



INSTALLTION INSTRUCTIONS

STEP 1 – BEFORE YOUR ORDER ARRIVES

WET TRADES FINISHED & DRY

All wet trades including decorating, concreting and plastering should be completed and thoroughly dried out. Your new wood floor is a hygroscopic material, meaning it will absorb moisture. In normal conditions, this is fine. But the excessive moisture introduced by wet trades can cause an array of problems.

NOTE: Plaster and Concrete Screeds may take several months to fully cure. As a general rule, drying time for cement and water-based screeds is one inch per month. Please use a Moisture Meter to check levels and contact your manufacturer for precise drying times. Unless otherwise stated by your manufacturer, do not attempt to dry Plaster or Concrete Screeds with heaters as they can weaken or crack.

Any sanding or other work that will produce dust should be completed before delivery. Fine dust can permeate into the wood and can be impossible to remove without damaging the floor.

RELATIVE HUMIDITY & AMBIENT TEMPERATURE

Prior to the arrival of your new wood flooring, both the RH level and Ambient Temperature of your fitting space need to be correct. The RH level (measurement of how much moisture is in the air) must be between **45-65%**. If required, please deploy a Dehumidifier to correct the RH levels. Ambient Temperature must also be stable between **18 to 24°C**. Heating systems (including underfloor heating) should be fully tested and working for at least two weeks before arrival of your flooring. This provides stable conditions for the flooring to acclimatise (step 2).

SUBFLOOR PREPERATION

GENERAL PREP

Your wood floor will only be as structurally sound and movement free as your subfloor, so a properly prepared subfloor is the key to a successful installation. The subfloor is likely to be either wooden or a cement-based screed. In either case, sweep and vacuum to remove any dust and debris. As mentioned previously, fine dust can be impossible to remove from your wood floor, but it will also create issues with the installation itself, especially when fully bonding your floor.

All existing flooring should be removed including carpets, underlays, parquet blocks, ceramic tiles and any adhesive residues left from removing an old floor covering.

ENSURE YOUR SUBFLOOR IS FLAT & LEVEL

It is vitally important your subfloor is flat to within 3 millimetres over 2 lineal metres. This means there should be no more than a 3mm gap under a 2m long straight edge at any point across the subfloor. Failure to meet these requirements may result in squeaking or undue stresses on the joints which can cause a host of unwanted issues.

STRUCTURALLY SOUND

Your subfloor must be structurally sound and free from movement. To prevent movement wooden subfloors must be of load bearing strength and free from deflection under loading.

HEAT SOURCES MUST BE INSULATED

Flooring must not be exposed to excess heat such as from hot water pipes below floors.

MOISTURE CONTENT OF WOODEN SUBFLOORS

Wooden subfloors should contain no more than **11%** moisture content and must not be more than **2%** higher in moisture than the wood flooring itself. If installing above a ventilated cavity on the ground floor, it is essential that a purpose made moisture barrier is installed on the subfloor. This moisture barrier must rise up the walls by **30mm**, all joints overlapped by a minimum **200mm** and taped with a water proof joining tape.

MOISTURE CONDITION OF CONCRETE SUBFLOORS

Concrete slabs and sand-cement screeds must be sound, dry, free of laitance and other substances which may impair adhesion (e.g. Bitumen adhesive residues etc). Anhydrite screeds must be less than **0.3%** actual moisture content. Mineral based subfloors must be less than **75%** equilibrium relative humidity and less than **65%** relative humidity for glue down of engineered flooring. Subfloors at ground level or below must contain an effective damp proof membrane to protect flooring from ground water in compliance with British Standards. If there is any doubt that the subfloor meets the required standard for moisture or the subfloor does not have an effective integral damp proof membrane, a suitable surface applied damp proof membrane must be installed.

STEP 2 – WHEN YOUR ORDER ARRIVES

ACCLIMATISATION

The acclimatisation period is imperative as it gives time to balance and prepare the wood flooring with the environment it is going to be installed in. Engineered wood floors should acclimatise for a **minimum of 3 days** and solid floors, **7 days**. Keep in mind, these are the minimums and ideally the flooring should be left to acclimatise for longer where possible.

