



Photography Daniel Jordan Homes

PARQUETRY

INSTALLATION GUIDE



AUGUST 2023



Pentarch Forestry™ Parquetry presents a unique opportunity to design a range of stunning Australian Hardwood floors. Pentarch Forestry™ Parquetry comes in a variety of sizes and colours making it possible to achieve traditional herringbone, brick bond, square on square, basket weave, random brickbond and mixed species designs to create a very individual floor.

The following should only be used as a guide & the installer should apply all Australian Standards, National Construction Code (NCC) requirements, & best practices when installing. The sub floor moisture & under floor humidity must comply with NCC & AS 1684 requirements.

This must include the relevant safety protocols required. This guide should not be used as the sole means of direction.

Pentarch Forestry™ recommends that a qualified professional timber flooring contractor installs, sands & finishes a Pentarch Forestry™ hardwood timber floor. Read all instructions before starting & take the time to plan the job properly. Please check all material for faults or defects prior to installation.

If there are any problems before or during the installation of a Pentarch Forestry™ product, stop & do not continue laying. Contact your Pentarch Forestry™ representative.

1. Properties of Timber

Timber is hygroscopic - meaning it is capable of easily absorbing & expelling moisture in response to local conditions. As timber absorbs moisture it expands & as it expels moisture it contracts.

As such, factors such as relative humidity (atmospheric moisture), moisture ingress (sub-floor or other), direct sunlight, air conditioning & lack of adequate ventilation can cause timber to expand or contract.

Therefore, care must be taken to correctly assess the suitability of the site prior to the installation of timber flooring, as well as to maintain a suitable environment where the timber floor has been installed.

The roof, external doors & windows, exterior cladding & wet trades should all be complete before a timber floor is installed. The storm water system must be complete or effectively directed away from the sub-floor.

3. Product Handling on Site

The packaging around Pentarch Forestry products is designed to protect it during transport only. Upon delivery timber flooring & decking products should be stored indoors where they can be protected from the elements. Do not store outside using a protective covering such as a tarpaulin as condensation can occur underneath.

4. Suitable Subfloors

Pentarch Forestry Parquetry is designed for any subfloor that is structurally sound, level, flat, clean and dry such as:

A concrete slab Sheet flooring such as plywood & particle board.

The sub floor moisture & under floor humidity must comply to NCC & AS 1684 requirements. Air vents should always remain unobstructed. Number of air vents & size should meet or exceed NCC requirements. In areas of high humidity or where increased exposure to moisture is apparent it is good practice to increase the surface area of the vents and/or install fans to increase air circulation under the floor.

Sub-floor vents should always allow for cross-ventilation of the sub-floor & must not be placed on only one side of a dwelling. Ground level below flooring should be well drained and should be flat, level & clear of any debris.

