



# TED TODD

FINE WOOD FLOORS

## INSTALLATION GUIDE



*Plank*



*Narrow  
Plank*



*Wide  
Plank*



*Extra-Wide  
Plank*



*Super-Wide  
Plank*



*Herringbone*



*Chevron*



*Chantilly  
panel*



*Parquet de  
Versailles*



*Parquet de  
Chevney*



*Circular  
design panel*



*Parquet de  
Ardeche*



*8 tile  
parquet de  
versailles*



*Shrawley*



*Avery*



*Continuous  
Versailles*



*Wall  
Cladding*

## GUIDELINES FOR: SUB FLOORS

### 2.1 General Subfloor Requirements.

For a comprehensive listing of sub-floor types and construction layouts, please refer to BS8201, Section 3, Figures 1 to 3. Do we want to show Ted Todd versions of these BS8201 figures? NB Figure 1, diagram (a) in BS8201 does not show any vapour barrier.

**All sub-floors must comply with BS8201-2011.**

Ted Todd wood floors can be installed over a variety of Subfloors. Please refer to the following sections for minimum Subfloor specifications:

- 2.2 Panel Products, such as Chipboard, OSB or Plywood.
- 2.3 Solid-board softwoods.
- 2.4 Joists.
- 2.5 Tiles.
- 2.6 Screeds, such as Concrete, Anhydrite or Gypsum
- 2.7 Raised Access floors
- 2.8 Mixed Subfloors.

### 2.1.1 Subfloor Moisture

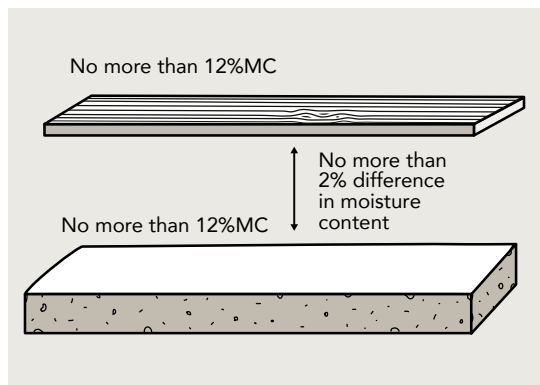
Ensure moisture content of subfloor/substrate meets the appropriate industry standard for the finish flooring material to be installed.

For Wood based subfloors there should be no more than 12%MC and should be no more than +/- 2% Moisture Content difference to the Wood Flooring.

For concrete screeds moisture content should not exceed 2% (calcium carbide measure) or RH of 65%. Anhydrite-based screeds with MC of no more than 0.5% (0.3% with UFH).

Always check moisture content of wood flooring on both sides before installing.

Always use an appropriate moisture barrier.



**Figure 1: Wood based subfloors should only be +/-2% Moisture Content difference to the Wood Flooring.**



Plank



Herringbone



Chevron



Circular design panel



Continuous patterns

## GUIDELINES FOR: SUB FLOORS

### 2.1.2 Subfloor Flatness and Integrity

The Subfloor must also be clean, dry, structurally sound, free of squeaks and free of protrusions.

Subfloors must be flat to within flatness tolerance of a maximum 3 mm gap showing under a 2 m long straight edge.

If peaks or valleys in the subfloor exceed the tolerances specified above, level with approved screed material for use under wood flooring. It is usually the builder's or general contractor's responsibility to provide the wood-flooring contractor with a subfloor that is within the tolerances listed above.

Inspect the Subfloor carefully. If there are any movements or squeaks in the subfloor, refasten the subfloor to the joists in problem areas. Any protrusions within the sub-floor should be dealt with.

### 2.1.3 Subfloor deviation from level, as defined by BS8201 – 2011, section 12.4.2.2.

This refers to the slope of a subfloor or deviation from the level, or from a specified datum. The maximum permissible slope of the finished floor should be specified, taking into account the area of the floor and its end use. For large areas (greater than 25 m<sup>2</sup>), a deviation of 15 mm from the level or specified datum is generally considered to be satisfactory. Greater accuracy to datum can be necessary in small rooms, along the line of partitions walls, in the vicinity of door openings etc. For an area under 5 m × 5 m, a maximum deviation of 5 mm from datum is considered acceptable.

