Then continue by spreading 700mm – 900mm of adhesive across the room, either side of the middle row. Never spread more than can be covered in 30 minutes.
6. Continue to install further rows of the pattern on either side of the middle row until you reach the edges of the room.
7. Allow the adhesive to cure for approximately 2 hours before permitting light foot traffic, and 24 hours before moving furniture onto the floor.

**NOTE:** Never use a rubber mallet or hammer directly on the flooring to fit the tongue and groove. This can damage the flooring and/or finish.

## WHAT IF SHRINKAGE/GAPS/SPLITS/DELAMINATION



Wood flooring is a hygroscopic material, meaning it will expand or contract according to its moisture content. Where significant shrinkage, gapping, or splitting appears, this is due to a corresponding reduction in moisture level in the flooring. Here are some reasons why this might happen.

1. If the site moisture levels is too high when the floor is installed, it will dry out as the property adjusts to its normal living conditions.
2. Insufficient acclimatisation time can also result in moisture reduction after installation.
3. Air conditioning systems can also have a drying effect.
4. High temperatures on the surface of the floor from underfloor heating or direct sunlight will dry it out, often leading to the top layer coming away or delaminating (note, solid wood floors are not recommended with underfloor heating.)

In situations 1-3 above, introduction of some natural humidification may help to close up the shrinkage gaps, although where the issue results from incorrect procedure in the installation process, it may be necessary to have some parts of the floor re-fitted.

High surface temperatures need to be addressed through re-calibration of the underfloor heating system temperature or solar shading, whichever is applicable.

Minor splitting within the grain of the wood can normally be repaired with coloured wood filler.

In the case of a solid wood floor, an incorrect installation method can sometimes result in shrinkage and splitting. Solid floors are more prone to moisture movement than engineered floors, and should always be nailed or glued down to the substrate.

## EXPANSION/BRIDGING/TENTING



The direct reverse of shrinkage, wood flooring expands as its moisture content increases. Correct expansion gaps around the perimeter will absorb any normal changes, but where exceptional expansion takes place and there is no further room around the perimeter, the floor will sometimes start to push upwards over an area (bridging), or as a pair of boards (tenting). There are many reasons why this can happen:-

1. Lack of correct acclimatisation.
2. Failure to provide correct perimeter expansion gaps.
3. A pinch point where expansion gaps were overlooked/filled.

4. A fixture or solid obstruction preventing normal movement.
5. High subfloor moisture levels.
6. Increased air humidity.

In all cases, it is important to establish whether there is a high level of humidity or subfloor moisture, and take corrective action if needed. In extreme cases this may involve taking up the wood floor first to allow for further subfloor preparation and drying out. The most important point is to ensure that the room or site has reached equilibrium as close as possible to its final living conditions.

Once the cause of any further abnormal expansion or shrinkage has been removed, then the flooring can be refitted, and/or expansion joints recut.

## CUPPING



Sometimes the edges of wood flooring boards appear to be rising up to form a ridge between each board. This is known as cupping and is invariably caused by the moisture level below the floor being higher than the top surface. The underside therefore expands more than the top surface causing the edges to push upwards.

Where the extent of the cupping is minor and the source of the subfloor moisture is likely to dissipate, it is worth allowing a few weeks for the moisture condition to settle, as minor cupping will often correct itself. More extreme cupping may not self-correct even once dried out, and it may be necessary to replace the affected flooring.

Sanding down and re-finishing the flooring is another option, but should only be attempted once it has been established that all moisture has dissipated and no further distortion is likely to take place.

## BOUNCING/SQUEAKING



This is usually caused by one of the following problems.

1. Increased moisture levels causing expansion can put pressure on the board joints or cause the boards to rise slightly (bridging) which resulting in movement and squeaking. See earlier section on EXPANSION/BRIDGING/TENTING for corrective action.
2. These symptoms can also occur where the subfloor is not flat enough and the floor is straddling a low spot, so that foot traffic causes movement. Correct subfloor levelling should be carried out.
3. In the case of a solid wood floor, an incorrect installation method can



allow excessive movement. Solid floors are more prone to moisture movement than engineered floors, and should normally be nailed or glued down to the substrate.

### BOWING

A certain amount of bowing - where the ends of a board are higher or lower than the middle - is fairly common in engineered wood flooring and does not affect the performance of the floor. Normally up to 30mm of bowing will settle down over time provided not all the boards are bowing the same way. Bowed boards can often be cut and used as row ends. Bowing can sometimes be caused by a sudden change in moisture, for instance if the boards are removed from the packaging without correct acclimatisation, but again this will usually settle down in time. A further period of acclimatisation with the bowed boards weighted down flat will often help.

### COLOUR VARIATION/KNOTS/FILLER



These are all normal features of rustic grade wood flooring and should be regarded as part of its character. Boards should be selected and mixed sympathetically to provide an aesthetically pleasing appearance. Strong colour contrasts between adjacent boards should usually be avoided, and any boards that are less visually pleasing can often be used around the edges of a room, where they are less obvious, or where they are likely to be covered by furniture.

Where a less rustic appearance is required, it is often possible by purchasing some extra material to select out unwanted features.

### COLOUR CHANGE/FADING



Real wood, like most other natural materials, will change colour over time, mostly as a result of exposure to Ultraviolet rays from natural light. The speed of change is largely dependent on the amount and intensity of exposure. This is not a product defect and can be reduced/slowed down by use of window shading and regular moving around of furniture/mats/rugs etc.

### LENGTH VARIATIONS

Length variation is quite normal as this allows the maximum use of valuable raw material with least wastage. Shorter boards can either be used as row starters and cut ends, or in the main field of the floor to break up the regularity of the pattern. There are generally a few short lengths in each pack of engineered wood flooring, and solid wood flooring comes in random lengths as standard.

### WIDTH VARIATION

With solid wood floors, boards widths can sometimes vary slightly as a result of normal machining tolerances and variations in the hardness of the wood. This may appear as gaps between isolated boards. Minor variation can usually be absorbed during installation by adjusting the board position to split the gap equally between both sides of the board. Where larger width variation is found between boards, it is common practice to simply set aside the last board and pick another that better suits the previous one. If a number of similar boards are found, these can be stacked together until there are enough to complete a full row.

### HARDNESS/DAMAGE



Although Oak is technically a "hardwood", and will last for years if treated properly, it is still susceptible to damage from small, sharp objects, and heavy point loads. Over time, a certain amount of normal wear will actually add to the character of the floor, but good cleaning and maintenance practices, absorbent external door mats, and protective furniture feet pads are all advisable to avoid unwanted damage. Likewise castor cups can prevent dents from heavy furniture with small feet (eg Pianos) and stiletto heeled shoes are best left at the door.

### DULL DRY SURFACE/STAINING



Using the right cleaning products is vital to maintain the surface finish in good condition. Pre-finished wood floors should only be cleaned with a gentle pH neutral formulation that includes a residual refreshing action, using a spray and/or a lightly damp mop. Use of inappropriate chemicals, and even some supermarket "wood floor cleaners", can have an adverse effect on the finish, even to the extent of causing it to fail. This can result in a dull dry look and spilled fluids can penetrate the wood grain causing staining. Steam cleaning is also not recommended. Areas of high traffic may need more frequent cleaning or refreshing, and if they have deteriorated to the extent of allowing staining, then it may be necessary to have the flooring re-finished by a specialist.