



Downie's Cottage

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Insulated lime plaster on the hard

Walls

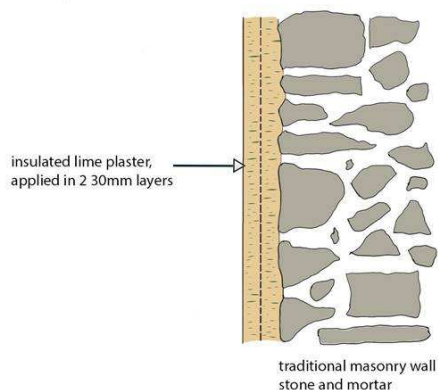
What is the solution?

Application of 2x30 mm of insulated lime plaster to the internal face of the wall. The plaster used was a pre-mixed lime plaster from Eden Lime, Cumbria which included 'perlite' beads to increase the insulation qualities. The Lambda value of the plaster is 0.113 W/mK. The value for 500 mm stone wall and 50 mm insulation is noted as 1,19 W/m²·K.

Cross section of the wall build-up, available pictures of the solution:

Indicative diagram showing the insulated lime plaster on the hard; HES Image

Wall Insulation - Insulated Lime Plaster





Applying first coat of insulated lime plaster in the kitchen; HES image



Second coat (left) being applied on top of first coat (right); HES image

Why does the solution work in terms of compatibility with conservation, moisture safety and energy improvement?

Lime is traditionally a common material for plaster of this kind. The material chosen was a lime plaster, which had largely fallen off. It is a vapour open and capillary active insulation option, which would allow dispersal of any liquid water and water vapour. This was finished with clay paint, to maintain the breathability throughout the whole wall thickness.

Pros and cons of the solution:

The original plaster was extensively damaged and needed replacing. That is why we replaced it with an insulated equivalent that was thicker and more energy efficient.

Additional Information:

After three years of use as a holiday cottage the walls have remained dry and the building is comfortable to occupy. No signs of damp or condensation. You can find more information on the building's homepage:

<https://downiescottage.co.uk>

Is there any related publication? If yes, please provide any available link or document for

further reading

<https://www.hiberatlas.com/smartedit/projects/32/hes-refurb-case-study-22.pdf>

HES Refurbishment Case Study 22 - Downie's Cottage

Link to best practice example (Hiberatlas):

<https://www.hiberatlas.com/en/downies-cottage--2-32.html>