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The Snowdonia National Park
Authority

Surveyed
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Prys Mawr, Llanuwchllyn

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Introduction

NGR

Centred on: SH 86924 30271

Listed Building Reference: 4687

NPRN: 28702

PRN: 12460

Garden NPRN: 265195

Location and Topography (Figure 1)

Prys Mawr is located approximately 800m WNW of the village of Llanuwchllyn. Set back from the A494 it is accessed by a lane running west from the road. The house sits on the northern side of the farmyard.

Archaeological Background

Prys Mawr is Grade II Listed building (Listed Building Reference 4687) which was listed in 1966 because of “its special interest as a seventeenth century, storeyed, end chimney house with earlier timber-framed origins retaining good historic character” (http://jura.rcahms.gov.uk/cw/cw_eng.php?id=4687).

The associated garden has been given the NPRN number of 12460, by the Royal Commission on the Ancient and Historic Monuments of Wales, for its depiction on the Second Edition Ordnance Survey map of 1901 (<http://www.coflein.gov.uk/en/site/265195/details/PRYS-+MAWR%2C+GARDEN%2C+LLANUWCHLLYN/>). The description on the entry states that: “Its main elements on that map include woodland and a quadrangular enclosure”.

The Snowdonia National Park Authority have grant aided repairs to the house, as part of this process a condition placed that a dendrochronologist was consulted on the dating of the roof timbers. The National Park Authority have also commissioned this report which includes a desktop study, the recording of the house and a watching brief on the works associated with the repairs.

SUMMARY

Prys Mawr has clearly developed over a considerable period of time, whilst the dendrochronological study suggests a date of between 1540 and 1570 for the ceiling beams in the hall it is probable that this was not the original phase of construction. It is likely that the original house was a timber framed storied house which developed into a Snowdonia Style house, probably in the mid sixteenth century.

Documentary evidence suggest activity in the immediate area from at least the fifteenth century and the presence of a near circular enclosure hints at much earlier activity. The house was part of the Glanllyn estate which in the sixteenth and seventeenth century was owned by the Vaughan family before being transferred to the Wynn family in about 1740. The Glanllyn Estate passed into public ownership in 1948 in lieu of death duties.

The date plaque, of 1685, on the front of the house probably related to William Vaughan and his wife Catrin, however it is not sure which of the phases of modification relates to this plaque or whether the plaque marks a family event.

Methodology

The project involved a desktop study of Prys Mawr, followed by the recording of the house, the monitoring of the current restoration works and an archaeological watching brief on the associated drainage works. A dendrochronological study of the house was also undertaken by C.M. Bridge of Oxford Dendrochronology Laboratory.

The desktop study consulted the records of the National Library of Wales, Merionethshire Archive Office, Denbighshire Archive Office and the Archives of the University of Wales at Bangor together with a series of online resources.

A plan of the house was produced by direct measurement, however the elevations of the house were made by modification of a series of drawing by Rhys Llwyd Davies, the architect for the restoration project.

The drawings of the timberwork were carried out by direct measurement at a scale of 1:20. Photographs were taken with a Nikon D80 digital SLR camera at a resolution of 10.2 mega pixels shot in RAW format. These were converted to JPEG format for editing and inclusion in the report. Where practical all the photographs included a metric scale.

The digging of the drainage works for the project were monitored and the features revealed were recorded with graphic, written and photographic records being made.

Desk Top Study

The records of the National Library of Wales, Merionethshire Archive Office, Denbighshire Archive Office and the Archives of the University of Wales at Bangor were consulted together with a series of digital records including those of Achwilio, Coflein and The Historic Wales Portal.

Sources

National Library of Wales

- 1626 Wynnstey Rental (R3)
- 1660 Wynnstey Rental (R9)
- 1701 – 1706 Wynnstey Rental (R5)
- 1772 – 1773 Wynnstey Rental (R41)
- 1735 Wynnstey Rental (R18)
- 1736 – 1739 Glanllyn Rental (R24)
- 1765 – 1767 Wynnstey Rental (R28)
- 1766 – 1767 Wynnstey Rental (R38)
- 1779 Wynnstey Rental (R47)
- 1785 Glanllyn Rental (19666D)
- 1785 – 1795 Glanllyn Estate Accounts (19664B)
- 1801-1802 Wynnstey Rental (R60)
- 1811 Wynnstey Rental (R65)
- 1818 Wynnstey Rental (R73)
- 1826 Wynnstey Rental (R81)
- 1832 – 1853 Wynnstey Rental (9436D)
- 1836 Wynnstey Rental (R91)
- 1847 Tithe Map and Schedule for Llanuwchllyn
- 1851 John Parry. Bond
- 1867 Wynnstey Rental (R122)
- c. 1875 Photograph of Prys Mawr (Photographic collection. (W1AbNL) 003381774)
- 1891 Carnarvon and Denbigh Herald 26 June 1891
- c.1900 Glanllyn Rental (17800B)

1954 Photographs taken during the visit of the Country Landowners Association to some of the farms being renovated on the Glan-Llyn Estate (Casliad Geoff Charles Collection. (WLABNL) 003366279)

Merionethshire Archives

1841 Census

1851 Census

1861 Census

1871 Census

1881 Census

1911 Census

1949 Glanllyn Estate Index of Tenants (ZM/6535)

Denbighshire Archives

1608 Wynnstay Rental (DD/WY/5371)

1688 Glanllyn Rental (DD/WY/5384)

1760, 1774 and 1776. A rental of the estate of Sir Watkin Williams Wynn Bart. in the county of Merioneth for the years 1760, 1774 and 1776. (DD/WY/539)

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Haslam, R., Orbach J. and Voelcker, A. 2009. *The buildings of Wales. Gwynedd*. Yale University Press

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Nicholas, T. 1872. *Annals and Antiquities of the County Families of Wales. Vol. II*. Genealogical Publishing Company.

Parry, O. 1953. The hearth tax of 1662 in Merioneth. *Journal of the Merioneth Historical and Record Society. II*. 16-44

Smith, P. 1988 *Houses of the Welsh Countryside. A study in historical geography (second edition)*. HMSO London

Cartographic Sources

1819 Ordnance Survey Surveyors drawing 303. Scale 2 ½ inches to the mile.

1889 Ordnance Survey First Edition Map Merionethshire XXVIII.4 Scale 1:2500

1901 Ordnance Survey Second Edition Map Merionethshire XXVIII.4 Scale 1:2500

1949 Glanllyn Estate map (Merioneth Archive ZM/5371)

Digital Sources

http://jura.rcahms.gov.uk/cw/cw_eng.php?id=4687

Achwilio. http://www.cofiurcahcymru.org.uk/arch/gat/english/gat_interface.html

Coflein <http://www.coflein.gov.uk/en/site/265195/details/PRYS-+MAWR%2C+GARDEN%2C+LLA NUWCHLLYN/>

Coflein <http://www.coflein.gov.uk/en/site/28702/details/PRYS+MAWR/>

Notes on the Vaughan Families of Wales http://archive.org/stream/VaughanFamilyOfWales/VaughanFamily_djvu.txt

National Library of Wales, O. M. Edwards Papers http://archiveswales.org.uk/anw/get_collection.php?coll_id=20020&inst_id=1&term=Prys%20Mawr

http://archive.org/stream/lloydfhafodunos00lloy/lloydfhafodunos00lloy_djvu.txt

<http://wbo.llgc.org.uk/en/s-VAUG-ROW-1590.html>

<http://familytreemaker.genealogy.com/users/r/o/w/Thomas-J-Rowlands/PDFGENE1.pdf>

<http://familytreemaker.genealogy.com/users/r/o/w/Thomas-J-Rowlands/GENE1-0004.html>

<http://histfam.familysearch.org/getperson.php?personID=I159536&tree=Welsh>

Desk Top Results

Prys Mawr is within the township of “Tref Brysg (Brysg)” from which it gets its name. This is within the parish of Llanuwchllyn which, in turn, is within the commote of Mignant (Lloyd 1876, 216). As Prys Mawr is clearly a major building within the township it is likely early references to “Tref Brysg” may be relevant to the history of the house.

The earliest reference discovered in the desktop study is that to Rhys of Tref Brysg, son of David ab Ieuan Fychan of Llanuwchllyn who was born in about 1470 (<https://histfam.familysearch.org/getperson.php?personID=I28490&tree=Welsh>). There is also a reference to an Edward Prys of Tref Brysg born about 1500, (Nicholas 1855). Also potentially relevant is the reference to John Iorweth of Prys, the Sheriff of Merioneth who was ordered to ensure the proper conduct of an election in Dolgellau in 1571 (Beverly Smith and Beverly Smith 2001, 674).

Nicholas, in his 1872 publication “Annals and Antiquities of the Counties and Country Families of Wales. Volume 2” records the Edwards family of Prys near Llanuwchllyn, specifically a John Edwards of Prys, near Llanuwchllyn, living 1588 (684).

The earliest possible specific reference to the house is with a rental of 1608 (DD/WY/5371), which is preserved within the Wynnstay archives, which mentions “Prys”. At this time it formed part of the Caer Gai Estate owned by a John Vaughan. Tref Brysg became part of the Vaughan estate as a result of a marriage between Rowland Vaughan and Jane daughter and heiress of Edward Price, son of Captain Pryse of Coed Prys, in the township of Tref Brysg (Lloyd 1876, 219). The Vaughans’ controlled the Caer Gai estate until about 1740 when it was sold to Sir Watkin Williams Wynn and was incorporated into the Glanllyn Estate which in turn was part of the Wynnstay Estate (Welsh Biography Online). Probably the most famous member of the Vaughan family was Rowland (c. 1590 – 1667) who was a poet, translator and staunch Royalist, possibly acting as a captain at the battle of Naseby. Caer Gai itself was burnt down in 1645 by a parliamentary force and Rowland Vaughan was imprisoned in Chester in 1650.

As a result the estate was given to a kinsman, but after the end of the Civil War and some years of litigation the estate was returned to Rowland Vaughan and Caer Gai rebuilt. He also married Jane, the daughter of Edward Price of Tref Prys, Llanuwchllyn (<http://wbo.llgc.org.uk/en/s-VAUG-ROW-1590.html>)

One of Rowland Vaughan's sons was William Vaughan who was born at Tref Prys <http://www.ralphvaughan.com/F7/Genealogies/EUtree/gp256.html>. It is possible that it is this William Vaughan whose initials are part of the date plaque on the front of the house. Another possible reference to the house was the 1662 hearth tax assessment of John Vaughan of Prys for four hearths in the Hearth Tax (Parry 1953, 21).

In about 1740, Caer Gai and Tref Brysg, were sold to Sir Watkin Williams Wynn, Bart. by the Rev. Henry Mainwaring who had married Mary Elizabeth Vaughn in 1733. The properties were incorporated into the Wynstay Estate. (Lloyd 1876, 219).

Between 1760 and 1801 the Glanllyn rental records the tenant as David Evans with the rent rising from £40:0:0 /year (Denbighshire Archives DD/WY/539) to £58:5:0 /year (National Library R60) although in 1776 a rent of £60:0:0 was charged (Denbighshire Archives DD/WY/539). The finances of the farm did not appear to run smoothly, as on Lady Day (25th March) 1785 David Evans was £15:0:0 in arrears and in 1786 this rose to £24:9:0 (National Library 19664B)

By 1811 the tenancy had passed on to Evan Davies (presumably David Evans' son), with a rent of £83:0:0/year (National Library R65). This proved to be unsustainable and the rent was reduced to £78:10:0/year. Even so, once again, the farm was in considerable financial difficulties during this period as there were arrears of £117:15:0 in 1817 and £176:5:0 in 1818 recorded in the Wynstay rentals for 1818 (National Library R73). Evan Davies survived in his tenancy until Lady Day 1824 (National Library R81) when the tenancy was taken up by William Thomas and Jane Davies at a rent of £81:0:0/year.

The 1832 – 1833 Wynstay rental (National Library 9436D) records the fields associated with Prys Mawr as being:

17.6	Prys Mawr
	Coed Ucha
	Coed Isa
	Cae Tan'r Foel
	Mownog
	Ddol Rhyd Ceir
	Perth y Groes
	Cae Bryn Cornant
	Cae Glas Mawr
	Cae Glas Bach
	House Fold and Garden
	Cefn Ysgubor
	Cae Cefyn Glas
	Caer Mendre

With a total area of 109 acres 6 perches (approximately 41.3 Ha)

In 1834 the rent to Lady Day was reduced to £29:9:8 because some land was removed from the farm, however after this presumably the land was returned as the rent rose once more to £81:0:0/year. At this point the tenancy was taken over by John Jones and David Davies (National Library R91)

By the time of the 1841 Census the tenancy had been taken by David Evans. At this time the household consisted of six members of the Evans family (David 34, Elinor 32, Evan 15, Griffiths 12, David 8 and John 7) together with four servants, Evan Davies (32), Elizabeth Jones (20) and a second Elizabeth Jones aged 15.

The 1851 Census marks a change in tenancy, with the head of the household being Anne Parry. It is likely that the bond taken out in the same year by John Parry suggests that Anne's widowhood was relatively recent at the time of the census. There were two children, Robert (8) and Jane (5) and four servants (Catherine Davies 28, Evan Jones 30, Richard Jones 28 and John Roberts 16) also recorded as living at Prys Mawr.

Another widow had the tenancy in 1861 when the census records Catherine Jones (59) as the head of the household. The family members living at the property were William (34),

Catherine (19) and Ellis (15) and there were five servants (Elizabeth Pugh (17), Jane Jones (17), Cadwalader Thomas (48), Robert Jones (40 and Queen Jones (13). There was also a lodger, Hugh Molley Johnson (34) who was the curate of Llanuwchllyn.

The 1867 Wynnstay Rental (National Library R122) records an Evan Davies of Prys Mownog which is assumed to be Prys Mawr as the name Mownog is one of the field names in the 1832 – 1833 Wynnstay rental (National Library 9436D). At that time the area farmed was 109 Acres, 16 Perches (approximately 44.1 Ha). This would conform with the 1871 Census, only four years later where Evan Davies (45) is recorded as the head of the family and as a farmer of 100 acres who employed 2 men. The rest of the family were Gwen (35) his wife, Jane (12), Catherine (9), David (7), Mary (5) and Elinor (2). There were also three live in servants (Robert Roberts 40, Mary Jones 25 and Thomas Evans 19).

Evan Davies is still the head of the household in the 1881 Census with the family member including Gwen (45), Ellen (12), Edith (8), David (17) and Sarah Ann (5). There were three live in servants; Catherine Richards (29), Thomas Evans (28) and Robert Roberts (20) and two visitors Jane Jones (22) and Anne Jones (1).

By the 1891 Evan had died, however his wife Gwen continued to hold the tenancy, in her own right, until at least 1901 with entries both in the 1901 Census and in the 1900 Glanllyn rent book (National Library 17800B). At this time 113 acres, 2 rood and 5 perches (approximately 46.3 Ha) were being rented with 250 sheep on the farm. The number of family member living on the farm reduces between 1881 and 1901 so that by 1901 only Gwen Davies and her son David were living at Prys Mawr with three servants; Thomas Jones (40), David Williams (21) and Maggie Jones (26). Ellen Davies had married O.M. Edwards, the first Chief Inspector of Schools for Wales in 1891 and died in 1919. (http://archives.wales.org.uk/anw/get_collection.php?coll_id=20020&inst_id=1&term=Prys%20Mawr).

In 1948 the Glanllyn estate was handed over to the Welsh Agricultural Sub-Committee for management as the estate went to the

Treasury, in lieu of death duties. D.J Davies was the tenant of Prys Mawr at this point (Merioneth Archive ZM/6535). In the Glanllyn Estate Index of Tenants, for 1949, Plot 71 is recorded as “Prysmawr and Prys Bach Sheepwalk on Drosgoch”. This covered an area of 105 A, 3R 27P (approximately 42.9Ha) with access to a further 58A, 1 R, 6P (approximately 23.6 Ha) of sheepwalk. The annual rent for this was £118.

Unfortunately, few graphical resources were located in the desktop study. No early estate maps were located and the tithes for the parish of Llanuwchllyn were transferred to Sir Watkin Wynn, thus there is no detail of the tenants. The earliest mapping recovered were the Ordnance Survey Surveyors drawings of 1818 (Figure 2). These were drawn at a scale of 2 ½ inches to the mile, thus whilst Prys Mawr is marked no detail of the buildings can be discerned.

Unusually, however there is a photograph which is assumed to be taken in about 1875 (National Library Photographic collection. (WLABNL) 003381774) (Plate 1) which shows an oblique view of the house from the south east. At this point in its history the southern gable wall had not been rendered.

The earliest detailed mapping of Prys Mawr are the First and Second Editions of the Ordnance Survey maps in 1889 and 1901 (Figures 3 and 4) both of which show the farm house complex in a very similar form to that shown in the present day. Whilst there are minor changes to the farm buildings no changes to the house were recorded. It is also noticeable that the scullery does not appear on either of the maps and thus this must date to after 1900. A noticeable feature on both of the maps is the near circular enclosure around the farm which is an unusual feature not reflected by the other farms in the area and possibly suggesting that the farm was based on an earlier complex.

The 1949 Glanllyn Estate map (Figure 5) is based on the 1:10560 Ordnance Survey mapping and thus the details of Prys Mawr is not certain, however the near circular enclosure is clearly marked.

In 1954 the house was subject to a programme of improvement. During the course of this refit, the Glanllyn estate was visited by the Country Landowners Association and a number of photographs (Plates 2 – 4) from the visit have been preserved in the National Library Casgliad Geoff Charles Collection. (WIAbNL 003366279). The work took place both to the outside and inside of the house. Of particular note is the condition of the southern gable wall which appear to have been re-built since the 1875 photograph (Plate 1). Also the roof appears to have been replaced with the use of standard slate rather than the moss slates in the earlier photograph.