NOTE: For acclimatisation Woodlands Eco Pro flooring should be laid flat in its sealed packaging. As the packs are not airtight, the flooring will be able to breath whilst simultaneously supporting the boards and preventing warping.

Upon arrival, your floor should be kept in its sealed, unopened pack. Where possible, the flooring should be kept in the room in which it is to be installed or as close to typical living conditions as possible (in accordance with the figures outlined in Step 1). Failure to properly acclimatise your flooring could not only make installation difficult or even impossible, it could invalidate your guarantee.

NOTE: Do not store packs outside or anywhere with different ambient conditions to the rooms where it is to be installed. A certain amount of bowing in engineered floors is common and if the bowing is no more than 25 mm then these boards can be installed and will lay flat with a random staggered fitting pattern.

STEP 3 – PLANNING THE INSTALLATION

INSTALLATION METHOD

Engineered floors can be floated on underlay or fully bonded using a flexible adhesive. 18 - 20 mm floors may be fixed to wooden subfloors using secret nails.

DIRECTION OF FLOOR

Where possible, install wood flooring parallel to the longest walls so that the direction of greatest potential expansion (across the width and grain) does not coincide with the direction of greatest dimension of the floor. This is especially important in large areas.

We recommend a maximum of **8m x 12m** without a break. A threshold should be installed in all doorways. This is because a larger area of flooring will expand more than a smaller area and the standard 12-15mm expansion gap may not be sufficient for such a large amount.

Before you begin installing your first row of flooring, measure the width of the room and divide this by the width of the board. This will give you the number of rows. The last row should not be less than **60mm wide**. If you have calculated that it will be, rip cut along the first row until the last row is wide enough.

WASTAGE

Wood flooring should always be over ordered by **10%** of the actual area required. This allows for wastage material created when cutting away planks to fit, but also allows for boards with natural blemishes, knots etc that although within the grading tolerance, are not to your taste. It is also good practise to keep at least one pack of flooring stored in case of unforeseen repair work.

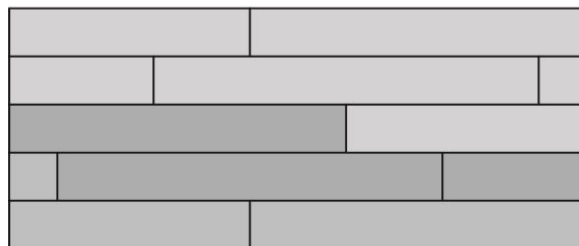
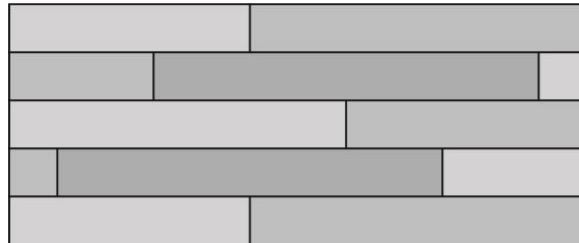
CHECK FOR DEFECTS

The installer is the last line of quality control. Check every plank for damage or defects before installing. Samples must be taken as a guide only and colour, shade and other characteristics will vary. Open a few packs and sort them for final client approval. This will also help you with randomised installation.

NOTE: The installer is the last line of quality control. DO NOT INSTALL BOARDS WITH OBVIOUS DEFECTS.

RANDOMISED INSTALLATION

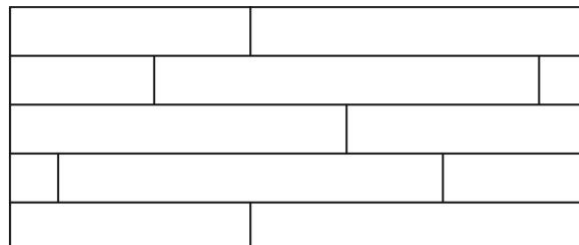
In order to achieve an even mix of colours, shades and other characteristics, the contents of multiple packs should be mixed during installation. Avoid Grouping similar colours and grain pattern where possible. By not mixing the planks before installation, areas of dark and light planks can look patchy and out of place.



