



Timber Cladding



Timber cladding has the ability to add character and distinction to a wide range of building designs. It can be installed and finished to give a bright and colourful appearance, or alternatively, left to provide a natural weathered look. It offers considerable design flexibility and is easily adapted to both traditional and modern building styles. Timber cladding is not new; it has been around for centuries. But with improved design and installation techniques and protective coatings a further extended service life can now be expected.

Species Selection

While double vacuum treatment prior to installation offers protection to the sapwood element in any selected species, natural durability and desired appearance often dictates species selection. However, pre-treatment in accordance with BS 8417, careful design selection and selected use of surface coatings offers an extended service life with many of our more common softwood species.

If the heartwood of a timber species has sufficient natural durability, (specifier should refer to BS EN 350-1) it can be used without preservative treatment even where a recognised hazard

exists. However, where sapwood is present, the loss of which would render the component unfit for its intended use, preservative treatment should be applied in accordance with BS 8417, whatever the associated natural durability of the heartwood - see table overleaf.

Moisture Movement

Cladding timbers will expand and contract due to moisture movement directly related to our considerable fluctuation in climate, with moisture from the air being a considerable factor. Properly maintained and well-detailed exterior cladding has a typical equilibrium moisture content of about 16%. It will however

fluctuate from around 12% on a hot summer's day to 20% or above during extended wet periods. Accordingly, BS 1186-3: 1997 recommends that exterior cladding timber has a moisture content of 13-19% before installation. Movement however can be dramatically reduced by the use of suitable breathable wood primers on all surfaces prior to installation, together with the important addition of end grain sealers.



Allowing moulded cladding to acclimatise to its end use environment conditions prior to installation will also reduce movement after installation.

Frequent wetting of external timbers contributes very little to its degradation when compared with potential trapped or stagnant pockets of water. However, this can be completely eliminated in careful design detail.

Timber Durability

Whilst our Irish climate can be described as moist, properly installed and maintained timber cladding will withstand the elements with all its variations. A prime example is the long standing white gable of the Landmark Hotel on the Conamara Coast featured in the picture below.



Preservative Specification for Cladding

Treatment recommendations for cladding timbers which require preservative treatment - BS 8417 Table 9

Service life years and treatment process	Permeability class of wood species			
	Permeable		Resistant	
	Penetration	Retention	Penetration	Retention
15 - Low Press 15 - High Press	P2 P8	CV1 CV1	P2 P2	CV1 CV1
30 - Low Press 30 - High Press	P2 P8	CV1.25 CV1.25	P2 P4	CV1.25 CV1.25

The following points should always be considered when trying to achieve the ultimate durability from timber cladding:

- **Suitable cladding profile**
- **Double vacuum preservative treatment**
- **End grain sealing**
- **Use of a suitable primer prior to installation**
- **Adherence to correct installation procedures**
- **Use of a suitable surface coating**
- **Adherence to the recommended maintenance programme for the surface coating**

Maintenance of Surface Coatings

Careful selection of surface coatings is very important. Suitable breathable coatings will allow for expected moisture movement and at the same time can give UV protection. High build or skin forming products should be avoided as expected movement will result in flaking or cracking. A wide



range of suitable breathable coatings in both solvent and water based options are now available and manufacturers' instructions should be followed carefully.

Useful Links

Coford - www.coford.ie

Woodspec - www.woodspect.ie

NSAI - www.nsaie.ie

Wood Marketing Federation - www.wood.ie

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