



The roof of the Hall [Photograph Jonty M Sexton]



Inside the Great Hall [Photograph Jonty M Sexton]

HISTORIC PROJECT

LAMBETH PALACE GREAT HALL

London

CLIENT:

THE CHURCH COMMISSIONERS

ARCHITECT:

ABLETT ARCHITECTS

COST:

£1,500,000

The Great Hall

For nearly 800 years Lambeth Palace has been the London residence of the Archbishop of Canterbury. The Great Hall, which has been built and rebuilt many times over the centuries, currently houses much of the Palace Library, as well as being used for events and exhibitions.

It was in the first Great Hall that Erasmus and Holbein were welcomed by Archbishop Warham. The Great Hall was demolished following the English Civil War and then rebuilt at the Restoration. The hammer beam roof of the Great Hall was completely destroyed during the Blitz and then replicated exactly during restorations.

Now, as part of a recent major refurbishment, completely new services have been incorporated in the Hall. A new heating system using underfloor heating pipework and radiator and trench convector heat emitters have been installed.

Conservation

The most important criterion for historic collections is usually to keep the relative humidity of the air stable, avoiding high and low extremes. The control of temperature is less critical, and it can safely be allowed to vary over a wider range. A specification

normally adopted is a relative humidity of 40–65%, and a temperature of 16 to 26 °C. A suitable conservation temperature can thus be considerably lower than a normal comfort temperature.

Conservation Heating

A suitable environment for the important books stored in the Great Hall was essential, so a conservation heating system was implemented. In this, the temperature is adjusted to maintain the humidity constant. Analysis of conditions from previous years showed that by heating the Hall to an average of 2–5 °C above its unheated level the humidity could be controlled at 55%, ideal for the collection. Average space temperatures would be governed by the ambient air moisture content, being as low as 10–13 °C in the winter and up to 24 °C in summer.

The maximum output from the heat emitters was deliberately kept below the output required for normal comfort temperatures under winter design criteria, but the conservation controls can be overridden for special events. The controls include additional monitoring sensors to check for an even heating effect throughout the Hall, and report on conditions behind the book presses. When needed, trace heating cable is switched on to promote air movement in the enclosed spaces near the

walls.

Lighting

Amongst other improvements, LED uplights reflecting the mullion spacing of the Hall replaced the old inefficient mercury vapour and halogen lamps used previously, to give a clean bright light and a dramatic reduction in carbon emissions.

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