

Before and After

you choose your
non structural overlay
natural timber
strip flooring



natural timber floors, just like all quality products, must be handled, stored, installed and maintained with care to ensure excellent service.

This leaflet answers many of the most asked questions about overlay natural timber floors and highlights important precautions and considerations which you should discuss with your chosen flooring supplier, builder and/or installer before you proceed.

Experience has shown that where dissatisfaction with an overlay timber floor occurs, simple precautions and sensible care have usually been ignored at some stage during the delivery, on-site storage, installation or general care of a floor, or that customers are unaware of the consequences of their choices and decisions.

Read through this leaflet then use the check list at the back to tick off items as you progress.

Natural Shrinkage and Expansion

It is most important to understand that overlay timber floors are not synthetic or man-made, but are a completely natural material which is sawn, seasoned and machined to a suitable profile.

Natural timber is hygroscopic, that is, it continually takes up and gives off moisture to keep in balance with its surroundings. This results in a process of natural shrinkage and expansion.

Depending on the timber species chosen, visible shrinkage and/or expansion may take a day, a week or even months, resulting in the gaps between floorboards opening and closing depending upon the weather, the season and local influences.

To reduce the degree of shrinkage and expansion, today's timber flooring is generally seasoned or kiln dried to an average moisture content of between 9 percent and 14 percent. This is considered to be a good starting point for the majority of installations but, as you will read later, many other local factors influence the atmospheric moisture content around and in your home and therefore affect your floor.

Which Timber to Choose?

Choosing the right timber for the floor in your home will probably be the most difficult step, only because of the huge selection from which you can choose.

The following information will assist you to understand the alternatives and help you to ask the right questions when discussing the various options with your flooring supplier.

Timber Colour

This is purely a personal and aesthetic choice. The general colour will be determined by the timber species. However, even within one species there will be natural variations. Some species exhibit only small variations while others vary greatly. Remember timber is a natural product and no matter how big a sample you have seen your floor WILL BE DIFFERENT from the sample and completely unique.

The true colour of a floor will only become evident after it has been sanded and coated with a chosen finish. A darker floor will make the room appear darker and may therefore require more available daylight and/or artificial light sources. Lighter coloured floors tend to show dirt and marks less than darker floors. The colour of the floor may change slightly over time with exposure to light and heat.

Timber Features

Depending upon the species chosen, various mixes may be available. You may prefer a mix which exhibits the maximum variety of natural features including colour, knots, gum vein (generally dark lines) and insect markings to provide unique visual impact, or you may prefer a mix which offers maximum continuity and consistency with few outstanding features. Discuss the normal variation encountered in your chosen species and also the available options with your flooring supplier.

Board Width

Overlay flooring is generally supplied in profile widths of 80 mm to 85 mm. The direction the boards are laid will affect the look of a room. Generally boards laid along a room will make the room look longer while boards laid across a room will make it look wider. Other factors, such as the subfloor materials, may control the direction the boards must be laid.

During dry periods the floor may exhibit gaps between boards and cupping may also be apparent. Both of these conditions generally disappear after a reasonable period of normal humidity/weather conditions. It is preferable to lay boards so that when you look towards a light source (window or glass door) you look along the boards rather than across the boards.

Timber Hardness

You may also need to consider the hardness of the timber if you expect exceptionally heavy traffic or stiletto heels.

Timber Flooring Checklist

Home Design Considerations

- Under floor ventilation and drainage
- Moisture barrier for concrete slabs
- Moisture content and integrity of substrate
- Air conditioning/heating systems
- Skylights/direct sunlight through large window areas
- Location near large body of water (coastal, lakes, rivers, dams, wetlands, etc)
- Dry or moist prevailing winds

Timber Selection

- Colour/timber species
- Timber features
- Board laying direction
- Method of fixing
- Hardness/foot traffic
- Suitability of support

Timber Finish Selection

- Tung-oil, subdued/semi-gloss
- Polyurethane, hard, smooth, glossy (seek advice)
- Liming/Stains
- Full length windows/glossy surface reflections
- Refurbishing requirements

On-Site Storage, Acclimatisation and Laying

- Transport/wrapping
- Storage location off ground protected from elements
- Avoid storage in direct sun or small sheds
- Avoid storage on/in freshly concreted areas
- Keep flooring away from "Wet Trades"
- Allow expansion gaps at walls
- Acclimatising to final location (seek advice). If done, avoid laying during/just after abnormal weather

Caring for Your Timber Floor

- Wipe up spills and remove sand/grit promptly
- Use mats at external doorways



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Fixing Overlay Flooring

Overlay flooring is generally fixed by:

- direct gluing to concrete; (with or without moisture barrier);
- secret nailing and gluing to existing timber / particleboard / plywood structural flooring;
- secret nailing and gluing to plywood over concrete.

Advice should be sought from your accredited floor-layer.

Choosing a Timber Finish

There are a number of different types of finishes that can be applied to your timber floor. They differ not only in their composition but in the way they enhance the appearance of the floor. The following should also be considered:

- how long they will last
- how they may be refinished
- how they are maintained
- whether a sacrificial coating is appropriate
- how they may be repaired.

The leaflet on “Timber Floor Finishes and Maintenance” in the “Before and After” series may be of assistance.