Building Survey Results

Prys Mawr lies on the northern side of the farmyard with its gardens to the north and east. At a slightly larger scale there is the remains of a circular enclosure around the farm which is marked by a line of mature oak trees to the south and west (Plate 5) and this is best seen on the Ordnance Survey mapping (Figures 3 and 4). This possible enclosure would have been approximately 140 m in diameter.

The house is of “t” plan with later extensions to the north and west. The main axis of the house is essentially north – south with a kitchen range running to the west. The building is of poorly coursed boulders with slab quoins in an approximation of long and short work. The roofs are in relatively modern slates which are assumed to be part of the 1950’s restoration, but certainly date to after 1875.

External

The front elevation to the house (Plate 6, Figure 6) is on the eastern side of the building overlooking the valley of the Afon Dyfrdwy. This elevation contains a number of features of interest. Near to the northern end of the elevation a timber post was revealed by the restoration works (Plate 7, Figure 10). This post is set approximately 1.1 m from the northern end of the elevation and has a series of mortice holes and pegs along its length suggesting a range of timbers originally linked to this post (Plates 8 – 12). A total of seven possible joints were recorded, the majority of which appear to mark the positions of rails

running at right angles to the post. At 3.05 m above the ground level, however, a joint for a diagonal brace was recorded (Plate 10). It is noticeable that all of the joints are on the southern side of the post suggesting that this was a corner post for a timber framed building which is thought to be the earliest core of the current building.

The windows on the front elevation are of a similar style each with six panes defined by wooden frames (Plate 13), typical of the Glanllyn estate of the late nineteenth century (Gwilym Jones *pers. comm.*). In each case the top left hand pane is openable and has arcing support on the outside. It is likely that these frames predate the 1954 restoration of the property as they appear on the photographs taken at that date (Plate 3). It is possible that they occupy earlier opening, as is shown by the large stone lintels on the lower windows.

Above the front door is a date plaque with the date 1685 and the initials “V” and “WK” (Plate 14). These probably refer to William Vaughan and his wife Catrin. William was the son of John Vaughan of Caer Gai, Llanuwchllyn who in turn inherited Caer Gai and “Tref Brysg”. He was High Sheriff of Merioneth in 1682 and died on 13 Jan 1686. (<https://histfam.familysearch.org//getperson.php?personID=I159536&tree=Welsh>). The doorway is defined by a series of massive stones (Plate 15). It has a depressed arch defined by stone voussoirs (Plate 16) which have an arc scored on their surface. Whilst this may be an attempt to produce the impression of a more formal doorway, it is more likely that there was an arched porch or trellis over this door at some point. This door is clearly a later insertion into the front elevation. The original position of the front door was to the south (Plate 17) of the current door with its position marked by a distinct vertical joint in the stonework and the presence of wooden lintel. This lintel (Plate 18, Figure 11) has two mortice joints, one of which has been truncated suggesting this was a re-used timber. It is curious, however, that the joints were facing outwards and it is possible that these joints were re-used for a porch over the front door. The northern side of the blocked door has been removed by the insertion of the current doorway and its surround of massive stones.

There is also a vertical joint in the stonework above the southern end of the lintel of the blocked door (Figure 6, Plate 19). This would suggest that this southern end of the building may have been built (or re-built) in a later phase. The windows to the south of this break, however are of a similar design to the rest of the windows in this face suggesting that all of the windows are contemporary, possibly being inserted at a similar time to the insertion of the front door.

The northern elevation (Figure 7, Plate 20) included the gable end of the main range, the northern face of the “kitchen range” and a brick single storey extension. The gable end has a marked bulge both axially and vertically (Plate 21) with a variation in the stonework across its face. There is a tendency for larger boulders to occupy the centre of the gable, whilst more flaggy stones tend to fill in between the centre and the rough slabs used as quoins. There was also a timber embedded within the gable end (Plate 22) at a height of 4.4 m above the current ground level. There is some suggestion of a vertical break within the stonework below this timber, possibly suggesting the position of an opening, however this is not entirely clear. A second near vertical break to the west is largely a function of the break between the use of boulders and the more flaggy stonework.

The northern face of the “kitchen range” has a single wooden framed window lighting the first floor (Plate 23) with a wooden lintel. The window is divided into four with the top right hand pane further divided, once again into four by alloy “comes”. The top left pane opens and has an arcing support on the outside. There is a second wooden lintel to the east of the window which marks the position of a blocked opening (Plates 24 and 25). This opening would appear to have been truncated by the stonework of the main range suggesting it pre-dates at least part of the main range construction. Above the level of the windows the ends of two timbers (Plates 26 and 27) were recorded, each approximately 220 mm square which correspond with structural timbers recorded within the house.

The works to restore the roof of this wing revealed evidence for the previous covering, at least in this part of the structure. A series of

moss slates (Plate 28) were found resting on the top of the wall. A wooden peg (Plate 29) was also found on top of the wall. This is 300 mm long and is roughly shaped, probably with a draw knife. It has a marked head 28 mm x 30 mm which forms a notch 10 mm deep to the main shaft. This shaft is 30 x 19 mm in section tapering to a 15 x 12 mm at the point. In such it has the characteristic of a wooden tent peg, however there is no sign of use on neither the point nor the head. One possibility is that part of the house previously had thatch roof and this artefact may have been a thatching pin.

The kitchen door (Plate 30) is close to the join between the “Kitchen” and Main ranges. Now with a modern door it is marked by a series of massive stone blocks defining the western side of the door.

There is a scullery and outside toilet extension on the western end of the northern elevation. This is largely brick built, however on its western face (Plate 31) there is the remains of a stone built structure suggesting that this is a later replacement of an earlier structure. There is some evidence for later development within this range as a vertical joint below the window in the eastern face of the scullery (Plate 32) would suggest it originally had an external door. Whilst the window in the eastern face is metal framed, that in the northern elevation is wooden framed with six panes (Plate 33).

The western elevation (Figure 8, Plate 34) includes the gable end of the “Kitchen Range”, the western face of the main range, the scullery extension and a lean-to in the join between the two main ranges. The gable end is constructed of uncoursed boulders which tend to become smaller towards the top of the wall. It has boulder quoins which clasp the corners. The tall chimney is clearly a later addition, possibly associated with the installation of an oil fired range in the kitchen.

In the corner between the main and “kitchen” ranges there is a boulder built lean-to structure (Plate 35). This single storey structure has had a six paned metal framed window inserted into its western face. The western elevation of the main range was rendered, obscuring the details of the construction, however this render was removed during the restoration of the building.

No new features were recorded and the construction of this wall was similar to others within the main range.

Both the southern walls of the “Kitchen” and Main ranges were rendered (Plate 36), the removal of which revealed no further details.

Internal

The ground floor plan of the property is shown in Figure 12. The main access is to the kitchen, through a doorway with slightly splayed reveals. The kitchen is dominated by the range (Plate 37) and there is a ceiling beam crossing the centre of the room, spanning the width of the “kitchen” range. This has been plastered, thus no details of any mouldings are available. In the north eastern corner of the room (Plate 38) two protuberances were noted at ceiling level which are of uncertain function. It is possible that they are large stones projecting into the room, however as they are plastered their origins are uncertain.

Off the kitchen is the scullery, largely brick built this room contains a low slate bench and a brick built copper on its southern wall (Plate 39). The blocked doorway, now occupied by a window, in the eastern wall is also evident (Plate 40).

The hall is dominated by the hearth (Plate 41) which has a large straight bressumer which is chamfered on its rear surface. On the eastern side of the fireplace is an opening (Plate 42) now sealed with a wooden door. Behind this door is a blocking wall of modern brick, however there are the remains of a spiral stair in this corner of the building, thus this opening probably was originally designed to light the lower parts of the staircase.

On the western side of the hall a post survives which is partly supporting the transverse ceiling beam (Figure 12). This post (Figure 15, Plate 43) is now supported on a stone pad, however this is likely to later adaptation to the rotting to the foot of the post. It is assumed that this post is part of an original timber framed phase and part of the framing is demonstrated by a mortise on the southern face of the post. The weight of the transverse ceiling beam (Plate 44) is supported by a triangular brace with the ceiling beam only

just being cut into the post. This would suggest that the current ceiling is a later insertion into a pre-existing timber structure. The post can be traced through the ceiling where it appears on the first floor.

The ceiling has two axial and two transverse beams, although the southern axial beam is partly hidden by the insertion of the staircase. The axial beams are both wider and deeper than the transverse beams, however the detail of the joints between these beams suggest that they are contemporary. Each of these beams is chamfered and have stepped stops where they meet in slightly enlarged bosses (Plate 45). The end of the beams, where they meet the walls, however have simple straight cut stops (Plate 46). The joists for this ceiling are coggled and have moderate chamfering and stepped stops (Plate 47).

A door in the south west corner of the hall gives access to the below stairs cupboard. At the back of this cupboard, the end of the ceiling beam in the parlour is exposed (Plate 48). Two sockets for stopped lapped joints are exposed, one of which has a peg hole in its face suggesting that these joints held studs, possibly for a partition.

The eastern axial beam can be traced through the entrance hallway (Plate 49) into the parlour. The western axial beam, similarly appears in the parlour, although its course below the stairs could not be traced. Within the parlour these beams are coggled into a transverse ceiling beam (Plate 50) with no stops on the eastern axial beam and only short straight cut stops on the western beam. The chamfers continue, however, along the whole of the length of the beams. The transverse beam has a marked boss where the axial beams join and has an area of reduced width towards its western end on the northern face (Plate 51). This is assumed to mark the position of an earlier staircase.

The axial beams to the south of the parlour transverse beam are heavily chamfered and have scrolled stops (Plate 52) which are noticeably more decorative than those seen in the hall. There are no stops on these beams where they enter the chimney breast.

On the first floor (Figure 13) two uneven areas on the western wall of the landing would suggest that at least two posts survive behind the modern decoration (Plate 53). This can be related to an exposed post between Bedroom 4 and the passageway to the bathroom. The post is an extension of the post in the hall, and is therefore probably part of the original timber phase to the house. It has two mortise holes in its eastern face (Figure 15, Plate 54) suggesting some of the framework to the house.

Limited evidence for further timberwork, in the main range, occurs in Bedrooms 1 (Plate 55), 2 (Plate 56) and 4 (Plate 57) where possible transverse beams are suggested by wider sections of the walls near to the ceilings. There is also evidence for a bressumer in Bedroom 4 (Plate 58) which is exposed in the cupboard in the north western corner of the room. This is rather curious, it is clearly a major timber, being approximately 360 mm square, however it is set only about 1.0 m above the level of the floor which can be compared to approximately 1.5 m for the ground floor bressumer in the hall. The fireplace itself has been blocked and papered over so its form is unknown.

In the north eastern corner of Bedroom 4 the eastern wall of the chimney breast is curved (Plate 59). This would have been one side of the stair well for the spiral staircase recorded on the ground floor.

Within the kitchen range, on the first floor a lateral beam crosses the bathroom (Plate 60), running through the bathroom wall and across the store room (Plate 61). Whilst this beam is chamfered along its whole length, no stops were recorded. The joists in the Store Room are exposed, however these appear to be relatively modern replacements as they have no chamfers and are sawn.

The roof structures in the attic (Figure 14) are distinctive within each of the ranges. In the main range there are three identical trusses (Trusses 3, 4 and 5, Figure 14), each with a king post with diagonal braces (Plate 62, Figure 16). The timbers used for these trusses is noticeably smaller than those used for the trusses in the kitchen range and are of sawn timbers suggesting a relatively modern date,

possibly c1890 (Listing Description 2001). There are scratched carpenter's marks on each of the joints of the trusses marking both the position and angle of each of the joints. The roof space is insulated, however, it would appear that the trusses sit on top of tie-beams using larger timbers which are possibly part of an earlier roof structure.

The gable walls of the main range have the chimney breasts centrally placed, however at the northern end the main chimney breast (Plate 63) appears to cut a diagonal, stone built structure (Plate 64) which may be part of an earlier chimney.

The original relationship between the roofs of the two ranges has unfortunately been lost with the replacement of the main range roof. The purlins, from the kitchen range, have been sawn off before they reach the main range roof structure, whilst the original ridge piece has been sawn at the partition between the two ranges (Plate 65). The partition between the two ranges is constructed of studs placed at regular intervals which were filled with plastered wattle work. It also has a later five plank ledged door inserted. This doorway demonstrates the difference between the two attic levels in the two ranges. That in the kitchen range is 0.88 m below that of the main range, although ridge levels are the same. This difference is allowed by a shallower pitch to the main range roof of about 40° when compared to approximately 46° for the kitchen range. The angle of the kitchen range roof is probably related to its original covering, Brunskill (2007, 60) suggest an angle of 50° is required for thatch, however given the exposed position of Prys Mawr this may have been reduced in order to reduce the wind loading on the roof. The presence of moss slates on top of the walls of the kitchen range would suggest that these were the covering of this roof at one point prior to the current roof.

The kitchen range has two similar trusses (Figure 16, Plates 66 and 67) each with an arched collar which are slightly lop-sided. All of the joints are pegged and one of the principle rafters is notched at its peak to allow the ridge piece (Plate 68). The principal rafters are also trenched for the two pairs of purlins (Plate 69). The purlins run from within the roof space of the main range along the whole

length of the kitchen range with the exception of lower southern purlin the western end of which has been replaced with a previously used timber (Plate 70). This has a series of three sockets for lap joints with associated peg holes on what is now its upper surface.

There is a single rafter on the northern side of the roof which appears to be the fragment of a truss (Plate 71). Running only from the top of the wall to the level of upper purlin, this timber is noticeably bigger than the common rafters used for the rest of the roof. The top of this timber has a lap joint in order to fit it to the upper purlin (Plate 72).

Dendrochronological Study

A series of eighteen core samples were taken by C.M. Bridge of Oxford Dendrochronology Laboratory from the timbers of the house. Two areas of the property were looked at – the roof of the kitchen wing, and the main house itself. Whilst the roof timbers looked superficially very good for dating, once prepared, the samples showed several bands of very narrow rings, probably resulting from management of the trees. This made them undatable. Three ceiling timbers from the main range did date however, giving a likely combined felling date range of 1540–70.

The full Dendrochronological Report is included as Appendix 2.

Watching Brief Results

The need for a new drainage system on the front of the house led to the digging of a “Y” plan trench (Figure 17) from near the corners of the house to the eastern side of the garden. Initially this trench was intended to be shorter, being basically “V” shaped in plan. However solid rock was encountered and the trench was extended to the south east. The excavation of this trench was monitored and the few features revealed recorded.

Only two features were recorded (Figure 18), the foundation trench of the house and another feature which was possibly a small pit or large post-hole. The foundation trench (Context 3, Plate 73), runs along the front of the house, the top of the feature was 1.19 m wide, however

this narrows to 0.24 m at a depth of 0.35 m below the current garden level.

The only other feature located was a small pit or possible large post-hole (Context 5, Plate 74) which was approximately 7.0 m from the front of the house. It appeared only in the northern face of the southern trench and was 0.44 m wide and 0.24 m deep. No finds were associated with either of the features, thus they are undated.

The contexts are summarised in Appendix 3.

Discussion

Prys Mawr has clearly developed over a long period of time with at least seven possible phases demonstrated by the structural development of the house. Prior to this however, it is possible that the site was occupied by a large, roughly circular enclosure which was up to 140 m in diameter. This feature is essentially undated, however enclosures of this size and shape are not a common feature of post medieval gentry house/farm complexes. It is possible that this enclosure reflects a prehistoric enclosure of possible Late Bronze Age/Iron Age date, however it is also possible that it dates from an Early Medieval date.

The earliest phase of Prys Mawr itself would appear to be a timber framed building occupying most, if not all of the main range of the current house (Figure 20) and was originally constructed as at least a storey and a half building and was possibly a two storey building. Whilst there is only limited evidence for this earliest phase, it is possible to reconstruct at least part of the framing (Figure 19) from the surviving timberwork and the position of the sockets for missing timbers. It is likely that there was an extra bay to the south of the surviving timberwork with the relatively narrow bay now at the southern end of the surviving timber frame acting as a cross passage. The dating of this phase is uncertain, however it is likely to be within the sixteenth century (Barnwell and Suggett 2012, 23). It is possible that the dendrochronological date of between 1540 and 1570 may relate to this phase, however it is equally likely that it relates to the third major phase of construction. The form of this phase was possibly that of Smith's "Type A" end chimney house (Smith 1988, 157-158, Figure 81)

Phase 2 would appear to be the addition of the kitchen range to the rear of the building, probably built in line with the gable end of the Phase 1 building. The presence of a blocked window in the northern face of the kitchen range (Plate 24) would suggest this range was constructed before the northern end of the main range was extended. It is also likely that the infill of the main range with stonework had started by this phase.

Within Phase 3, the main range would appear to take on the characteristics of a "Snowdonia Type" house: a stone built, storeyed, dwelling divided into two parts on either side of the entrance passage. Characteristically the ground floor has a large hall with a gable end fireplace which has a winding stone stair to one side of the fireplace (Suggett and Stevenson 2010, 58). It is likely that the cross passage was retained at this point with the blocked door on the front elevation (Plate 17) of the main range marking the position of the front door. It is possible that the ceiling beams in the hall, and thus the dendrochronological date, relate to this phase of construction. Snowdonia houses of classic type and gentry status were already quite numerous in the mid sixteenth century (Barnwell and Suggett 2012, 25) which would correlate with the possible date range from the dendrochronological study.

The southern end of the house has clearly been re-built and it is possible that this represents the next phase of construction (Phase 4, Figure 20). The ceiling timberwork in the parlour has more complex scrolled stops than the simpler straight cut or stepped stops in the hall which possibly suggest a slightly later date. The use of scrolled stops begins in the late sixteenth century and continues until the late seventeenth or early eighteenth centuries (Hall 2005, 161) It is also likely within this phase the cross passage was partly blocked with the insertion of a staircase along its southern side (south of the position of the current staircase).

