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St John the Baptist, Bishop's Tawton, Devon (Diocese of Exeter)

Wall monuments

Conservation Report



January 2020

Introduction

This report describes work undertaken in January 2020 to a number of wall mounted monuments in St John the Baptist's church, Bishop's Tawton, North Devon. The work essentially followed the proposals set out in our earlier report of July 2018 and was commissioned by Mr David Lewis on behalf of the PCC of St John's church.

The report briefly describes each monument for clarity and explains the condition as found, before detailing repair and conservation work undertaken in this project. It is illustrated with digital images.

1. Anne Hulton d. 1834

Location

South wall of the chancel

Description

Dimensions (mm): H: 1300 W: 990 D: 230 Base at: 2500

An inscription panel framed by a Gothic arched surround with cornice adorned with paterae and brattishing, supported on two corbel brackets

Materials and Construction

The inscription is of Carrara marble; the framing stonework is of French limestone. There is modern polychrome on the heraldic shield.

The monument is supported on the two corbel brackets, which are probably built some way into the wall, and restrained in its upper areas with ferrous cramps.

Condition As Found

Structure

Structurally, the monument was unsafe and close to a collapse of its upper sections. Large fixings and repair cramps of mild steel had been inserted in an apparent earlier phase of repair and these had then corroded, expanded and shattered the surrounding stonework. The arch section above the inscription was broken into many fragments and these had then been unsympathetically repaired with dark grey Portland cement. The lower portion of the monument was apparently stable. The eastern side pilaster was fractured into four fragments and had possibly been dropped during a previous phase of repair work.

Surfaces

The stone of the monument was largely sound, although as mentioned above the arch was shattered in many places with smears of grey cement widespread. Other surfaces were soiled and had drips of old

varnish and paint from re-decoration schemes. The lettering of the inscription had lost much of its paint and become partly illegible.

Conservation Programme

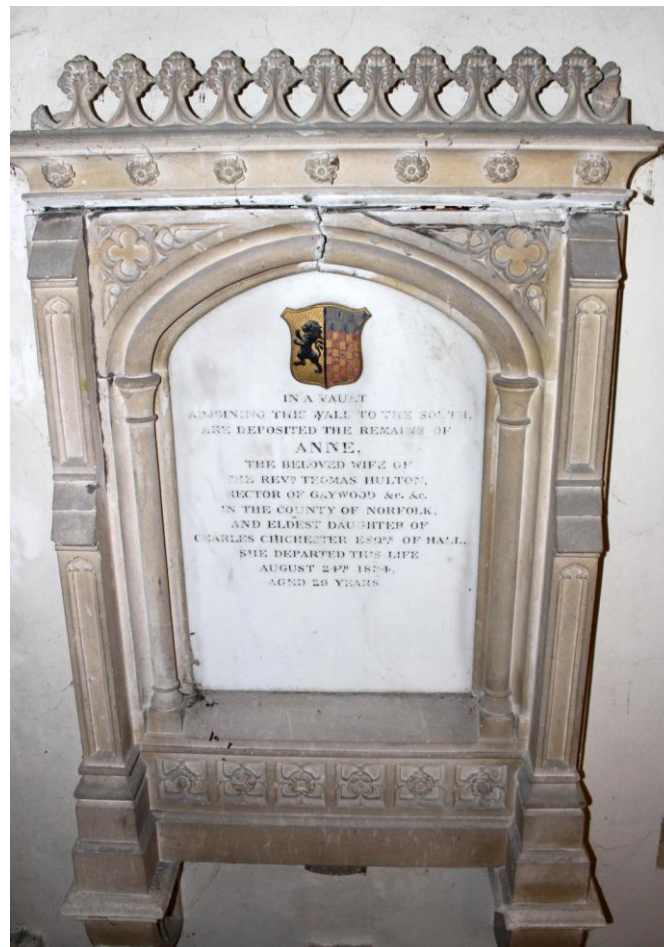
A full fixed scaffold was erected to give good access to all parts of the monument. The monument was recorded with working drawings enabling dimensions to be plotted and assisting in re-erection. Digital images were also taken and some are included in this report. The monument was then partially dismantled down to its lower sections and the dismantled elements stored either on the scaffold or on the floor below.