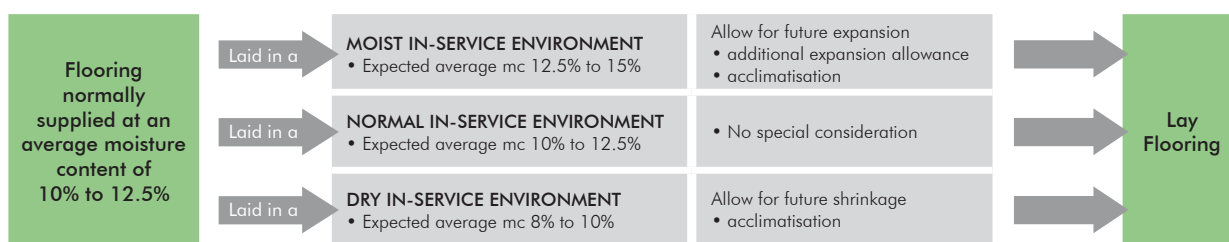
2. Acclimatisation

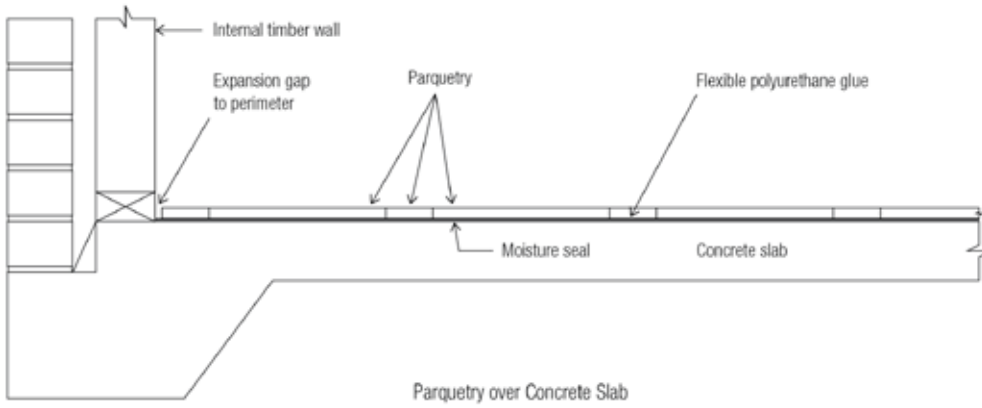
Pentarch Forestry Parquetry flooring is kiln dried to approximately 9 to 14% moisture content as per AS2796. Timber is a natural product that expands & contracts with seasonal changes & is affected by the moisture content of the air. The moisture content of timber is the percentage weight of water present in the timber compared to the weight of the timber with all the water removed. Moisture content varies with changes in humidity & temperature in the surrounding air. Small seasonal changes in timber flooring are a normal occurrence & fine gaps that open up between boards during dry periods are not considered a defect.

To minimise the movement of a parquetry floor caused by swelling on moisture uptake & shrinking on moisture loss, it is important to lay & fix a parquetry floor that is close to the average moisture content of the environment in which it is to be laid. Therefore it is imperative that the installer undertakes a complete site assessment prior to installation.

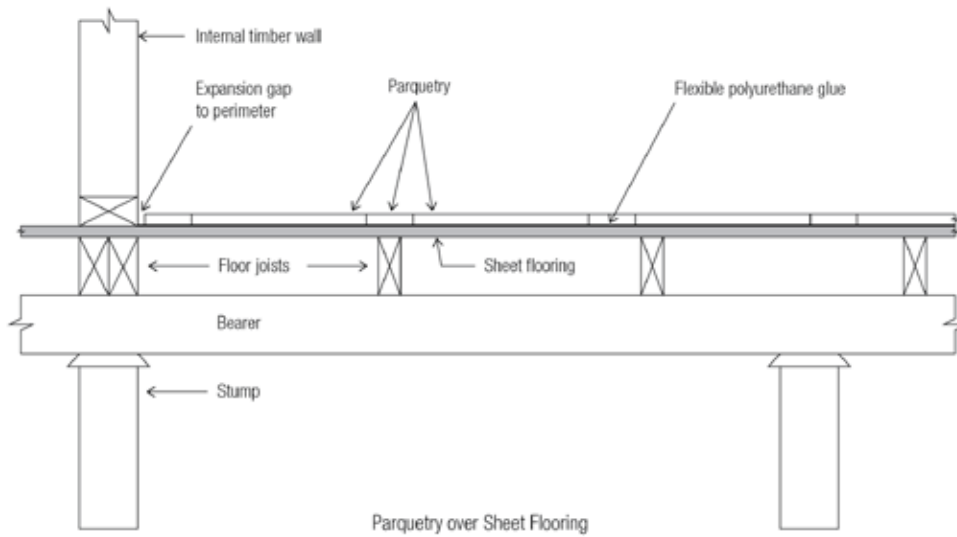
Before installing a timber floor, ensure the site conditions are suitable. A timber floor should only be installed in a weatherproof building. The project should reach near completion before installation begins to avoid damaging the newly fitted timber floor from heavy trade traffic.

1.0 - A simple guide to whether acclimatisation is necessary is provided in the flow chart below.

