Tiling to External Timber

External Timber Walls

There is still sometimes the requirement to tile externally onto timber substrates. But as we know all wood and composite boards are subject to moisture and thermal movement. Exposure to water will cause the boards to degrade therefore marine, WBP or external grade plywood may be used (most other types of board are not suitable for external use) where the life of the installation is expected to be limited but it should be restricted to smaller areas – not exceeding 3m in height above pedestrian walkways.

We would recommend waterproofing the installation (backs, sides and faces of the boards) with **Bis-Watertite** Tanking System or **Bis-Vapourstop**, which is suitable for external use. Note this can be difficult as unless it is a new installation the boards would have already been fixed making access to the underside and the edges of the boards difficult if not impossible. Tiles may then be fixed in a solid-bed of **Bis-Flex** or **Bis-Xtra** and grouted with either polymer modified grouts such as **Vitri-Grouts** or an epoxy grout such as **Speed-E-Poxy**.

We don't recommend this as a permanent installation as over a period of time the plywood boards may become unstable.

External Timber Balconies

Very often balconies that are to be tiled are not built as such during the original construction. Balconies can often be built onto garage roofs or other overhangs which have an existing surface, in a lot of cases and covered with asphalt. These surfaces were more than likely designed as ceiling to the room below rather than as floors. As ceilings are generally self-supporting rather than having a requirement to support traffic, they tend to not be rigid, and are thus directly unsuitable to receive tiling.

If they are existing external surfaces they may also be finished in external roofing grade asphalt which is also unsuitable to receive direct tiling as it designed to remain deformable. **See Technical Bulletin BTB6 External Asphalt**

As a rule of thumb, unless they are of concrete construction, balconies are not suitable for tiling. The tiles chosen are often large format dark tiles, which will exhibit large thermal movements that will exaggerate any possible damaging effects.

If a balcony is being built into a new construction, the surface to be tiled should be a cement sand screed. Smaller, lighter coloured tiles will have a greater chance of proving successful in balcony situations owing to the reduced heat absorption and greater facility to allow movement than a darker tile.

Falls should be formed in the substrate to ensure puddling of water does not occur. Pooling and uncontrolled running off of rainwater can quickly become a case for failure. These falls should never be formed in the adhesive layer, but always at the design stage in the substrate.

A number of manufacturers now produce complete balcony drainage systems. For further information on the **Watec®Fin balcony drainage system call 0208 778 9000.**

If balconies constructed of timber are required to be tiled the joists will need to be rebraced to bring them up to flooring grade quality, giving a surface with the minimum of deflection; then made rigid by either covering with materials such as a cement sand screed (If the weight of an unbonded or 'self-supporting' cement sand screed is considered too great, the use of a Lytag screed (lightweight aggregate) should be considered), a suitable thickness tile backer board or a reinforced decoupling matting system such as **Watec®3E. (Call 0208 778 9000 for more information**.)

These systems are not waterproof and as timber is sensitive to water they will need to be waterproofed to prevent them rotting.

In this situation we would recommend waterproofing the installation with either **Bis-Watertite** Tanking System or **Bis-Vapoustop**, which is suitable for external use. Note this can be difficult as unless it is a new installation the boards would have already been fixed making access to the underside and the edges of the boards almost impossible. Polymer modified external grade adhesives and grouts can then be used to fix the tiles, which again should be frost resistant external grade. See above.

As previously stated timber boards used externally are subject to moisture and thermal movement and should be limited to smaller areas. More important they have a limited life expectancy.