The arch sections had suffered widespread fracturing from the corrosion of metal repair cramps; all metal elements were removed and the shattered fragments dowed together with stainless steel pins and cramps set in epoxy resin. Gaps and losses were filled with lime mortar matched in colour and texture to the surrounding stone.

Old mortars were removed from joints and old iron stubs were drilled out of the supporting wall. All surfaces were cleaned with V and A mix or deionised water, as appropriate and splashes of varnish and paint were removed with acetone or alcohol as necessary. The lettering of the inscription was touched in with Rowney's acrylic paints to render it legible once again.

The monument was then reassembled and fixed back in place with stainless steel cramps set in polyester resin. Joints were bedded and pointed in lime mortar.

The Hulton monument before work: note cracking in joints





Closer views of the cracking in the structure



Top photo: dismantling in progress, showing large iron clamp; below, fractured stones laid out before repair



Top: arch section being repaired. Bottom: the iron elements removed from the monument





The Hulton monument after work



2. Joseph Yeomans d. 1826

Location

North wall of the chancel

Description

Dimensions (mm): H: 1630 W: 1000 D: 120 Base at: 2750

An inscription with pediment over and supported on a plinth with two corbels; all of this carried on a backing slab itself supported on two wall corbels

Materials and Construction

The inscription and associated ornamental elements are of Carrara marble. The backing slab and its corbels are of black Carboniferous limestone.

Lettering is picked out in black oil based paint.

The monument is essentially carried on the two small black stone corbels built into the supporting wall and then restrained to the wall with ferrous cramps. The white elements are fixed to the backing slab.

Condition as Found

Structure

The monument had a sizeable crack down the rear joint with the supporting wall, and further open joints in the upper part of the structure. Surveys with a metal detecting instrument revealed ferrous metal in the lower part of the monument as well, necessitating its removal, as it was clear that corrosion was already advanced.

Surface

The monument's surface was lightly soiled but otherwise sound. Some of the lettering of the inscription was faded or had lost all its paint.

Conservation Programme

A full fixed scaffold tower was erected to give good access to all parts of the monument. The monument was then recorded with working drawings to aid re-erection, and with digital images. The structure was then dismantled down to the base section, and all iron elements removed. These were

found to be of interesting design - the section of the fixing buried in the wall was of iron, but this was then attached to a twisted bronze wire fixing that returned into the monument to restrain it. In this way, the original builders ensured that the iron staining that rusting would have caused in the white marble was avoided, but unfortunately they were unable to avoid the expansion and disruption caused by the iron section of the fixing in the wall.