Phase 5 saw the moving of the front doorway slightly to the north and presumably a rearrangement of the internal layout of the main range including the movement of the staircase to the north. The position of the date plaque directly over this door (Plate 19) may suggest that they are contemporary, however the date of 1685 would more likely relate to Phase 4 possibly suggesting that the plaque was moved when the front door was relocated.

Two phases of late development have been recognised based on the two extensions. It is assumed that these happened at different times because of the materials used, the map evidence and the evidence for a previous range having occupied a similar footprint to the scullery. Being constructed in stone the lean-to store to the south of the kitchen range is earlier

than the construction of the scullery and it therefore assigned to Phase 6. The scullery, however, is largely built of brick, although it incorporates the stone built remains of an earlier structure, and is assigned to Phase 7. Both of these phases are of probably nineteenth century date or later. The scullery can be dated to after 1900 as it does not appear on the Second Edition Ordnance Survey mapping, whilst the stone built extension must date from before 1889 as it is on the First Edition map.

The roofs have clearly developed, having a variety of coverings at different periods. This is best recorded on the kitchen range where the relatively steep angle possibly suggest that it was initially thatched. The presence of considerable numbers of “moss slates” on top of the wall of the kitchen range also suggest that this was the roof covering before the current slate roof. The main range, however has a “new roof” together with new trusses which are held together with metal bolts

Acknowledgements

Thanks are due to the Davies Family for their forbearance during the recording to Prys Mawr. The restoration works on the house was carried out under the instruction of the architect Rhys Llwyd Davies who also provided the elevation drawings of the house together with a series of photographs taken before the works associated with this report were commissioned.

The project was commissioned by the Snowdonia National Park Authority and was monitored by John G. Roberts for the National Park Authority. Gwilym H Jones Arwel Thomas of the Snowdonia National Park Authority also provided photographs and information on Prys Mawr.

Richard Suggett of the Royal Commission on the Ancient and Historic Monuments of Wales visited the house whilst it was being recorded and offered advice and comments. Margaret Dunn of the Dating Welsh Houses Group also helped with organising the dendrochronological study.

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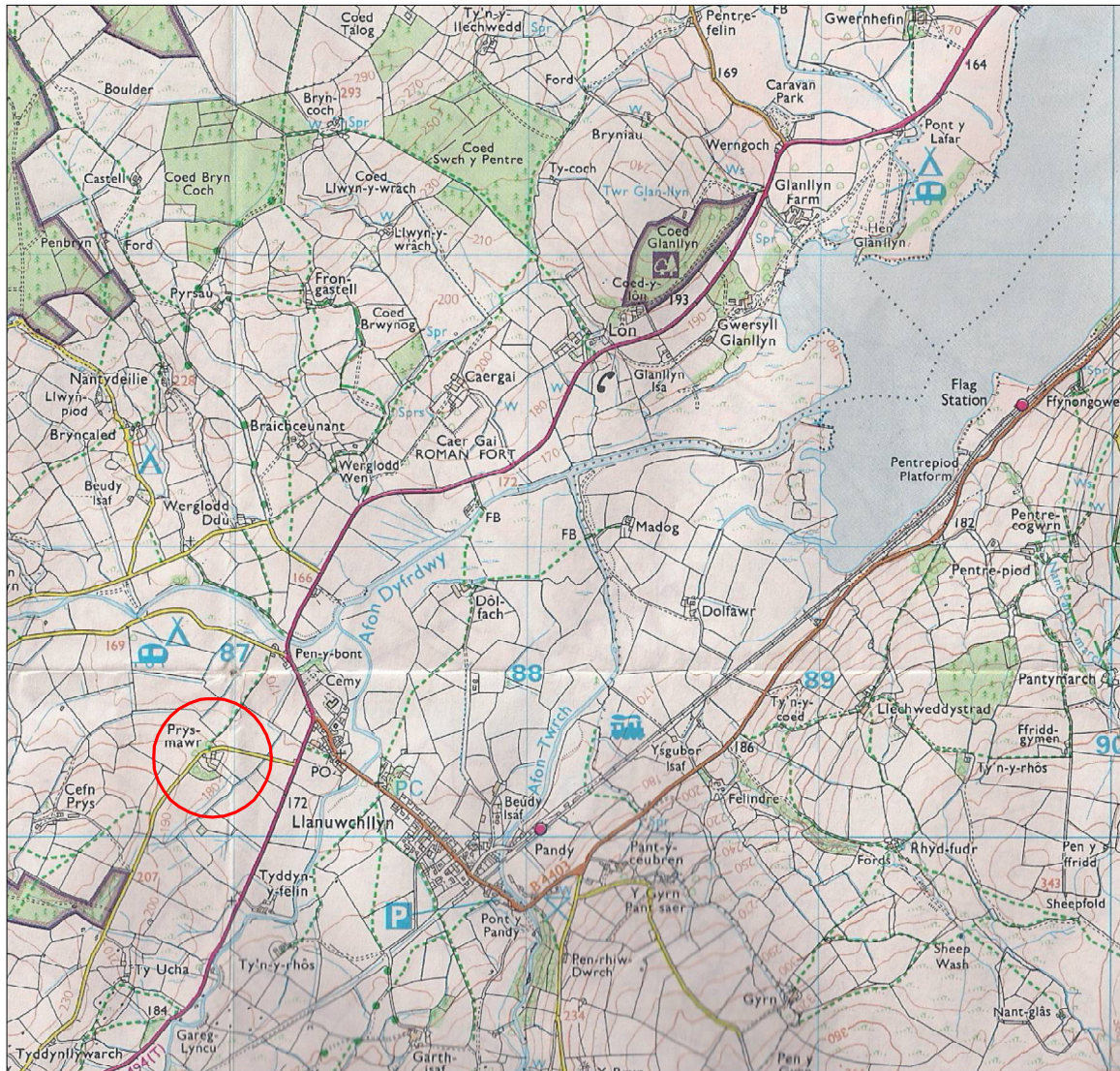


Figure 1: Location
Scale 1:25,000

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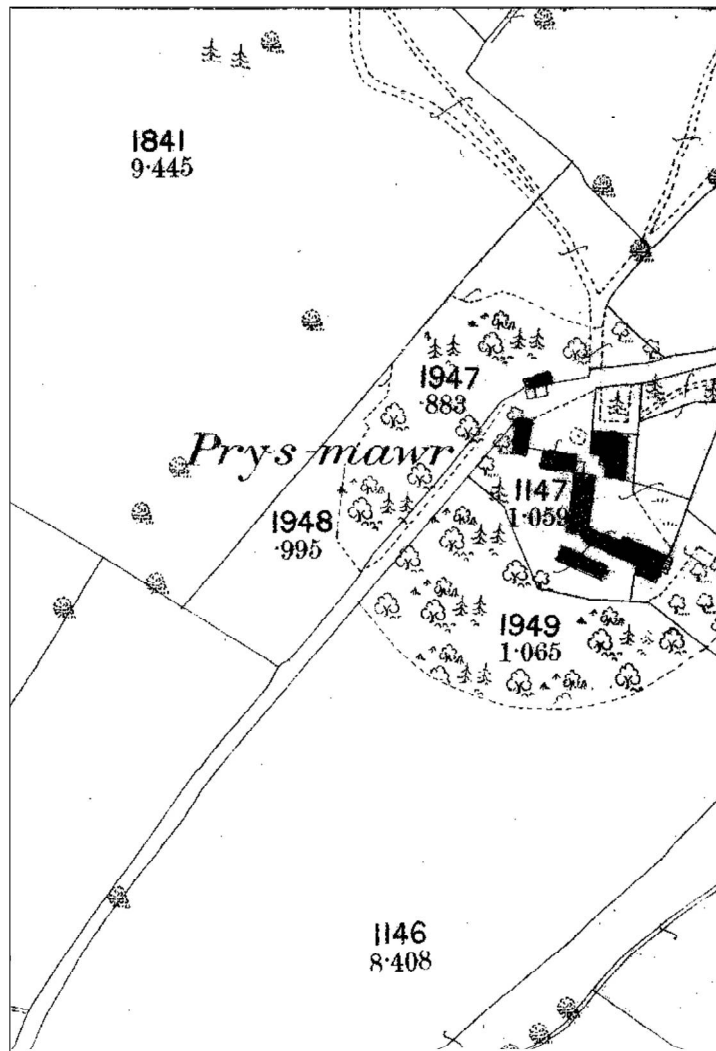


Figure 3: Extract from the 1889, First Edition
Ordnance Survey Map Merionethshire XXVIII.4
Scale 1:2500

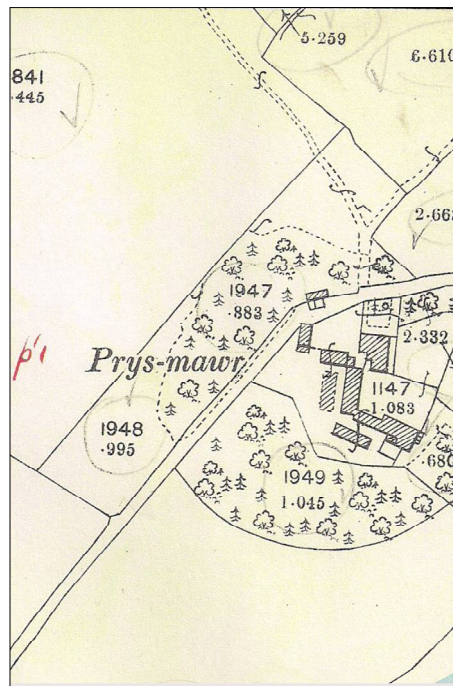
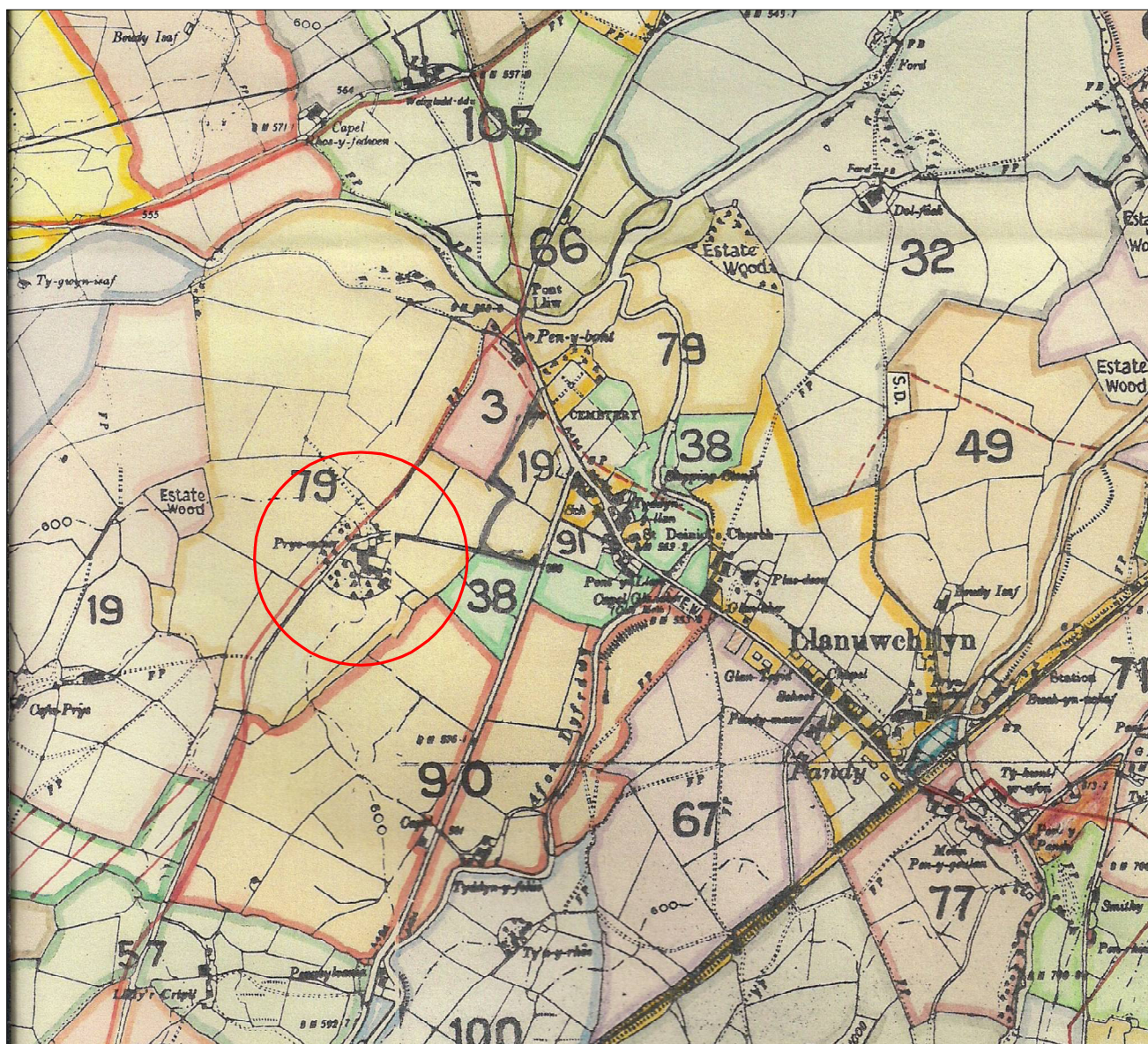


Figure 4: Extract from the 1901, Second Edition
Ordnance Survey Map Merionethshire XXVIII.4
Scale 1:2500



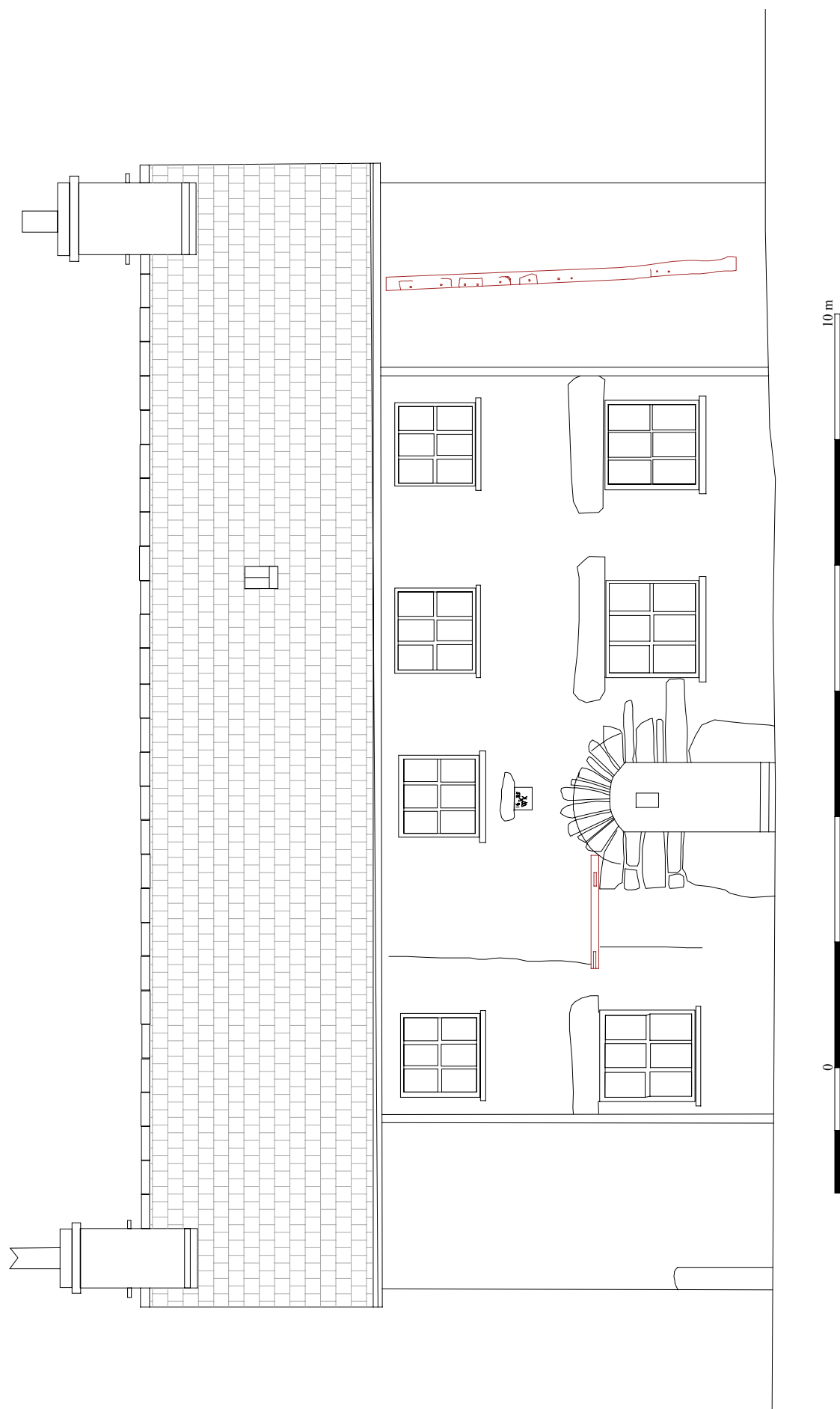
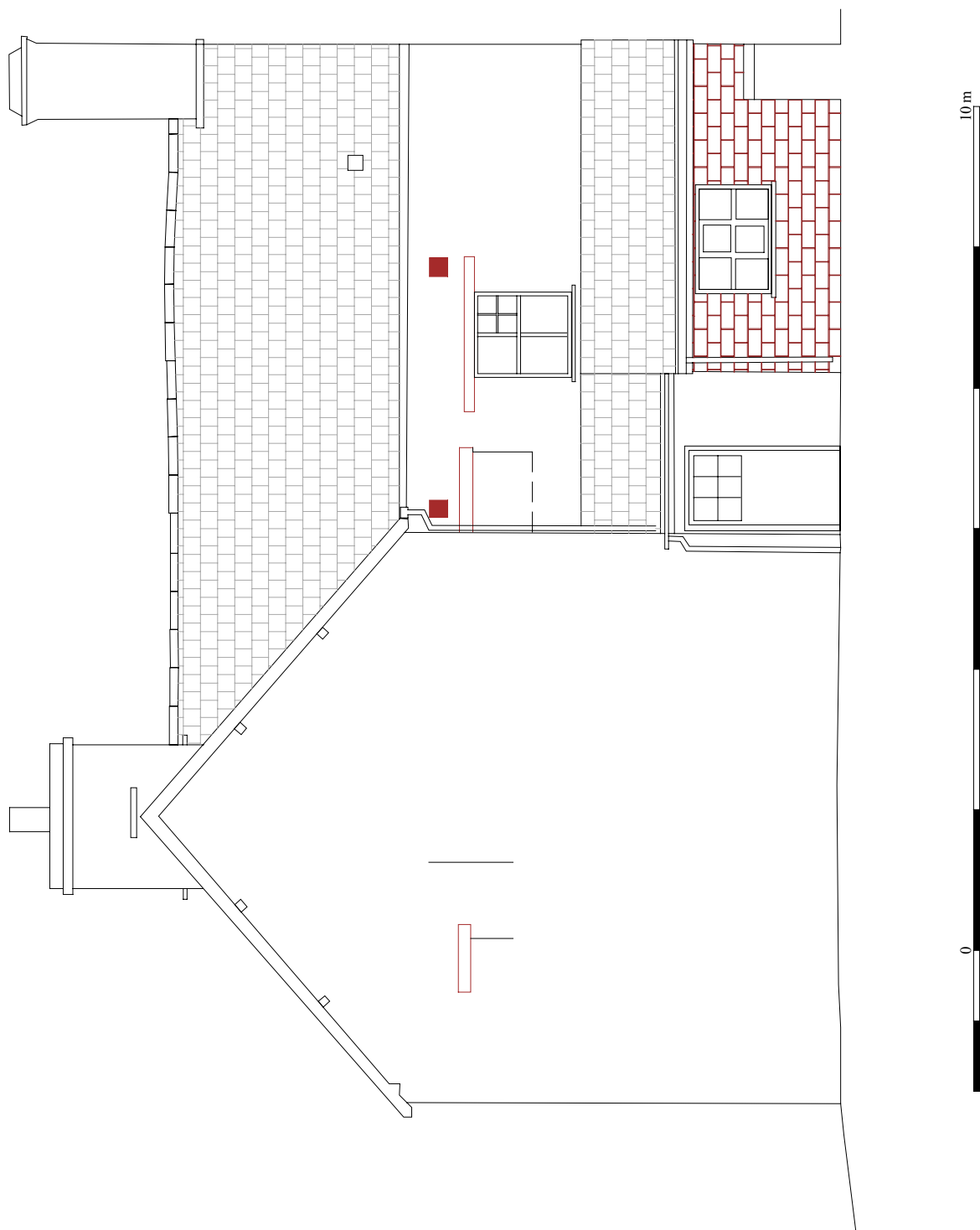


