

The background of the top half of the page is a photograph of a dark-stained wood plank floor. In the upper left corner, a portion of a brass-colored metal cart with a glass is visible. A dark grey rectangular box is overlaid on the top center of the image, containing the brand name and tagline.

**WOODPECKER**

NATURALLY INSPIRED FLOORING

# FITTING WOOD FLOORING WITH UNDERFLOOR HEATING

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## OUR GUIDELINES

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Disclaimer: Installation guidance is advisory and is based on established good practice and the BS-8201-2011 standard. It is the fitter's responsibility to follow these procedures before, during and after installation. Woodpecker cannot accept responsibility for any issues relating to installation.

## OVERVIEW

Underfloor heating (UFH) is commonplace in new-builds and becoming increasingly popular for refurbishments. Besides adding contemporary value to a property, these systems save wall space, distribute heat more evenly than conventional radiators and are more energy efficient to run.

When it comes to choosing flooring for underfloor heated rooms, wood is a great choice. Unlike tiles or stone, it's naturally warm to the touch and provides better heat output than more insulating carpet materials.

In this guide, we share our recommendations for specifying a suitable wood floor and fitting over UFH systems. The advice is given to the best of our knowledge and experience but it's important to review these guidelines with those of your underfloor heating manufacturer too.

## WHICH WOOD FLOORS ARE COMPATIBLE?

We always recommend engineered wood floors rather than solid wood. These have increased stability and strength to withstand changes in temperature thanks to their multi-layered construction. And all of our engineered woods have a great thermal transfer, with tog ratings that are well below the recommended maximum of 1.5.

Woodpecker bamboo and laminate floors are compatible with underfloor heating too, and also have some of the lowest tog ratings in our collection.

Get a closer look at any of our designs with free samples. Order from [woodpeckerflooring.co.uk](http://woodpeckerflooring.co.uk)

## CHOOSING A SYSTEM

Your choice of UFH system will depend on things like the type of property, any current subfloors and height restrictions. There are a large number of options available but we recommend:

- A system which allows the temperature of the flooring to be accurately controlled. It's important that the underside of the wood doesn't exceed 27°C – higher temperatures could cause excessive drying and lead to cracking. This can be managed with temperature probes installed in the subfloor.
- A water pipe (wet) system that is set into a screed, or an electric system that is set into a smoothing compound. Sticking down a wood floor directly to an underfloor heated surface will provide the best quality of heat output.

As there are so many systems on the market, it's a little tricky for us to cover all aspects of installing UFH here. However, we do advise the following:

- Isolated hot spots in your floor should be avoided so consider fitting an additional insulating layer if the heating pipes or elements are close to the surface.
- Do not attempt to dry out a new screed using the underfloor heating system as this will de-stabilise the cement.
- Ensure a minimum coverage of 10mm when laying a screed or smoothing compound above UFH pipes or cables.
- Use a heat distribution board above electric foil blankets or water pipe systems between joists.

## COMMISSIONING THE UNDERFLOOR HEATING

Once the underfloor heating is in place, make sure it's switched on and thoroughly tested before the wood floor is fitted. We recommend letting it run for at least a fortnight, allowing time to check for any leaks.

Heat the system gradually, starting at 1°C above the room temperature and raising at no more than 1°C per day.

Turn off the UFH for at least 48 hours before installing wood flooring.

## PREPARATION

As with any wood floor fit, checking the subfloor and room conditions is key. Pay particular attention to the following:

### MOISTURE CONTENT OF THE SUB FLOOR

If the flooring is being installed over a concrete subfloor, check that the Relative Humidity is within acceptable limits – where underfloor heating is involved, we recommend a maximum of 65%. If there is a timber subfloor, make sure the moisture content is below 11% Wood Moisture Equivalent.

If the moisture levels in the subfloor are too high then measures should be taken to reduce them to the correct levels before going ahead with the floor fit.

### CONDITION AND CLEANLINESS OF THE SUB FLOOR

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 bumps and dips not exceeding 3mm over a 2m area. The surface should be vacuumed and totally free of debris before fitting begins.