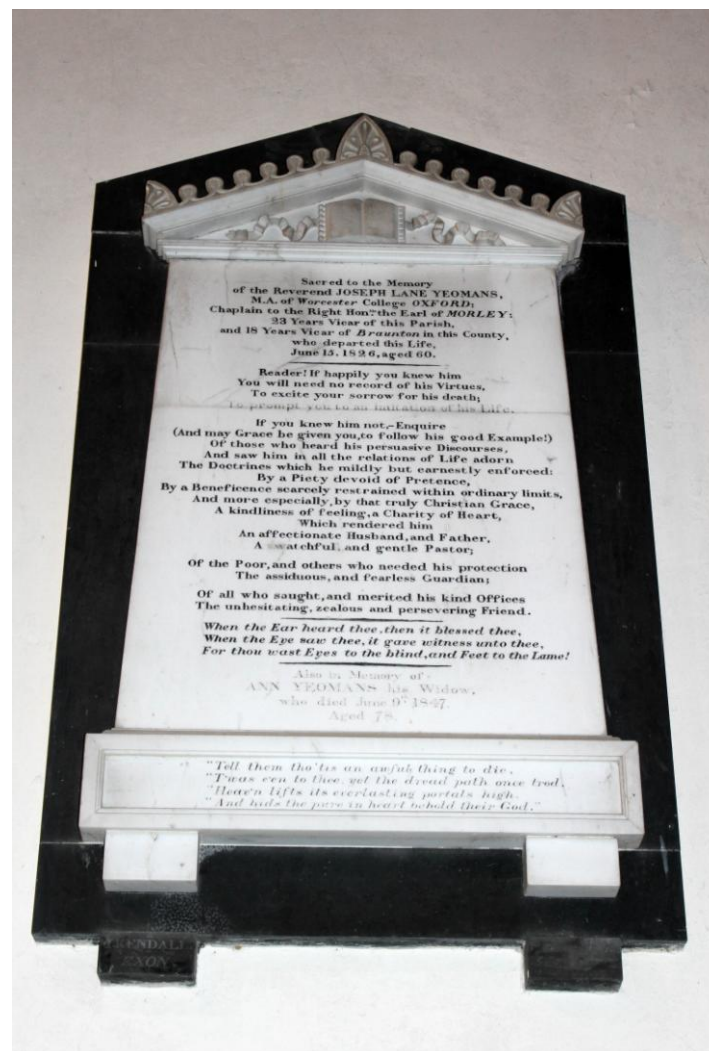
Dismantling revealed that the major failures were in the upper part of the monument, where the black point to the obelisk had been backed on to a piece of Portland stone, itself repaired with several large iron cramps. These were all in a very poor state and had fractured the stone around them.

Iron elements and old fixing stubs were removed from both the wall and the monument, and shattered stones were pinned together with stainless steel dowels and epoxy resin. The thin black limestone sections of the obelisk point were then reattached to the Portland stone backing with plaster.

The monument was then re-erected using stainless steel cramps, polyester resin for wall anchors, and lime mortar or plaster for bedding and pointing, as appropriate.

Surfaces were lightly cleaned with V and A mix applied on cotton swabs and removed with water. Letters that had become illegible were retouched with Rowney acrylic paints.

