

Archaeological Investigations Ltd

Mathern Palace Mathern MONMOUTHSHIRE

Archaeological survey of the roof.



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ARCHAEOLOGICAL INVESTIGATIONS LTD

Managing director: A Boucher BSc MIFA

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**Mathern Palace, Mathern, Monmouthshire:
Archaeological Survey of the Roof, HAS 816 2009**

Text: D.Rouse

Illustrations: D.Rouse (except original Architects drawings by Gerald Eve)

Fieldwork: D.Rouse, S.Mayes, A. Boucher

For: Gerald Eve/Corus

Cover picture: Working in Roof 2 over the chapel

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1 Summary

Project name: Mathern Palace, Mathern

Location: Monmouthshire

Grid reference: NGR SO 52340 90832

Type: Archaeological Survey of the Roof

Client: Gerald Eve/Corus

Planning Application: DC/2006/00551

The project arose in response to a commission from Gerald Eve to carry out an internal historic building survey of the roof timbers prior to consolidation work on the roofs at Mathern Palace, Mathern, near Chepstow (Figure 1).

The proposed works were considered likely to affect a Listed Building (Grade II listed) and a site of archaeological significance. Work was undertaken in accordance with PPG 15.

The main aims of the project were to identify archaeological features in the areas affected by the proposal (roofs 2-6), through inspection of the internal timbers and trusses. The archaeological works took the form of surveying and recording the Mathern Palace roofs prior to repairs to the timber structure and replacement of the roof.

The findings of the survey were that a few features of potential historical interest survive within some of the inspected roof spaces. These features included a wall plate in Roof 2, joists throughout (that were not affected by the proposals), and possibly original trusses, rafters and purlins in Roofs 3 and 4.

2 Introduction

The project came in response to a commission from Gerald Eve, Chartered Surveyors and Property Consultants to carry out an internal historic building survey of the roof timbers of roofs 2-6 prior to consolidation work, to encompass initial inspection of the roof timbers and trusses of the Palace buildings and recording of historic timbers within the roof space.

The survey of the roofs was carried out between 23/07/07 and 05/02/09.

The proposed works were considered likely to affect a Listed Building (Grade II listed) and a site of archaeological significance. Work was undertaken in accordance with PPG 15.

The archaeological survey was conducted because *Gerald Eve* intended to repair the roof and replace some of the timber structure with new timber. No archaeological building recording work had been previously undertaken on the site as far as is presently known.

2.1 Topography and geology

The Palace and its associated buildings lay within the southern part of the modern settlement of Mathern, in the medieval core of the settlement, divided from the more modern village (also known as Newton Green) by an elevated section of the M48.

It is on the border of two zones of underlying geology where Triassic mudstones meet outliers of Tournaisian and Viséan formations of the Carboniferous Limestone Series. The site was centred at NGR ST 52340 90832.

3 Aims and objectives

The project was considered likely to produce results that would be of local/regional archaeological importance.

The main aim of the project was to enable archaeological features to be identified and recorded in the areas affected by the proposal.

The main objectives of the work were to:

- a. To inspect internal timbers and trusses of the palace building roofs.
- b. Identify the date and nature of features being investigated.
- c. Assess survival, quality, condition and relative significance of any archaeological features and structures within the study area.
- d. Produce a record of those features.
- e. Produce a report.
- f. Deposit an ordered archive in a recognised depository.

4 Method

The scope of the work encompassed rapid background documentary research, an internal historic building survey of the roof timbers prior to consolidation work, to encompass initial inspection of the roof timbers and trusses of the Palace buildings and recording of historic timbers within the roof spaces of Roofs 2-6 (see Figure 4).

Rapid documentary research into the history of the building was undertaken through the following sources

- Sites and monuments record held by Glamorgan-Gwent Archaeological Trust
- Gwent Record Office, Cwmbran
- Royal Commission on the Ancient and Historical Monuments of Wales
- Cartographic evidence
- Geology and soils maps
- Secondary sources.

A drawn record of the roof structure had been made by Gerald Eve, including sections at each truss. The building recording involved the annotation to and collation of these existing 1:50 survey drawings (plans and elevations). Particular emphasis was placed on identifying original timber features.

The Gerald Eve roof plans and truss elevations had been drawn for use as a timber schedule, to locate timbers that needed repair or replacement, not as an archaeological record. The drawings were used as a guide and the plans and truss elevations were annotated where details that needed recording were found. A small amount of the roof structure in Roof 2 may pre-date the post 1894 renovations, as did parts of roofs 3 and 4.

A photographic record consisting of high quality digital and black and white 35mm prints was made. This included both general shots and details of individual features/fixtures.

Site visits were made by qualified archaeologists to carry out the recording of the roof structure as and when access to the roofs was made available, and following contact from Gerald Eve.

Any archaeological features found to be present were to be recorded at a scale of 1:20, and photographed using 35mm black and white negative and colour film.

Notes and sketches were made in a site notebook during all stages of the survey carried out on site.

The code of conduct of the Institute of Field Archaeologists was adhered to, in particular Standards and guidance for archaeological investigations and recording of standing buildings or structures (revised 2001).

5 Historical and archaeological background

A church at *Merthir Teudric* is mentioned in the Llandaff charters (Ref: LL141) c. AD 620 and this is taken to be a precursor of St Tewderic's church at Mathern, to the north-east of the Site. Legend has it that Tewderic, King of Glamorgan died at a nearby well and ordered that a church be built on the spot.

Mathern Palace, one of the former residences of the Bishop of Llandaff, stands to the south of the churchyard. The oldest surviving standing fabric is thought to be 15th century in date, and built by Bishop de la Zouche.

The remains of the medieval palace comprise a stone two and three storey house (partly ruinous) with a tower attached to the north. In the early 16th century a chapel, refectory and kitchens are thought to have been added by Bishop Miles Salley. Bishop Godwin carried out further works in the late 16th and early 17th centuries, which may have included a rebuilding of the kitchens. However, these only presaged a long period of decline and the last bishop to reside in the building was William Beaw (d. 1705). It continued to be maintained until the episcopate of Shute Barrington (1769-82) when the palace was partially dismantled and let to a farmer with the demesne land. It belonged to the see until the death of Bishop Ollivant (1883) when it passed to the ecclesiastical commissioners by act of parliament. In 1889 it was sold to George Carwardine Francis, who sold in on to Henry Avray Tipping in 1894 (Bradney 1933, 63-4).