Figure 6: Front elevation
Scale 1:75

Based on an original drawing by Rhys Llwyd Davies



Based on an original drawing by Rhys Llwyd Davies

Figure 7: Northern elevation
Scale 1:75

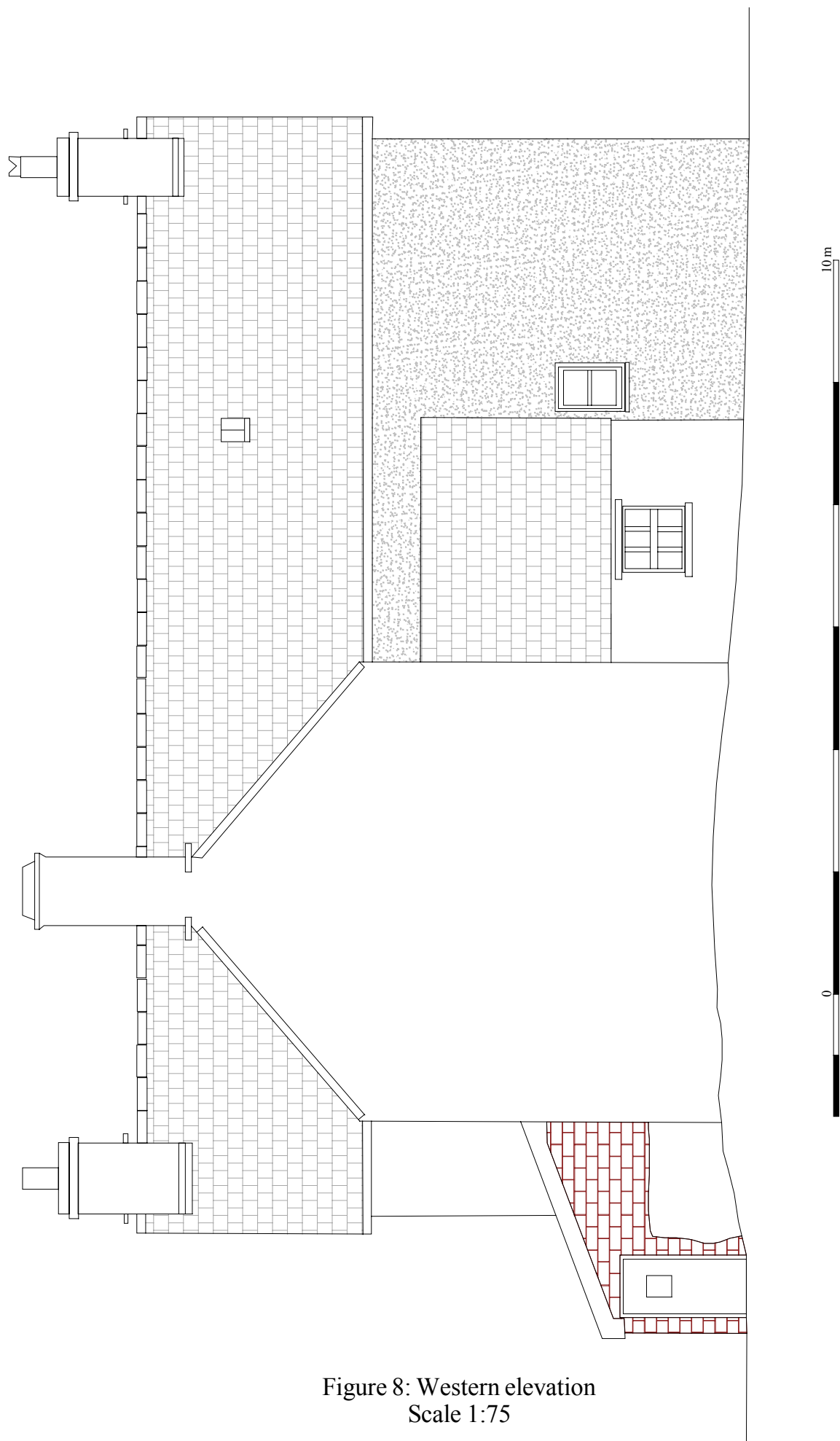


Figure 8: Western elevation
Scale 1:75

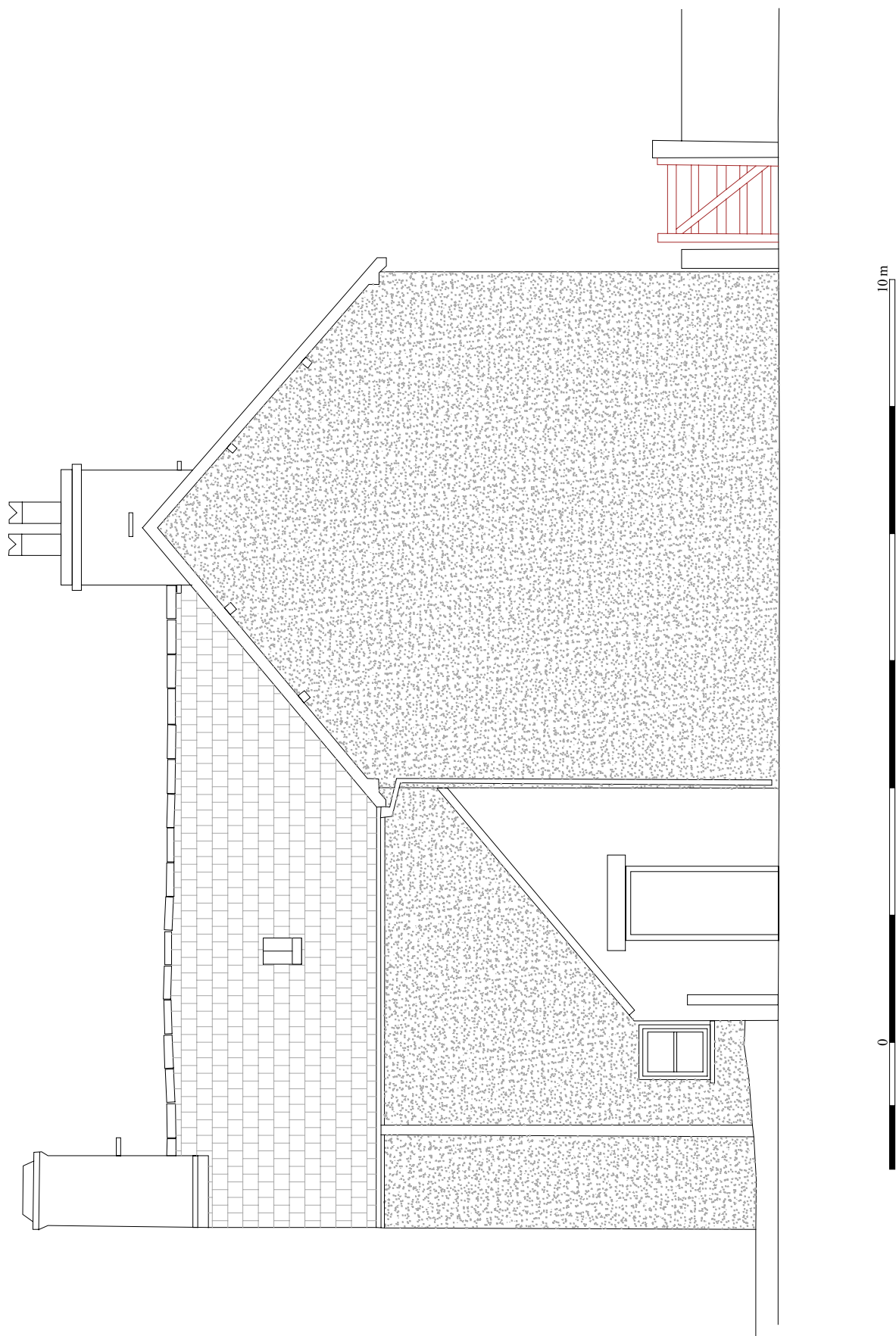


Figure 9: Southern elevation
Scale 1:75

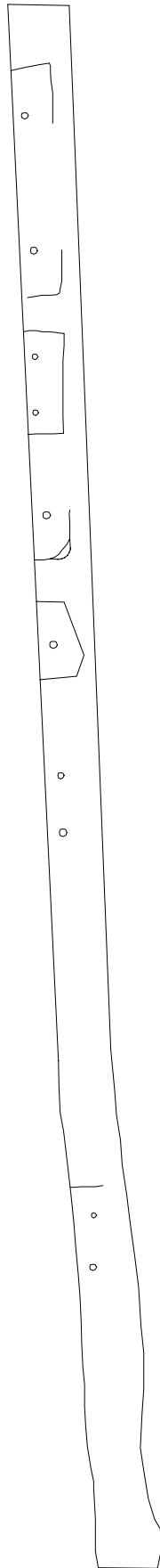


Figure 10: External Post
Scale 1:20

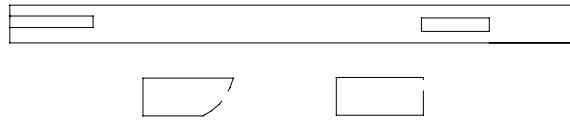


Figure 11: Lintel from Blocked Door
Scale 1:20

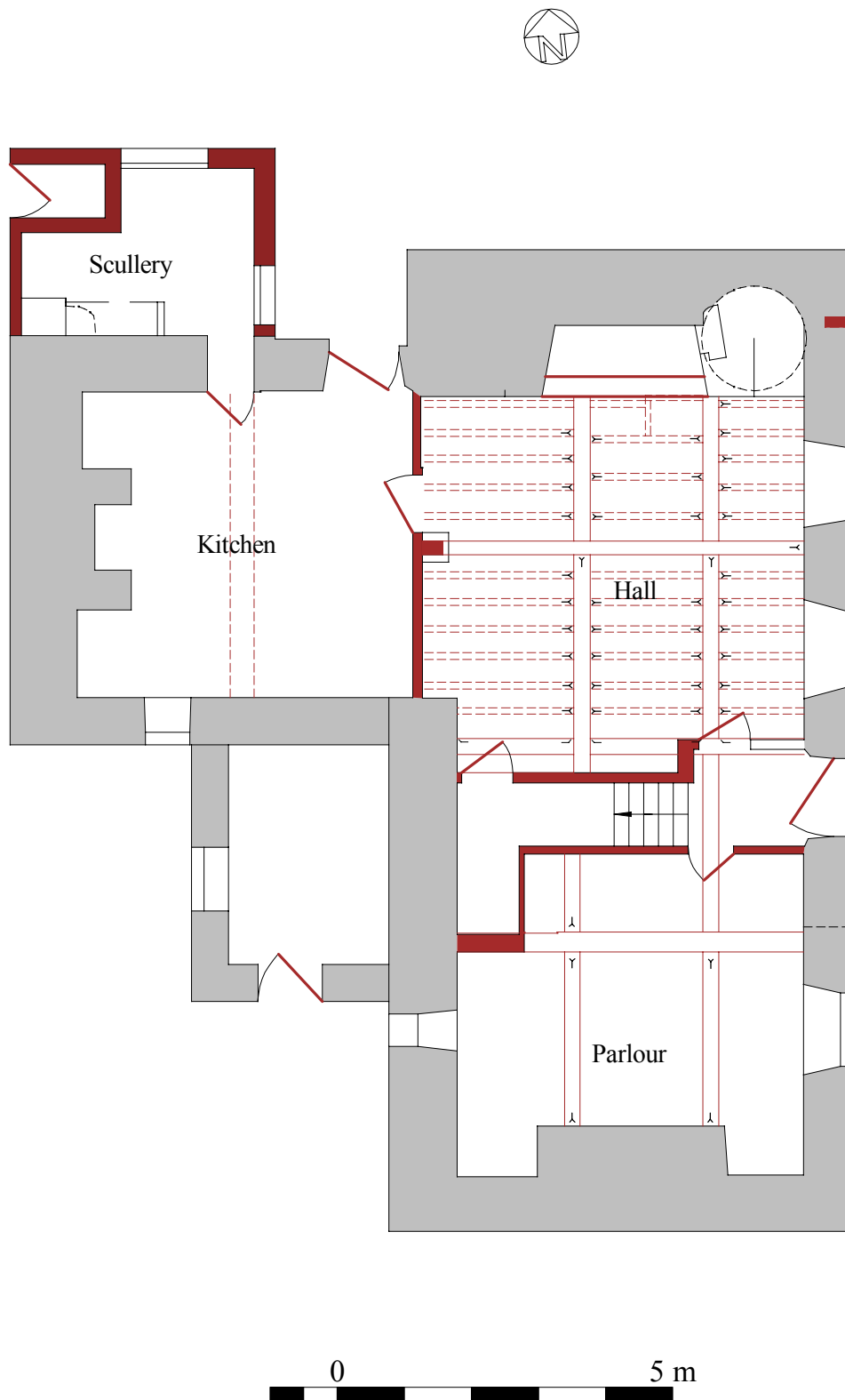


Figure 12: Ground Floor
Scale 1:100

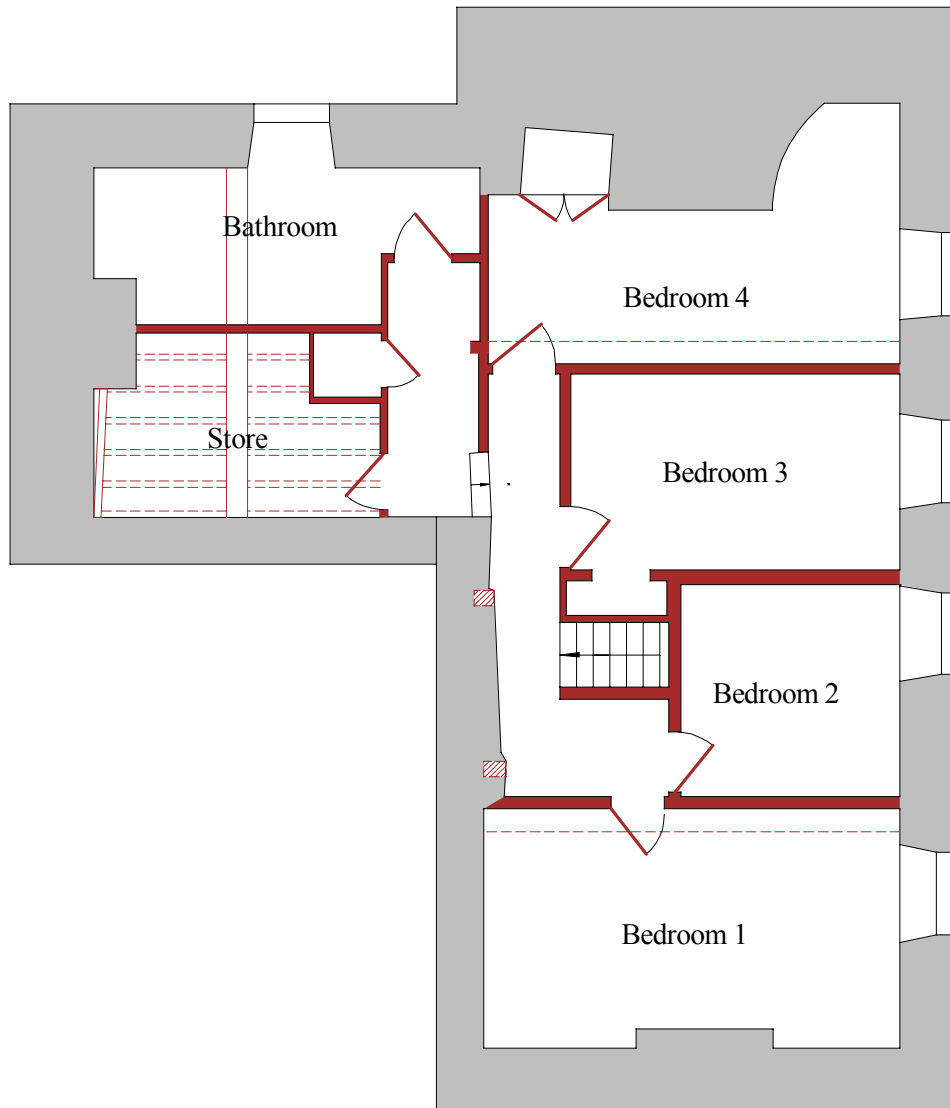


Figure 13: First Floor
Scale 1:100