The Yeomans monument before work began





Above: open joints in the structure, caused by corrosion of fixings



Top right: one of the original composite cramps, part iron and part bronze

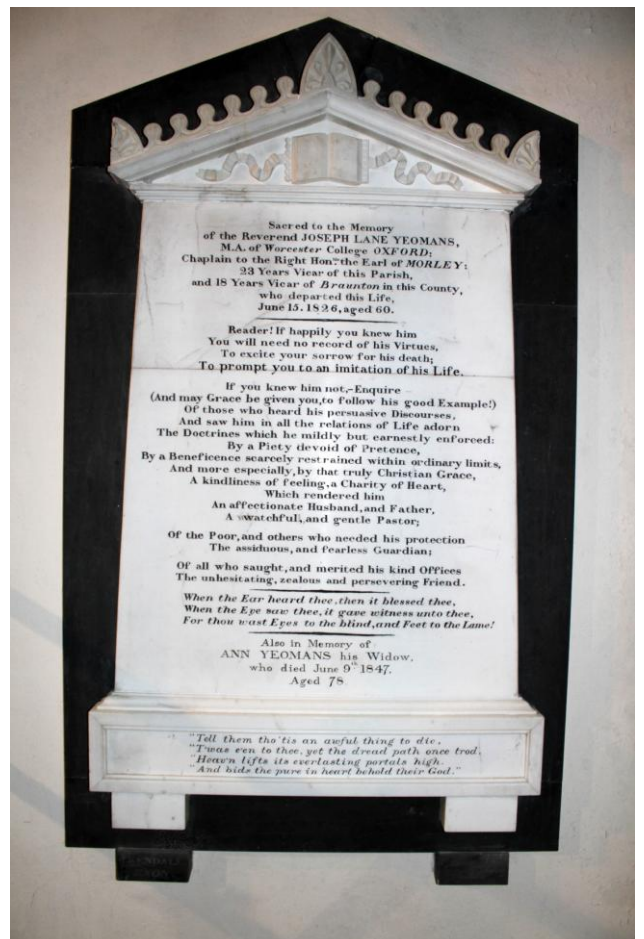


Lower right: a new stainless steel cramp inserted



Left: rebuilding in progress

Below: the Yeomans monument after work



3. John Pyke d. 1810

Location

South wall of the nave

Description

Dimensions (mm): H: 650 W: 870 D: 65 Base at: 2200

An oval inscription with rectangular backing slab, carried on two corbels ornamented with arrow decoration

Materials and Construction

The monument inscription is of Carrara marble, the backing slab of ornamental Italianate marble

This simple plaque is supported on corbels built into the wall and restrained with top cramps of ferrous material.

The expensive marble surface sections are all attached to a base slab of Portland limestone, to gain maximum effect with minimum expense. The surface panels are cramped back to the Portland stone with small visible cramps of mild steel.

Condition As Found

Structure

The monument was well supported on its built in marble corbels, but had been fixed together with small ferrous cramps, and these had corroded, damaging the surrounding stone and opening up the joints in the structure. Dismantling revealed also iron fixings holding the monument to the wall, and iron nuts in the rear, tying the oval inscription to the Portland stone backing section. One section of the ornamental marble surround had been displaced from its backing.

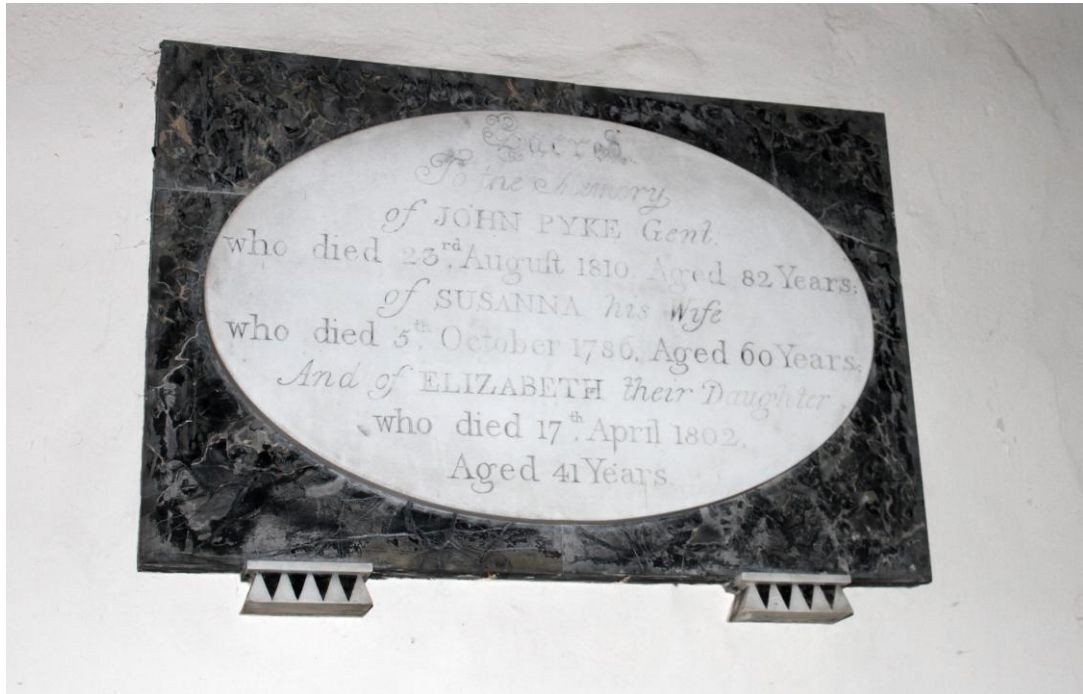
Surface

Surfaces were sound but lightly soiled.