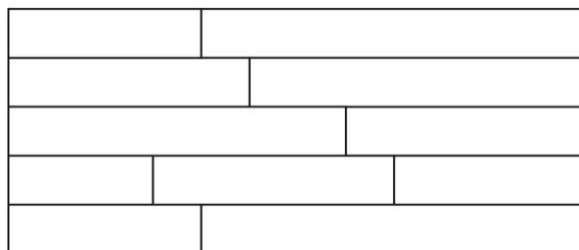
LAYING PATTERN

For installation of flooring planks which run in the same direction, header-joints must be staggered by a minimum of two board widths apart. It is also important to even patterns across the floor as this can cause dimensional weaknesses as the floor expands and contracts.

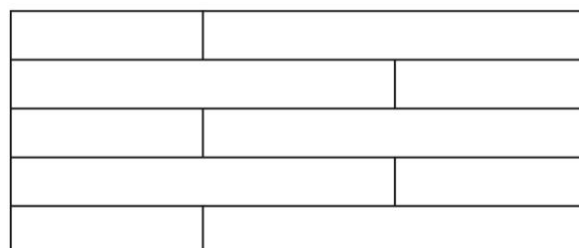
Header joints should be staggered by length equivalent to at least two boards width to stabilise the floor and limit movement.



If the header joints are too close, the floor will be much weaker and more likely to open up as the floor expands and contracts.



Avoid lining up header joints as it will lead to weak points in the floor where parallel boards may warp and cause an excessive movement.



STEP 2A – FLOATED INSTALLATION (STEP 2B FOR BONDED)

A floating installation is where the boards are joined together and laid on underlay over the subfloor. Firstly, a 3mm (or thicker) purpose made underlay is to be laid in the opposite direction to that of the flooring. Then, the floor is laid loose on top of the underlay bonding only the interlocking tongue and groove joints with a **D3 grade** moisture resistant PVAC adhesive.

PVAC ADHESIVE APPLICATION

When bonding tongue & groove wood flooring, a continuous bead of PVAC adhesive should be applied evenly along the top of the groove. The tongue should then be firmly pressed into the groove to ensure a tight fit.

A wooden tapping block can be used to assist if necessary to prevent damage to the tongue.



If extra strength is required, PVAC adhesive should be applied evenly to both top and bottom of the groove. Do not apply adhesive into the back of the groove (see illustration) as this may prevent the tongue and groove joints from closing properly.



The groove on both the head and length of the board need to have a continuous bead of PVAC. **Never spot glue.** This can cause weakness and potential gapping as the floor naturally expands and contracts.



UNDERLAY & DAMP PROOFING

It is strongly recommended that a purpose made moisture barrier is installed below floated wood floors. For example, you would lay a **1000-gauge** polythene damp proof membrane over a concrete subfloor before the underlay.

Alternatively, you can purchase underlay which has a moisture resistant barrier layer built in. In either case the moisture membrane should be taken vertically up the wall above the finished level of the wood floor. All moisture barriers must be taped at the joints with a purpose made joining tape. Polythene damp proof membranes should be overlapped by at least **200mm**.

OTHER NOTES ON FLOATING INSTALLATIONS

1. In L-shaped halls we recommend a fully bonded installation rather than floating.
2. If floating a floor in commercial areas, L-shaped spaces, or over under floor heating, ensure that the joints are double bonded i.e. Apply PVAC to the upper and lower portion of the groove.
3. Where necessary use flooring straps to achieve closed joints.
4. Flooring must not be exposed to heat sources such as from heated pipes at shallow depth below screeds, or suspended pipes below floorboards. Pipes must be thoroughly insulated.