By this time it had sunk to "the sordid untidiness of a hopelessly ill-contrived and un-repaired farmstead" (Avray Tipping, quoted in Cadw/ICOMOS 1994) and Tipping instituted a campaign of renovation and rebuilding, both of the main house and the surrounding buildings, he also laid out the gardens. Much of this process is outlined in the Sales Particulars of 1914 (Gwent Record Office D 25.1407). Annotation to this document shows that bidding reached 7,350 guineas (or pounds) before it was withdrawn, but in 1923 it was sold to Colonel Donald James Campbell Macnabb (Bradney, 64).

The earliest cartographic depiction of Mathern Palace so far found dates to the 1840s and is probably the Tithe Map (Gwent Record Office D1111.10) (Figure 2). On the First Edition Ordnance Survey of 1886 (Figure 3) the building is shown only slightly enlarged from its 1840s plan, with modest extensions to the north, west and south sides. By 1901 the Chauffeurs cottage and Gazebo had been added at the northern end. The building was also enlarged at the south end, with a new block built onto the south side of the chapel, and additional, detached out buildings (Figure 4). The 1921 Ordnance Survey map (Figure 5) shows minor additions including a small extension at the south end connecting the main house to outbuildings. An accurate plan of the Palace buildings as they appear today is included as Figure 6.

The outer court was reached through a gatehouse built by Bishop de la Zouche. This building is likely to have been of three storeys like that at nearby St Pierre, but "After the bishops deserted their home early in the eighteenth century it soon became material for farm buildings.

The saddle-back mouldings of its parapet were found to be most conveniently shaped to form the louvres or ventilating slits of *the barns, of which its side walls still form the ends [our italics]*" (*ibid.*).

All that remains visible of the gatehouse are "the remains of an iron hook on which swung one of the great doors, and the stone doorway into the newel stair which gave access to the rooms above" (the latter is still evident on the southern face of the building to the north of the entrance into the courtyard, i.e. to the north of Gardeners' Cottages).

A stone bearing the date 1419 was in the museum at Caerleon and said to be the date stone of the gatehouse at Mathern Palace (*ibid.*).

No formal archaeological study of the roofs had previously been carried out, and the date of any surviving early parts of the roof structure was not known. Though it was possible that parts of the original roofs could have survived, it seemed likely that most, if not all of the roof would have been rebuilt between 1894 and 1914 by Henry Avray Tipping.

6 Fieldwork results

Repairs and alterations were required on parts of the roof at Mathern Palace. The areas affected by the proposals included roofs 2-6 (See Figures 6-9).

On site recording of the timber roof structure of Roof 2.

Roof 2 was "L" shaped in plan (Figure 6) and covered the early 16th century chapel (thought to have been built by Bishop Miles Salley), and the wing on the adjacent north side. The recording of the roof involved looking for original or potentially early roof timbers, annotating any additional detail to the Architect's drawings (Figure 7), taking digital photographs and additional site notes as necessary.

Access to the roof space had to be gained through a hatch in the bathroom of the Directors suite. A few features had to be added to the Architect's drawings, there were for example too many or too few rafters in some of the roof bays. The short braces that had been added to the rafters as part of an earlier phase of repairs had not been recorded, and three roof trusses had been located on the roof plan, but had not been recorded (ie labelled or drawn in elevation).

Inspection of the exposed parts of roof 2 following stripping.

The roof over the former chapel was stripped and the exposed timber structure of Roof 2 was examined before any repairs were carried out to assess what, if any of the timber structure was original and therefore required more detailed archaeological recording.

Inspection of the exposed wall plate on the south side of the building showed that parts of the timber had either suffered from woodworm, or had rotted away and were crumbling to dust, leaving only the outer face of the timber intact.

The west end of the wall plate was rotten to 2.10m along its length. From inspection it was evident that the wall plate had consisted of two pieces of timber that had been jointed (mortice and tennon) and pegged together just to the west of the large early 16th century window on the south facing elevation of the chapel. The join in the wall plate was located at approximately 4.60m to the west of the east gable of the chapel.

The wall plate appears (superficially) to be possibly the oldest remaining timber in Roof 2 (that was available for inspection at the time of the survey). However, its poor condition could be due to water damage rather than age. It seems likely that this timber would have been replaced, or at least repaired during the post 1894 renovations of the building.

Examination of the rafters on the west side of the roof showed that they were generally in a reasonable condition, although some had woodworm, or were rotten at the bottom. Packers (also affected by woodworm) had been nailed to the bottom ends of rafters (some had two packers). The packers appeared to have been added to level the bottoms of the rafters in order to straighten out the roofline. Some of the rafters had bowed out of shape under the weight of the roof.

At the west end of the chapel there is a partly dismantled tower hidden in the roof space. Located against the east face of the tower was a truss, not drawn or numbered on the Architect's drawings (labelled A9, Figure 7), that had dropped by about 9" (23cm) on its south end. The drop in the truss was due partly to the rotten wall plate, and partly to the tie beam having rotted at the bottom. The dropped truss had affected the roof over the tower, pulling it slightly out of shape, meaning that the roof over the tower required attention to correct its position. The trusses were all open with tie beams, except Truss A2 which had a strut (a repair) supporting the principle rafter on the east side.

A second, newer truss (A10) was located immediately on the west side of A9 but was not visible from outside and therefore it was not possible to see whether this truss had also

moved, or whether it had been put in to alleviate the problem caused the movement of A9.

Repairs and replacements were required to Roof 2. The proposed repairs/alterations were relatively minor and did not adversely affect the structure of the roof, which is for the most part, a completely modern structure.

None of the roof timbers that were accessible from inside the roof structure, including the trusses appeared to be original to the building. The saw marks on the timbers look modern and the style of the trusses also implies a modern construction date. Roof 2 was probably completely re-built as part of the renovations known to have been carried out after 1894 by Avray Tipping. Some of the roof structure appears to have been added at an even later date.

Timbers of Roof 2 that were to be altered or replaced (see Figure 5) included the following;

1.) The south wall plate of Roof 2.

The timber/s would require at least repair, if not complete replacement. As the wall plate was not accessible to record by drawing at 1:20 scale at the time of the initial survey, it was agreed that the wall plate would be carefully removed and set aside for detailed drawn records to be made at a later date. Unfortunately the three foot long section disintegrated on removal.