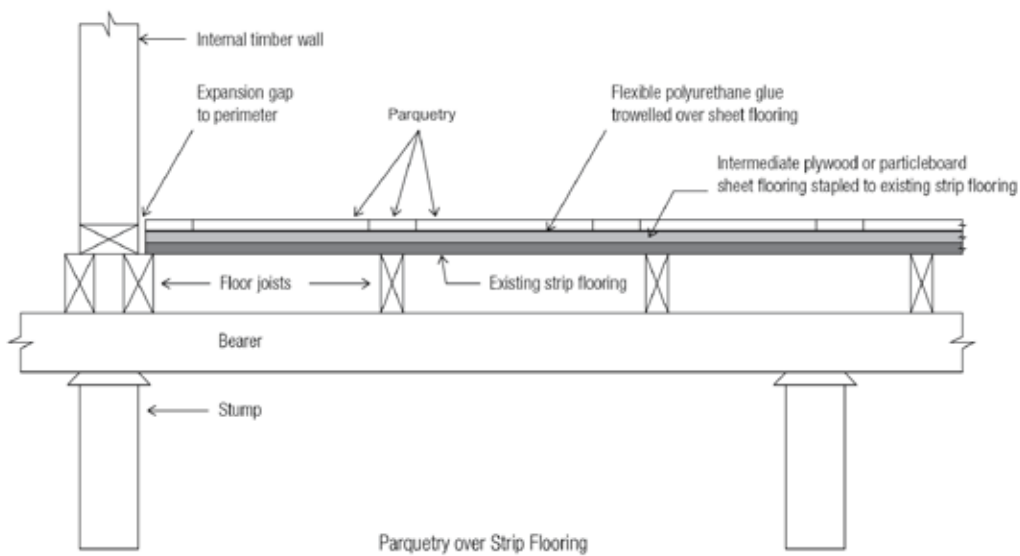




4(a)



4(b)



4(a). Concrete Slab

The concrete must be sound and have a steel trowelled finish and be free of floating ridges. The concrete should be clean, dry and free of but not limited to dust, wax, coatings, adhesives, curing compounds, oil or grease. The slab must be flat with no more than +/- 3mm deviation in a 3 metre radius as per AS3600 – 2001: Concrete structures. If the deviations are greater than specified then the laying surface can be brought to level by using a self-levelling compound and/or grinding.

Parquetry must not be laid on any section of a concrete floor which has moisture content of more than 5.5%. The best way to test for moisture content is to use an appropriate moisture meter. Concrete floors that are not suspended should have a polyethylene waterproof membrane underneath to prevent rising damp. If this is not present or you have concerns with varying moisture in the slab, you should use a moisture/vapour barrier as per the manufacturer's instructions. Ensure an adhesive that is compatible with the moisture/vapour barrier, is used when laying the parquetry.

4(b). Sheet Sub-Floor

An alternative method is to fix plywood or particleboard sheeting to the concrete slab after first laying a polyethylene membrane (minimum 200 micron). Plywood sheeting must comply with AS/NZS 2269 – Part 0 Plywood Structural Specifications.

This subfloor must be level sanded prior to Pentarch Forestry Parquetry installation. This will remove any other surface irregularities, such as edge swelling at joints.

5. Setting Out

Parquetry floors can be set out in many different ways depending on the pattern chosen. The home owner or installer needs to choose the most important area e.g. entry/passage and set up the parquetry to look the best in this area. Entries and passageways are often chosen because it's the first impression once the front door is open and these areas usually have the least amount if not no furniture to interrupt the view of the parquetry floor. The parquetry is centred in these areas to balance the pattern between the walls (see diagram for herringbone setup). Once this first row is installed then all other rows follow from this first setup unless each area is setup individually and separated by a threshold because the pattern will not matchup.