Home Design Considerations

Shrinkage and expansion of timber board floors is a natural and cyclical process. The degree of movement depends on the surrounding changes in atmospheric moisture content and therefore is generally controlled by seasonal weather conditions. Changes are most evident during long periods of either dry or wet conditions. However, local conditions also have considerable influence.

Good ventilation under your floor is a very significant factor in a successful installation over bearers and joists. Minimum ventilation recommendations may not be adequate for your site. Excessive humidity in the under floor area can be caused by the lack of sufficient cross ventilation or by damp soil conditions arising from poor drainage. Ensure that water from gardens or stormwater does not drain under the floor area and that no

water lays in the under floor area. Subfloor moisture vapour passing through an existing floor can affect the overlay floor.

When the overlay flooring is installed over a concrete (or similar) substrate it is essential that the substrate is at a suitable moisture content. Where practical it is recommended that a moisture barrier be installed between the timber flooring and the substrate especially if the substrate is subject to moisture ingress (eg slab on ground).

The barrier may be plastic sheeting or a coating (as appropriate). There is a range of proprietary coatings but care should be taken when using a glue to fix the boards to choose a glue that will bond to the chosen coating.

Where the substrate is particle board or plywood which has been used as a platform floor during construction, particular care should be taken that the particle board or plywood is at an appropriate moisture content and has retained its structural integrity prior to fixing the overlay flooring.

Air conditioning and heating systems change the general moisture content within a home. Your flooring specialist should be made aware that these systems are to be used. It may be necessary or advisable before laying / coating to operate these systems and to acclimatise the flooring to the average conditions in these situations.

Shutting a house up when away on holidays for long periods can also create abnormal humidity conditions.

Full length windows, large glass areas and skylights which admit direct sunlight can create sunroom conditions with high temperatures and low moisture conditions causing flooring to shrink. Direct sunlight will also cause colour changes to the timber, so moving rugs occasionally and the use of curtains or blinds is a good idea.

If your home is located close to a body of water, such as the ocean, a river, lake, dam or wetlands, or if it will experience prevailing winds which may direct particularly moist or dry air towards your home, special moisture control measures may be required. Expert advice should be sought.

Transport and On-Site Storage

It is most important to ensure a suitable on-site storage location is available before delivery is arranged as incorrect storage will damage the timber and/or delay laying.

All flooring timbers should be protected from the elements during loading, transportation and unloading.

The optimum storage location would be under cover, protected from the elements and direct sun and where the atmospheric moisture content is similar to the level expected in your house.

In all locations the timber pack should be stored at least 200 mm off the ground/concrete, with even supports to maintain straight boards and to allow good ventilation to all pack faces. A moisture barrier between the ground/concrete floor and the underside of the timber is essential.

Do not store timber in plastic wrapping exposed to direct sun as this limits air circulation and exposes the timber to extremely high temperatures which causes sweating.

Do not store timber on a fresh concrete floor or in a recently cement rendered room as the timber will absorb moisture from the drying concrete or render.

Laying and Acclimatisation

Depending upon the situation it may be necessary or advisable to acclimatise the flooring to its proposed location prior to fixing.

By discussing all of the points on the checklist with your chosen flooring specialists they will be able to advise on the need for on-site acclimatisation as well as suitable methods and timing.

It is not advisable to fix acclimatised timber flooring during or just after extended periods of wet or dry weather. In this case, allow a period of normal weather conditions before fixing.

Additional information on acclimatising timber flooring is also available in a leaflet produced by Forests NSW.

It is preferable to lay flooring only after all “wet trades”, such as brick cleaning, rendering, plastering and tiling, have finished. Plastic laid over the floor to protect it from wet trades often raises the moisture content of the flooring timber and can be counter productive. Close monitoring is required in this situation.

Ensure expansion gaps of 10 mm to 12 mm are left between the edge of the board and any vertical barrier, such as walls, steps, tiled thresholds, posts, doorsills, etc. These gaps are usually covered by skirting boards or filled with a compressible filling material, such as mastic, cork or similar material.

For continuous floor widths over 6 m, measured at right angles to flooring, intermediate expansion joints should be provided in addition to the perimeter gaps. This joint should be either a single 10 mm wide gap, under a wall or across a hallway and the like, or smaller gaps with closer spacings to give an equivalent space (for example, 1 mm gaps at 1 m spacing or loose cramping).

Before fixing, ensure that your contractor has checked the flooring moisture content.

Caring for Your Timber Floor

A little sensible care will keep your timber floor a pleasure forever.

The amount of care will depend on your location and life style but generally any liquid spills should be wiped up promptly and sand, dirt or grit should be removed to prevent surface scratching.

Vacuuming or sweeping followed by a wipe over with a slightly damp mop or electrostatic mop will usually provide the necessary regular care. Spills and sticky soiling may form a matrix on the surface which may not be easily removed. To remove this matrix it will be necessary to damp mop the floor using a detergent. Only use detergents made specifically for use on timber floors. Dilute the detergent as per the manufacturers instructions and then wet the mop with the mix. Thoroughly wring out the mop to remove most of the moisture so that the mop is damp but not dripping. Now clean the whole of the floor wringing the mop out regularly to remove soil.

Use doormats at each external entrance of your home to trap dirt and grit. Mats just inside doorways will also remove extra dirt from shoes.