

# St. Mary the Virgin

## Aylesbury, Buckinghamshire

### PROJECT TEAM

Client:  
DCC of St. Mary's,  
Aylesbury

Architect:  
Caroe & Partners

Structural Engineer:  
Frank W. Haywood  
& Associates

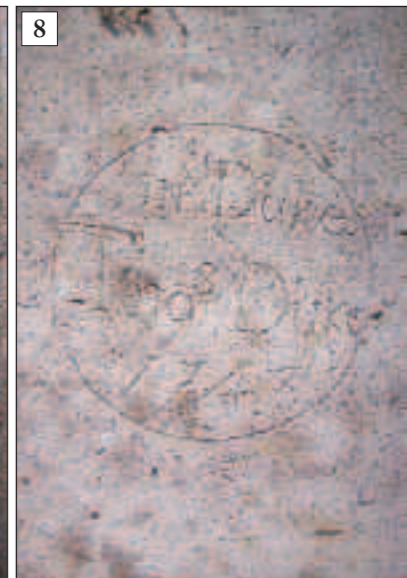
CDM Coordinator:  
Halstead Associates

Ecologist:  
Bernwood ECS

Contractor:  
Cliveden  
Conservation  
Workshop Ltd

St. Mary's Church, Aylesbury, is the county church for Buckinghamshire, located in a cathedral-like close set in the heart of the old town. Construction of the present building was begun on the site of former Saxon and Norman churches in the thirteenth century, with additions in the form of chapels, including a

The walls of the church are generally constructed in random-coursed rough-faced limestone, with dressed Bath Stone quoins and mouldings. The majority of the roofs have lead coverings, including the spirelet to the central tower, all of which discharge into a combination of cast iron gutters and downpipes.



- 1> Lady Chapel prior to the works: view from the south-east
- 2> Interior of the Lady Chapel
- 3> Ceiling of the Lady Chapel
- 4> Leadwork prior to the works: view to the north-east
- 5> Leadwork prior to the works: view to the north-west
- 6-8> Examples of graffiti found on the existing leadwork

The first major phase of works to be considered was the re-leading of the Lady Chapel roof. Fr. Shane Wood, the rector of St. Mary's, was successful in securing a grant for partial funding of these repairs from Buckinghamshire Historic Churches Trust, and Caroe & Partners was appointed to draw up a specification of work and to seek suitable tenders.

The structure of the chapel roof comprises a series of timber trusses, with posts supporting the ridge beam and purlins; close-spaced rafters span between these to support a boarded roof [3]. The roof of the chapel is of shallow pitch, and was covered in lead sheet of irregular widths, draining to gutters concealed behind stone parapets on the north and south elevations [4, 5].

During an initial inspection of the roof, various inscriptions were found in the leadwork, particularly on the more sheltered north slope. These dated back to the mid-eighteenth century, and included one which reads, "H. Pricketts / 1815 / His Foot / Aged 11 years," incised within what appeared to be the outline of a small shoe [6]. Others record the names of "John Wheeler / Isaac Wheeler / George Duke / 1743," neatly written within a precisely-drawn circle [7]; and Jno [John] Duke / Thos [Thomas] Duke / 1748," similarly circumscribed [8]. These inscriptions give an

of the new coverings, as the existing lead sheets were considerably larger than those recommended for use today, and the gutters somewhat shallower, with long, uninterrupted falls to the rainwater outlets. While it was necessary for the replacement roof coverings to reflect the form of the original as far as possible, some modifications would clearly be required in order to meet current standards.

To the pitched roof slopes, therefore, instead of a single lead sheet from ridge to gutter, two sheets were used, with a long lap to achieve the required vertical coverage and to prevent water ingress via capillary action. Similarly, the bays were made narrower to conform with current requirements for thermal expansion and regularised in width to minimise wastage.

To the north gutter, as the existing outlets were located towards the middle of the roof, the new leadwork could be designed in a similar way to the existing, with only minor modifications to the falls. To the south gutter, however, there was only a single outlet at the east end making it impossible to set out the leadwork in the same manner, whilst also incorporating the new drips and falls required by present-day standards. It was therefore decided to add an additional sump outlet and downpipe at the west end, and to drain this gutter in both directions.