2.) Rafters on the west side of Roof 2.

Three rafters on the west side of the roof between trusses A3 and A4 needed to be replaced.

3.) Truss A2.

The east principle rafter of the truss needed replacing.

4.) The roof over the tower.

The whole of the roof over the west tower needed to be re-built to correct the twist caused by the truss (R2/A9) dropping.

5.) A purlin on the east side of the roof, between trusses A1 and A2 needed replacing.

Records made of Roof 3.

A site visit was made to inspect roofs 3 and 4 after the necessary repairs had been carried out. The rafters, purlins and trusses were surveyed and on close inspection it appeared that parts of the roof structure may be original to this part of the building, or at least they appear to predate the 1890s restoration.

Four trusses (trusses 1-4) were located in Roof 3 between the west gable and a chimney in the roof space that appear to be possibly original. The four trusses were alike in style (collar and tie beam) and had sequential Roman numerals (Truss 1= "I", Truss 2= "II", Truss 3="△", Truss 4= "V").

Truss 5 was located on the eastern side of the chimney. The truss was modern and of a different style (low collar, no tie beam) to the others in Roof 3 (described above). The roof level beyond the chimney (including Truss 5) was lower than the roof on the west side of the chimney. No alteration was made to Truss 5. The entire roof structure in the east end of Roof 3 appeared to be of fairly new timber, and Truss 5 was the only truss in this end of the roof.

The north facing gable on the north side of Roof 3 is a later addition to the building. The gable does not appear on the 1886 map but does appear on the 1901 map so it is reasonable to assume that it was built during the 1890s restoration of the building.

A now redundant purlin located low on the North side of the roof (Roof 3) must be original, or at least it predates the construction of the north gable as its position blocks access to that part of the roof, and would make no sense as being part of that phase of work. It seems reasonable to assume that some of the rafters in the main part of the roof are also original.

All the trusses in Roof 3 were repaired, (except for Truss 5) with new timbers as part of the present phase of works. Timbers of Roof 3 that were replaced (see Figure 8) included the following;

- 1.) **Truss 1**, located at the west end of the roof was entirely replaced with new timber, in the same style as the "original".
- 2.) **Truss 2**, Truss 2 had its west principle rafter and tie beam replaced. Truss 2 had carpenters assembly marks ("III") remaining on all the unaltered corresponding timbers.
- 3.) **Truss 3**, Truss 3 had its east principle rafter and tie beam replaced and had carpenters assembly marks ("II") remaining on all the unaltered timbers.
- 4.) **Truss 4**, located at the east end of the roof had been completely replaced (except for the collar) in new timber, the same as the "original".

Annotations were made to the Architects drawings and digital photographs were taken to record the appearance of the roof space.

Records made of Roof 4.

The timber structure of Roof 4 was surveyed and recorded after the repairs had been carried out. There were three trusses in the roof space, all of similar style, with single collars and tie beam. The whole of the roof structure appeared to be modern, with the exception of trusses A and C (I and III), which possibly predate the 1890s renovation of the building.

The roof space in Roof 4 had been partly plastered, and whitewashed (perhaps it had been an attic room at some time). A horizontal edge to the whitewash across a central stone chimney implied a former ceiling level, there was also a vertical edge to a coat of plaster on one face of the chimney that appeared to indicate the position of a former partition. The configuration of the timber structure within the present roof did not appear to correlate with the whitewashed (ceiling?) line on the chimney.

Timbers of Roof 4 that had been replaced (see Figure 9) included the following;

- 1.) **Truss A**, located at the south end of the roof, had its west principle rafter replaced with new timber, to match the "original".
- 2.) The tie beam had already been replaced at an earlier, unknown date. The unaltered timbers (collar and rafter) had carpenters assembly marks ("I").
- 3.) **Truss B**, Truss "B" was entirely replaced with new timber matching the original.
- 4.) **Truss C**, Truss "C" had the principle rafter of the west side replaced. The unaltered timbers (tie beam, collar and rafter) had carpenters assembly marks ("III").

5.) **Wall Plate**, The wall plate in the south west angle of the roof had been repaired, this involved the complete replacement of the wall plate on the south wall and a partial replacement of the wall plate of the west wall, between Truss "A" and the south wall.

6.) **Rafters**, Most of the rafters between Truss B and the south wall were replaced with new timber. Rafters in the north gable were replaced, as was a short rafter adjacent to Truss C.

All the visible timbers (except possibly trusses A and C) post dated the renovations of the 1890s. The roof space was recorded through annotations to the Architects plans and elevations and through digital photography.

Roofs 5 and 6.

Roof 5 (the Chauffers cottage) and Roof 6 (the Gazebo) were both modern additions to the building complex, as such they did not require archaeological recording.

7 Conclusion

In conclusion, Roofs 2, 3 and 4 contained some timbers that pre-dated the 1890s restoration of the buildings.

The aims of the project have been satisfied and the methods used were appropriate in this case.

8 Site Archive

The site archive will be deposited at Chepstow Museum.

1. 86 digital photographs
2. 27 Black and White photographs on 35mm print film
3. 4 Photographic registers
4. 4 Pages of copied site notes including sketches
5. Copy of this report
6. 1 correspondence file
7. Annotated Architects drawings
8. The research archive (maps, documents and copies of old paintings)