NOTE: Wood flooring is affected by seasonal climactic changes and will expand and contract, so it is important to allow room for this expansion. Expansion gaps must be left wherever the floors meets obstructions including all walls, door frames, thresholds, structural support, fireplaces etc. These expansion gaps can be covered using Skirting Board or Perimeter trim e.g. Scotia.

The expansion gaps must be a minimum of 12mm for areas less than 25m² or 15 mm for larger areas. It is recommended that an expansion gap is always installed between doorways even if the adjoining room continues with the same wood floor. Where wood floors meet other floor coverings a suitable Reducer threshold strip may be used.

STEP 2B – FULLY BONDED INSTALLATION

Engineered wood flooring may be bonded directly to concrete, sand-cement screed subfloors or to suitable wood-based subfloor e.g. Plywood. We recommend Wood's Good MS and MS Plus floor adhesive as it is fully tested with all Woodlands Eco Pro products. However, any reputable purpose made permanently flexible adhesive (e.g.1 component Polyurethane or SMP) will work e.g. Sikabond 54.

The adhesive should be applied to the subfloor using a V-notched trowel to minimise wastage and create ridges of adhesive which the flooring can bed into. Always use the trowel type which is recommended by your adhesive manufacturer for the type of wood flooring being installed. Replace worn trowels and clean thoroughly before use.



OTHER NOTES

1. When installing the flooring lift up occasional boards after placement to ensure the board is making full contact with the bed of adhesive.
2. For UFH hot water systems embedded into concrete, a fully bonded installation is recommended as it improves the TOG rating.
3. Previous floor coverings and the adhesive residues must be removed before bonding.
4. Ensure screeds are of adequate cohesion strength of before installation.
5. Avoid accelerated drying of new screeds as this can lead to poor cohesive strength, especially over under floor heating.

6. Always check the recommendations of your adhesive manufacturer especially with other subfloors e.g. asphalt, anhydrite.
7. Some chipboard products have a moisture resistant treatment which can seriously impair adhesion. A layer of plywood may be laid over and securely fixed to the chipboard before installation may commence.
8. Any adhesive which come into contact with the face of the board must be removed whilst wet, as cured glue is incredibly difficult to remove.
9. Concrete slabs with a fully bonded installation must be <65% relative humidity. Testing of subfloors must comply with BS8201 Code of practice for wood-based products & BS 8204 Screeds, bases and in situ flooring.

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USE WITH UNDERFLOOR HEATING

All Woodlands Eco Pro engineered floors can be used with underfloor heating. Please read the **Woodlands Underfloor Heating Guide** in full before you begin installation. Because of the temperature changes to which the flooring is subjected to, not following the guidelines may present a range of problems.

A few important notes:

- The flooring installer should ensure that all services (not only heating services) running beneath the floor have been tested fully by the services installer before laying starts.
- Installation should be fully bonded when possible to insure optimum heat transfer.
- **Do not** allow humidity below 45% RH, or above 65% RH. (A small domestic humidification unit can be employed to avoid low humidity during the winter heating cycle if necessary.
- **Do not** allow the floor temperature to exceed 27°C, (including under rugs). **Avoid** thick insulating rugs as this will lead to high floor temperatures.
- **Do not** commission the UFH for 48 hours after the installation is complete. This gives the adhesive time to fully cure and allows the floor to settle.
- **Do not** turn the system straight up to maximum. Gradually increase the temperature 1oc per day until you reach your optimum operating temperature. And never exceed 27°C at the surface temperature. We strongly recommend a dual thermostat system

is used to monitor the surface temperature and the ambient temperature of the room.

- **Do not** turn the heating on or off suddenly. Throughout the life of the flooring avoid any rapid or big temperature changes as fluctuating the heat within the product runs the risk of drying out the timber. This can result in dimensional changes causing the floor to split and crack.
- Where underfloor heating is involved, particular attention should be paid to ensure that the top surface temperature of the wood flooring should not exceed 27 °C