Lady Chapel to the south-east, built during the fourteenth century [1, 2]. Further enlargements and modifications were made in the fifteenth century, and in the seventeenth century, a clock and spirelet were added above the existing tower. The church was extensively restored during the eighteenth century and was Grade I listed in 1952. The church continues to play an important role in the spiritual, community and cultural life of the town, and maintains various facilities, including an office and a large kitchen, as well as a small café and toilets, for the use of visitors.

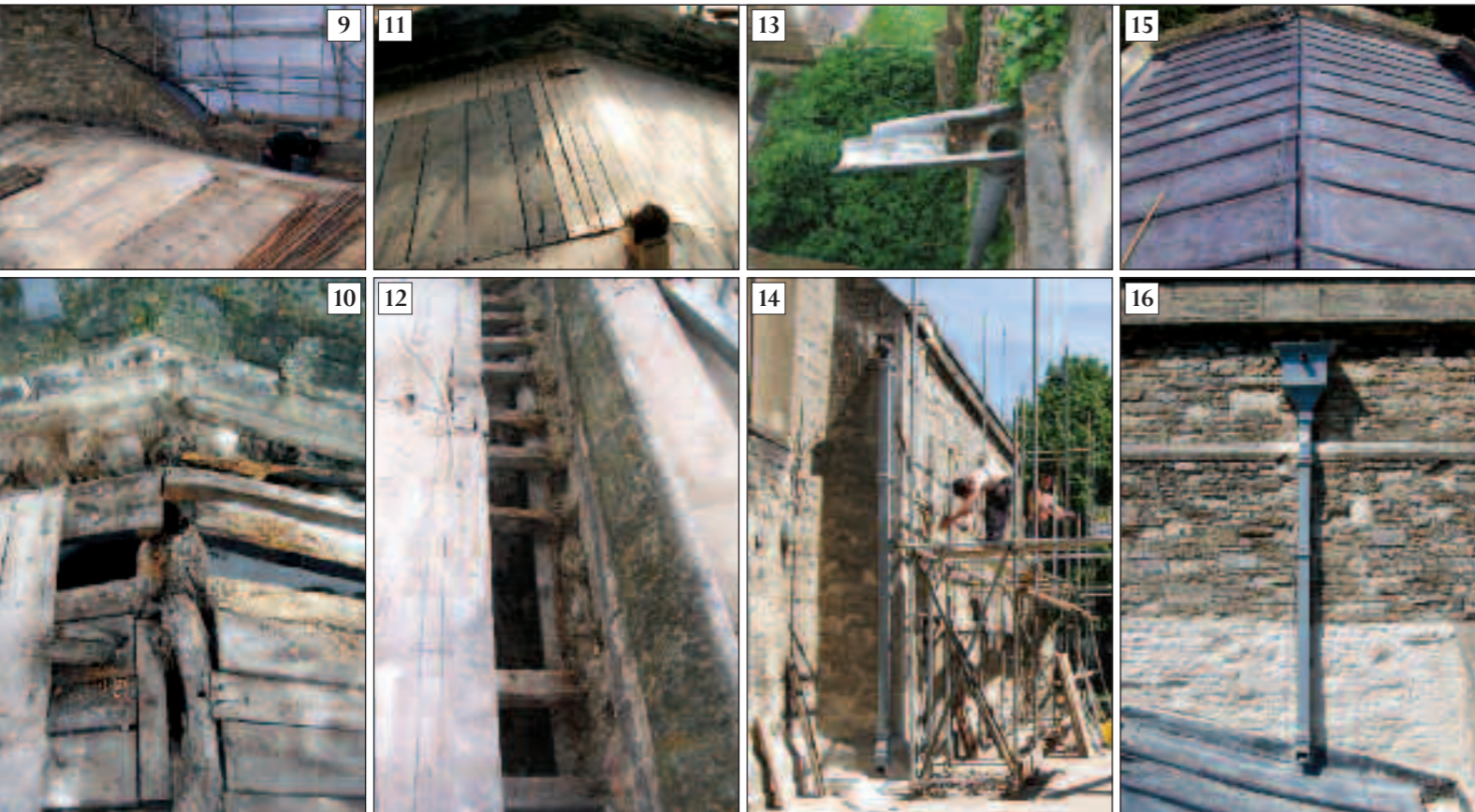
Patrick Crawford of Caroe & Partners was appointed as the church's inspecting architect in 2002 and carried out his first quinquennial inspection of the building in 2005. While the church was found generally to be in a reasonable state of repair at this time, particular concerns were raised with regard to the condition of the leadwork and associated rainwater disposal system to several of the roofs, as well as to the condition of much of the external stonework. It was therefore recommended that a phased programme of repairs be undertaken.