9 Bibliography

Cartographic sources

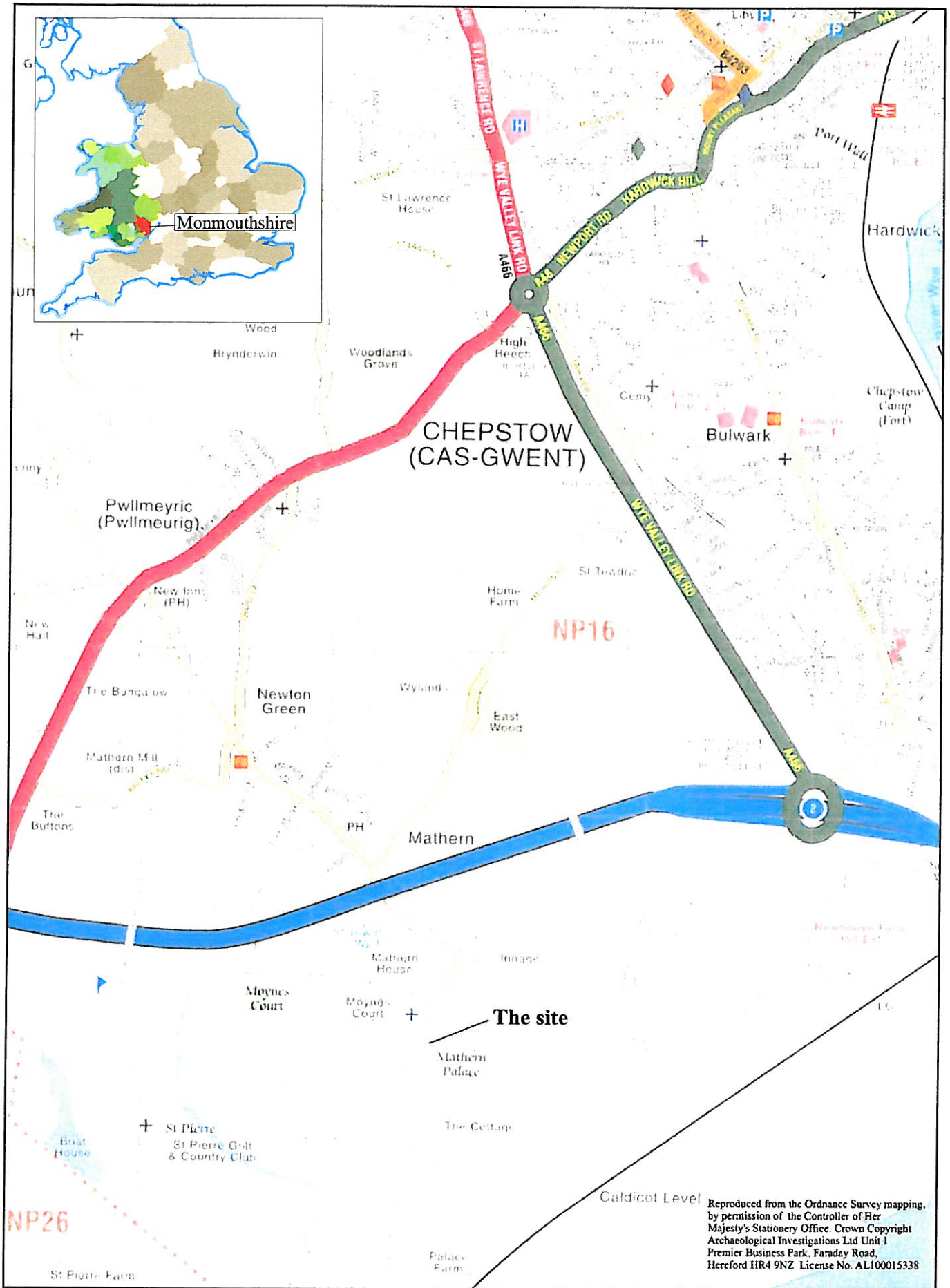
1840s	? Tithe map of the parishes of Mathern and Runstone (Gwent Record Office D1111.10)
1886	First Edition Ordnance Survey
1901	Second Edition Ordnance Survey
1921	Third Edition Ordnance Survey

Documentary sources

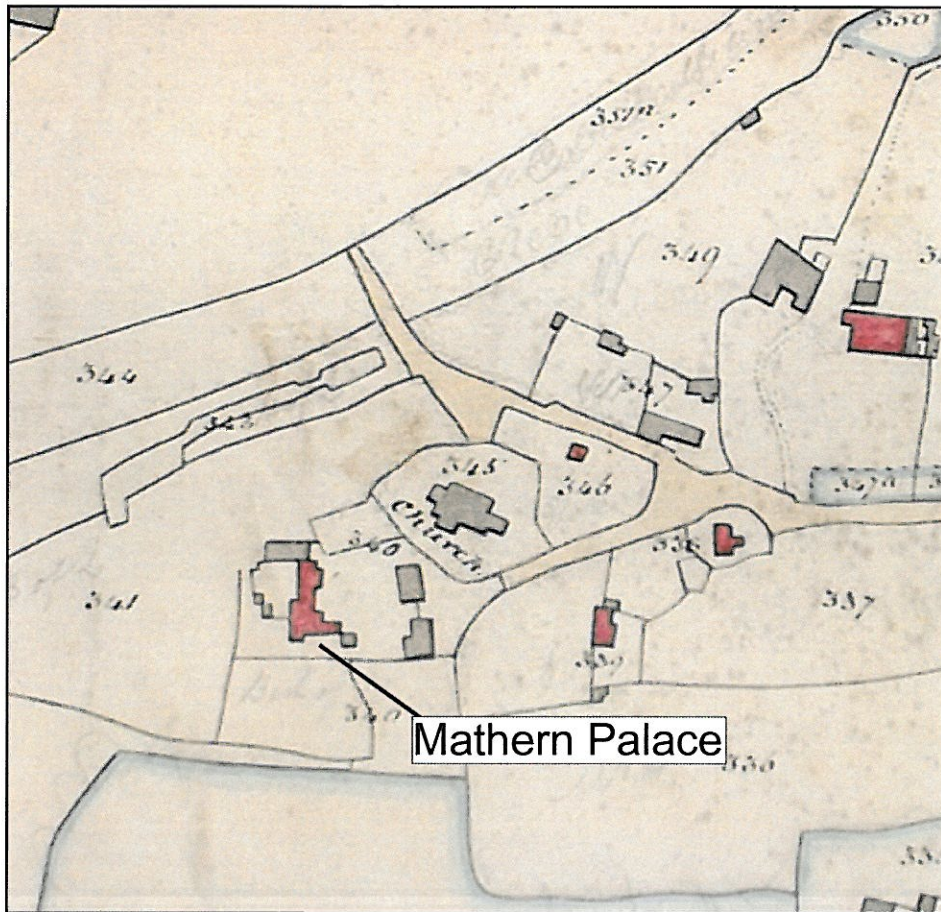
1914	"Sales details for auction of Mathern Palace on Monday May 18 th , 1914 by Collins & Collins at The Beaufort Arms Hotel, Chepstow" (Gwent Record Office D25.1407)
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Secondary sources consulted

