

# Houghton (virtually) Revisited



The magnificent exhibition at Houghton Hall of paintings from the Hermitage has been recorded for posterity by a remarkable laser scanning process

This Summer sees the recreation of one of the most important 18th Century European art collections, with the 'Houghton Revisited' exhibition, which runs at Houghton Hall, Norfolk, from 17 May to 29 September. The magnificent art collection of Great Britain's first Prime Minister, Sir Robert Walpole, purchased later by Catherine the Great to adorn the Hermitage in St Petersburg, has been reassembled in its original setting by the Marquess of Cholmondeley and exhibition curator, Dr Thierry Morel, with the support of the Samuel H. Kress Foundation, for the first time in over 230 years.

Houghton Hall was originally designed to house Walpole's prized collection of Old Master paintings from the English, French, Italian, Flemish and Spanish schools. The exhibition features masterpieces by Van Dyck, Poussin, Albani, Rubens, Rembrandt, Velasquez and Murillo, which have been hung in their original positions in the State Rooms – bringing the House back to its former splendour.

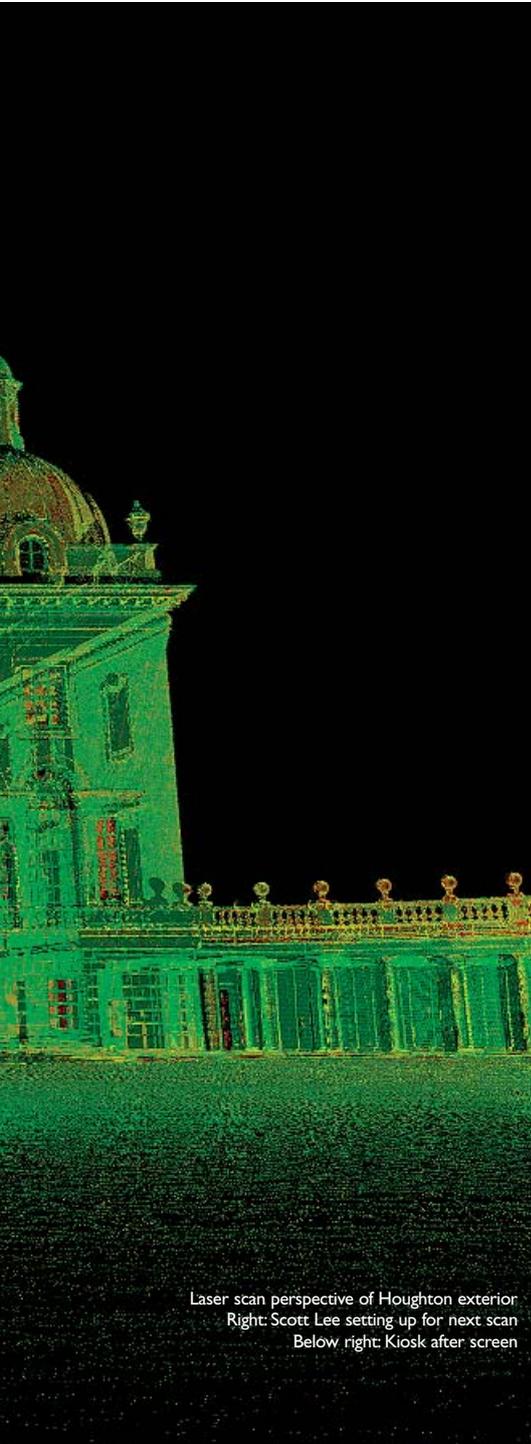
But Lord Cholmondeley, a direct descendant of Sir Robert Walpole, was determined that this remarkable event would live beyond the temporary exhibition, as it offered a unique opportunity to digitally document the art in its original setting which could be experienced and appreciated long after the collection is returned to Russia.

To make the 'virtual exhibition' a reality, Lord Cholmondeley engaged CyArk, an international not-for-profit organisation with a UK office in Edinburgh, who specialise in the use of new technology to digitally document the world's most important heritage. CyArk have several years' experience of capturing and digitally reproducing some of the world's most iconic built heritage from the Easter Island statues to Edinburgh Castle.

Two experts from CyArk, Scott Lee and Adam Frost led the work which used the latest laser and photographic technologies to create an accurate, detailed survey of the House and a compelling visualisation of its interiors both before and after the exhibition.

The first phase of the project began before the exhibition in early February of 2013. CyArk captured digital panoramic photography of the interior of Houghton Hall and used 3D laser scanning technology to provide an accurate and detailed survey of the exterior of Houghton Hall. The images and laser scan data were then processed and integrated into an interactive virtual tour for Houghton Hall.

For the second phase, and with the support of Faro and their Focus3D laser scanner, the interiors with the Hermitage pictures 'in situ' was scanned and documented in a single day. With the baseline



Laser scan perspective of Houghton exterior  
 Right: Scott Lee setting up for next scan  
 Below right: Kiosk after screen



documentation in place, Adam was able to capture a series of high resolution panoramic images that matched with the locations of the images captured in the first phase. At the same time, staff in CyArk USA's office programmed a sophisticated framework for an interactive kiosk controlled via an iPad. The kiosk interface was specifically developed to enable embedded content such as catalogue information of the artwork to be mapped onto the panoramic images, offering users the ability to intuitively pull up details about each exhibition piece.

Then, with an internet connection and a little patience the large data set was transmitted to the CyArk team in the USA from Kings Lynn. The team in the USA worked quickly to process the data, align the panoramic images and program the kiosk, which was installed in Houghton Hall in time for the exhibition opening.

With the assistance of the Royal Academy, the kiosk was updated to include catalogue imagery and details about the exhibit pieces.

The result is that there is now a highly accurate model which can be viewed by visitors on a screen, giving a view of the exhibition which is very close to that experienced by those lucky enough to have the ability to visit the exhibition. Although the 'virtual exhibition' is displayed on a flat screen, the quality of the images gives a remarkable

representation of the exhibition and the opportunity to 'walk through' it, painting by painting.

Ruth Parsons, Executive Director of CyArk Europe said, "While nothing can take away from the awe-inspiring experience of seeing such magnificent artwork in its original and splendid setting, the latest technology allows us to document the House and its contents in incredible detail, providing an accurate and compelling picture which is now available at Houghton Hall and safely archived for future generations."

Lord Cholmondeley added, "I would like to thank all of the contributors who helped to realise our ambition to allow the exhibition to live on in this way. In addition to CyArk who created the 'virtual exhibition', I greatly appreciate the support of the Kress Foundation who so generously contributed vital funding to the project."

#### MORE INFORMATION

You can find out more about the Houghton Revisited exhibition at [www.houghtonrevisited.com](http://www.houghtonrevisited.com) and more about CyArk's upcoming event at the Tower of London (20-22 October) to launch the CyArk 500 Challenge to digitally preserve 500 cultural heritage sites within the next five years at [www.cyark.org](http://www.cyark.org). If you would like to find out more about the Houghton Hall project, please contact Ruth Parsons, Executive Director CyArk Europe on 0131 200 6024.