Parish Church of  
St. Mary the Virgin  
St. Mary's Square  
Aylesbury  
HP20 2JJ

interesting insight into those who may previously have been on the roof, and perhaps also the names of the lead plumbers who laid the original coverings. After a service life of over 250 years, however, the leadwork was found to be in a poor state of repair, with slumped bays, numerous pits and scratches, as well as patch repairs of various kinds.

Given the poor condition of the lead, and in order to conserve the fabric of the Lady Chapel for the long-term, it was decided, in consultation with the client and the DAC, that the most suitable form of repair would be complete re-leading. This, however, presented various challenges in terms of the design

In addition to the re-roofing works described above, and a new below-ground connection from the new downpipe to the sewer, various other repairs were also included in the contract specification. These included stonework repairs to the parapet walls, re-pointing, overhauling and redecorating the rainwater goods, and a provisional sum allowed in respect of timber repairs to the roof structure. To discourage theft, the application of Smartwater to the both the new lead coverings and to the existing metal roofs in other areas of the church was also included in the specification. > 38



- 9> Existing boarding following removal of the lead
- 10> Decayed ridge beam and rafters to the east end of the chapel
- 11> New timber boarding replaced following repairs to the structure at the east end
- 12> Existing gutter bearers to the south of the roof
- 13> Existing lead overflow chute to the north elevation
- 14> New lead overflow chute and downpipe to the south-west corner
- 15> New leadwork to the roof
- 16> Redecorated rainwater goods and sheltercoated stonework to the west of the chapel

#### A PERSPECTIVE ON THE LADY CHAPEL RESTORATION BY THE RECTOR OF AYLESBURY, FR. SHANE WOOD

In these hard economic times it might surprise you to hear of a rector who is happy to hand out redundancy notices. Well, only to the numerous buckets that seemed to be a permanent feature of the Lady Chapel to catch the leaks. Indeed I felt in my first year as rector that a gazebo in the winter was the best way to go through a communion without getting wet. That was until the excellent team of Patrick Crawford and Alex Veal from Caroe & Partners teamed up with Cliveden Conservation to restore the roof to a watertight condition.

Forward planning is the key to a project going smoothly. As Patrick had shown how this was to be done in the earlier restoration of the boundary wall I was confident that all would be in hand and run smoothly. When I say smoothly, no one can guarantee that a building of this age will be in the state you want it to be when you reveal the underside. So it was no surprise to have Patrick calmly talking about structural engineers and not to pre-judge the situation. As it turned out it was sound advice. Having Patrick's wisdom on a project like this and his steady nerve helped keep all of us focused and we soon addressed the issues.

To have a building project with workers on site for three months whilst the daily round of prayer and activities made for a fascinating time. The workers were used to working on buildings only open for brief periods of time. St. Mary's is open seven days a week and serves a wide range of needs. The workers fell into a routine of polite interest from locals and being asked to stop hammering whilst a particular service or concert was on. The goodwill on both sides and a genuine sense of helping keep this ancient church used and cared for helped underpin a healthy working relationship. Of course the homemade soups, cakes and bread and the fairly traded tea and coffee helped keep the body fit for the hard work put in.

St. Mary's has the scale of a small cathedral, with all the usual costs, but on a parish budget. The repairs are only one part of an on-going repair and refurbishment programme. We have been blessed by the recent commissioning of two new high altar frontals. This autumn we will take the opportunity to incorporate the two remaining Victorian frontals into two new frames to bring out the wonderful detail of the frontals. We are also incorporating a new Laudian frontal for the Lady Chapel with a matching background curtain. Also the plans for refurbishment of the high altar rail cushions and choir seating and lighting will further enhance the building.

I hope this project will inspire us to address the next stage of refurbishment. A couple of new lead roofs, a new lot of exterior repair and the re-ordering of the west end will finally allow the dream of putting back into St. Mary's a pipe organ fit for the building and its multiple use over the many years to come.