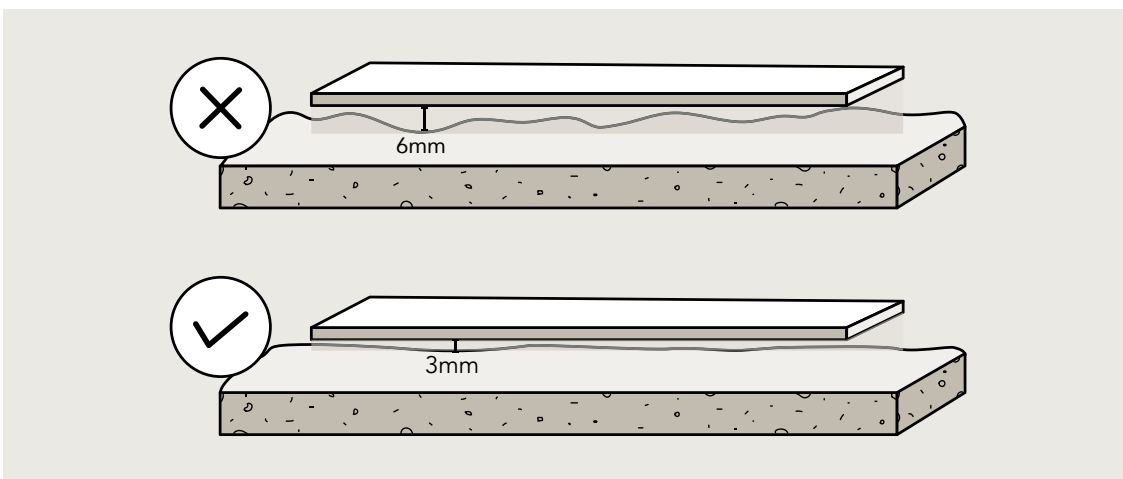


Figure 2: Subfloors must be flat to within flatness tolerance of a maximum 3 mm gap showing under a 2m long straight edge.



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Herringbone



Chevron



Circular design panel



Continuous patterns

## GUIDELINES FOR: SUB FLOORS

### 2.2 Subfloors of Wood-based Panel Products

- Typically Plywood or OSB are used.

**Subfloor Must Be Flat.**

Make sure the panels are flat within a flatness tolerance of a maximum 3 mm gap showing under a 2m long straight edge. If the panels are out of specification, consider sanding or a levelling screed.

When sanding, care must be taken to minimize the amount of dust produced. Dust collection devices must be used.

**Subfloor Must Be Dry.**

Refer Chapter 1C, Moisture Testing.

#### 2.2.1 Specification.

For wood panel products subflooring, check for loose panels and re-nail or screw down loose panels securely.

Check that the installation site conditions and the design of the installation meets the standards of Chapter 1, complementing BS8201-2011.

Ensure that there is proper expansion space around the wood panel subfloor and the perimeter of the room.

Also check for delaminated or damaged areas and repair those areas as needed. Make sure the subfloor is clean and free of debris before beginning installation.

Ensure that wood panel sub-floors over joists meet with current local building regulations with regard to the panels' structure and thickness and joist centres spacing.

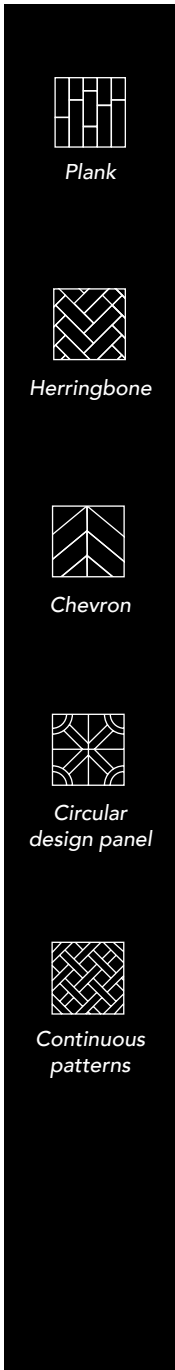
#### 2.2.2 Fastening and Spacing Specifications

Follow the panel manufacturer's recommendations for spacing and fastening.

Only use fixings and fasteners that comply with BS8201-2011, section 12.7.

Typical panel spacing and fastening requirements for truss/joist systems call for a 3mm expansion space around the perimeter of each panel, with panels fastened every 300 mm along intermediate supports.

