

Appendix 4

Case Studies

April 2013



Camborne, Roskear, Tuckingmill Townscape Heritage Initiatives



Introduction

Technical information from measures outlined in the [Improving Energy Efficiency in Cornish Historic Buildings](#) guide obtained from other sources.



New outdoor cob classroom at Upton Cross Primary School. Works and photo courtesy of Clayworks.

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1. Secil ecoCORK performance results

Example u-values

Thermal performance of traditional buildings is notoriously difficult to calculate as solid walls differ in materials and construction. Examples are provided below from Mike Wye and Associates Ltd of potential thermal performance and improvements to a cob wall by using Secil ecoCORK. These results are based on extremes of performance. The worse the performance of the original material, the better the improvement when Secil ecoCORK is added.

Although the thermal performance is not the only consideration when deciding on how comfortable a building will be to occupy, it is important for Building Regulations. The thermal performance therefore needs to be calculated as accurately as possible.

Building Control accept third party certification with test organisations who are UCAS or ILAC registered. ecoCORK is certified by IPAC which is certified by ILAC.

Assuming the average heating bill for a cob dwelling is £1,885 at 2013 prices(1), it is calculated that 35% heat is lost through walls(2). Therefore 35% of £1,885 is £660. A saving of 13% suggests a potential saving of £86 per annum and a saving of 25%, a saving of £165 per annum.

With a 10% rise per annum in heating fuel costs, compound savings over 10 years can reasonably be expected to be at least £1,400 at 13% or £2,600 at 25%.

- (1) www.confusedaboutenergy.co.uk - Central Heating
- (2) www.buildingconservation.com - solid wall construction

For further information contact:

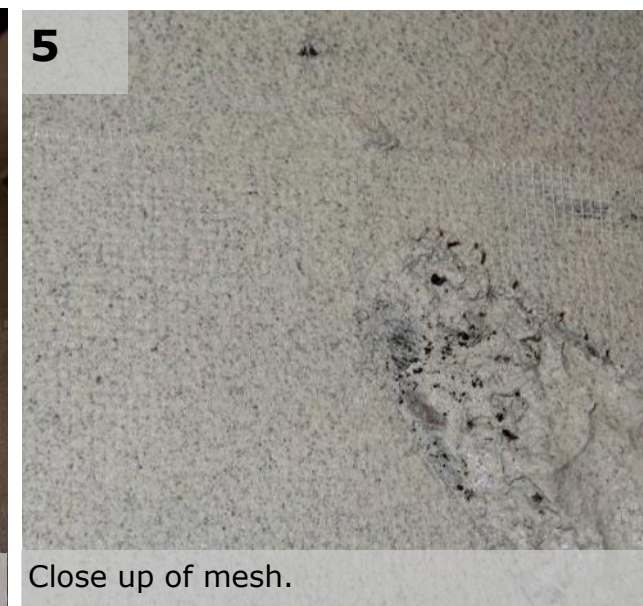
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Performance results of ecoCORK

Cob walls based on lambda value of 0.40					
Existing structure	U-Value before	Secil ecoCORK inside	Secil ecoCORK outside	U-Value after	Improvement
600mm	0.579	~	20mm	0.525	10%
600mm	0.579	~	40mm	0.475	18%
600mm	0.579	20mm	40mm	0.438	24%

Cob walls based on lambda value of 0.80					
Existing structure	U-Value before	Secil ecoCORK inside	Secil ecoCORK outside	U-Value after	Improvement
600mm	1.023	~	20mm	0.865	15%
600mm	1.023	~	40mm	0.738	28%
600mm	1.023	20mm	40mm	0.652	36%

Cork board installation at Tyrella House



ecoCORK used on a cottage in Devon
Photos show works in progress and completed building
finished with earthborn silicate masonry paint (bottom
right)