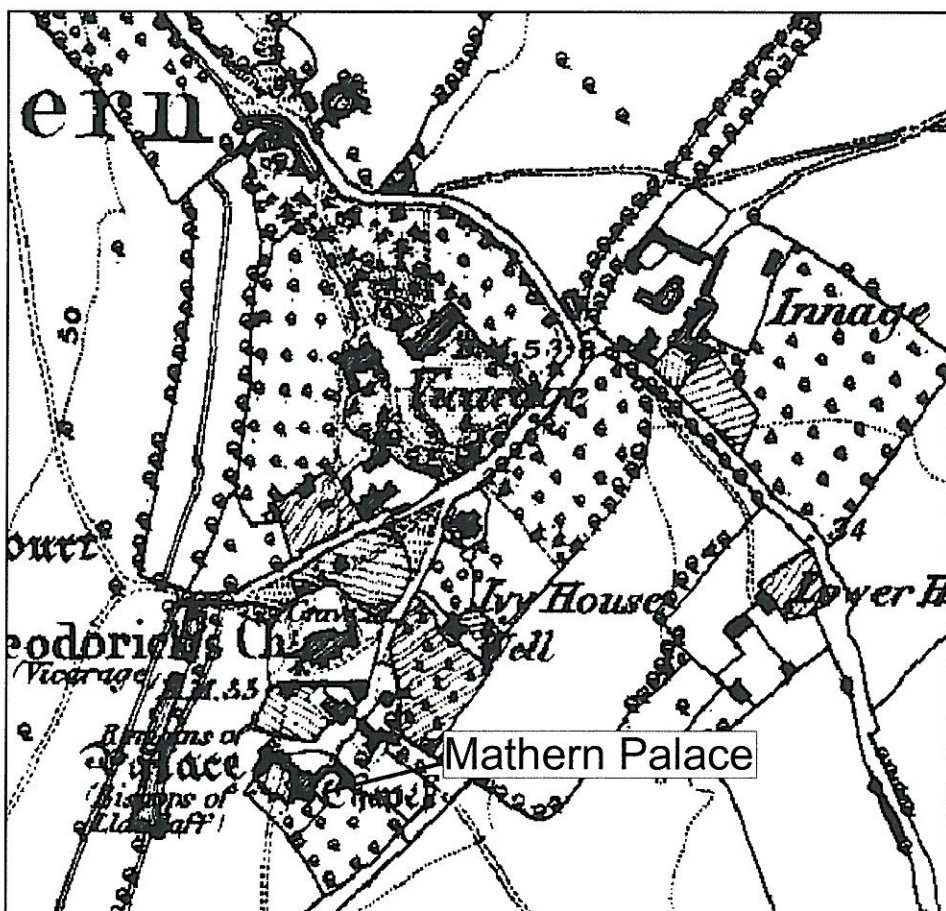
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- Cadw/ICOMOS, 1994 *Register of Landscapes, Parks and Gardens of Special Historic Interest in Wales – Gwent*
- Davies, E.T., 1950 *A History of the Parish of Mathern* Chepstow Society



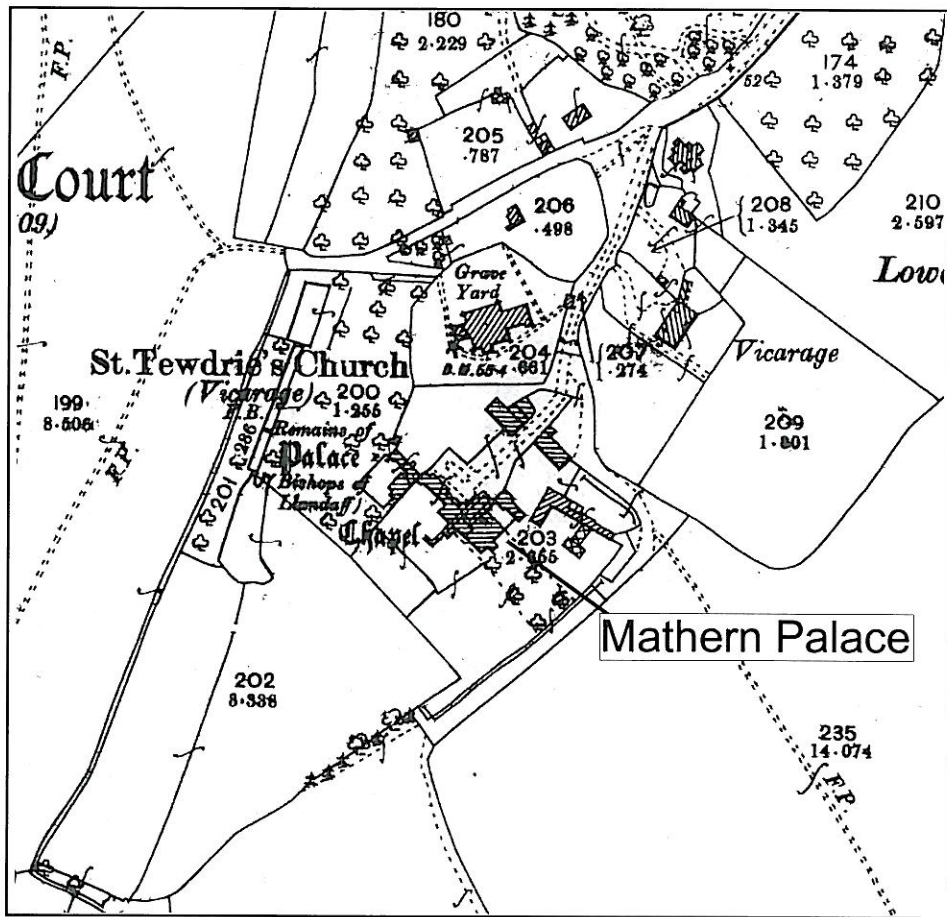
Location of the site at Mathern Palace, Figure 1.