Edge swell arounds the edges of the panels should also be flattened. This can usually be accomplished by using an edger sander. Ensure flatness of no more than 3mm under a 2m straight edge.



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Continuous patterns

## GUIDELINES FOR: SUB FLOORS

### 2.3 Solid Board Subfloors - (existing plank floorboards)

**Subfloor Must Be Flat**

Make sure the boards are flat to within 3mm in 2m radius.

If the boards are out of specification, consider sanding.

When sanding care must be taken to minimize the amount of dust produced. Best practice would include using dust-collection devices. If dust is not adequately contained, respirators should also be used to minimize the amount of dust inhaled.

**Subfloor Must Be Dry**

Refer Chapter 1C, Moisture Testing.

#### 2.3.1 Specification

Ensure that the Solid board subflooring (existing floorboards) meet all relevant building regulations and that the installation is structurally sound with no signs of rot or infestation.

We do not recommend installing parquet (herringbone or geometric pattern) flooring directly onto existing floorboards without the use of minimum 9mm ply panel underlayment, laid in the same direction as the subfloor planks and installed according to BS8201-2011.

### 2.4 Joists- Structural floor.

Only acceptable for minimum thickness of 20mm solid or engineered floors as the installation will be of a structural nature.

**Joists level must Be Flat**

Make sure the joists are flat to each other within a flatness tolerance of a maximum 3 mm gap showing under a 2m long straight edge

**Joists must Be Dry**

Refer Chapter 1C, Moisture Testing.

Always use a Builders' Paper such as Sisalkraft to ensure an adequate moisture barrier below the wood floor.

#### 2.4.1 Specification

Check carefully the relevant building regulations with regard to the structure, floorboards thickness and joist centres to ensure that the installation is structurally compliant and safe.



Plank



Herringbone



Chevron



Circular design panel



Continuous patterns

## GUIDELINES FOR: SUB FLOORS

### 2.5 Tiled Subfloors

**Subfloor Must Be Flat**

Make sure the tiles are flat to within 3mm in 2m radius.

If not flat, a levelling screed will be necessary.

**Subfloor Must Be Dry**

Refer Chapter 1C, Moisture Testing.

#### 2.5.1 Specification

Engineered and solid flooring can be installed directly over existing ceramic tile, terrazzo, marble and granite.

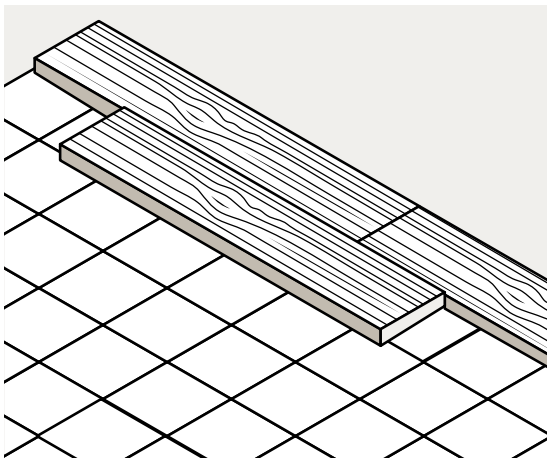


Figure 3: Engineered and solid wood floor can be installed directly over tiled surfaces.

### 2.6 Concrete and Screed Subfloors

All subfloors must be installed and comply with BS8201-2011.

**Subfloor Must Be Flat**

Make sure the subfloor is flat to within a flatness tolerance of a maximum 3 mm gap showing under a 2m long straight edge

**Subfloor Must Be Dry**

Refer to Chapter 1C, Moisture Testing.

#### 2.6.1 Specifications for Concrete.

**Subfloor Must Be:**

- Minimum 3000 psi (21N/mm<sup>2</sup>) compression strength and density around 2400KG/m<sup>3</sup>
- Free from non-compatible sealers, waxes, and oil, paint, drywall compound etc.
- Check for the presence of sealers by applying drops of water to the slab, if the water beads up, there may be sealers or oils.
- Do not attempt to glue a wood floor over a chalky or soft concrete slab.
- Check for burnished, slick steel-trowel slabs and power floated slabs.
- To be made suitable, the above may all require screening with a 30-grit abrasive and using Ted Todd Primerfast as a primer once the screed is fully dry.

