



TECHNICAL BULLETIN #14

WARNING TO CONSUMERS AND CONTRACTORS

Set-out below is summary of typical Wood Floor “Failures” of which you may care to take note:-

1. Lack of required **perimeter expansion** provision.
2. Absence of designed “**internal**” expansion provision on all one-directional floors over 6 metres wide (across-the-width-of-the-boards).
3. Absence of **expansion joints at transition** to alternative floor coverings of stone etc., into bathrooms/ laundries etc.
4. Water penetrations from **leaking showers**
5. Water penetrations from **ineffective waterproofing** of window / door frames.
6. Water penetrations through ineffective **set-downs** to external balconies / paving are required by Building Code of Australia.
7. Lack of **subfloor ventilation**.
8. Poor **site drainage** / ponding of water under sub floor areas.
9. Failure to comprehend specific requirements for “**High Humidity**” sites.
10. Failure to “**acclimatise**” timber prior to installation on specific sites.
“Block stacking of timber” does **not** allow for site “acclimatisation”.
11. “**Secret Nail**” fixing of boards **over** 85 mm wide (which **should** be **face nailed**
12. Use of **polyurethane** coatings on T&G Board Floors found responsible for “**edge bonding**” failure of wood floors.
13. The practice of, “**filling**” expansion voids to the perimeter of floors with **silicone**, removes **minimum** 10 mm **expansion void**, provision for perimeter **expansion** movement.
14. 12 mm cork expansion joints used (“assuming” 12 mm of movement), when 12 mm resin bonded cork will provide **only** 5 mm of expansion.

15. The practice, of establishing “**break-points**” / construction joints or framing rooms with borders between large rooms of wood flooring is wisdom”, in that any damage that may occur over time, in one area of a residence, might be more professionally dealt with in isolation, without necessarily interfering with floors throughout the entire residence
16. The practice of installing wood floors over any sub floor that has **not** been thoroughly **moisture tested**, and the results of such tests permanently recorded and documented (including) the **type** of Moisture Meter / **Brand** / **Model** / **Last “Certified” date** of instrument “**inspection**” and “**accreditation**”, is fraught with danger, and regarded as “**irresponsible**”.
17. Adhesive bonding over unprepared or contaminated sub floors (old adhesive / paint / oils / friable surfaces etc.,) is responsible for many floor failures.
The principle of also using a 50 cent coin to scratch the surface **to ensure** that the surface is “sound” and **does not “furrow”**, is essential.
18. Quality wood floor installations **cannot** be effected over **defective** sub floors.

Any sub floor that exceeds the **minimum** requirements of **3 mm maximum variation** anywhere under a 3 metre straight-edge, should not proceed until the sub floor levels have been adjusted.

19. Poor quality sub floors and / or installation of wood floors over tiled floors using an adhesive **direct-bond** system can be very problematic because as wood “**moves**”, it can often take poorly secured / prepared sub floors (including ceramic tiles), with it.

20. Magnesite Sub Floors

Regrettably, there are people who still today attempt to install **glue-down** wood floors over old magnesite. This is a practice that is strongly advised against, as often, wood floor “**movement**” will eventually take the magnesite with it.

Failure of new floors, installed over old magnesite as a **glue-down** system, within 12 months is not uncommon.

The only wood floor system regarded as suitable over old magnesite, is a **floating floor** system that will not put pressure on the bond of the magnesite to the sub floor.

Alternatively, recommendations for any “glue-down” system, would require **complete removal** of magnesite, re-level the sub floor where necessary, install new acoustical membranes where and as required, then **unless** glue-bonding with an engineered plank flooring in excess of 189 mm wide, sheet with a **minimum 12 mm** Exterior Waterproof Structural Plywood, properly anchored to the sub floor prior to nailing or gluing any wood floor system.

18 mm is the “**preferred**” thickness of Structural Plywood.

Please Note:

While there are some exceptions to the above advice, this information is provided to act as a **“warning”** to the uninitiated / uninformed parties for whom this advice is offered.

21. Existing timber sub floors that are already “coated” must be coarse sanded to fully remove existing coatings, to achieve a proper adhesive bond, when using “glue-down systems.
22. Timber floors being installed by (nail fixing or direct bonding), directly over an **existing T&G Board** floor should be installed:-
 - a. Over a **minimum thickness of 12 mm Exterior Waterproof Structural Grade Plywood sub floor** glued and screwed over the existing level, clean and dry (structurally sound) sub floor, **prior** to installation of T&G Boards.

Alternatively –

- b. **New timber boards** may be installed directly over existing timber board floors, as long as they are installed in the **opposite direction** to the line of the existing boards, after **coarse sanding**, to remove existing coatings etc., and “flatten” the existing boards.
23. In the 21st Century, today’s technology provides competent tradesmen with some outstanding **adhesive** / and **liquid membrane** technology.

However, misuse or **“skimping”** on the proper use of these materials are often seen as important aspects of incompetent floor installation and “failure”.

Therefore, our professional advice is do not use outdated **PVA** adhesives (which are water emulsified), when installing a quality wood floor.

Our strong recommendation is to **only** use a “high quality” Waterproof Polyurethane Adhesive.

Use a “compatible” **Liquid Membrane** in all areas where there are **any reservations** at all as to the quality / porosity / susceptibility, or moisture of the subfloors you are addressing.

Under **no circumstances** use **“dollop”** application techniques (or a-little-dab-will-do-you) adhesive application.

If a wood floor is to be **“direct-bonded”** this means that it **must be** properly **“bedded”** in a **100%** full trowel bed of the “specified” adhesive, using the “specified” notched trowel, with a view to, establishing a **100% direct-bond** between timber and sub floor.

The increasing number of “a-little-dab-will-do” adhesive installations and failures is alarming and must be stamped out quickly.

24. All parties are “**warned**” that since the withdrawal of **Licences** for wood floor installations in NSW by the former Government, there has been a huge increase in wood floor failures, and the **substitution** of Australian timbers with imported species, coupled with **incompetent installation methods / techniques**, many of which are reflected in the above items which have been documented for your understanding.

In the commercial climate that we live in today, nobody can afford to run with “fat” in their pricing, so clients must be aware that we are living in an age when **people mostly get just what they are paying for** and careful selection with eyes wide open is strongly advised.

Hence, when large disparity exists between the quotes that you are considering, there is **always** a profound reason for that difference, even if it is not initially obvious to you.

Make sure that you thoroughly investigate your proposed contractor before putting a noose around your neck, and regretting it.

Ask plenty of questions, convince yourself that they **know** what they are talking about, “**check**” at every stage of the process that you are not being “duded” as a “**quality**” wood floor installation should last the **life** of your building and **enhance** the asset value of your property.