HOUSES OF PARLIAMENT
RESTORATION AND RENEWAL

Fabric of the Building | Factsheet

The Palace of Westminster is one of the most iconic and significant buildings in the world. It is home to one of the busiest parliaments, with more than a million people, including 100,000 schoolchildren, passing through its doors each year.

Following the fire of 1834, when the old Palace burned down, a competition was launched for its redesign, specifying that the new building should be 'Gothic or Elizabethan'. As the old Houses were originally designed as royal apartments and were cramped and ill-ventilated, the fire was seen as an opportunity to create a state-of-the-art purpose-built home for Parliament, using cutting edge technology and the best of British craftsmanship.

Renowned architect Charles Barry was successful in his bid, with the support of Augustus Welby Pugin, who went on to design most of the Palace's magnificent Gothic interiors, including carvings, gilt work, panelling, and furniture.

The Palace is now considered to be one of the finest examples of neo-gothic architecture in the world and is Grade I-listed and part of a UNESCO World Heritage Site. However, years of under-investment and the need to conduct repairs around sittings of Parliament have resulted in a large backlog of major work. The hidden problems of leaking roofs, gutters, and steam pipes, failing mechanical and electrical systems, and antiquated heating and ventilation systems, are all becoming a serious threat to the fabric of the building and its interiors.

Stonework

The Palace was built using Anston limestone from Yorkshire because it was ideal for elaborate carving. However, the stone quickly began to decay and very little was done to prevent its decline during the 19th century. Some stone cleaning and restoration work was carried out in the 1930s and again in the 1980s and 1990s, however there is still a huge amount of essential work to be done. The main difficulties lie in access and the noise and disruption caused in a continuously used building. Internally, the original linings are Painswick stone from Gloucestershire and Caen stone from France, both chosen because they were ideal for carving. Today, much of it is in need of cleaning or restoration due to wear and tear, leaking roofs, decaying windows and antiquated plumbing.

Key Facts - Stonework

- Built using sand-coloured limestone from Anston Quarry in Yorkshire
- Each block up to 4ft thick

Windows

There are approximately 4,000 windows, from basic casements in rooms and corridors, to the ornate stained glass panels that allow light to fill the many hallways and chambers of the Palace. This vast amount of glass, much of it set in bronze frames, no longer provides weather resistance and generates significant heat loss from the Palace. The vast majority of windows do not close properly, and all are now in need of repair or replacement. This work is needed to halt further damage and decay to the surrounding stonework, and to reduce heat loss and running costs of the Palace.

Main Image: Cast Iron Roofs
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Key Facts - Windows

- Approx 4,000 windows
- Majority of these windows (approx. 3,800) are set in bronze frames, while others are iron-framed, leaded diamond-pane or wooden

Cast Iron Roofs

The cast iron tiled roofs were installed on wrought iron structures in the mid-1800s, and used innovative, leading-edge technology. However, they have never undergone major renovation or repair and now, 160 years on, the roofs are leaking, causing significant damage to the stonework and historic interiors of the building. To avoid further damage to the fabric of the building, a phased programme of roof repairs is underway, which will also ensure the building is watertight before any major restoration and renewal work begins internally.

Key Facts - Cast Iron Roofs

- 160 years old
- Weight of each tile: 75kg
- Number of tiles on roof: approx 7,000
- Tile size: 100cm by 75cm by 1cm