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Herringbone

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Circular design panel

Continuous patterns

## GUIDELINES FOR: SUB FLOORS

### 2.6.2 Specifications for Screed.

Make sure the Screed is well bonded to the sub-floor. Check for hollow spots, cracks and loose areas.

As with on-ground concrete sub-floors make sure the Screed is clean, flat to specification and dry.

Over lightweight Screeds (less than 3000 psi), only float engineered floors directly over the subfloor.

For wide solid boards a ply Subfloor can be installed over a concrete screed using nominal 15mm Class 1 Exposure plywood subfloor panels installed according to BS8201-2011.

### 2.7 Raised Access floors (RAF).

All subfloors must be installed and comply with BS8201-2011.

In addition, for RAF the main tolerances are listed in the standard PSA MOB PF2 PS/SPU Performance Specification for platform floors.

RAF must be installed in accordance with the manufacturer's guidance and the relevant standards.

The main points are:

- The RAF floor system must be compatible with the type of wood flooring and installation method. Check with the RAF manufacturers for compatibility.

- P3.03: The maximum gap between the RAF panels when located in their respective positions shall not exceed 1mm.
- P3.08: The difference in height between adjacent panels without floor finish, panels with a hard surface type floor finish and panels with lipped edges shall not exceed 0.75mm before the application of any load.
- P3.07: Before the application of any load, the platform floor surface shall be level to within: a.  $\pm 1.50$  mm over any 5-metre square and b.  $\pm 6.00$  mm over any size of basic space.
- The concavity or convexity of any RAF panel under no load conditions shall not exceed 0.75 mm when measured horizontally parallel to any edge or diagonally across a 600 mm module.

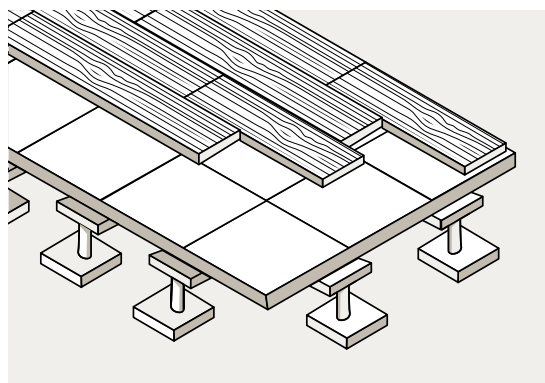


Figure 4: Raised access floors (RAF)



Plank



Herringbone



Chevron



Circular design panel



Continuous patterns

## GUIDELINES FOR: SUB FLOORS

### 2.8 Mixed Subfloors.

For areas with mixed subfloors, most commonly extensions whereby the ground floor has a suspended floor, and the room is extended with a concrete screed, it is important to level the entire area and to ensure the ridge between the two areas is removed.

Only use one fitting method to install the floor in the area unless the floor is separated by the use of a T section at the join of the Subfloors.

If only part of a continuous floor area is to be fitted with UFH, it is recommended that the heated area is separated from the un-heated area by a break in the wood flooring using a T-bar section. This is to avoid any differential in expansion / shrinkage of the two areas that may lead to splitting, cracking, open joints or a squeaky installation.

The best ways to install the floor is either:

- to ply the entire area (see 2.2 - Panel Products Subfloors) and either nail or glue the flooring to the ply using Ted Todd MS Flex adhesive.
- to screed the entire area and fully bond (glue-down) the wood floor to the new screed, once dry.

Refer to Chapter 1 to ensure the tolerance for moisture is met and the correct use of vapour retarders for each area.

### 2.9 Summary.

- All subfloors must be installed and comply with BS8201-2011.
- Subfloor Must Be Flat.
- Subfloor Must Be Dry
- Refer to the sections above, when the type of subfloor has been identified, for detailed guidelines.
- Ensure that the preferred method of installing the wood floor is compatible with the subfloor that exists.

**For RAF, see the standard PSA MOB PF2 PS/SPU Performance Specification for platform floors, and check with RAF's manufacturers instructions that the system is compatible with the required wood floor.**

### 2.10 FAQ's

#### Is all of the above really necessary?

The success of a good wood floor installation depends upon many factors. In instances where things go wrong, the problems will almost certainly be traceable back to failure to correctly follow some of the guidelines listed above. Even in apparently simple installation projects all of the above points must be checked to ensure compliance.

