

Astley Castle, Warwickshire

It has been listed as a Grade II* listed building since 1952 and as a Scheduled Ancient Monument since 1994

The completed project was recipient of the RIBA Stirling Award for Architecture in 2013



Dating back to the 13th century the site has been owned by three Queens of England and has been owned by The Landmark Trust since the 1990's. The castle was on the verge of collapse after a fire in 1978 and far beyond a conventional restoration project. An architectural competition was held to design a Landmark for the 21st century, where unequivocally modern living accommodation was clasped within the shell of the ancient Castle. Modern architecture was, unashamedly but sympathetically stitched into ancient fabric to provide modern living accommodation.

Conservation engineers Mann Williams devised an appropriate and sympathetic solution to stabilize the whole structure utilizing the Cintec anchor system.



ASTLEY CASTLE – STRUCTURAL REPAIRS SCHEDULE 01 – option 1 (Rev A)

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North End of East Elevation – Proposed

Cintec RWT 15 Consolidation Anchors 1200mm long, min 600mm into masonry return.

Cintec 10mm RAC Consolidation Ties, in 25mm diameter hole, 1 length to suit wall, (allow 400mm).

Existing timbers replaced with like-for-like Oak lintol, air dried to approx 12% moisture content. (See Detail A)

Cintec 10mm RAC Consolidation Ties, 550 Long in 25mm diameter hole

Cintec Stitching Anchors in pairs, 16mm stainless steel rebar x 9.5m long in 38mm diameter core, (See Detail B)

Notes:-

1. Stone cores from face of wall to be retained and reset following installation of anchors to achieve concealed repair/strengthening, or repair mortar to be constructed from crushed extracted cores.
2. All general stone and brickwork repairs, repointing, removal of timber shutters etc. to be confirmed.



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Given the extreme decay and degradation of the masonry this structure was a real challenge. The elements and vegetative growth had taken its toll on the “earth” lime mortar with many areas of missing and loose stones. The main external walls were strengthened longitudinally over the openings and the separating leaves of the wall tied together with consolidation anchors.

The Cintec anchors worked extremely well in the old mortar and holes were drilled using mining-barrels to keep out the debris of the wall before inserting the anchors through the drilling barrels. Subsequently the barrels were removed, and anchors grouted.



After careful recording, those parts of the building beyond pragmatic repair were taken down. The new-build introduced also consolidates and ties together what could be saved of the original fabric as unobtrusively as possible, leaving the Castle's form in the landscape largely unchanged. There was further work on the wider setting, including repairs to the curtain walls and moat, and the 18th-century Gothick stable block.

All images courtesy Mann Williams LLP