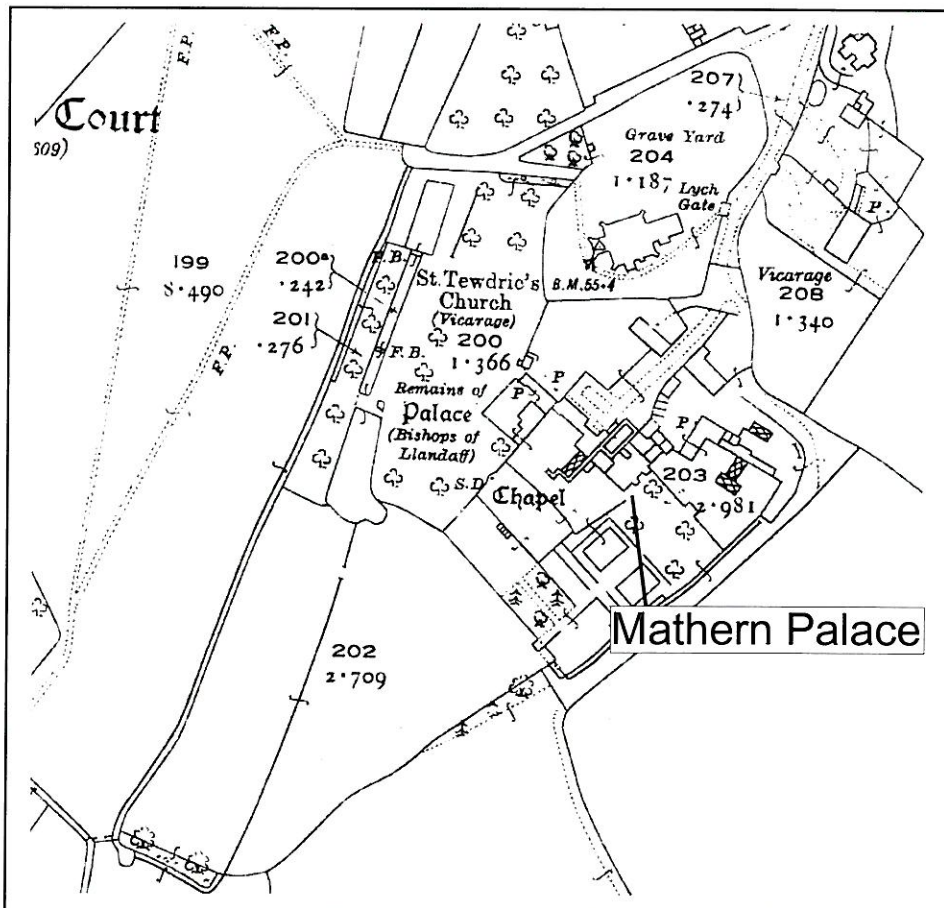
Mathern Palace, on the 1840s Tithe map, Figure 2.



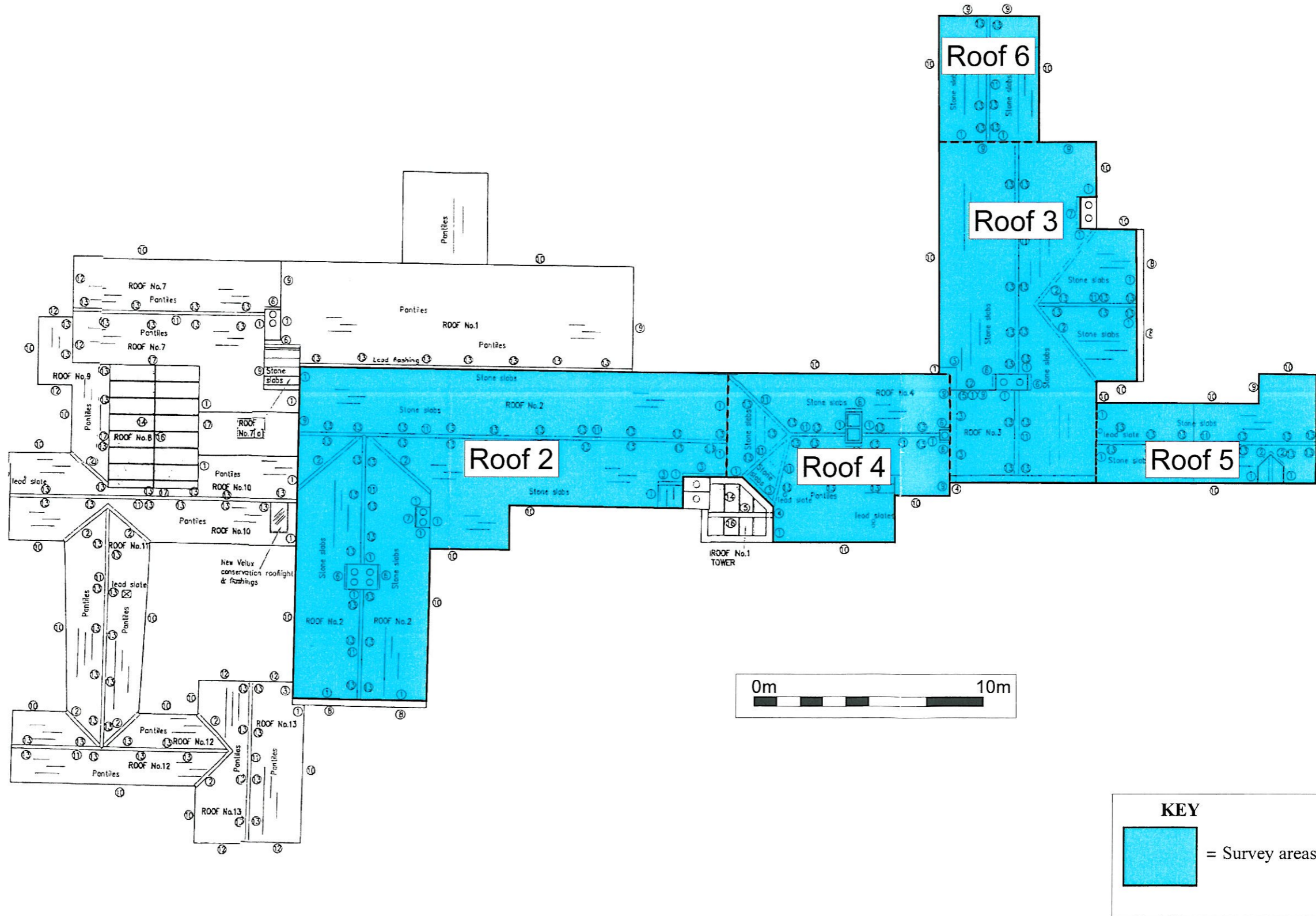
Mathern Palace, on the 1886 Ordnance Survey, Figure 3.