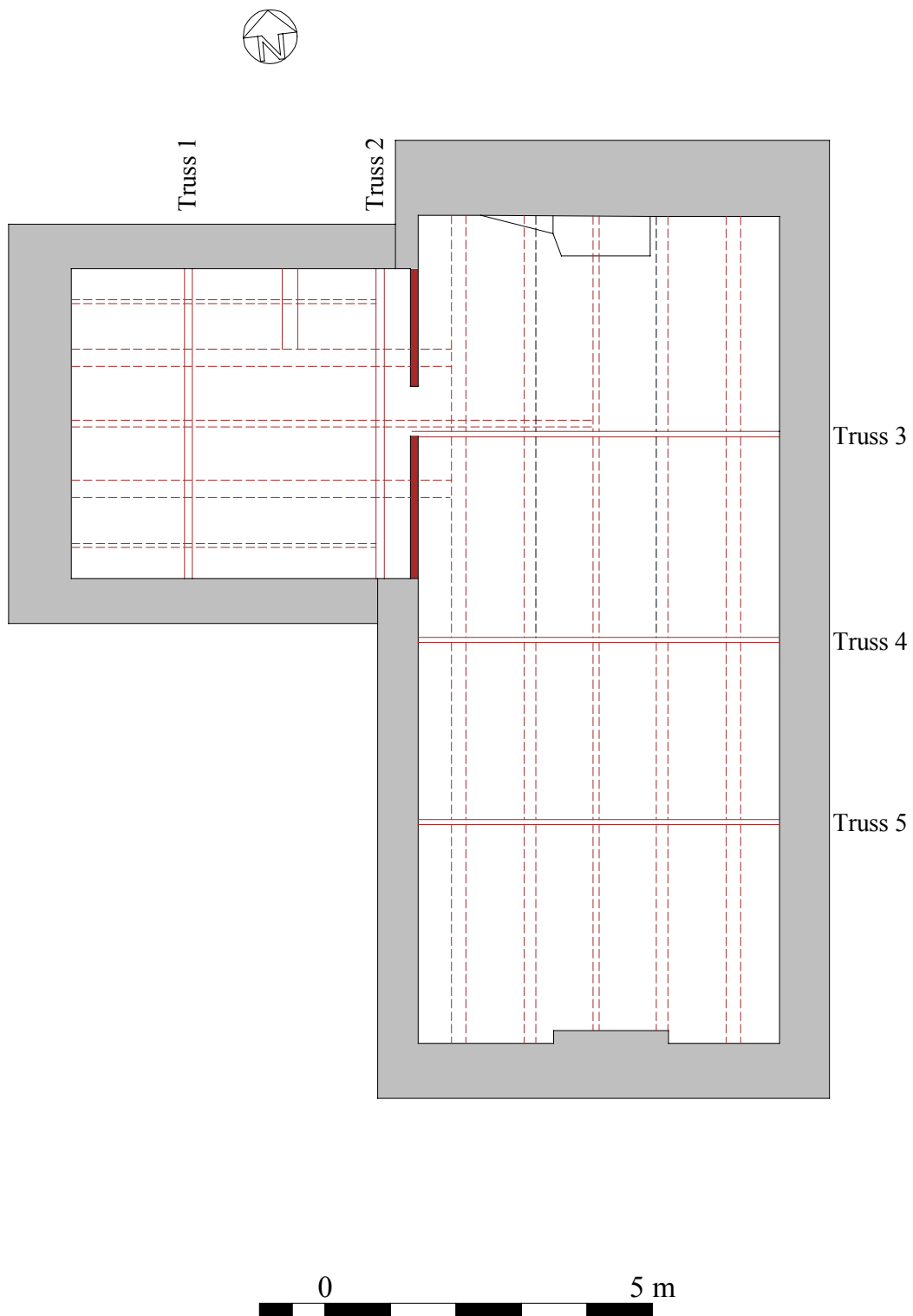
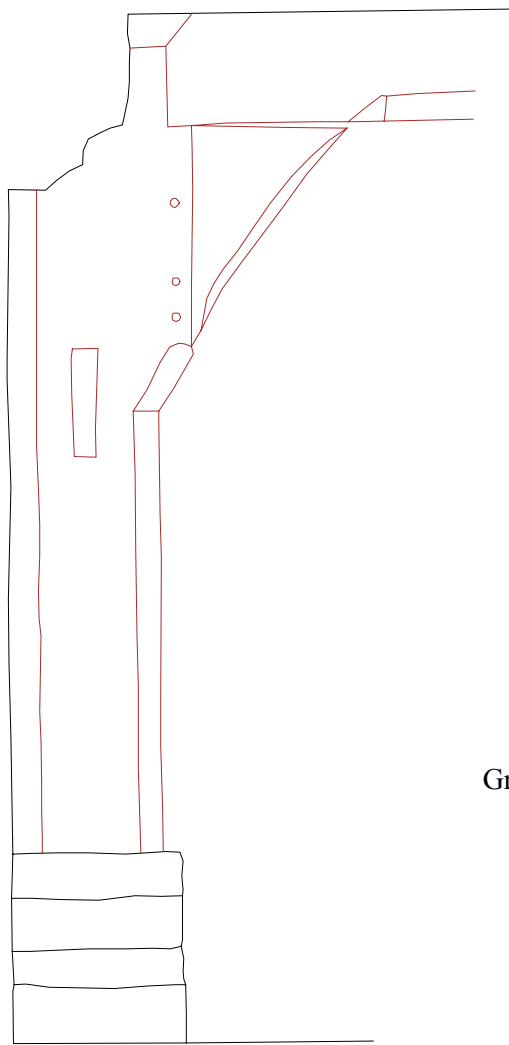
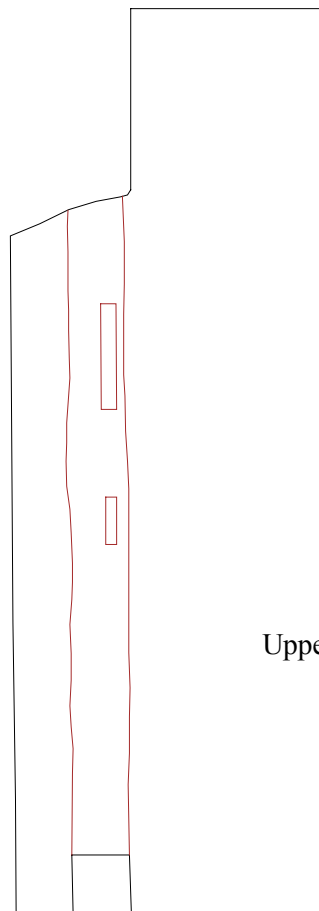
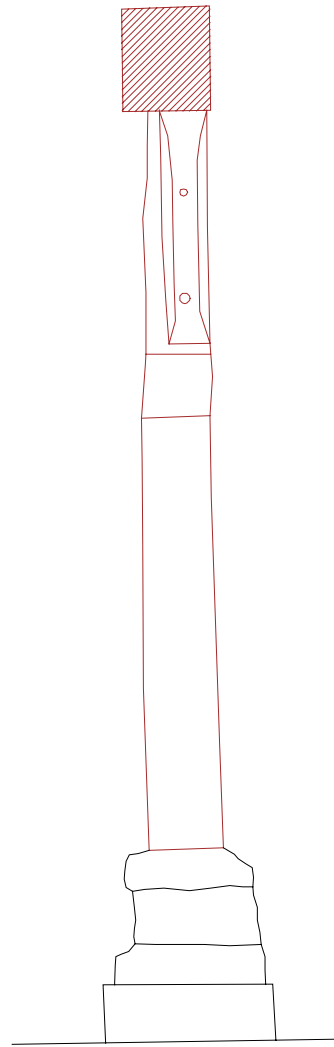


Figure 14: Attic
Scale 1:100

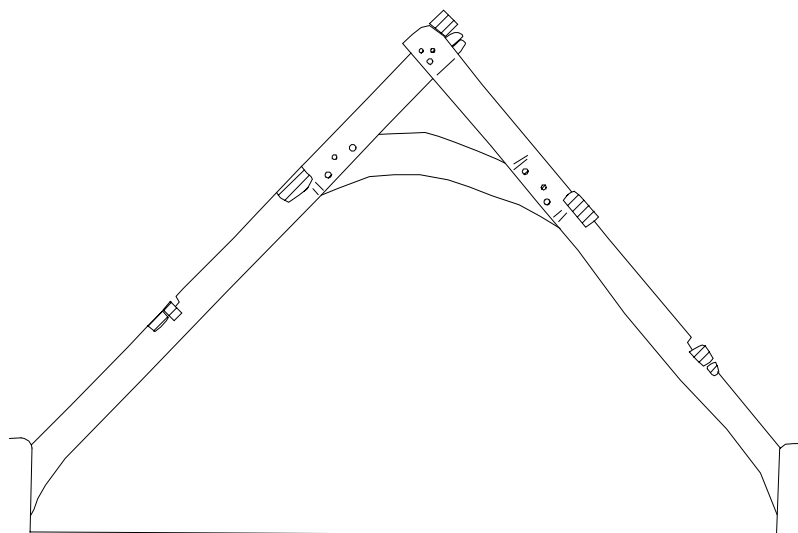


Ground Floor Post

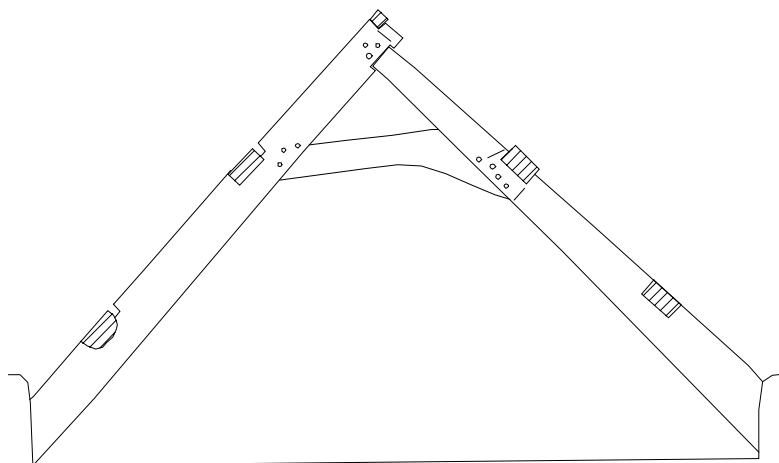


Upper floor post

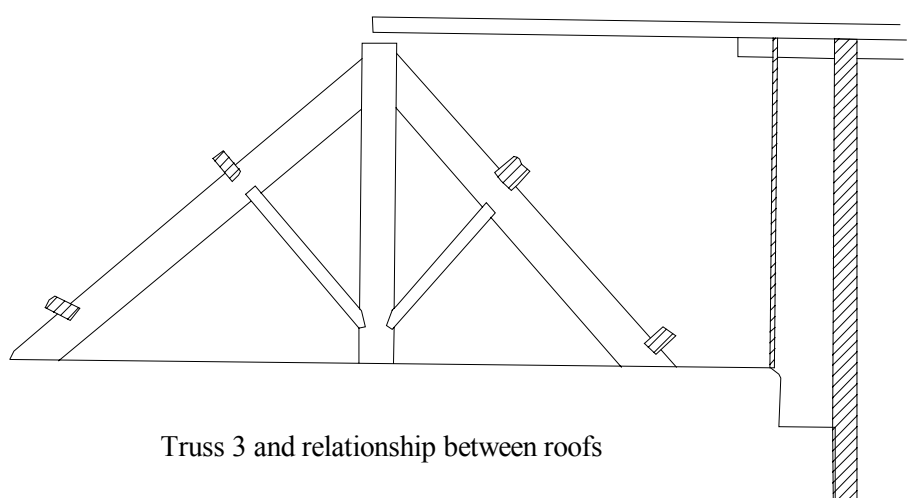
Figure 15: Posts within the house
Scale 1:20



Truss 1



Truss 2



Truss 3 and relationship between roofs



Figure 16: Trusses
Scale 1:50

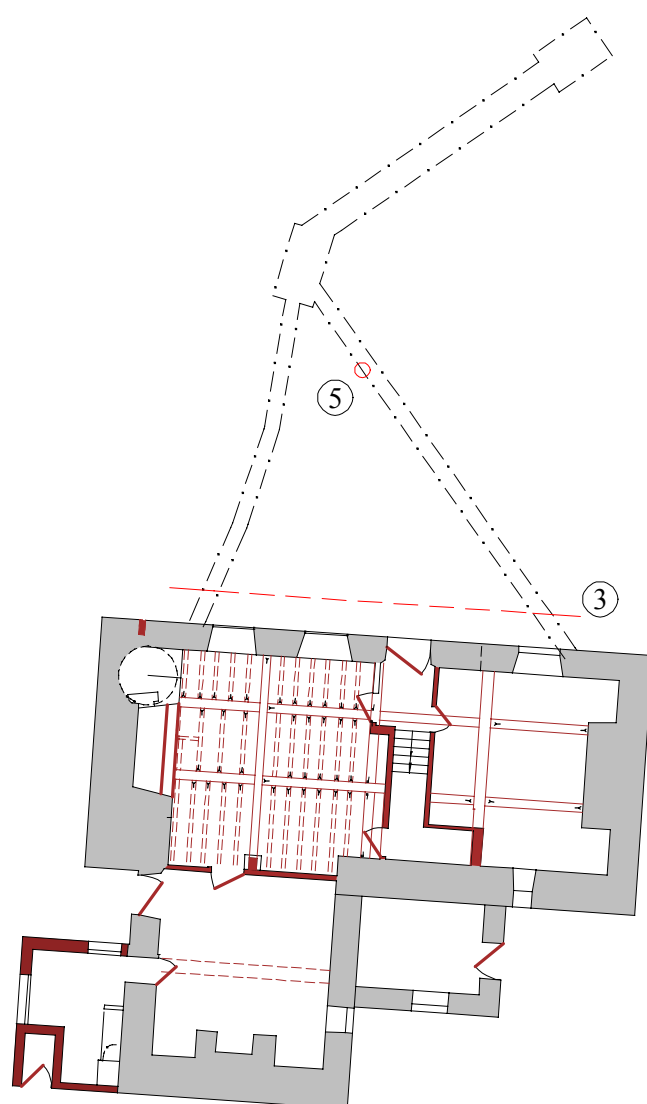


Figure 17: Location of the Drainage Works
Scale 1:200

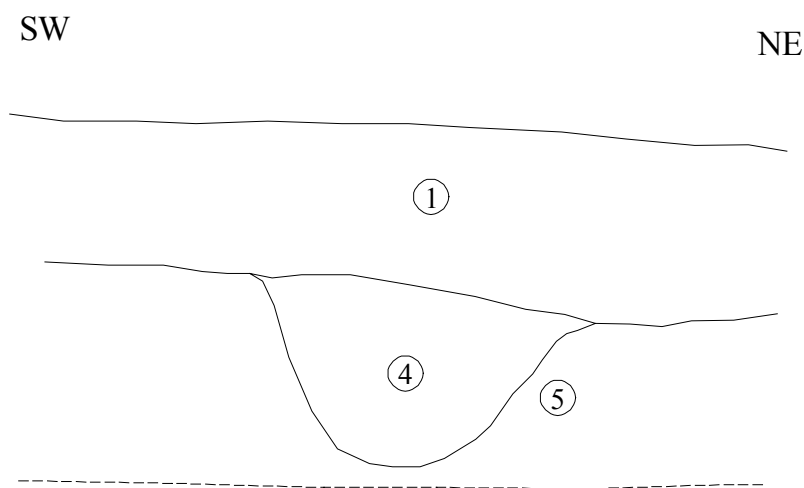
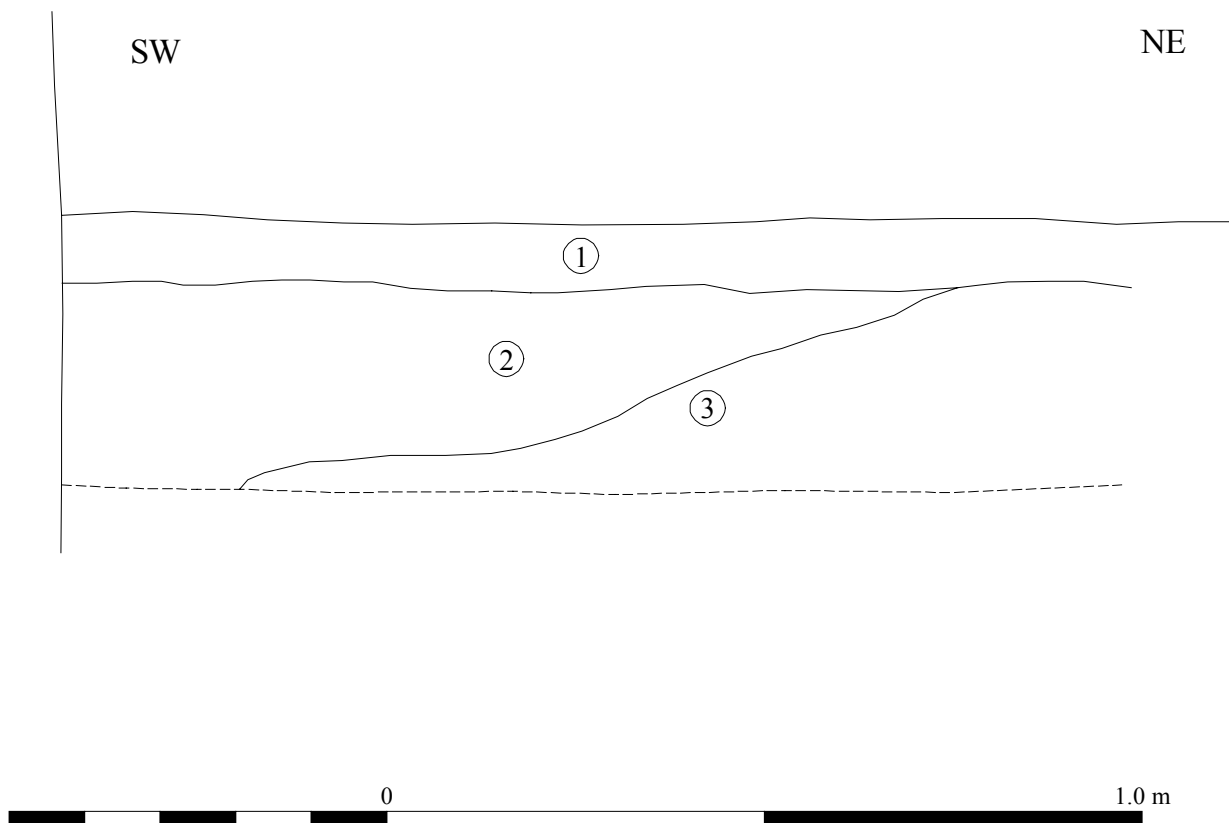


