



**GREYSPACE
FLOORING**

Greyspace Flooring Wood Flooring Installation Guide

Thank you for choosing Greyspace as your flooring supplier. Before commencing with the installation it is important that you and your floor installer read the following instructions carefully.

Owner / Installer Responsibility

Wood is a product of nature and an allowance should be made for some milling, finishing or grade variations. Owners requiring a great deal of consistency should consider allowing for additional material over the recommended cutting / wastage allowance.

IT IS THE DUTY OF THE OWNER / INSTALLER, WHETHER PROFESSIONAL OR NOT, TO INSPECT THE FLOORING BEFORE INSTALLATION.

The installer or owner assumes all responsibility for final inspection of the product quality prior to installation. The owner has final responsibility to ensure that they have received the correct product and finish that was selected, before the installation has begun.

The installer or owner must also determine that the job site environment and sub-floors involved meet or exceed all requirements within this document. No claim will be accepted for flooring which is visibly noticeable or preventable if such product is unpacked and / or installed. If the installer or owner feel the flooring is faulty or not suited for purpose the flooring should not be unpacked and installed and we should be contacted immediately.

Storage and acclimatisation period

All flooring must be stored in the correct conditions prior to installation.

The product must not be stored on site until the site is watertight and all floors plastering cement work decorating and all other wet works i.e. plastered. Paint tiling etc. are completely dry and finished. The product must be stored horizontally on a flat surface in its original packing, no more than 2 to 3 packs, high and wide. Packs should be separated with batons to increase air recirculation. The product should not be stored next to a radiator.

We strongly recommend keeping records of moisture and humidity conditions on the site prior to installation. These measurements will be required by us and the manufacturer if there are any future problems.

Solid Wood must be allowed to acclimatise for at least 10 days prior to the installation. Where most engineered boards installed within a couple of days after delivery. Once delivered the product must be stored according to our guidelines until the installation date.

Site conditions

As mentioned above, moisture conditions, temperature and humidity levels, play an important part in the life of natural wood flooring. Although the installation process requires skill and precision, the success of an installation is in many ways, rely on the acclimatisation and moisture conditions during and after installation.

As environmental conditions greatly affect the behaviour of natural wood floors, temperature and humidity should be controlled, before, during and after the installation process to avert potential disaster.

Prior to installation, it is the installers responsibility to ensure that all internal site conditions are stable and suitable for the installation of the agreed flooring. Room temperatures of between 18° to 22°C and relative humidity of between 45 to 65% must be maintained at all times. Failure to maintain these conditions could cause ongoing behavioural problems with the product and invalidate any warranty.



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Subfloor preparation

Preparation of the sub-floors will depend on the condition of the existing structure and chose a method of floor installation (described in the following section). Before any installation takes place is essential to determine the condition and moisture content of the subfloors.

Subfloor level should have no more than a 3 mm deviation when measuring over a two meter distance. The subfloor must conform to BS8204: part one, 1987, which states that it must not deviate by more than 3 mm under a 3 mm straight edge in any one direction. Failure to keep these tolerances may result in the floor, squeaking or deflection of the floor in service.

Sub-floors must also be vacuum clean, smooth, and free of any debris, staples, visible nails, all adhesives, or other dried substances before installation.

Timber sub Floors

Wooden sub-floors usually consist of pine floorboards or wooden panel, sheeting like plywood, chipboard, etc. laid over joists or batons as a suspended floor. Prior to any installation, the installer should check to see if the materials used are adequate and there is no water, moisture or root presence. A hydro meter reading should be used to see if the conditions are suitable and no damp is present.

Moisture content of the timber subfloor should be no more than 4% above or below the finishing floor. If the floor is on or below ground level, the installer should make sure that there is adequate ventilation beneath, and between the joist and air bricks are present and not blocked.

In the event, the timber subfloor is not fit for purpose or the work involves the construction of a new subfloor, the installer should use a minimum and 18 mm thick, external grade plywood, or OSB boards directly on the joists.

If the existing subfloor is adequate, but not level, for example, Old on pine floorboards at 12 mm minimum external grade plywood, or OSB board can be glued directly onto the existing sub-floor. When new sheeting is installed over existing subfloor, any loose floorboards or boarding should be screwed down using long enough screws to penetrate and hold into the joist.

Concrete floors

The main responsibility of the installer prior to installation is making sure the moisture levels within the subfloor are low enough to lay the floor. Where concrete or other cementitious slabs are present, mainly in ground/basement levels, the installers should take a hydra meter reading to see if conditions are suitable and no damp is present. Screed or concrete sub floors must have under 4% moisture content. Failure to maintain these conditions could cause excessive dimensional, change, resulting in problems, like delaminating, copping, cracking etc.

