



TECHNICAL BULLETIN #16

PROTOCOLS AND SERVICES

To provide Members, Trade Contractors, Saw Millers, Timber Processors, Architects, Engineers, Designers, Specifiers and Government Departments with competent Technical Advice on “Preferred Methods of Best Practices” in the **Design, Installation and Maintenance** of all types of Wood Floor Systems.

1. To provide a continuous flow of information feed-back to the Wood Floor Industry with a view to increased education and training, that will deliver to consumers **reliable** levels of **consistent quality** in both product and services.
2. To effect an **inspection** and **review service** of new and proposed products and systems by manufacturers seeking to release new products onto the market, with a view of establishing the “technical competence” of a product or process, before it is released onto the market. to undertake this process in such a way, as to try and avoid the repeat of businesses failures, due to the release of products, lacking basic requirements of **stability, suitability** and a **proven design concept**, complete with a demonstrable **quality assurance** program.
3. To establish, and provide Members and the Wood Floor Industry at large, with **the preminent dispute resolution service** on any wood floor installation problem.

The primary intent of this service being, to provide the industry, with **the most powerful** and **most recognised “authority”** to adjudicate and report upon problems and disputes that plague the wood floor industry.

4. To establish a set of **protocols** by which Members of the **NWFAA Technical Committee** shall conduct the affairs of the Technical Committee, for and on behalf of it’s Members.
5. To conduct the affairs of the Technical Committee in keeping with the highest of **ethical practice** with a view to negotiating government “endorsement” of the **NWFAA Technical Committee** as the department of **fair trading / NCAT** recognised **authority** in settling disputes based upon **reports** issued by the **NWFAA Technical Committee** as “experienced Wood Floor Installers, rather than professional report writers, that lack experience, which has proven to be an many.

STRIP FLOORING OVER CONCRETE

Recognising that installation of timber floors over an **unventilated sub-base** should be avoided, as this creates an environment in which the raw underside of the board is exposed to a different environment, from that which is above the floor. These factors regularly translates into a distorted surface (cupped or curled boards) as condensation is often drawn to the underside of the board while direct sun light may excessively heat / dry the top surface of boards, usually coated with multiple layers of high solid coating material.

This response in timber boards is even more pronounced in coastal regions, where increased humidity can further exacerbate the problem.

Recommended Methodology

“Test and “record” the moisture content of the subfloor to ensure it conforms with the minimum requirement of the Building Code of Australia.

Check that tolerances of concrete sub-base conform to minimum requirements of plainness and levelness of the code **being maximum 3 mm deviation** anywhere under a 3 metre straightedge.

Adjust subfloor levels as necessary, using only highest quality concrete underlayments, used strictly in accordance with the manufacturer’s printed instructions.

Fix minimum thickness **18 mm Exterior Waterproof**, Structural Grade, Plywood to prepared concrete floor utilising a high quality **Waterproof** Polyurethane Adhesive System in accordance with the manufacturer’s printed instructions, leaving a 4 mm joint between sheets. Mechanically fasten plywood sheets to structural concrete using steel anchors of sufficient length to achieve minimum of 50mm purchase into parent slab. (NOTE: This means assessing thickness of any topping or underlayment before selecting choice of anchor length).

Strategically fix not less than 15 anchors per sheet, with perimeter anchors set not less than 50 mm from edge of sheets.

Pre-sand plywood as necessary to flatten (raised edges etc).

Fix T&G Strip Flooring directly to level, clean and dry plywood sub-base.

Secret Nailed Profiled Boards **up to 85 mm wide , secret nail as normal.**

Boards over 85 mm wide should be **glued** and **face nailed** directly to plywood sub-base.

Strategically fix **not less than 15 anchors** per sheet, with perimeter anchors set not less than 50 mm from edge of sheets.

Pre-sand plywood as necessary to ensure sub-base is clean and flat with flush joints.

WOOD FLOORS – OVER CONCRETE WITH RUBBER UNDERLAYMENTS

It is strongly recommended that direct bonding of solid timber floors and/ or parquet direct to **rubber** is contrary to good trade practice and is **not recommended**.

If **Rubber** Underlayments are designed into (or under) a Wood Floor System, then the recommended method is to sheet the rubber with **structural grade, exterior waterproof plywood** to enable a **timber-to-timber bond** to be established between the timber floor and subfloor.

The exception to this rule is where “Wide Board” quality, engineered plank floors over 189 mm wide are used and here very careful “bedding” of planks occurs, using a full (100%) Bed of High Quality, Waterproof Polyurethane Adhesive is employed.

Please Note:

The term “**Full Bed**” of adhesive should be interpreted as a 100% full (notched trowel) Bed of Adhesive and **NOT** a-little-dab-will-do-you “dollop” of adhesive place on the back of a board. Remember “suction” is 80% of the science of bonding and the “correct” bedding of a product in the right bed of adhesive will make a huge difference in the performance of any floor.

Recommended method for establishing Structural Plywood sub-base of Rubber Underlay, is (as detailed for strip flooring over concrete).

Please note, there are cork based acoustical products which “may” be appropriate for direct bonding but “caution” is advised as this is a “specialist” trade.

Recommended Methodology

“**Test** and “**record**” the moisture content of the subfloor to ensure it conforms with the minimum requirement of the Building Code of Australia.