### ATMOSPHERE

If there are any other wet trades in the room such as plaster and paint, make sure these are dried out before fitting. Check that the Atmospheric Humidity in the room is between 40 and 60% and that the temperature is above 18°C before fitting.

### ACCLIMATISING THE WOOD

Allow the wood to settle in to its environment by placing it in the centre of the room in which it is to be fitted for a short period of time. We recommend 3 to 4 days for engineered wood and bamboo and laminate will acclimatise over 24 hours.

## FITTING THE FLOOR

### EXPANSION GAPS

Before starting any type of wood flooring installation, make sure appropriate expansion gaps are left where the floor meets elements such as a wall, structural support, stairs, breakfast bar, fitted furniture, fireplaces, pipes,

etc. Gaps should also be considered at doorways to allow for the differing expansion between rooms.

Use spacers at regular intervals when fitting and then remove them before skirting boards, beading or trims are put in place. The points below should help determine how much space to leave...

- The gap for a wood or bamboo floor should be calculated on the basis of 2mm per metre span across the floor, with a minimum of 10-15mm regardless. For areas over 8m in width, extra provisions should be made for the expansion.
- A laminate floor requires expansion gaps of at least 8mm.

## GLUING DIRECTLY TO THE SUBFLOOR

To give the best quality of heat output and stability, we recommend that tongue and groove engineered flooring is glued directly to the subfloor – whether that be a screed or wood panels. Make sure the boards are fully adhered using a permanently flexible adhesive such as Woodpecker MS Parquet which can accommodate the natural expansion and contraction of the wood with changing temperatures. A liquid batten style installation isn't suitable as this leaves voids under the wood that increase thermal resistance and could cause a build-up of moisture.

## FLOATING OVER AN UNDERLAY

Engineered floors with glueless locking joints (such as those in our Raglan and Salcombe ranges) can be floated over underfloor heating in most cases. Make sure you choose an underlay that's suitable for UFH and will provide effective thermal transfer. Take a look at our Basic 20, Aquastop and Undermate options.

Glueless wood flooring can usually be floated directly onto electric foil mat UFH systems.

## INSTALLING OVER JOISTS

If you are installing wood over joists, ensure that there are no air gaps between the surface of the boards and the heating system. Check that the boards are not directly touching any hot water pipes too – we recommend laying a heat distribution board between the UFH and the flooring.

Great care is needed to avoid damage to the heating elements. And the flooring needs to be a minimum of 18mm thick to provide structural stability – see our Chepstow range.

Note that the floor temperature at the underside of the wood floor shouldn't exceed 27°C as this could cause excessive drying in the wood, leading to problems such as cracking.

## PARTLY UNDERFLOOR HEATED FLOORS

If only part of the subfloor has underfloor heating, separate the wood flooring above the heated and unheated areas using a dilation joint. Flooring above the underfloor heating will expand and contract more than the flooring that isn't, but the joint will accommodate for this movement.

Please refer to the Technical section of our catalogue for more detailed wood floor installation instructions.



## AFTER INSTALLATION

Once the flooring has been installed, allow it to acclimatise for two to three days before switching on the underfloor heating. This will allow it to settle and for any adhesives to dry out.

When the heating is switched on, make sure it's set at just 1°C above the ambient temperature and then raised gradually by no more than 1°C per day until the desired temperature is reached. Take care as turning the heating on full straight away could cause the wood to shrink, expand or even crack.

Note that the floor temperature at the underside of the wood floor shouldn't exceed 27°C as this could cause excessive drying in the wood, leading to problems such as cracking.

## ONGOING USE

The temperature of the underfloor heating should never be increased or decreased too drastically. In fact, the industry recommends that systems aren't turned off but instead left to run at lower temperatures, taking care that the room temperature never drops to below 18°C.

If the underfloor heating is completely switched off – for example, in summer – then it can be heated back up gradually using the 1°C per day guidelines above.

Rugs and runners should be used with care as these can trap heat and raise the floor temperature above the recommended level.

We always recommend reviewing the instructions of your underfloor heating manufacturer in combination with our guidelines. More detailed instructions for installing our wood floors can be found in the Technical section of our catalogue.