Figure 18: Sections
Scale 1:10

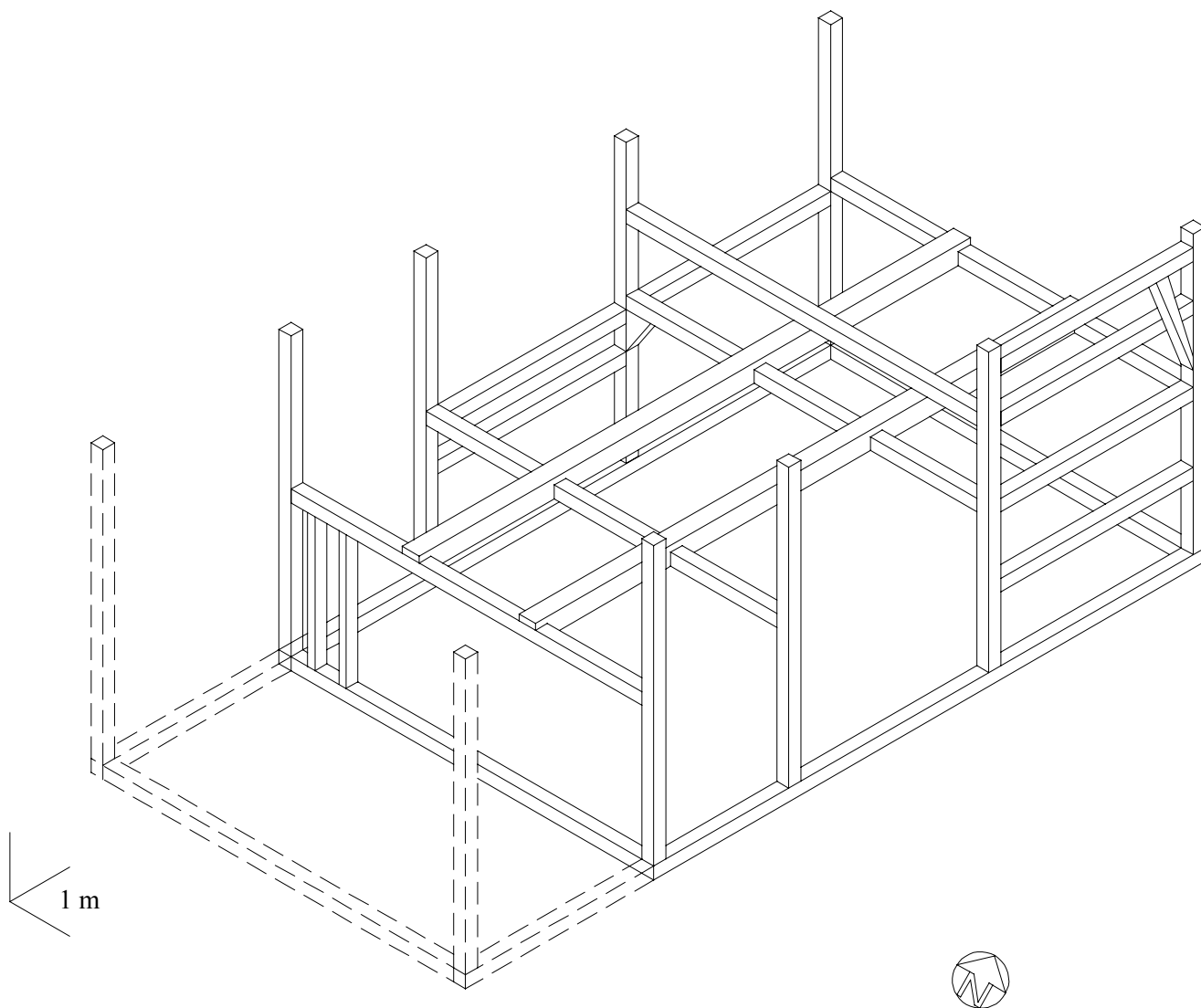


Figure 19: Possible Framing
Scale 1:100

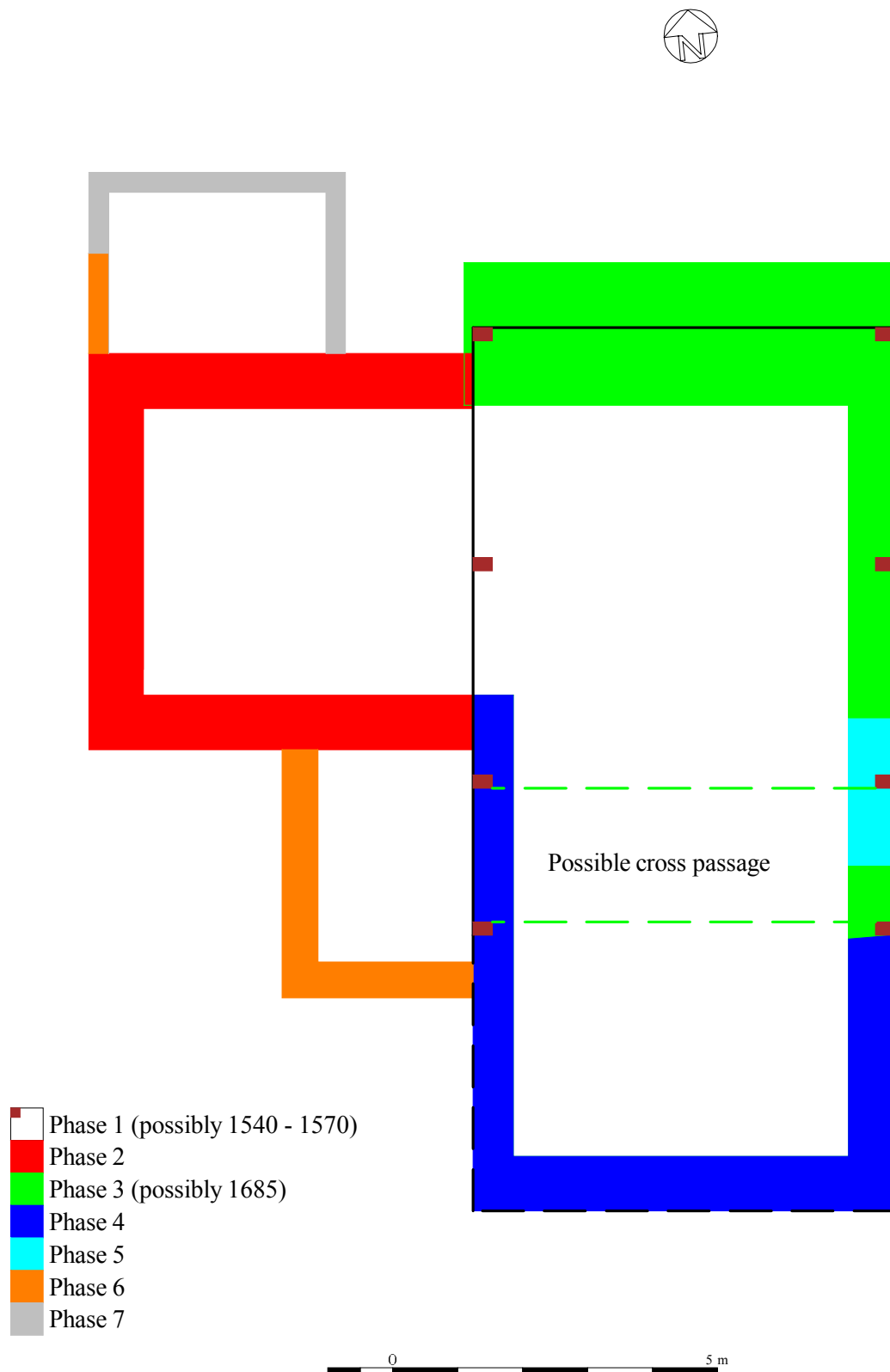


Figure 20: Possible Development
Scale 1:100

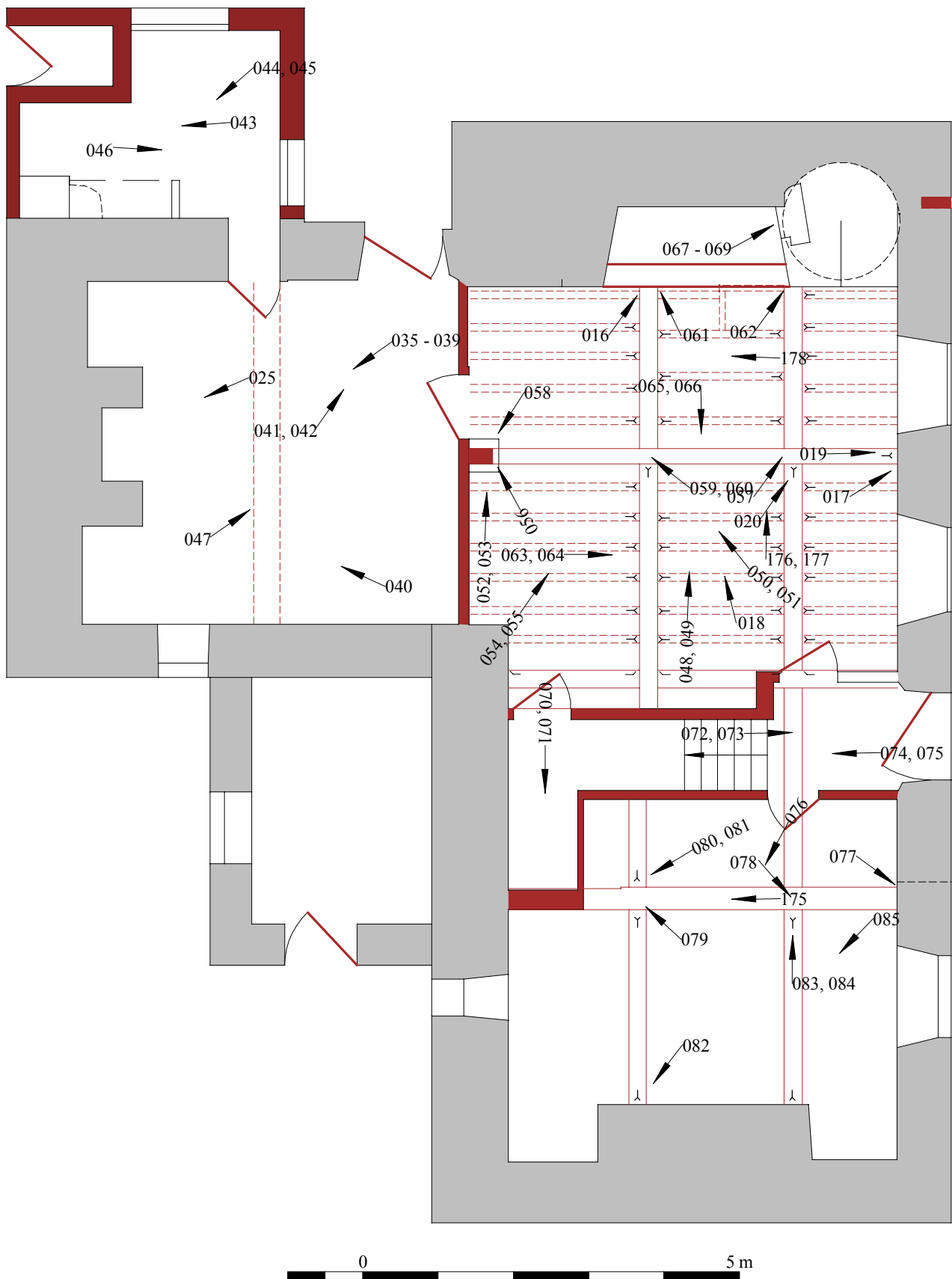


Figure 22: Location of the Ground Floor Photographs
Scale 1:75

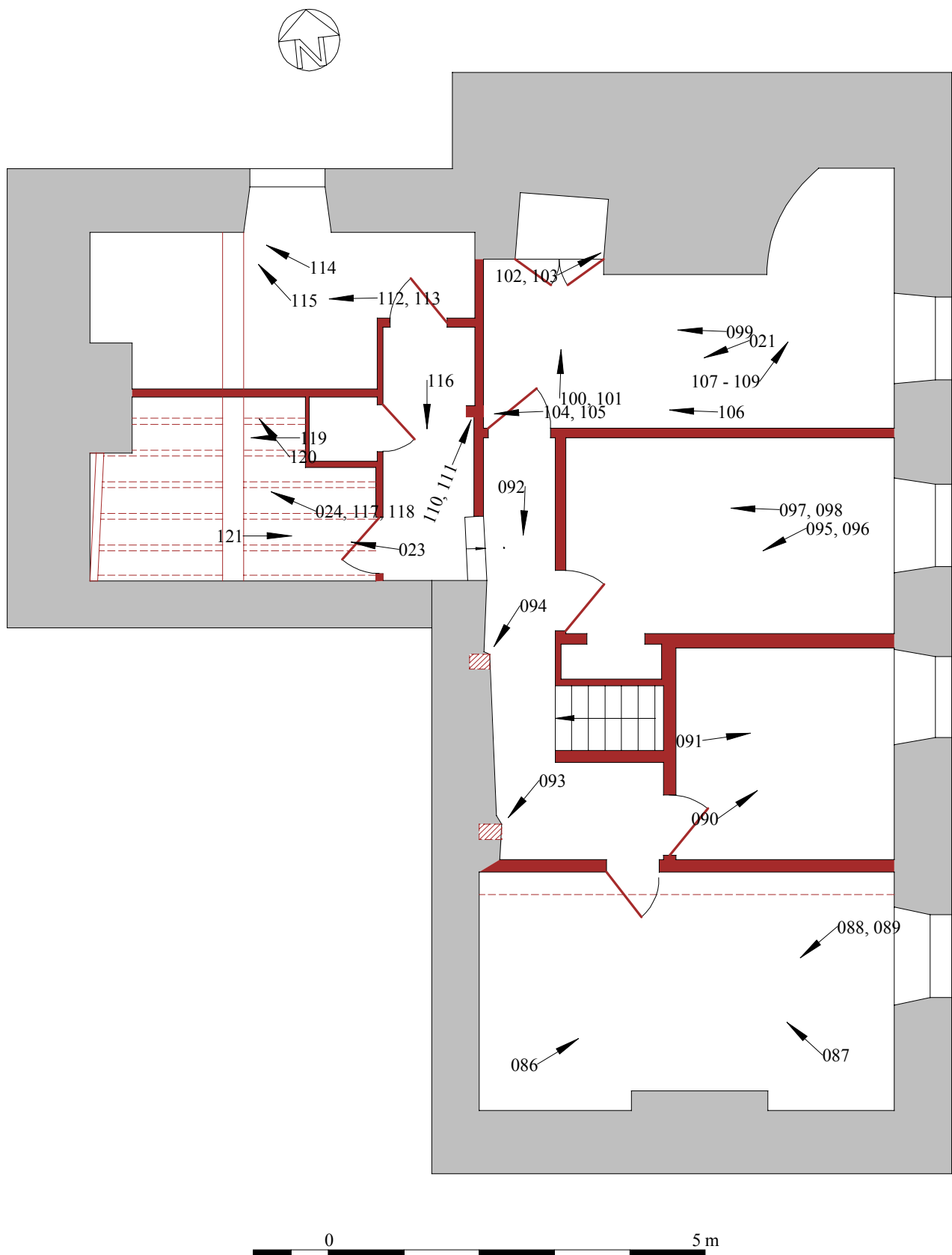


Figure 23: Location of the First Floor Photographs
Scale 1:75

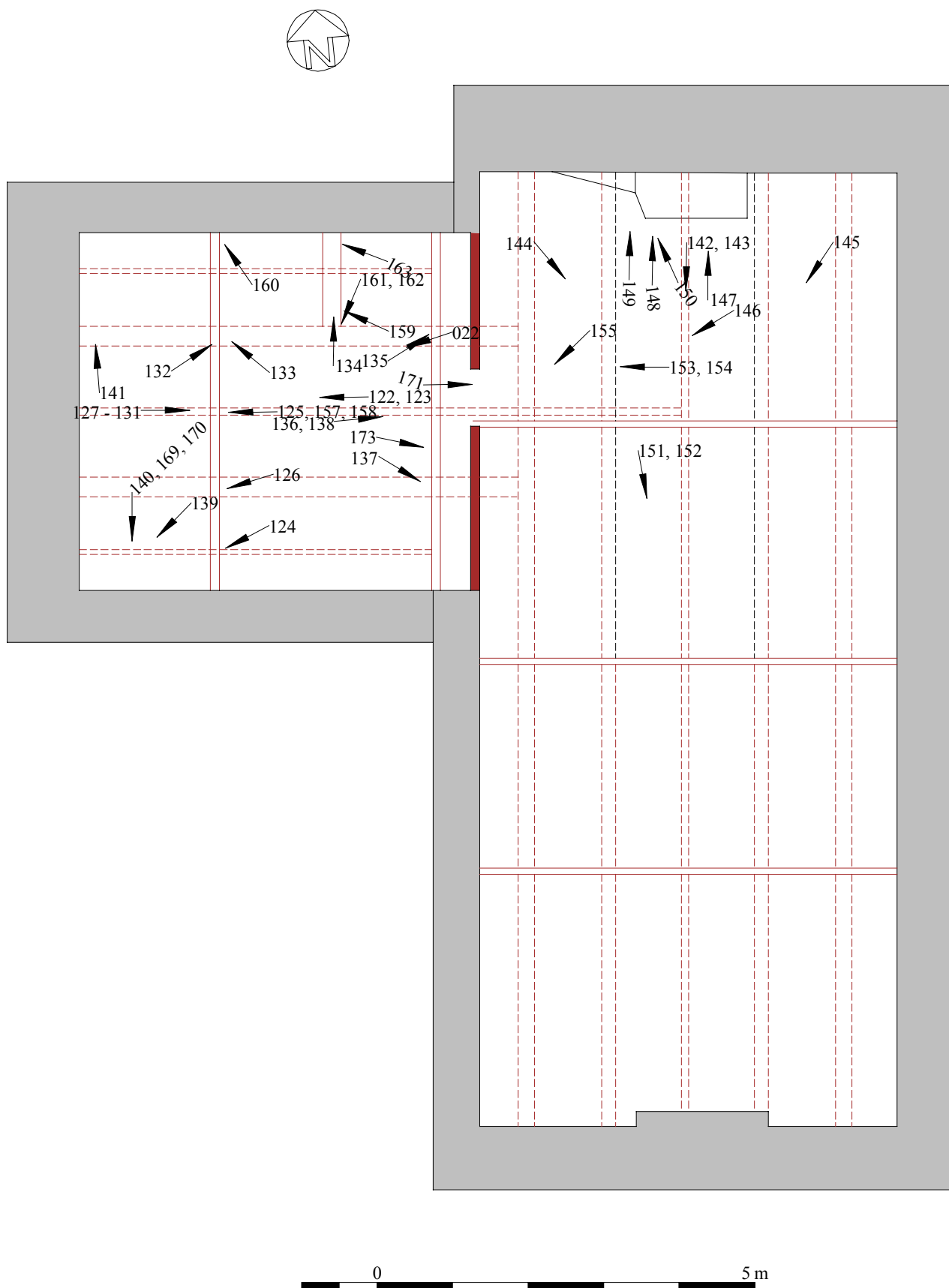


Figure 24: Location of the Attic Photographs
Scale 1:75



Plate 1: Photograph assumed to be about 1875 (National Library Photographic collection. (WIAbNL) 003381774)



Plate 2: 1954 photograph (National Library Casgliad Geoff Charles Collection. (WIAbNL) 003366279)



Plate 3: 1954 photograph (National Library Casgliad Geoff Charles Collection. (WIAbNL) 003366279)



Plate 4: 1954 photograph (National Library Casgliad Geoff Charles Collection. (WIAbNL) 003366279)



Plate 5: Arc of mature oaks to the west of the farm



Plate 6: Front elevation



Plate 7: Wooden post exposed by the restoration works



Plate 8: Joint at top of the external post



Plate 9: Mortice in external post



Plate 10: Mortice for a diagonal brace in the external post



Plate 11: Pegs for a mortice and tenon joint in the external post



Plate 12: Pegs for a mortice and tenon joint in the external post



Plate 13: Typical front elevation window



Plate 14: Date plaque



Plate 15: Front door



Plate 16: Detail of the door head



Plate 17: Blocked doorway in the front elevation



Plate 18: Lintel above the blocked doorway



Plate 19: Break in the stonework on the front elevation



Plate 20: The northern elevation



Plate 21: Bulge in the northern gable end of the main range



Plate 22: Timber in the northern gable of the main range



Plate 23: First floor window in the northern elevation of the “Kitchen Range”



Plate 24: Lintel for the blocked window in the northern face of the “Kitchen Range”



Plate 25: Detail of the lintel for the blocked window in the “Kitchen Range”



Plate 26: End of a timber above the level of the windows in the “Kitchen Range”



Plate 27: End of a timber above the level of the windows in the “Kitchen Range”



Plate 28: Moss slates resting on top of the wall of the “Kitchen Range”



Plate 29: Wooden peg found on the top of the wall of the “Kitchen Range”



Plate 30: The kitchen door



Plate 31: Brick scullery



Plate 32: Blocked doorway in the scullery



Plate 33: Detail of the scullery window



Plate 34: The western elevation



Plate 35: Lean-to between the two ranges on the western elevation (Photograph by R. Llwyd Davies)



Plate 36: The southern elevation (Photograph by R. Llwyd Davies)



Plate 37: The kitchen, looking NW



Plate 38: The protuberances in the NW corner of the kitchen



Plate 39: Slate bench and copper in the scullery

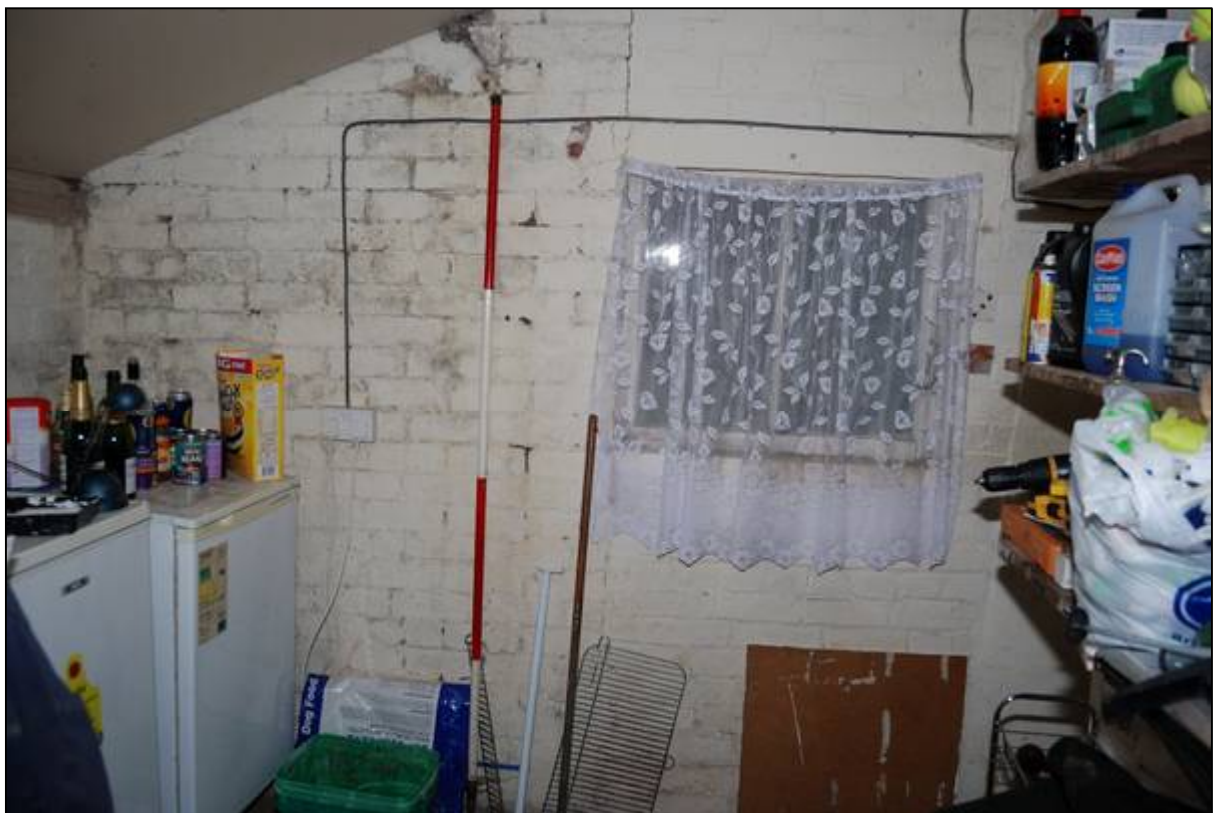


Plate 40: Partially blocked doorway in the scullery



Plate 41: Hearth in the hall



Plate 42: Opening in the side of the hearth



Plate 43: Post in the hall



Plate 44: The relationship between the transverse ceiling beam and the post in the hall



Plate 45: The boss between the transverse and one of the axial ceiling beams



Plate 46: Straight cut stop on one of the axial beam in the hall



Plate 47: Joists in the hall



Plate 48: Beam exposed in the below stairs cupboard



Plate 49: Axial Beal crossing the entrance hallway



Plate 50: The joint between the northern axial beam and the transverse beam in the parlour.



Plate 51: The reduced width of the transverse beam in the parlour



Plate 52: Rolled stops on one of the southern axial beams in the parlour



Plate 53: Possible posts on the landing



Plate 54: Post exposed in Bedroom 4



Plate 55: Probable transverse beam in Bedroom 1



Plate 56: Probable transverse beam in Bedroom 2



Plate 57: Bedroom 4, looking west showing possible transverse ceiling beam and the position of the post



Plate 58: End of the bressumer in cupboard in Bedroom 4



Plate 59: Curved wall in Bedroom 4



Plate 60: Beam across the bathroom



Plate 61: Beam in the store room



Plate 62: Truss 3, looking south



Plate 63: The northern chimney breast in the attic of the main range



Plate 64: Diagonal wall adjacent to the northern chimney in the main range



Plate 65: The relationship between the main range and kitchen range roofs



Plate 66: Truss 2 looking east



Plate 67: Truss 1, looking west



Plate 68: The peak of Truss 2 showing the notch for the ridge piece and the pegged joint between the principle rafters.



Plate 69: Trenching for the upper purlin



Plate 70: The replaced segment of the lower southern purlin



Plate 71: Possible fragment of a truss in the kitchen range



Plate 72: Relationship between the enlarged rafter and the top purlin



Plate 73: Context 3, foundation trench for the house



Plate 74: Context 5, possible small pit or large post-hole

Appendix 1: Specification for the Archaeological Recording of Prys Mawr, Llanuwchllyn.

Specification written by I.P. Brooks 20/01/2014

1. Background

- 1.1. The Snowdonia National Park Authority are grant aiding elements of the restoration of the Grade II Listed farmhouse of Prys Mawr, Llanuwchllyn.
- 1.2. The house is of an “L” shape plan which is at least of late 17th century date, although it is thought that it may incorporate an earlier structure.
- 1.3. This specification is based on discussion with John G. Roberts the Snowdonia National Park Archaeologist

2. Aims

- 2.1. To record the existing structure of Prys Mawr
- 2.2. To analyse the possible development of the house
- 2.3. To date the major phase/s of construction
- 2.4. To record any archaeologically significant deposits disturbed by the associated ground works.

3. Assessment program

- 3.1. The programme of works shall include:
 - 3.1.1.Desk Top Study
 - 3.1.2.Recording of the house
 - 3.1.3.The organization and co-ordination of a dendrochronological study of selected timbers within the house in order to assess the development and date of construction of the house if possible. The dendrochronology work will be commissioned and funded, by the Snowdonia National Park Authority, separately to the work consequent to this brief.
 - 3.1.4.Watching brief on the ground works associated with the development
 - 3.1.5.Analysis and report preparation

4. Methodology

- 4.1. Desk Top Study
