



Lambeth Palace Insulated Floor

An introduction to Insulated Floors for Old Buildings

Breathable, insulated and limecrete floors have now become quite common in the UK but one design does not fit all buildings and this is one in a series of case studies which may help you decide on the best floor build up for your old building.

It has long been recognised that in old buildings we should avoid pushing dampness in to walls from the ground by not using un draining compacted fill, cement subbases and impermeable layers and membranes.

By allowing the lowest section of the floor build up, the sub base, to drain freely and by insulating within and above this sub base it is possible to create well insulated, free draining floors, that help prevent dampness rising up walls in old buildings. This case study illustrates one such build up.



Lambeth Palace

The Great Hall at Lambeth Palace, which has been built and rebuilt many times over the centuries, currently houses much of the Lambeth Palace Library. It was in the first Great Hall that Erasmus and Holbein were welcomed by Archbishop Warham, and where Henry VIII was entertained by Thomas Cranmer.



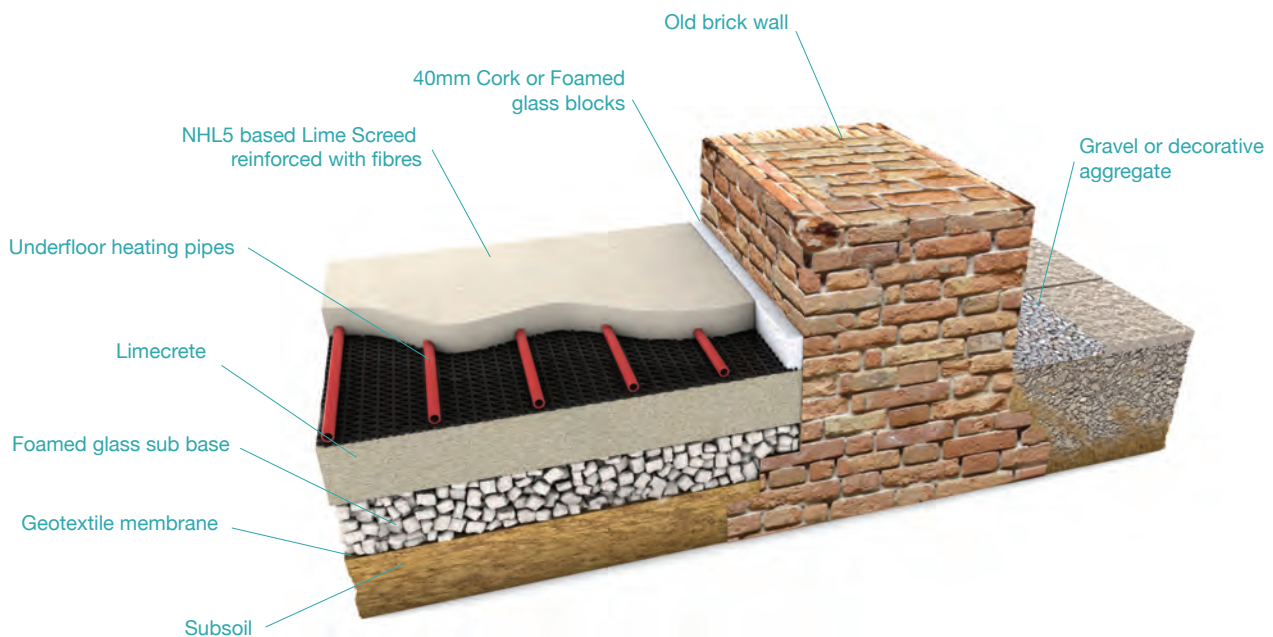
The Parliamentarian Colonel Scot ordered the demolition of the building following the English Civil War and the more valuable materials were sold off at auction. It was not until the Restoration that Archbishop Juxon rebuilt the Great Hall. He used much of his own money to complete the works, and attempted as much as possible to replicate the original medieval style. Writing in his diary in 1665, Samuel Pepys described a visit to see “Bishop Juxon’s new old-fashioned hall”.

In spite of Juxon’s splendid restoration, the Great Hall was rarely used until the early 19th Century, when, as part of Blore’s renovations, the Hall first became a home for the Lambeth Palace Library.



During recent renovation work the building’s custodians, architect and main contractor were keen to avoid problems seen elsewhere where buildings have compacted ungraded hardcore, membranes and concrete sub bases installed preventing any water that gets under the building from draining away and causing water to be forced into outside walls.

To ensure the new floor was well drained, insulated and breathable it was then built up from the bottom with 225mm of free draining 'Foamit 30' foamed glass and above this a compacted sub base was placed a geotextile membrane. This was then followed with 100mm of glass fibre reinforced lime concrete, consisting of 1 part Ionic NHL5, 3 parts 3mm down sharp aggregate and ¼ part 10mm limestone chippings. Underfloor heating pipes were then laid before an 80mm Ionic hydraulic lime based screed and bedding mix allowed the floor to be finished with stone tiles.



Further Advice

Further advice and support is available from...

Womersley's Ltd

Ravensthorpe Indust Est, Low Mill Lane, Ravensthorpe