Conservation Programme

A small mobile scaffold tower was erected to allow removal of the plaque from the wall. The plaque was recorded with working drawings and digital images. It was then released from its main fixings and removed from the wall. All iron cramps and other fixings were removed with fine drills and replaced with stainless steel cramps of similar form, fixed in epoxy resin. Cramps were overfilled with lime mortar and toned in to match the surrounding stone.

Surfaces were cleaned with V and A mix, producing a satisfactory result. The monument was then reinstated in position and fixed back to the wall with further stainless steel cramps and polyester resin. The joint around the edge was then re-pointed with lime mortar.



The Pyke monument before work began



Above: the Pyke monument after work and right, the west side of the monument



Location

West wall of the nave

Description

Dimensions (mm): H: 930 W: 700 D: 100 Base at: 2000

An inscription surrounded by a frame with four centred arch, a crenellated cornice and a plinth moulding

Materials and Construction

The monument inscription is of Carrara marble; the frame is of fine grained limestone, probably French.

The monument has a concealed fixing system. Most likely, the base section including the plinth moulding, is built some way into the wall and carries the rest of the structure.

Condition As Found***Structure***

The monument had endured extensive cement repairs, indicating a longstanding problem of structural disruption. Further disruption and cracking of these repairs and adjacent stone was evident, the result of iron corrosion.

Surface

Surfaces of the limestone frame were disfigured by cement and otherwise somewhat affected by damp penetration, and soiled. The Carrara inscription had some dribbles of varnish or similar and much of the lettering had lost its paint.

Conservation Programme

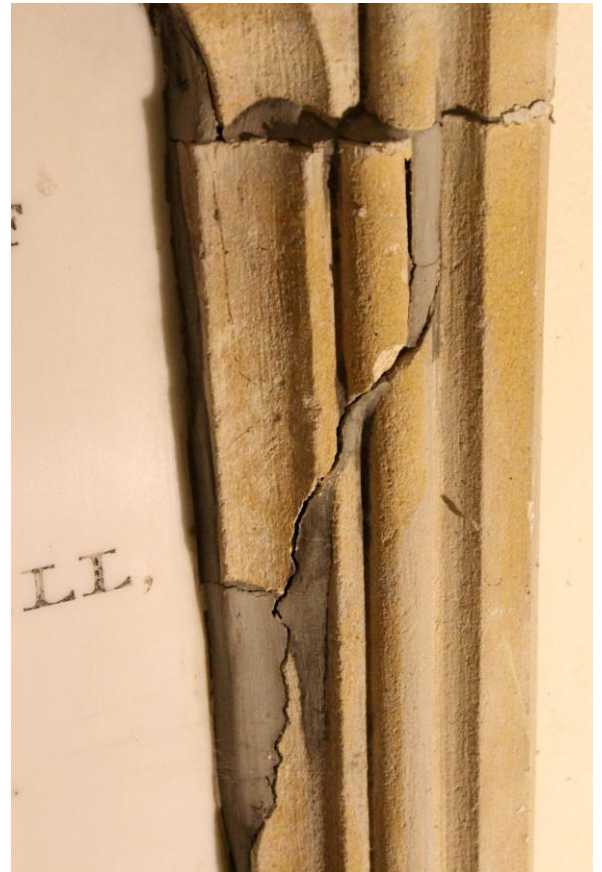
A small mobile scaffold tower was erected to allow removal of the monument from the wall. The monument was recorded with working drawings and digital images. It was then dismantled as far as the base section, which itself was sound and stable. Cement repairs and all iron elements were removed from both the monument and the supporting wall. Surfaces were cleaned with deionised water or V and A mix on cotton swabs as appropriate, and varnish and paint dribbles were removed with solvents.

