

Having dismantled the south gable the 2nd floor beams and principal roof timbers were repaired using resin techniques to reduce the extent of loss and damage to the historic fabric. Common rafters and other roof timbers were repaired in oak, or matching timbers, using traditional carpentry techniques.



All windows and doors have been repaired and draught-stripped to improve thermal performance. Roofs and suspended ground floors have been cleaned out and new insulation installed and the voids above and below provided with ventilation.

The two groups of four chimney stacks at either end of the main range were re-built using matching special shaped bricks and the stack to the west of the main range was similarly re-built to a reduced height.

Building services have been extensively renewed, improved and rationalised and the UEA district heating main extended to serve the Hall, and the Outbuildings in future phases, further reducing energy usage. Low energy lighting with automatic control has been installed and point of use water heating is utilised. The combined drainage system has been renewed and separated with surface water now taken to soakaways, reducing the load on the foul system.

An external fire escape stair has been removed and fire compartmentation, protection and detection systems upgraded internally with automatic closing devices to doors and secondary protection to existing glazing on escape routes. A fire protected glazed screen has been installed through the main range at ground floor level to protect the escape route and allow the majority of the space to be used as an amenity.

**Finds;** A cannon ball, suited to the popular small Falcon cannon in use between the late 15C and mid 17C, was found near one of the outbuildings. Various domestic items were found during the work including items of decorated and patterned porcelain, earthenware, crochet hooks, knitting needles, scissors and a bone handled knife.

Throughout the on-site works the site managers and craftsmen responded positively to the problems encountered with the building fabric. The workmanship of the brickwork subcontractor, roofers, plasterers and decorators is of particular note and many individuals, carpenters and general workmen made significant contributions to the scheme and the outstanding end result.



Form of Contract JCT SBC 2011

Main contractor; Kier Construction

Principal subcontractors; Brickwork; PM Whitlock. Steelwork, new staircases and balustrades; Crosskills. Roofing; GHB Roofing Ltd. Painting and Decorating; David Laydon. Lime Plastering; Nelson and Sons. Mechanical and Electrical subcontractors; Sotham Engineering.

Design Team; Architect and Lead Consultant; RH Partnership Architects. Structural and Civil Engineers; Clancy Consulting. Mechanical and Electrical Services Consultants; Rolph Partnership. Cost Management; Aecom.

# Earlham Hall University of East Anglia



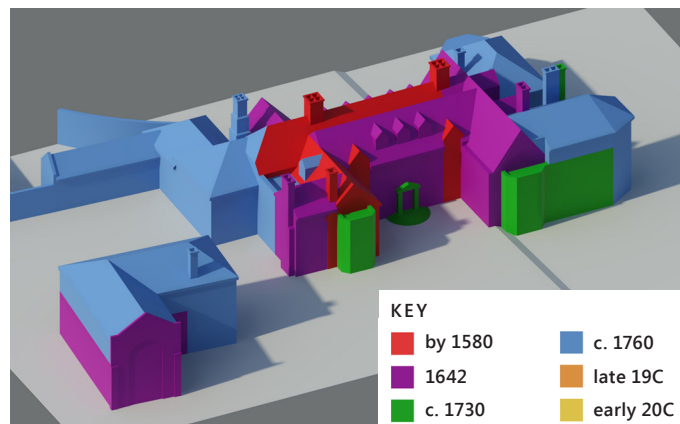


**introduction;** Earlham Hall, the outbuildings to the east, adjoining gardens and former Corporation works yard, were purchased from Norwich City Council by the University of East Anglia in June 2010. From 1962 the building has been leased by the UEA and from the mid-seventies Earlham Hall has been occupied by the University Law School. A project to effect emergency structural repairs was commenced in July 2010 and condition surveys and feasibility studies for refurbishment and alternative use were commissioned.