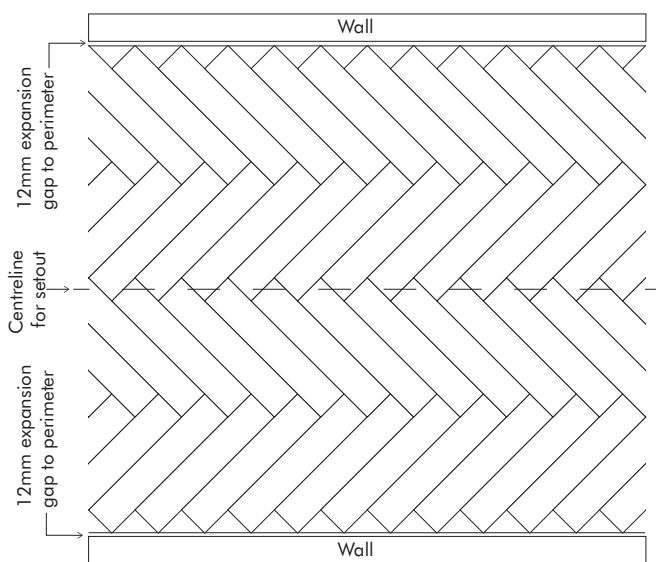
- Always use compatible products. Manufacturers often have recommended "systems" that guarantee compatibility.
- If a border is to be laid, snap chalk lines.
- The width of the border plus 12mm from the perimeter.
- Do not glue past this line when laying the body of the floor. Where the parquetry blocks extend past the glue area place the whole block (without extra glue) & trim later as described below.
- 24 hrs after laying re-mark the border lines & set the saw depth to the thickness of the block, cut out the border. Lay the border leaving a 12mm expansion gap.



6. Laying the product

Pour a quantity of flexible flooring adhesive recommended for parquetry onto the sub-floor at the centre of the room and using an appropriate parquetry trowel vigorously comb onto the floor leaving ridges of adhesive the full depth of the trowel teeth. Sufficient adhesive for one square metre should be spread at a time. Select a number of parquetry blocks from various boxes/bundles (to ensure colour & grain variations are evenly spread) and lay into the adhesive.

Ensure the block has made good contact with the adhesive by sliding it into place. Keep the edge of the panel exactly to the chalk lines and continue laying blocks in sequence keeping them tightly together. Regularly tap the parquetry in the adhesive bed with a rubber mallet or timber block. Continue until the whole room is covered. Cut the last blocks with an appropriate saw leaving a 12mm clearance from the wall for expansion.



Herringbone Parquetry Set Out



Sustainably Grown. Australian Made.

IMPORTANT POINTS TO REMEMBER

- With the abundance of different primers, levelling compounds, sealers & adhesives on the market always follow the manufacturer's guidelines.
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- If a border is to be laid, snap chalk lines.
- The width of the border plus 12mm from the perimeter.
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7. Sanding & Finishing

Pentarch Forestry recommends a professional to complete the sanding & finishing successfully. Refer to AS4786 for sanding and finishing of timber floors.

Once installation is complete the new floor should be left to allow the glue to cure before sanding machines are used. Refer to adhesive manufacturers recommendations for the appropriate timing.

There are many different types of finishes available from the increasingly popular water-borne polyurethanes to oil based and solvent based coatings. All of these coatings will affect the look of the timber floor in a different way so it is important for the installer/customer to be informed when deciding on the coating. Sheen levels choices can be influenced by the colour of the timber e.g. dark timbers and gloss finishes will highlight dust and matt finishes will minimise reflection.

Pentarch Forestry recommends water-borne or oil based finishes because they are less prone to "edge-bonding". Edge-bonding can occur when the coating bonds the flooring together so tightly that the flooring splits mid-board instead of on the joints during contraction. Always follow the manufacturer's recommendations when choosing and using floor coatings.

8. Care & Maintenance

For information on care and maintenance of a timber floor download a Pentarch Forestry Care and Maintenance brochure at www.pentarch.com.au/timberproducts.html

Note: Variations within a timber species are normal, therefore photographs, samples and displays can only be indicative of colour and should not be used for final selection. It is normal for natural timber products to react to changes in atmospheric and environmental conditions such as humidity and temperature.

pentarchforestry.com.au

National free call 1800 818 317

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