The monument was then re-erected with stainless steel cramps, polyester resin for wall anchors and lime mortars for bedding and pointing. Losses were filled with lime mortars matched to the colour and texture of the surrounding stone.



Above: the Snell monument before work

Right: the cracking and old cement repair showing a longstanding problem of deterioration





Left: iron cramps buried in the structure

Below: the arched section of the monument under repair

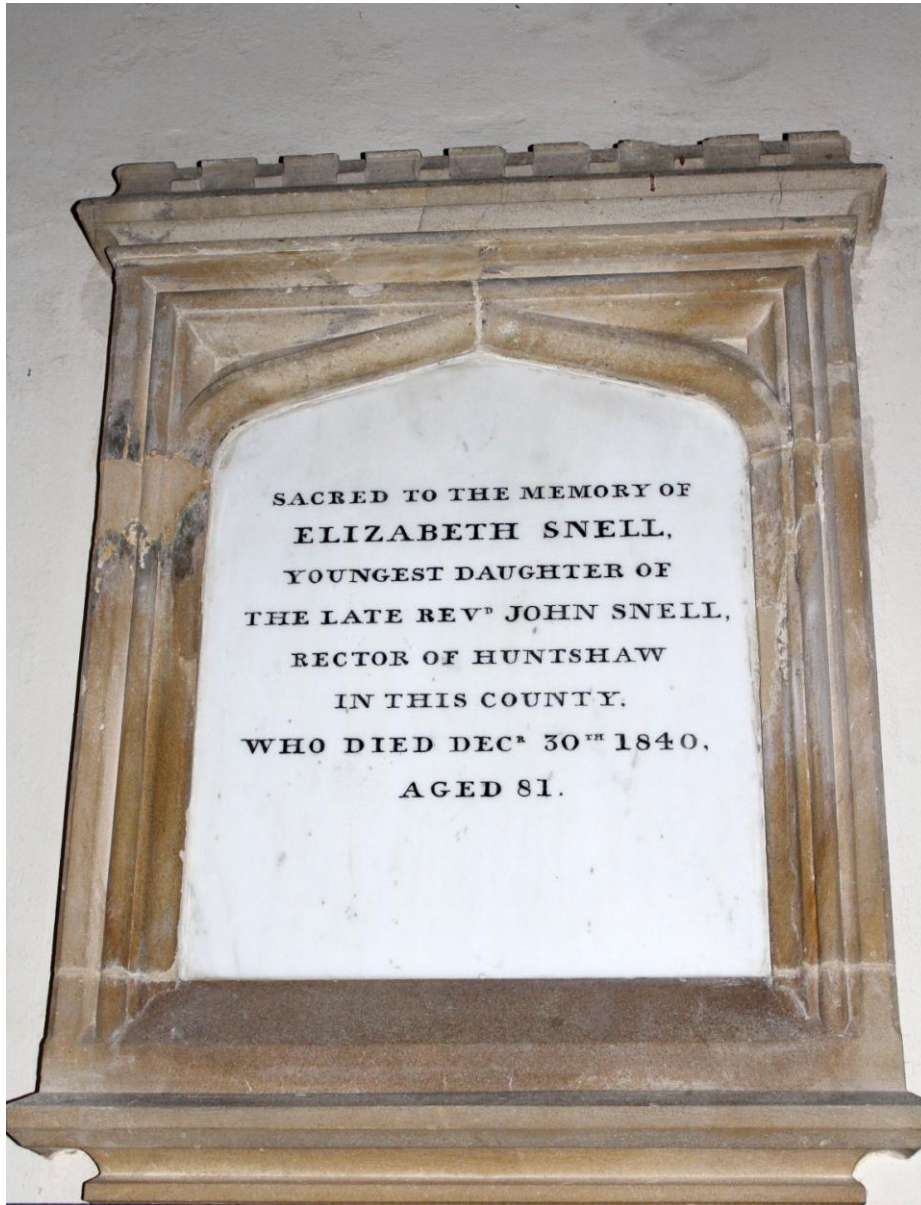




Work in progress: left, dismantling and below, re-erection



The Snell monument after work was completed



5. Mary Anne Rooke

d. 1831

Location

East wall of the vestry

Description

Dimensions (mm): H: 730 W: 755 D: 110 Base at: 2000

A simple rectangular inscription plaque, with cornice and two corbels, backed on a slab itself supported on two corbels.