In addition to the moisture in ground/basement levels. The installer should check to see if a damp proof membrane (DPM) exists or not, or if it has been compromised it is important a new DPM is fitted before moving onto installing the floor.



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Heating systems

If an underfloor heating systems (UFH) exists, or is to be installed, whether electric or water fed, some additional checks and processes will be required from the UFH installer– pre, during and post installation.

It is important that the owners and/or installers inform us of the existence of an underfloor heating system. This must be done during the order process and before work has started.

Whilst installing a wooden floor on top of a UFH system it is important that during the installation the system is either off or set to a low heat setting (around 15 degrees C). Once installation is complete and the UFH is ready to use the temperature should be increased by a maximum of only one degree per 24 hour period to allow the flooring to acclimatise to the new heat setting. Once the desired heat setting has been reached the UFH system can be used as normal.

As with underfloor heating, water fed radiator systems can provide excessive heat as subfloor level if pipes are running close to the floor and are not insulated. It is important to prevent the temperature at sub level from exceeding 27°C and insulating or distancing pipes from the sub level may be required. This will help avoid hotspots at floor level, which may compromise the structure, glue and/or finish of the new timber floor.

Expansion Gap

All wooden floors will react to changes in the presence of moisture stop

In the summer months, when the humidity is higher, the plants will expand, while during the winter months, when central heating is present, moisture is reduced within the planks causing them to shrink.

This natural process needs to be taken into account by ensuring that the floor is fully acclimatised, and when installing the floor an expansion gap of 6 to 10 mm should be left around the perimeter.

There are several methods of covering the expansion gap once the floor has been installed, depending on the existing site/room and personal preferences or budgetary constraints.

Where skirting boards exist, installers can either remove prior to installation then reinstall above the new flooring, or alternatively, the skirting boards can be bottom trimmed to allow for the new floor to slide underneath. Where skirting boards do not exist, or owners prefer to avoid any disruption to existing boards/walls, the gap can be covered with a hardwood beading i.e. scotia, quadrant or flat trim

Installing plank flooring

For aesthetic reasons, we recommend having the floor run the length of the room towards a natural light off. This will enhance the grain and provide a better overall look.

Before laying the floor, the fitter may need to undercut the bottom of the door frames, wardrobes, kitchen, plinths etc. to allow for the planks to fit under. Doors may also need to be undercut as the new floor may end up higher than the original one.

It is the duty of the installer/owner to judge the suitability of any piece for placement in a conspicuous area of a room.



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Nail down installation (Secret Nailing)

Commonly used with tongued boards, the installer should start at one end of the room and leave an expansion gap around the entire perimeter to allow for expansion. They should carefully select several of the straightest boards and once they've been nailed in place, go back and nail the same boards through the tongue, pre-drilling and nailing at a 45° angle. After the third row or so is in place a manual or pneumatic floor-nailer can be used.

The floor nail or cleat used should be ring-shanked or jagged and no less than 2.5 times the thickness of the boards. They should be set into each floor joist or baton, assuming 400 mm (about 6 inch) spacing and an additional nail between each set. This should result in a spacing of every 200 mm (about 8-10 inch) as recommended by the national Wood Flooring Association. All boards must have a minimum of two nails each.

No two connecting board should end on the same line so the installer should alter lengths to stagger joints at least 150 mm (about 6 inch) apart. Often the last row will not fit a full strip of flooring and should be cut so the installer is able to hand nail, the last row, leaving enough space expansion between the wall and the wood flooring. For better aesthetics, the installer should run the boards through the doorway and continuing into the adjacent room, although this may not be possible in all property types or room layouts.

Floating installation

Using the floating method of installation will require the pre-laying of an underlay in order to provide a cushion between the floor and the subfloor. This method will only lend itself to engineered boards although wide engineered planks are not recommended to be used with this method. The other downside with this method is that the floor is more likely to creak and the glue that is commonly used can break down over the years and the joints work loose.

Using the correct underlay is essential when floating a floor. Underlay combining a built-in DPM should be fitted at ground and basement levels or above concrete subfloors, where an acoustic reduction underlay should be used in multi occupant buildings to provide sound reduction between floors.

Once the underlay been fitted, according to manufacturing instructions, the installers should start installing the planks at one end of the room and leave an expansion gap around the entire perimeter to allow for expansion. In this method no nails are to be used and the boards either connect using a click system or the tongue and grooves are glued together using a specialist adhesive.