 - 4.1.1.The following archives will be consulted for relevant sources:
 - 4.1.1.1. The Historic Environment Record held by the Gwynedd Archaeological Trust
 - 4.1.1.2. The Meirionnydd Archives at Dolgellau
 - 4.1.1.3. The archives section of the University of Bangor
 - 4.1.1.4. The National Library for Wales at Aberystwyth
 - 4.1.1.5. National Monuments Record
 - 4.1.2.SNPA Listed Building file photographic collection - ref Gwilym Hughes Jones and Arwel ThomasAll desk-based sources included for the purpose of interpretation and analysis will be fully referenced.

4.1.3. The desk-based assessment will include:

4.1.3.1. Relevant published and unpublished sources

4.1.3.2. Relevant cartographic, illustrative and historical sources pertaining to the historical development of the site.

4.2. Standing Building Recording

4.2.1. The farm house at Prys Mawr will be recorded through a series of drawn plans, photographs, written descriptions and drawings of significant features. These will be compatible with a Level 3 Record described in English Heritage 2006 *Understanding Historic Buildings. A guide to good recording practice*.

4.2.2. The drawn record will be made using a combination of direct measurement using tape measures and a laser range finder (Leica Disto D2) and will include

4.2.2.1. Measured plan as existing

4.2.2.2. Measured drawings recording the form or location of other significant structural details

4.2.2.2.1. Measured cross-sections, long sections or elevational sections.

4.2.2.3. Measured drawings showing the form of any architectural decoration

4.2.2.4. Measured elevations where these are necessary an understanding of the building's design, development or function and not more readily obtained by photography

4.2.2.4.1. The elevations will be based on the existing drawings drawn by Rhys Llwyd Davies, which will be modified

4.2.2.5. A site plan, typically at 1:500 (Based on the existing drawings by Rhys Llwyd Davis)

4.2.2.6. A plan or plans identifying the location and direction of accompanying photographs

4.2.2.7. Copies of earlier drawings

4.2.2.8. Three-dimensional projections when these are of value in understanding the building

4.2.2.9. Reconstruction drawings and phased drawings when these are of value

4.2.2.10. Diagrams interpreting the movement of materials or people or segregation of people or activities where these are warranted. These will show the position and layout of the rooms; position, size and character of doors/windows etc.; the position and character of significant timber features and any other significant features.

4.2.3. Photographs will be taken with a Nikon D80 Digital SLR Camera at a resolution of 10.2 MP in RAW, subsequently converted to TIFF and JPEG for archiving and presentation.

4.2.4. If practical the photographs will include a suitable metric scale.

4.2.5. The photographs will include:

4.2.5.1. A general view or views of the building in its wider setting

4.2.5.2. The building's external setting

4.2.5.3. Further views to indicate the builder's or architect's intention

- 4.2.5.4. The overall appearance of the principal rooms and circulation areas
- 4.2.5.5. Any external or internal detail which is relevant to the building's design, development or use.
- 4.2.5.6. Any machinery or other plant, or evidence for its former existence
- 4.2.5.7. Any dates or inscriptions, any signage, maker's plates or graffiti
- 4.2.5.8. Any building contents or ephemera
- 4.2.5.9. Copies of maps, drawings, views and photographs present in the building.
- 4.2.6. A written description of significant element of within the house will be produced to include:
 - 4.2.6.1. Precise location
 - 4.2.6.2. Note of statutory designation
 - 4.2.6.3. Date of record
 - 4.2.6.4. Expanded summary of building form, function, date, sequence of development
 - 4.2.6.5. Introduction
 - 4.2.6.6. Acknowledgements
 - 4.2.6.7. Discussion of published sources
 - 4.2.6.8. An account of the building's overall form
 - 4.2.6.9. An account of the past and present uses of the building with evidence of interpretations. An analysis of any circulation pattern or decorative, iconographic or liturgical scheme. An account of any fixtures, fittings, plant or machinery associated with the building.
 - 4.2.6.10. Any evidence of former or demolished structures
 - 4.2.6.11. Full bibliography
- 4.3. Dendrochronological Study
 - 4.3.1. Oxford Dendrochronology Laboratory will be consulted over the suitability of the timbers within Prys Mawr for dating.
 - 4.3.2. At the time of writing it is intended that either Dr. Miles or Dr. M. Bridge will visit the house within January or February 2014 and will provide an assessment of the suitability of the timbers together with a costing for any proposed works.
 - 4.3.3. It is intended that the Snowdonia National Park Authority will commission any dendrochronological recommended directly.
- 4.4. Watching Brief
 - 4.4.1. The watching brief will follow the standards laid out in the Institute for Archaeologists. 2008. Standard and guidance for an archaeological watching brief.
 - 4.4.2. A suitably qualified archaeologist will be present during the course of any groundworks associated with restoration of Prys Mawr.

4.4.3. Whilst the time required for the watching brief is dependent on the construction programme, it is expected that the necessary works will take no longer than three days.

4.4.3.1. The time required for the watching brief will be discussed with the contractors and the Snowdonia National Park Authority in advance of the works taking place.

4.4.3.2. Approval for the time required will be sort from the National Park Archaeologist in advance of the works being carried out.

4.4.4. It is intended that the archaeological works will cause minimal delay to the project, however if significant features or deposits are encountered it may be necessary to stop the construction work, in that section, so that a suitable scheme of works can be initiated in discussion with the National Park Archaeologist

4.4.5. All features or archaeologically significant deposits revealed by the ground works will be fully recorded including:

4.4.6. A written description of deposit: type, components etc.

4.4.7. Drawn plans and elevations at suitable scales

4.4.8. Photographs will be taken with a Nikon D80 Digital SLR Camera at a resolution of 10.2 MP in RAW, subsequently converted to TIFF and JPEG for archiving and presentation.

