



# ROYAL OAK FLOORS

by Harper & Sandilands

## **INSTALLATION SPECIFICATION**

Royal Oak wide floors are an engineered floor board made using a 6mm American Oak wear layer laminated to a 14mm multiply base giving a 20mm overall thickness. The boards are tongue and grooved and end matched. Currently there are 2 widths being 189mm and 260mm which can be supplied in a choice of finishes or sold unfinished. The quality of the boards is exceptional in appearance and trueness. We recommend a wastage factor of only 5 to 6% extra to cover cutting waste. Moisture content is generally around 10+% depending on seasonal variations etc. Colour variation occurs as with all timbers; however our Smoked, Mink Grey and Carbonised finishes have greater tonal variation than stained finishes due to the chemical processes used to achieve the colour. Finished boards require no additional finishing treatment once down, however care must be taken to remove glue residue during installation and to protect the floor from other trades and traffic.

High quality engineered floors can be laid without the usual restrictions that apply to a solid product as shrinkage and movement are greatly reduced. We recommend qualified floor layers only be used to install our floors (please contact Harper & Sandilands for recommended installers).

### **Methods of installation over concrete slabs:**

#### **A) Slab Preparation:**

This information is relevant to all timber floor installations over a concrete slab.

Concrete must be structurally sound, dry (no more than 5.5% moisture content), level and cleaned of waxes, adhesives, dust etc.

Slabs must be flat with no more than a 3mm deviation in a 3 metre radius. If deviations are greater than above use a self-levelling compound (e.g. Ardit) to level the surface within the above tolerance.

#### **1. Floating**

Technically our floors are not “Floating Floors” as such and it is our least favourite method of installation, however being engineered and inherently flat means they can be used in this way. The reason we don’t like floating is that it gives the floor a more “hollow” sound (like a traditional timber floor over a joist sound) as opposed to a “dead” sound achieved when the floor is glued to the subfloor. This system is suitable for flood prone areas, for retail or residential use as the floor can be easily removed and used elsewhere. The 20mm thickness of the Royal Oak Floor means that the sound made when walking has a solid but hollow

quality underfoot not like the “tinny” sound produced from most thin floating floor systems that you may have experienced. We DO NOT recommend D.I.Y. installation.

Over a levelled slab (see A above), first lay a floating pad with the impervious side facing down. Overlap the pad by 150mm and join the overlaps using a 50mm wide double-sided tape. Lay boards parallel to the longest wall in the room. Leave a 12mm expansion gap along end walls and cover with skirting board. If laying an area greater than 20 metres long or 10 metres wide leave a 20mm expansion gap on all sides and obstructions. When laying the boards use a small quantity of PVA glue for the tongue and grooves only and remove any excess glue from the floor face with a wet rag.

## **2. Direct Sticking onto an acoustic mat or directly onto concrete slab**

Over a levelled slab (see A above), first coat the entire slab with Bostick Moisture Seal paintable membrane to manufactures’ instructions. Failure to correctly seal the slab can result in floor failure due to moisture rising and weakening the glue bond. If using acoustic mat over entire surface as per instructions below there is no need to apply a membrane first.

If using an acoustic mat (e.g. 5mm thick Impactamat) glue down using Bostick Ultraset applied using a 3mm V-notched trowel allow to dry to manufactures’ instructions.

Glue the boards directly to the Impactamat using Bostick Ultraset applied in a snake pattern individually to the back of each board or trowel glue using a 3mm notched trowel.

This mat system is a requirement on first floor residential or multi level installations to absorb noise it also works well on ground floor slabs. The floor will have a very solid sound and a softer feel under foot.

If not using an acoustic mat directly stick floor boards to the membraned slab using Bostick Ultraset trowel glued using a 3mm notched trowel. If boards are not sitting flat either weight them or secret nail them into the slab.

## **3. Direct Sticking over ply over a slab.**

Use this method to pack-out to a specific level; plywood from 9mm up can be used. Over a levelled slab (see A above) lay thick polythene sheet as a moisture barrier, overlap each sheet by 150mm and attach the overlaps using 50mm wide double-sided tape. Lay the ply over the polythene sheet in the opposite direction (cross laminate) to the intended direction of the floor.

Attach the sheets to the slab using pre-drill sleeve pins only at a rate of 28 pins per 2400mm x1200mm sheet. Level ply if necessary by plane. Rough sand ply and glue and secret nail boards using Bostick Ultraset applied in a snake pattern individually to the back of each board.

#### **4. Installation over existing timber floorboards**

Plane flat any high points on existing boards and rough sand to provide a glue key. Glue 4mm plywood using Bostick Ultraset using a 3mm v-notched trowel as per manufactures' instructions in the opposite direction (cross laminate) to the intended direction of the new floor.

Glue and secret nail floor boards using Bostick Ultraset applied in a snake pattern individually to the back of each board.

#### **5. Method of installation over timber joists**

If laying over ground floor joists care must be taken to eliminate moisture rising from the soil below.

Use heavy polythene sheeting to isolate the soil from the timber floor taking care to permanently attach the sheeting to walls and stumps.

Boards can be laid over joists as the product is tongue and grooved and end-matched. The floor can be installed without top-nailing by using a combination of Bostick Ultraset wherever possible and secret nailing.

A superior method would be to ply sheet or Yellow-Tongue over the joists then direct stick to the ply sheeting. This improves thermal insulation and improves worksite safety and productivity.

#### **UNDERFLOOR HEATING OPTIONS:**

In-slab and above-floor heating systems can be used under Royal Oak Floors.

In-slab heating uses either electrical or hydronic heating elements which are embedded into the slab. If using in-slab we recommend installation method # 2 above incorporating the acoustic mat.

IT IS VITAL THAT ANY UNDERFLOOR HEATING SYSTEM BE FITTED WITH A CUT-OFF THERMOSTAT SET TO NO HIGHER THAN 25 DEGREES C WHEN MEASURED UNDER THE TIMBER FLOORING. Irreparable damage to wooden floors occurs if it is subjected to temperatures above 25 degrees.

Above-floor heating uses electrical wires attached to the slab. This type of system is suitable for existing slabs or over other sub floors.

With either system it is important not to have a total timber thickness greater than 20mm otherwise the insulating properties of the timber reduce the effectiveness of the heating system. This eliminates using installation method # 3. We recommend installation method #2 incorporating the acoustic mat. Also any air gaps between the heating system and the floor acts as an insulator and should be avoided.

#### **IMPORTANT CONSIDERATIONS:**

1. It is vital that all glue residues are removed immediately after laying each pre-finished board. If using "Bostick Ultraset" to glue down use "Bostick Wipes" or a solvent suitable to the glue being used. Always test solvents first on an off-cut to establish that the solvent does not affect the colour or finish.
2. Once floors are laid on a building site it is essential that the floor be protected using 2mm foam underlay and 3mm or 4mm MDF sheeting that is securely taped together (do not apply tapes to the finished floor). This protection must be maintained until all works have been completed. Avoid plaster dust

on the surface of the floor. If dust is present vacuum off immediately, do not mop. Moisture can set the plaster dust into the low grain of the timber making it extremely difficult to remove.

3. Cleaning, we recommend the use of an "Enjo" type swivel cleaning pad for daily/weekly cleaning using sprayed on water or water with a very light floor detergent such as O'Cedar Oil Soap at half the manufactures recommended strength. Too much detergent can stay on the floor and dirt can build up. It is frequent rinsing of the Enjo pad in clear water to wash out the dirt that gives the best results.

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