Materials and Construction

The inscription is of Carrara marble; the backing slab and its corbels are of veined Italianate marble.

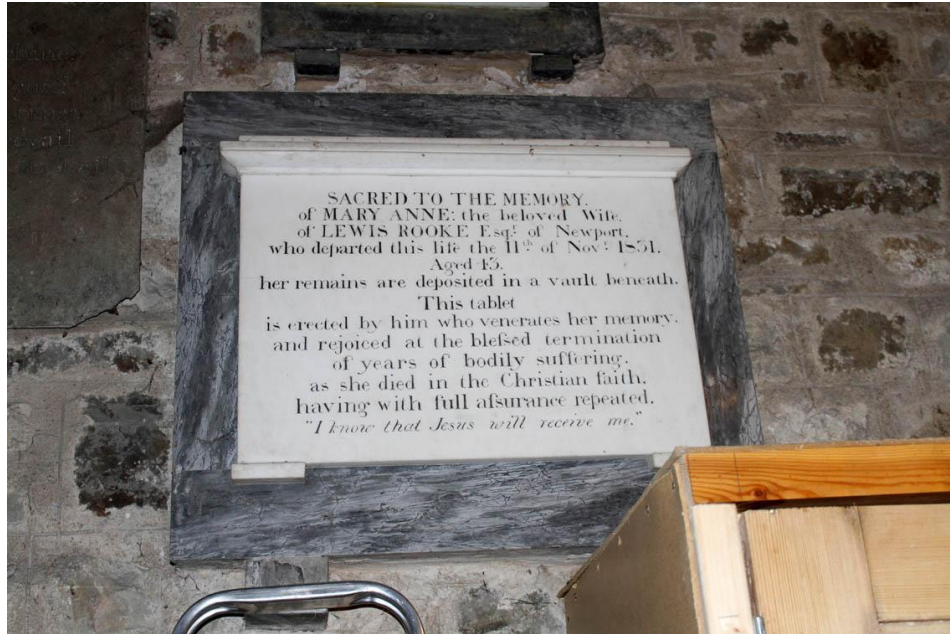
The monument is supported on the built-in corbels and restrained with ferrous cramps above.

Condition As Found

The monument was well supported on its built in stone corbels, but there were three corroded ferrous top fixings in a poor state.

Conservation Programme

An access platform was erected to give access to the monument. The top fixings were then progressively drilled out and removed, and replaced with two flat bar stainless steel fixings set in to the wall in polyester resin. Hole in the top surface of the monument were filled with lime mortar.



Above: the Rooke monument after work and right, a new fixing bedded into the top of the plaque



Appendix: Materials

Resin	Epoxy resin Iridium supplied by DZambelis Ltd, London
	Polyester resin J-Fix, supplied by Western Bolt and Engineering co Ltd
Lime	Quicklime Calbux 90 supplied by Rose of Jericho Ltd
	NHL 3.5 supplied by Rose of Jericho Ltd
Stone dusts	Ham Hill stone dust supplied by Limebase Ltd
	Bath stone dust supplied as above
Sand	Moreton Cullimore Coarse, supplied by Rose of Jericho Ltd
	W60 washed pit sand, supplied as above
Detergent	Synperonic A7 non-ionic detergent, supplied by Conservation Resources Ltd
Solvent	Shellsol T, supplied by Laboratory Analysis Ltd