A faculty for the proposed works was obtained from the diocese, approval of the below-ground drainage design obtained from building control, and the architect's specification and drawings issued for tender in July 2009. Soon after tenders were returned, however, bats were observed both within the church and externally in the vicinity of the Lady Chapel.

Following advice from Natural England, a report was commissioned from Bernwood ECS Ltd, whose Hannah Graves, a registered ecologist, inspected the proposed site and advised that although a license for the works would not be required, the re-roofing works would need to be carried out in accordance with an ecologist's method statement. This required that the works be undertaken outside of the bats' hibernation period: either by the end of November, or during the period March 1 to May 1; and that various additional precautions also be taken during the course of the works.

Following discussion with the rector, it was therefore agreed that the works would be carried out in the spring of 2010, and Cliveden Conservation Workshop Ltd was appointed by the DCC of St. Mary's in late 2009 on the basis of their earlier tender offer.

The works began on site on February 15, 2010 with the installation of protections and the erection of the scaffolding and temporary roof in preparation for the removal of the leadwork from March 1. The ecologist attended site to brief the contractor regarding the possible presence of bats at the start of the works, and again directly following the removal of leadwork to inspect for evidence of recent bat activity. No such evidence was found within the roof structure and the ecologist therefore advised that further inspections would not be required.

As the leadwork was removed, samples of the graffiti were carefully cut out and handed to the client for safekeeping. The timber boarding that was revealed beneath the leadwork formed an undulating surface that had been repaired in various places, but was generally found to be in a reasonable state of repair [9]. Some small areas of boarding were replaced or re-fixed to remove significant steps; but in general, the surface was retained.

Of greater concern was the east end of the ridge beam, which was found to be partially decayed, and appeared to provide little support to some of the adjacent rafters [10]. The structural engineer Clive Haywood was appointed to carry out an inspection of these members, and advised that although there was some loss of material, the spans were relatively short, so only minor strapping would be required. These repairs were carried out, along with other works to secure the ends of the rafters, to isolate timbers from the masonry where possible, to make repairs to the wall, to replace defective boarding [11], and to provide a timber fillet for the leadwork at the junction with the masonry.

While timber to the roof slopes was retained as far as possible, the existing gutters were removed in their entirety and reconstructed to new levels [12]. Proposed modifications to the south gutter were found to be feasible, and an outlet was provided through the buttress at the west end, incorporating a new lead overflow chute to match those elsewhere on the chapel [13, 14]. New timber rolls were provided to the whole roof surface, and the leadwork laid in accordance with the specification [15].

Repairs to the parapet walls involved the replacement of several coping stones, and, following analysis of the existing stone, a Bath Stone from Hartham Park quarry was found to provide a good match. Other plastic repairs were carried out to the stonework using a lime mortar, and a lime sheltercoat was applied to the friable stonework at the west end of the roof [16], all colour-matched to the existing stonework.

The rainwater goods, which consisted of lead overflow chutes and cast-iron downpipes were generally removed, overhauled, redecorated and fixed back in position. The gullies to the east of the chapel, however, they were found to be blocked solid, causing the downpipes to block up and eventually split at low level. These lower sections were therefore replaced, and the gullies cleared.

The works were completed in June 2010 and the DCC of St. Mary's is now considering applications for further grant funding in order to address the other priorities set out in the Quinquennial report.

In this regard, it is hoped that the next major project to be undertaken will be a similar re-roofing project to the baptistery and refectory, both located to the south of the nave. ■

#### Further information

Contract Type:

*JCT Minor Works Building Contract 2005*

Contract Sum:

£59,715.82

Sources of External Funding:

*Buckinghamshire Historic Churches Trust*

**CLIVEDEN CONSERVATION**

For the Conservation of Statuary, Mosaic, Mosaics, Monuments, Plasterwork & Decorative Arts

www.clivedenconservation.com

01494 451111

01494 451112

01494 451113

01494 451114

01494 451115

01494 451116

01494 451117

01494 451118

01494 451119

01494 451120

01494 451121

01494 451122

01494 451123

01494 451124

01494 451125

01494 451126

01494 451127

01494 451128

01494 451129

01494 451130

01494 451131

01494 451132

01494 451133

01494 451134

01494 451135

01494 451136

01494 451137

01494 451138

01494 451139

01494 451140

01494 451141

01494 451142

01494 451143

01494 451144

01494 451145

01494 451146

01494 451147

01494 451148

01494 451149

01494 451150