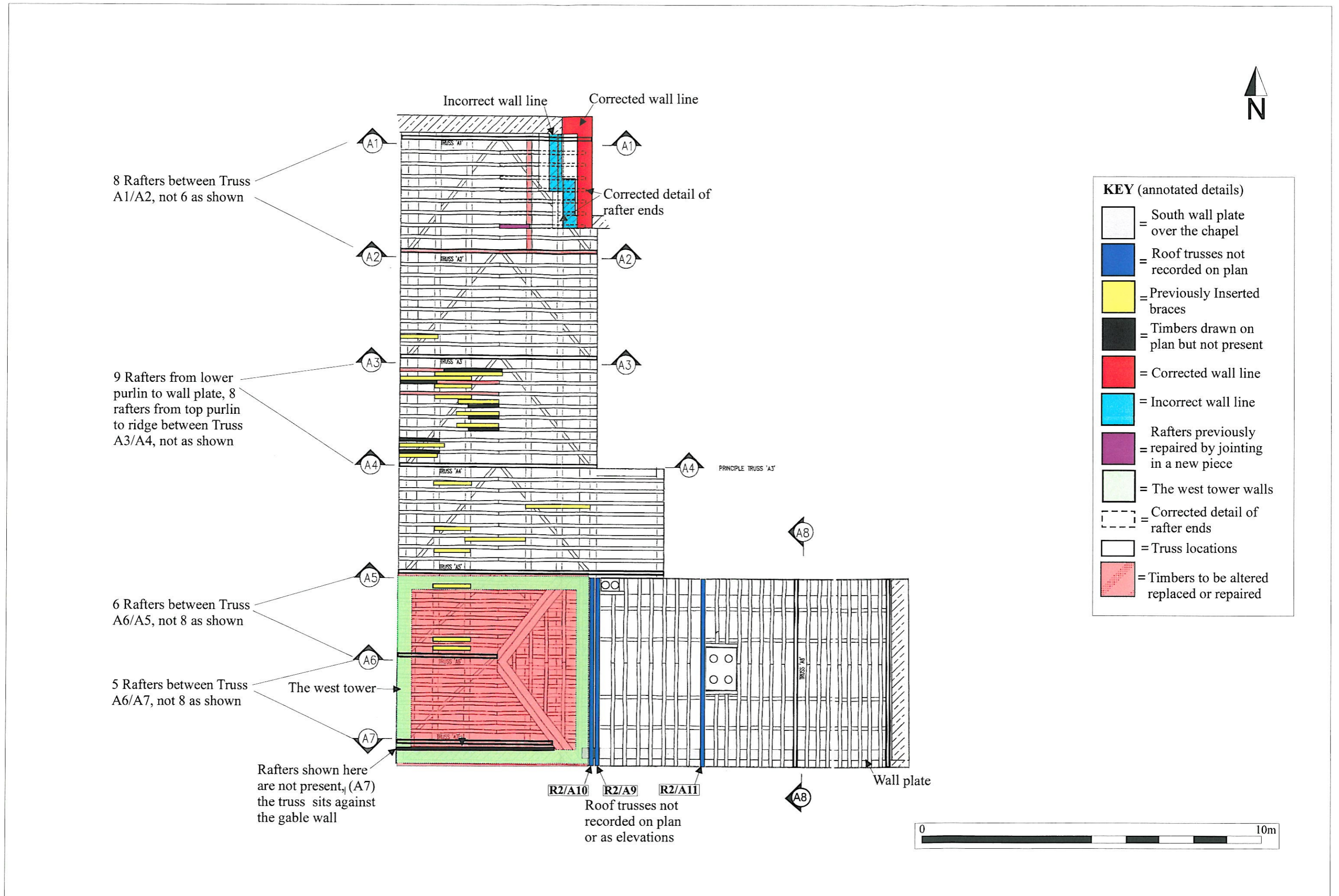
Mathern Palace, on the 1901 Ordnance Survey map, Figure 4.



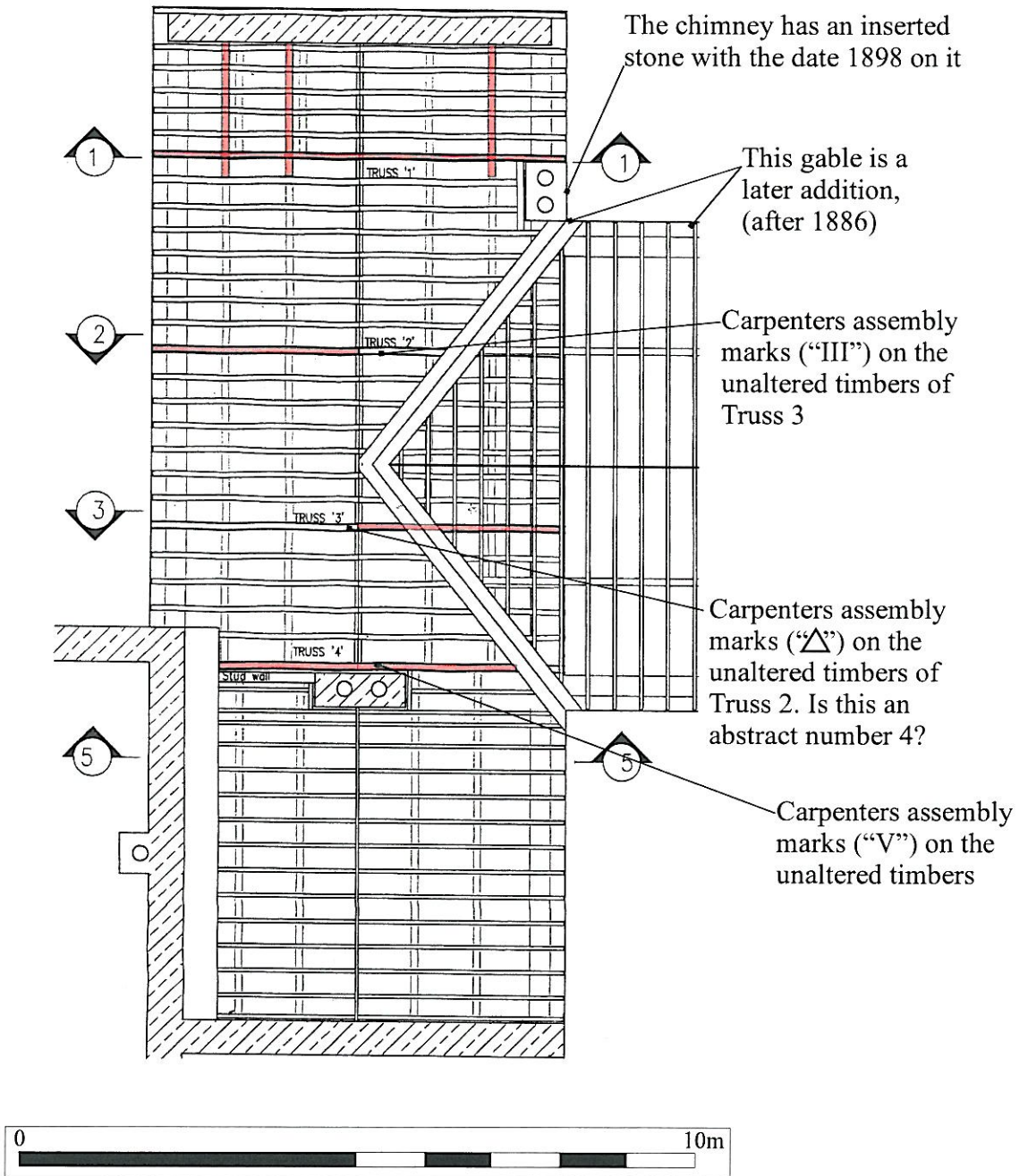
Mathern Palace, on the 1921 Ordnance Survey map, Figure 5.




