7 things Architects hate about timber cladding – and how to avoid them!

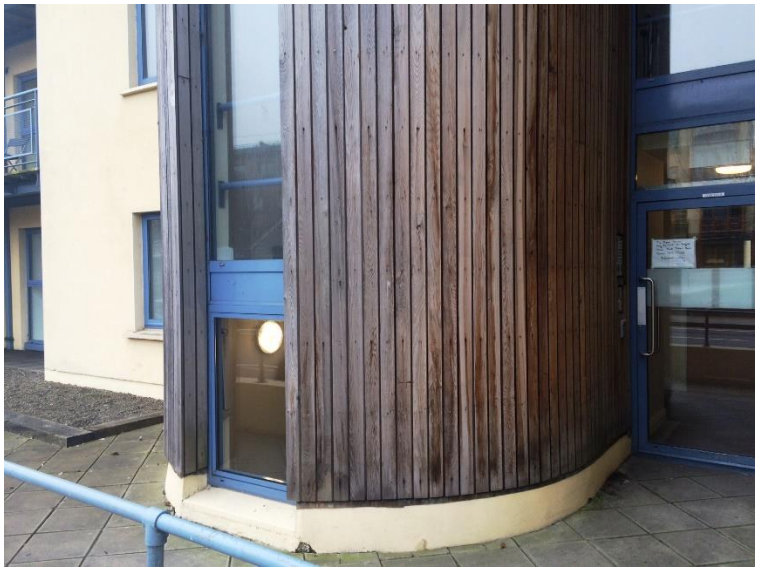
Specifying timber cladding on your building project can deliver a stunning looking building in sync with its surrounds and wonderfully friendly to the environment. But there are a number of pitfalls that need to be avoided. We look here at 7 reasons that prevent architects from using timber cladding and how you can achieve the same effect without falling victim.

1. WEATHERING

This is a significant issue as the building owner can pay a high price over time to maintain the cladding. We've all seen examples of buildings where the cladding hasn't been maintained as initially planned and what was once a vision has become an eyesore.

What started out in life as a beautiful warm brown wood finish turns to slate grey within 6 months, in some instances.

Initially, extracts within the timber rise to the surface, where they oxidise, resulting in a temporary brown staining. Then over time, exposure to UV rays in sunlight leads to photo-degradation and the timber surface turns grey. As different facades experience varying levels of exposure to the sun and rain, the result can be different shades of grey across the building, as is evident in the picture below.



How to avoid:

Clear or coloured coatings applied every few years over the life of the building. This has an impact on the cost consideration from the building owner's perspective, though this can be mitigated by using a product such as SAM Trimax which extends the period between coatings from every 5 years to every 10 years.

2. SHORT SERVICE LIFE

Bound up in the cost consideration is the service life of the cladding. Depending on the timber used, this cladding tends to vary in its life expectancy from a minimum of 10 years to a maximum of 30 years. Operating at the 30 year service life, this makes it comparable to Compact Material (also 30 years) and Fibre Cement (25 years).

How to avoid:

There are fibreboard and modified timber products available that deliver the aesthetic appeal of wood, but are much more durable, such as SAM Trimax, made with Medite Tricoya Extreme and Accoya. These have serviceable lives of 60 years, so that the calculation of cost/m^2 on an annualised basis is much more attractive.

3. MOULD AND FUNGUS

Unfinished timber will vary rapidly in moisture content, which can lead to the development of one of the many moulds that deface external timbers in a moist climate. In addition, where timber cladding has been incorrectly installed, fungal decay can occur. Where water gathers at a point on the cladding for an extended length of time, the fungi can break down the timber.

How to avoid:

Surface finishing to best practice standards, ideally in the form of a pre-finished board can deal with this. Alternatively, a product like SAM Trimax is pre-finished, has fungal resistance built-in and is unaffected by water pooling.

4. SHRINKAGE

Dimensional stability is the term used to describe how much or little a timber product expands or contracts due to changes in moisture content of the surrounding air and the direction of the wood grain. With some pine timbers, this can be as much as a 15% differential.

This makes life more complicated for the Architect in terms of ensuring the correct detailing and specification is achieved, sometimes requiring specialist advice so that the amount of movement anticipated can be accommodated.

How to avoid:

Using extremely durable fibreboard or modified timber products such as SAM Trimax or Accoya minimises this as the amount of movement is drastically reduced.

5. RUST STAINING

Architects naturally abhor rust staining on the face of the timber cladding from fixings. A plain steel or galvanised nail or screw fixing will lead to rust staining on the face of the timber cladding and must not be used in any circumstances.

How to avoid:

Austenitic stainless steel has been proven over time to be the best fixing material for external timber cladding.

6. RISK OF CUPPING

If the space behind the timber cladding is not adequately ventilated and drained, then there is a risk of the boards 'cupping'. Cupping is where the board curves across its width, caused by one side absorbing more moisture than the other, and swelling at a different rate.

How to avoid:

Allow adequate ventilation space behind the cladding. This space allows cladding boards to dry more rapidly after wetting. It also helps to equalise the moisture content of the inner and outer faces, which prevents the 'cupping' effect. Using a modified timber or extremely durable fibreboard product such as SAM Trimax will also significantly reduce any tendency as the product is less affected by moisture.

7. PICKING A TIMBER

The variety of timbers that are available mean that actually selecting one for a particular product requires quite a bit of time. Investigating heartwood and sapwood content, durability rating, species

of wood, the length of service life, carbon footprint, preservation, Use Class, colour and grain mean that there are a lot of variables and much to consider.

How to avoid:

Simplify the process by choosing an extremely durable fibreboard product such as SAM Trimax that delivers on the choice of profiles, colours and other benefits of timber but is much easier to specify.

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