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Glue - down installation

Glue down installation is our preferred method and requires the use of adhesive or bonding agent applied directly onto the subfloor. This method can be used on both concrete and timber subfloors, providing an extremely stable floor when done properly, although will require us slightly longer overall installation process.

For optimal application, flexible adhesive should be used and the trowel should be worked at a 45° angle so the adhesive left on the floor by the trowel teeth is just the right amount. Adhesive should only be applied to surfaces that can be reasonably covered in under an hour. Most flexible adhesives are also designed with under floor heating in mind and can be used for both solid and engineered floor. Laying over a concrete subfloor may require a liquid damp proof membrane to ensure no damp rises into the new floor.

As with other installation methods, the installers should leave an expansion around the perimeter and carefully select the boards, setting aside, any with imperfections or high colour variation for less visible areas of the floor. The installer should then press the planks down into the adhesive with the slight sliding movement, keeping adhesive out of the board grooves and sides to ensure perfect fit with adjacent board tongue.



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Installing parquet blocks

As with wide point flooring, before laying the floor, the installer needs to undercut the bottom of the door, frames, wardrobes, kitchen, plinths, etc. to allow for the planks to fit under. Doors may also need to be undercut as the new floor may end up higher than the original one.

Determining pattern direction

Although herringbone or brick pattern flooring can be installed from any point in the room, we recommend considering architectural features (main entranceway, wall with window, fireplace) and the longest section within a room before deciding on pattern direction. The information in this section refers mainly to installation based on herringbone pattern as it is more complex.

Installation guidelines

Using a chalk or laser line, the installer should mark a guideline in the centre of the room to indicate the centre of the pattern and mark one line either side of the centre line. These lines will provide a guide through laying the upper corners of the boards. Additional parallel guidelines across the entire floor surface can be marked if required to help with subsequent rows.

Installing a backer board

The installer can use a piece of plywood to make a backer board that will assist in starting the first row of boards. The board should be cut perfectly square, at approximately 5 mm shorter than the length of the block (ie. 345 mm x 345 mm plywood backer board for 350 mm long blocks). Installation should begin in the centre of the room, aligning two opposite corners of the backing board with the guideline, securing it to the subfloor. A block should then be placed on either side of the backer board to ensure measurement accuracy, then removed.

Applying adhesive

For optimal adhesive application, a flexible adhesive work for wood blocks should be used and the trowel should be worked at a 45° angle so the adhesive left on the floor by the trowel is just the right amount. Adhesive should only apply to surfaces that can be reasonably covered in under an hour.

Installing the first line

At this stage the installer should carefully select the boards, setting aside any with imperfections or high colour variation for less visible areas to the floor. To install the boards, the installer will be required to align the right and left hand corners with the guidelines, while pressing the boards down into the adhesive, with a slight sliding movement. If installing blocks with the tongue and groove, the tongue side should be laid against the backer board. It is important to keep adhesive out of board grooves and sides to ensure perfect fit with adjacent board tongue.

It is the duty of the installer/client to judge the suitability of any piece for placement in a conspicuous area of the room

Securing the blocks

If installing over a timber subfloor, in addition to the adhesives the blocks should also be manually fixed to the subfloor. If laying 10 mm or thinner overlay blocks, secure the block with four headless pins, one on each surface corner. For thicker tongue and groove blocks, nail down the first line to secure the floor properly. Proceeded the same way with subsequent blocks until you're ready to cut the last board in the row. If you are installing a border, make sure it is installed before cutting the last row. Always leave an expansion gap between the wall and the end of the last board in each row. Make sure to check alignment every row to ensure that the blocks are still square.



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Post installation

Once the floor is fitted, the installer should clean up or remove any rubbish related to the installation. For parquet or wide unfinished, planks the installers should now carefully sand and/or seal the floor using specialist tools and finishes, depending on the type of flooring and the finish required.

Pre-finish floors of factory finished and may not be suitable to receive additional finish on site but please check before application.

If additional building work is to be carried out or heavy furniture is to be fitted and / or moved around. We recommend laying a 3 mm hardboard, taped at connections, on top of the new floor. This will help protect against tools and equipment accidentally dropping, painting splashes and scratches due to the furniture movement etc. Please note, this is this may not protect against brick dust or other building dust reaching the floor and some maintenance work may be required to restore the floors lustre if a significant amount of work is taken in place post installation.

Floor exposed to brick or other building renovation just may lose lustre and require a maintenance finish to be applied following works.