

Case Study

Halton House, Aylesbury



Craftsmen in the
Conservation of
Historic Buildings

Conservation and repair of the Belvedere Tower.

This elaborate 1883 Listed Grade II* French-style mansion has been the home of the RAF since 1918. In 2014 Ellis and Co competed a project to remove, restore and replace The Belvedere, a two story tower that sits proudly on the roof at the centre of the mansion. The 2011 storms raised concerns about its safety and further investigation uncovered erosion in the original lead-coated wrought iron and wood structure. Our brief was to conserve as much of the original structure as possible and undertake sympathetic repairs. We commissioned special scaffolding and cranes capable of lifting the 10 tonne structure which was taken for restoration at our workshops in Shepton Mallet, Somerset. The new complete structure remains very much as was first constructed, with the addition of galvanised steel in place of corroded ironwork, and new lead replacements in areas that that were found to be perished.



The original Belvedere Tower. The whole structure was removed, repaired and rebuilt and craned back into position.

Samples of the original wrought ironwork structure were analysed to identify methods of construction and the condition of materials. A new galvanised steel structure was built in sympathy and incorporating original materials where possible. Our joiners used reclaimed timbers to rebuild the roof and seasoned battens to build the tower structure. Original wood ornaments were repaired and where necessary replacements were carved. Our lead workers worked with English Heritage to assess the decorative leadwork and where necessary pieces were recast. When complete, the whole structure was craned back into place, secured, and the staircase leading through building and into the tower was restored. The roof was re-leaded and the beautiful iron-railing fall barrier was restored and repainted.



A new steel frame was commissioned to replace the perished ironwork Belvedere structure. This was craned into position, clad in timber, using original restored timbers where possible alongside new inserts, and then covered in lead in accordance with the original design.



Lead and wood was eroded throughout the structure. What could be preserved was, and reclaimed wood was used alongside new materials to recreate the Belvedere wood clad and lead coated structure.