SAVING THE BRICKS AND ARTWORK

IMPACT!

£8m
EPSRC and AHRC are investing £8m in research to protect Britain's heritage.

£500,000
York Minster's annual restoration bill. New research is helping to make this work even more effective.

EPSRC and the Arts and Humanities Research Council (AHRC) have initiated an £8m Science and Heritage programme to help protect Britain's cultural legacy for future generations.

Buildings are crumbling, ancient books are yellowing and many priceless art works are fading away. However, advances in analytical science are helping conservationists pinpoint many of the problems facing irreplaceable collections and artefacts. The joint Science and Heritage programme will combine skills in science, engineering, the arts and humanities to protect our heritage from 21st century threats.

IMPACT ON BUILDINGS, BOOKS AND BYGONES

- The programme is improving the outlook for museums, galleries, archives, libraries, and historic buildings across Britain.
- It is helping York Minster improve restoration techniques by using cutting-edge spectroscopy to analyse the building materials and mortars affected by decay and weathering.
- Climate change during the next century could allow fungi to destroy books and artworks. Research into indoor environments and damaging moulds will find ways to mitigate damage.

CONSERVATION RESTORATION

A substantial investment by EPSRC and AHRC has earmarked £8m of research funds to help conserve Britain's cultural heritage. The money will allow scientists, engineers, and those in the arts and humanities to work together to protect museums, galleries, archives, libraries and historic buildings from ongoing degradation.

New researchers

The first ten Science and Heritage projects were launched in summer 2008 and have supported PhD students to work in collaboration with heritage professionals. Among the major projects underway is the use of x-ray techniques (x-ray absorption fine structure spectroscopy and x-ray photoelectron spectroscopy) to investigate restoration work carried out to York Minster over the centuries.

The limestone cathedral was completed in 1472 and restoration work has been ongoing ever since as stonemasons work their way around the structure to restore decayed and weathered limestone. The new research being undertaken at the University of York, by Karen Wilson and colleagues Adam Lee and Kate Giles, will look at previous building materials used in restoration to understand why they have decayed or survived. They will then advise restoration teams on the best materials to use.

Mouldy books

Professor Peter Brimblecombe and colleagues at the University of East Anglia are working on the implications of climate change for the indoor environment of historic buildings – buildings that often house priceless art collections and irreplaceable libraries. Brimblecombe explains that the rapid shift to high humidity towards the end of summer caused by increasing temperatures will provide better growing conditions for mould. This is good news for fungi, but bad news for books. His team is devising mitigating measures to stop the rot.

Addressing the Lords

The programme addresses concerns raised by the House of Lords Science and Technology Committee in 2006 regarding the decline in the heritage science discipline. Heritage science could have impact on conservation across Britain and its revitalisation is important to protecting the UK's cultural legacy into the 21st century.

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