Mathern Palace, buildings and roof plan, based on Gerald Eve's survey drawing (scaled to fit), Figure 6.



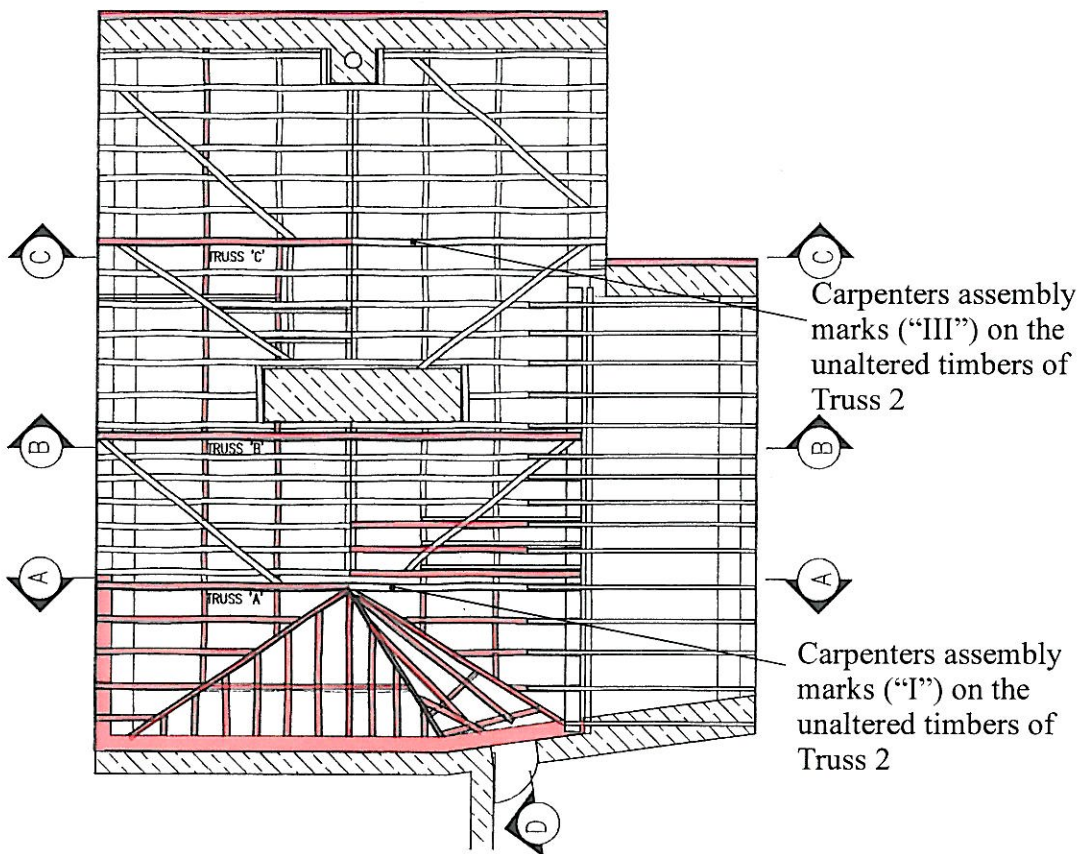
Mathern Palace, Roof 2, annotations to the architects drawings (at 1:100 scale), Figure 7.




KEY (annotated details)

 = Timbers altered replaced or repaired

Mathern Palace, Roof 3, annotations to the architects drawings (at 1:100 scale), Figure 8.



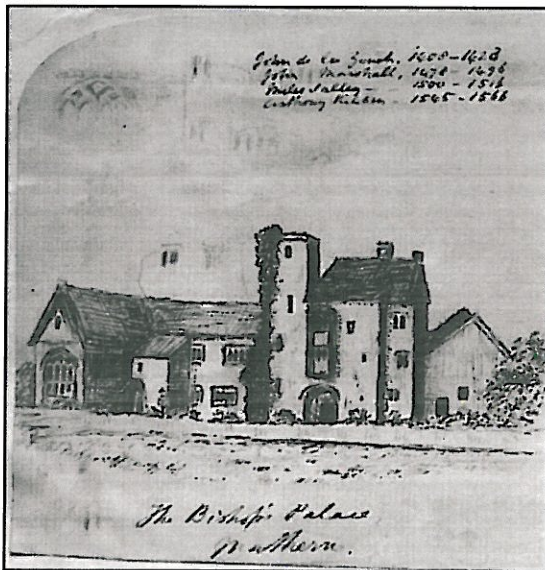
KEY (annotated details)

 = Timbers altered replaced or repaired

Mathern Palace, Roof 4, annotations to the architects drawings (at 1:100 scale), Figure 9.



Mathern Palace, painting by William Gastineau, published circa 1831-1840.



"The Bishop's Palace, Mathern", sketch by William Henry Greene, drawn circa 1893. From the scrap book of William Henry Greene, Page 159.

"Back of the Bishop's Palace, Mathern", sketch by William Henry Greene, drawn circa 1893. From the scrap book of William Henry Greene, Page 159.