Check that tolerances of concrete sub-base conform to minimum requirements of plainness and levelness of the code **being maximum 3 mm deviation** anywhere under a 3 metre straightedge.

Adjust subfloor levels as necessary, using only highest quality concrete underlayments, used strictly in accordance with the manufacturer’s printed instructions.

Fix Rubber Underlay to concrete sub-base utilising Waterproof Polyurethane Adhesive System used strictly in accordance with manufacturer’s recommendations.

Fix minimum thickness **18 mm Exterior Waterproof**, Structural Grade, Plywood through Rubber Underlay, to prepared concrete floor utilising a high quality **Waterproof** Polyurethane Adhesive System in accordance with the manufacturer’s printed instructions, leaving a 4 mm joint between sheets.

Mechanically fasten plywood sheets to structural concrete using steel anchors of sufficient length to achieve minimum of 50mm purchase into parent slab. (NOTE: This means assessing thickness of any topping or underlayment before selecting choice of anchor length).

Strategically fix **not less than 15 anchors** per sheet, with perimeter anchors set not less than 50 mm from edge of sheets.

Pre-sand plywood as necessary to ensure sub-base is clean and flat with flush joints.

PARQUET FLOORS OVER CONCRETE

Recommended methodology

“Test and “record” the moisture content of the subfloor to ensure it conforms with the minimum requirement of the Building Code of Australia.

Check that tolerances of concrete sub-base conform to minimum requirements of plainness and levelness of the code **being maximum 3 mm deviation** anywhere under a 3 metre straightedge.

Adjust subfloor levels as necessary, using only highest quality concrete underlayments, used strictly in accordance with the manufacturer’s printed instructions.

Check that the consistency of the concrete is not too sandy (or friable) by use of a coin to scrape the surface to check against furrowing. If surface is judged to be less than suitable,, then the surface must be addressed by either **grinding** or chemically binding etc (epoxy moisture seals etc) as might best be judged suitable, to ensure a “sound/ dry” hard surface before installation proceeds.

Supply and install parquet over **level, clean** and **dry, structurally “sound”** concrete sub-base utilising a high quality, purpose made Waterproof Polyurethane “parquet” adhesive system used strictly in accordance with the manufacturer *direct icons*.

“Square” edge parquet may be sanded and finished with nay wood floor coating.

However, any site-finished Tongue & Grooved Parquet product should **not** be treated with **Polyurethane Coating** due to potential dangers of “**edge Bonding**” where coating strength prevents normal seasonal movement between blocks or boards and may cause tearing of the wood floor system.

The preferred coating system for all T&G Flooring is and “High Solids” Oil Based Floor Finishing System.

Strategically fix **not less than 15 anchors** per sheet, with perimeter anchors set not less than 50 mm from edge of sheets.

Pre-sand plywood as necessary to ensure sub-base is clean and flat with flush joints.

PARQUET FLOORS – OVER CONCRETE WITH RUBBER UNDERLAYMENTS

It is **strongly recommended** that direct bonding of timber floors (of any type) directly to rubber underlays is contrary to good trade practice and is **not recommended**

If rubber underlays are designed for use in a glue-down Parquet Wood Floor System then the recommended method is to **firstly** install the rubber underlay, then sheet over the rubber underlay with **minimum 15 mm thick structural grade, exterior waterproof plywood**, to enable a **timber-to-timber** to be established between parquet and structural plywood subfloor.

Recommended methodology

“Test and **“record”** the moisture content of the subfloor to ensure it conforms with the minimum requirement of the Building Code of Australia.

Check that tolerances of concrete sub-base conform to minimum requirements of plainness and levelness of the code being **maximum 3 mm deviation** anywhere under a 3 metre straightedge.

Adjust subfloor levels as necessary, using only highest quality concrete underlayments, used strictly in accordance with the manufacturer’s printed instructions.

Fix Rubber Underlay to concrete sub-base utilising a full bed of Waterproof Polyurethane Adhesive System used strictly in accordance with manufacturer’s recommendations.

Fix minimum thickness **15 mm Exterior Waterproof, Structural Grade, Plywood** through Rubber Underlay, to prepared concrete floor utilising a full bed of high quality **Waterproof** Polyurethane Adhesive System in accordance with the manufacturer’s printed instructions, leaving a 4 mm joint between sheets.

Mechanically fasten plywood sheets to structural concrete using steel anchors of sufficient length to achieve minimum of 50 mm purchase into parent slab.

(NOTE: This means assessing thickness of any topping or underlayment before selecting choice of anchor length).

Strategically fix **not less than 15 anchors** per sheet, with perimeter anchors set not less than 50 mm from edge of sheets.

Pre-sand plywood as necessary to ensure sub-base is clean and flat with flush joints.

PARQUET

Directly bond parquet to plywood sub-base in accordance with Australian Standards.

“Square” edge parquet, when “filled” and prepared correctly may be sanded and finished with almost any wood floor coating system.

However, any site-finished Tongue & Grooved Parquet product should **not** be treated with **Polyurethane Coatings** due to potential dangers of “**Edge Bonding**” where coating strength prevents normal seasonal movement between blocks or boards and may cause tearing of the wood floor system.