Earlham Hall July 2010

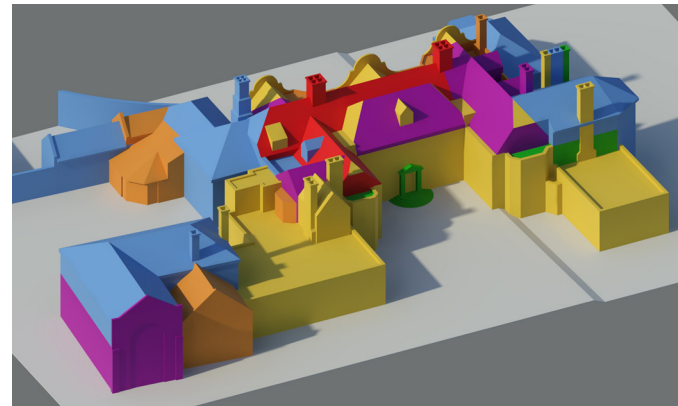
**history and context;** The records for the manor of Earlham show that the Houghtons acquired the estate in 1616 and Thomas Houghton extensively remodelled the house, the core of the present hall, in the 1640's to form a substantial east-west range with cross wings. In 1657 the estate was acquired by the Waller family and in 1682 it passed to Waller Bacon, who became MP for Norwich in 1705. Changes were made to the house during this period and during the ownership of Waller Bacon's son, Edward, up until 1786 when the hall was leased to the Gurney family.



Earlham Hall c.1761 viewed from the north east

John Gurney (1749-1809) was a prominent local businessman and Quaker who, in 1803, became a partner in the Norwich bank. He and his wife Catherine, nee Bell (1754-1792) were associated with some of the leading thinkers and reformers of the period. They and the eldest of their children, including Elizabeth (m.1800 Joseph Fry) who became the social reformer, moved to Earlham Hall permanently in 1786 and the Gurney family, remained as tenants of Earlham Hall until 1915.

The Gurneys made numerous changes to the hall and grounds right up to the early years of the twentieth century.



Earlham Hall c.1910

**repair project;** The UEA Law School has now re-occupied the building following refurbishment to fit the building for beneficial use for the foreseeable future. This is very likely the first full refurbishment since the University took the lease in 1962. Works of maintenance, fire compartmentation and piece-meal additions and alterations had been carried out since purchase of the building by NCC in 1925 through successive roles as a Library, maternity hospital, nursery school and University use.



In addition to the modern alterations vegetation had been allowed to grow over all the external elevations damaging masonry, retaining damp and promoting rot and decay.

The 2012-2014 project had the objective of improving access for all, refurbishing services and fittings and putting the building in good order such that it could, in future, be managed under a routine, regular, maintenance regime. Services and facilities have been upgraded and include lecture capture AV, a platform lift and internal ramps. Intrusive modern elements have been removed and historic fabric revealed and conserved. A footpath to the east links Earlham

Hall and the courtyard outbuildings to University Drive via the Exemplar site and provides a fitting approach to the new east entrance and reception for the Law School.

The main contractor, Kier Construction, commenced works on site in July 2012. Further asbestos was encountered and in September 2012 the building was closed to the contractor for 3 months to allow further survey and removal. This work involved extensive opening up, the lifting of all floor boards, removal of some panelling, wall linings and modern coverings revealing elements of structure and fabric previously concealed.



Temporary works to support the main range roof and second floor were delayed and it was only in March 2013 that access became available and repair works could be defined and agreed. Above the first floor windows of the south elevation successive alterations had been carried out resulting in a band of walling from this level through the second floor zone which had no integrity. On this mixed construction the centre gable had been constructed, c. 1910, adding approximately 4 tons of brickwork to the south elevation of the main range.

It was necessary to dismantle the centre gable and re-build the south elevation above the first floor windows. The masonry was dismantled course-by-course and each brick marked for re-building in the same location. 95% of the bricks were re-used and the mortars carefully matched to the existing to reflect the campaigns of previous repairs and additions. The dismantling revealed, at the head of one of the first floor windows, a brick scored with a pentangle and the numerals 666. This may have been a protective curse added by the mason. A likely date for this would be the 1640's when East Anglia was embroiled in religious conflict and witch hunts. A period when opposing beliefs could readily be equated to heresy or evil.