4.4.9. The photographs will include metric scales

4.4.10. All artefacts and ecofacts will be recorded by context.

4.4.11. Each deposit, feature or layer will be identified by a unique context number to which all other records will be related

4.4.12. Plan drawing showing extent of deposit.

4.4.13. Elevation drawing of any feature recorded to record vertical stratigraphy.

4.4.14. Where possible, features will be sampled to obtain dating and functional evidence.

4.4.15. Where possible, elevation drawings of feature half sections to record vertical stratigraphy.

4.4.16. Where appropriate, deposits will be sampled for environmental, dating or technological evidence. Samples will be fully recorded and packed appropriately for future analysis.

4.4.17. Sampling will be carried out in accordance with the procedures outlined in English Heritage. 2011. *Environmental Archaeology. A guide to the theory and practice of methods, from sampling and recovery to post-excavation.*

4.4.18. All features recorded will be tied in to the National Grid.

4.4.19. All features revealed by the ground works will be recorded as above if safe working practices and the work programme allows.

4.4.20. If human remains are encountered all works will stop until the appropriate permissions have been obtained.

4.5. Finds

4.5.1. Any flint artefacts will be studied by I.P. Brooks for Engineering Archaeological Services Ltd.

- 4.5.2. Any pottery will be studied by an appropriate specialist to be agreed in consultation with the National Park Archaeologist
- 4.5.3. Any metal or other special finds will be studied by an appropriate specialist to be agreed in consultation with the National Park Archaeologist
- 4.5.4. All ceramic, bone and stone artefacts will be cleaned and processed immediately following the watching brief.
- 4.5.5. Metal artefacts will be stored and managed on site according to the UK Institute of Conservation Guidelines.
- 4.5.6. Any samples taken for environmental analysis will be assessed and studied by an appropriate specialist to be agreed in consultation with the National Park Archaeologist
- 4.5.7. If specialist reports are required these will not be commissioned without the express permission of the Snowdonia National Park Authority.

5. Reporting

- 5.1. A summary report on the findings of the investigations will be prepared and completed within one month from completion of the project. This will summarise the results of the project including;
 - 5.1.1. Results of the Desk Top Study
 - 5.1.2. Results of the Building Recording
 - 5.1.3. Results of the Dendrochronological Study
 - 5.1.4. Results of the Watching Brief.
 - 5.1.5. A location plan at a suitable scale
 - 5.1.6. Hard copies of the reports will be sent to The Snowdonia National Park Authority (3 copies), The Regional Historic Environment Record held by the Gwynedd Archaeological Trust, the Royal Commission on the Ancient and Historical Monuments of Wales and Cadw. These bodies will also be sent digital copies of the report together with the archive on optical digital disc

6. General

- 6.1. IFA Code of Conduct
 - 6.1.1. All staff will abide by, and all procedures be carried out in accordance with the Institute of Field Archaeologists' Code of Conduct.
- 6.2. Health and Safety
 - 6.2.1. EAS Ltd adopt and adhere to safe working practices at all times. A copy of the company's general statement of policy is available on request.
 - 6.2.2. A risk assessment will be carried out prior to any fieldwork
- 6.3. Staff
 - 6.3.1. The project will be directed by Dr I.P. Brooks MIFA
 - 6.3.2. Project Staff will include Dr I.P. Brooks MIFA
- 6.4. Timetable
 - 6.4.1. A timetable can only be provided for part of the project as some of the elements within this specification are dependent on external factors. Desk top study

- 6.4.1.1. Visit to the National Library of Wales, Aberystwyth:- 1 day
- 6.4.1.2. Visit to the Meirionnydd Archive, Dolgellau: 1 day
- 6.4.1.3. Visit to the Archives held by the University of Wales at Bangor: 1 day
- 6.4.2. Building recording
 - 6.4.2.1. Fieldwork: 2 days
- 6.4.3. Dendrochronological Study
 - 6.4.3.1. Assessment visit: 1 day
 - 6.4.3.2. Permission for any follow up works will be sort from the Snowdonia National Park Authority or its representatives
- 6.4.4. Watching brief
 - 6.4.4.1. This will depend on the construction programme, however given the scale of the works it is not expected to take any longer than 3 days.
- 6.4.5. Analysis and report preparation.
 - 6.4.5.1. Analysis and report preparation : 4 days
- 6.5. Insurance
 - 6.5.1. EAS Ltd carries all necessary Public and Employee Liability Insurances.
 - 6.5.2. EAS Ltd carries Professional Indemnity Insurance.
- 6.6. Copyright
 - 6.6.1. EAS Ltd would normally retain full copyright of any commissioned reports, tender documents or other project documentation, under the Copyrights, Designs and Patents Act 1988 with all rights reserved: excepting that it hereby provides an exclusive license to the client for the use of such documents by the client in all matters directly relating to the project as described in the Project Specification.
 - 6.6.2. EAS Ltd is prepared to assign copyright to The Snowdonia National Park Authority at the request of the client, whilst retaining the right to be recognized as the author of any written, drawn or photographic records and reports generated.

Appendix 2

Oxford Dendrochronology Laboratory
Report 2014/6

**THE TREE-RING DATING OF
PRYS MAWR,
LLANUWYCHLYN
GWYNEDD
(NGR SH 869 302)**



Summary

Two areas of the property were looked at – the roof of the kitchen wing, and the main house itself. Whilst the roof timbers looked superficially very good for dating, once prepared, the samples showed several bands of very narrow rings, probably resulting from management of the trees. This made them undatable. Three ceiling timbers from the main range did date however, giving a likely combined felling date range of **1540–70**.

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Oxford Dendrochronology Laboratory
Mill Farm
Mapledurham
Oxfordshire
RG4 7TX

March 2014

The Tree-Ring Dating of Prys Mawr, Llanuwchllyn, Gwynedd (NGR SH 869 302)

BACKGROUND TO DENDROCHRONOLOGY

The basis of dendrochronological dating is that trees of the same species, growing at the same time, in similar habitats, produce similar ring-width patterns. These patterns of varying ring-widths are unique to the period of growth. Each tree naturally has its own pattern superimposed on the basic 'signal', resulting from genetic variations in the response to external stimuli, the changing competitive regime between trees, damage, disease, management etc.

In much of Britain the major influence on the growth of a species like oak is, however, the weather conditions experienced from season to season. By taking several contemporaneous samples from a building or other timber structure, it is often possible to cross-match the ring-width patterns, and by averaging the values for the sequences, maximise the common signal between trees. The resulting 'site chronology' may then be compared with existing 'master' or 'reference' chronologies.

This process can be done by a trained dendrochronologist using plots of the ring-widths and comparing them visually, which also serves as a check on measuring procedures. It is essentially a statistical process, and therefore requires sufficiently long sequences for one to be confident in the results. There is no defined minimum length of a tree-ring series that can be confidently cross-matched, but as a working hypothesis most dendrochronologists use series longer than at least fifty years.

The dendrochronologist also uses objective statistical comparison techniques, these having the same constraints. The statistical comparison is based on programs by Baillie & Pilcher (1973, 1984) and uses the Student's *t*-test. The *t*-test compares the actual difference between two means in relation to the variation in the data, and is an established statistical technique for looking at the significance of matching between two datasets that has been adopted by dendrochronologists. The values of '*t*' which give an acceptable match have been the subject of some debate; originally values above 3.5 being regarded as acceptable (given at least 100 years of overlapping rings) but now 4.0 is often taken as the base value. It is possible for a random set of numbers to give an apparently acceptable statistical match against a single reference curve – although the visual analysis of plots of the two series usually shows the trained eye the reality of this match. When a series of ring-widths gives strong statistical matches in the same position against a number of independent chronologies the series becomes dated with an extremely high level of confidence.

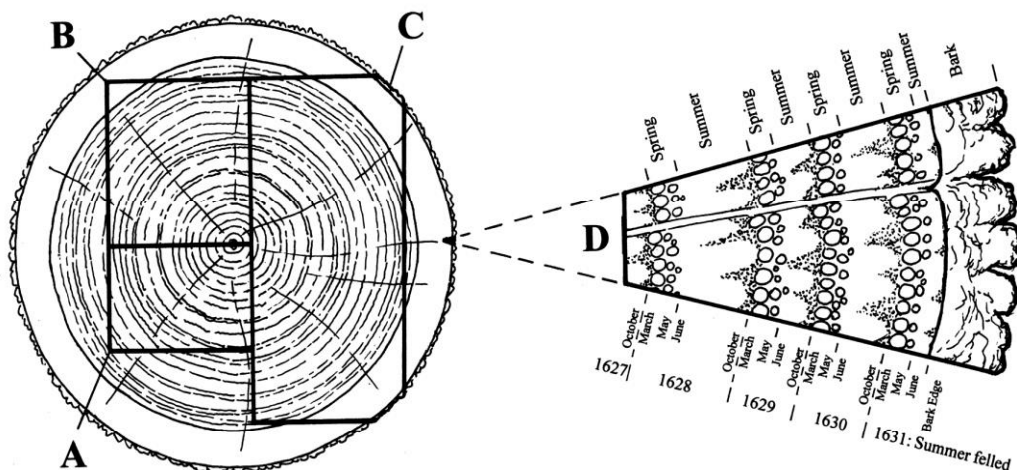
One can develop long reference chronologies by cross-matching the innermost rings of modern timbers with the outermost rings of older timbers successively back in time, adding data from numerous sites. Data now exist covering many thousands of years and it is, in theory, possible to match a sequence of unknown date to this reference material.

It follows from what has been stated above that the chances of matching a single sequence are not as great as for matching a tree-ring series derived from many individuals, since the process of aggregating individual series will remove variation unique to an individual tree, and reinforce the common signal

resulting from widespread influences such as the weather. However, a single sequence can be successfully dated, particularly if it has a long ring sequence.

Growth characteristics vary over space and time, trees in south-eastern England generally growing comparatively quickly and with less year-to-year variation than in many other regions (Bridge, 1988). This means that even comparatively large timbers in this region often exhibit few annual rings and are less useful for dating by this technique.

When interpreting the information derived from the dating exercise it is important to take into account such factors as the presence or absence of sapwood on the sample(s), which indicates the outer margins of the tree. Where no sapwood is present it may not be possible to determine how much wood has been removed, and one can therefore only give a date after which the original tree must have been felled. Where the bark is still present on the timber, the year, and even the time of year of felling can be determined. In the case of incomplete sapwood, one can estimate the number of rings likely to have been on the timber by relating it to populations of living and historical timbers to give a statistically valid range of years within which the tree was felled. For this region the estimate used is that 95% of oaks will have a sapwood ring number in the range 11 – 41 (Miles 1997).



Section of tree with conversion methods showing three types of sapwood retention resulting in **A** *terminus post quem*, **B** a felling date range, and **C** a precise felling date. Enlarged area **D** shows the outermost rings of the sapwood with growing seasons (Miles 1997, 42)

PRYS MAWR (notes by Ian Brooks)

This is a sub-medieval lesser gentry house of end-chimney with cross-passage plan. There is a second wing set at right angle to the rear of the house which holds the kitchen. This has a 3-bay pegged collar-truss roof. The roof in the main range has been replaced (probably in c 1890), however the hall and parlour have beamed ceilings with wide stopped-chamfered main and subsidiary beams and narrow chamfered joists. In the centre of the rear partition wall, between the main and rear ranges, is a large chamfered post on a stone plinth which supports the main lateral beam. This post and another recently

found in the front elevation suggest an early timber phase. There is a date stone of 1685 which reflects a later phase in the development of the house.

SAMPLING

Sampling took place in February 2014. All the samples were of oak (*Quercus* spp.). Core samples were extracted using a 15mm diameter borer attached to an electric drill. They were numbered using the prefix **pmr**. The samples were removed for further preparation and analysis. Cores were mounted on wooden laths and then these were polished using progressively finer grits down to 400 to allow the measurement of ring-widths to the nearest 0.01 mm. The samples were measured under a binocular microscope on a purpose-built moving stage with a linear transducer, attached to a desktop computer. The ring-width series were compared on an IBM compatible computer for statistical cross-matching using a variant of the Belfast CROS program (Baillie and Pilcher 1973). A version of this and other programmes were written in BASIC by D Haddon-Reece, and re-written in Microsoft Visual Basic by M R Allwright and P A Parker. Subsequent analyses were carried out using DENDRO for WINDOWS, written by Ian Tyers (Tyers 2004).

RESULTS AND DISCUSSION

Basic information about the samples and their origins are shown in Table 1, and illustrated in Figs 1-3. The samples from the Kitchen Wing roof exhibited bands of narrow rings (Fig 4) which were not apparent at the time of coring. Two series matched very well (Table 2), these being the samples from each principal rafter of truss 1 (Figure 1) – suggesting that they are two halves of the same tree. Unfortunately these bands of very narrow rings do not reflect natural weather-related variation, and are probably the result of human management of the trees, lopping or pollarding. None of these samples dated therefore.

Several of the samples from the main range also exhibited sudden growth changes, but not as severe as those found in the Kitchen Wing roof. Three of the samples had too few rings for further analysis. Sample **pmr10** had a break in it which may have lost rings between the two sections, which were therefore treated as two separate parts (i and ii), which could not be matched with any other series, or dated independently. Series **pmr11**, whilst having 150 rings, also failed to match other series or date independently, probably as a result of these growth changes which are unlikely to have been caused by natural weather fluctuations, and similarly the 90-year long fireplace lintel ring series also failed to match. Three series gave relatively poor matches with each other (Table 2) but had their matching positions confirmed by dating each series independently against the reference material. These ceiling beam series were combined to form a 111-year site chronology, **PRYSMAWR**, which was dated to the period 1421-1531. The relative positions of overlap of the series are shown in Fig 5 along with their likely felling date ranges, the strongest matches being shown in Table 3.

Two dated series retained the heartwood-sapwood boundary, giving a mean H/S date of 1529, and a likely combined felling date range of **1540–70**, making this the likely date range of construction.

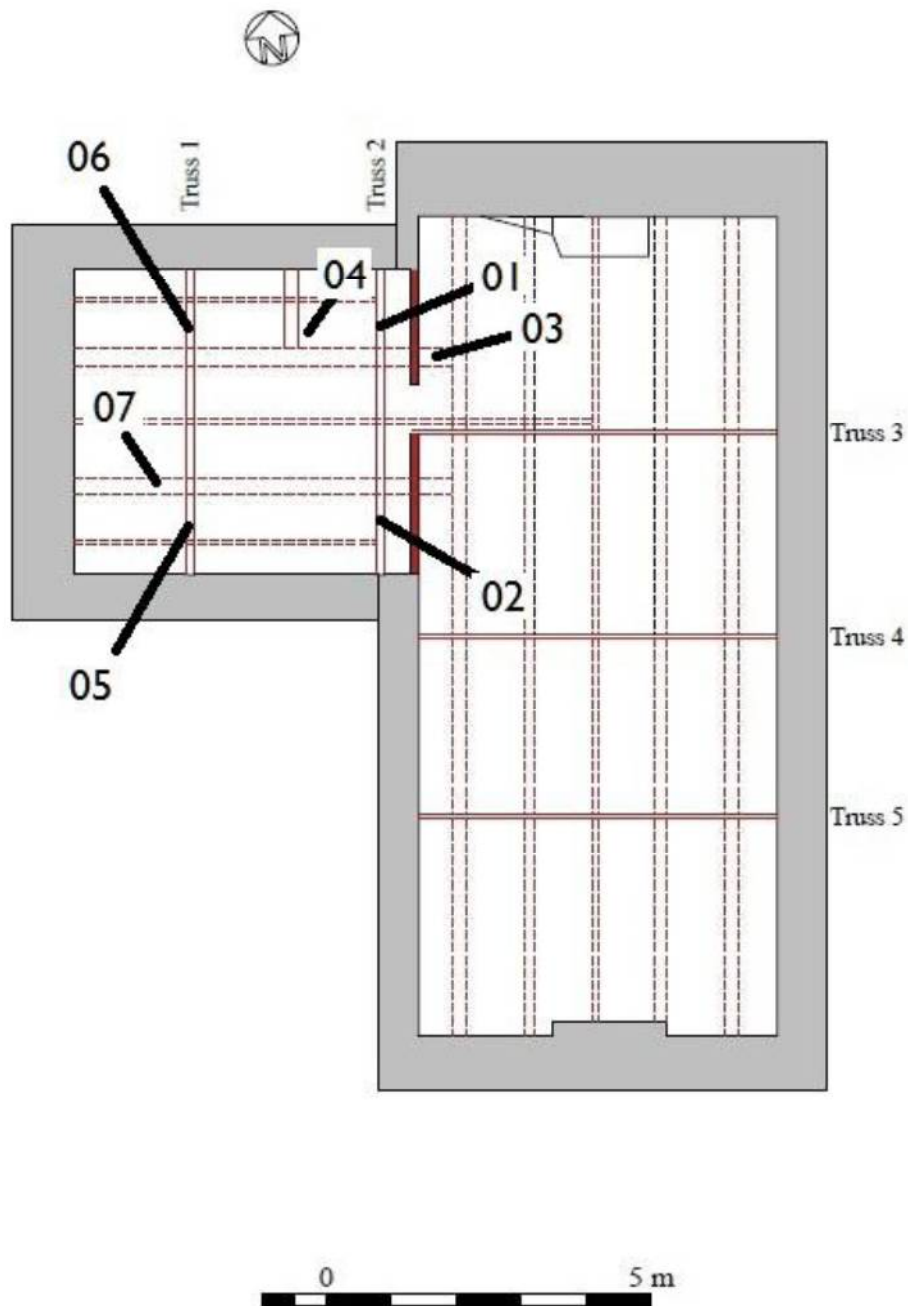


Figure 1: Roofs of Prys Mawr, showing the approximate positions of samples taken for dendrochronology, adapted from original drawings by Ian Brooks

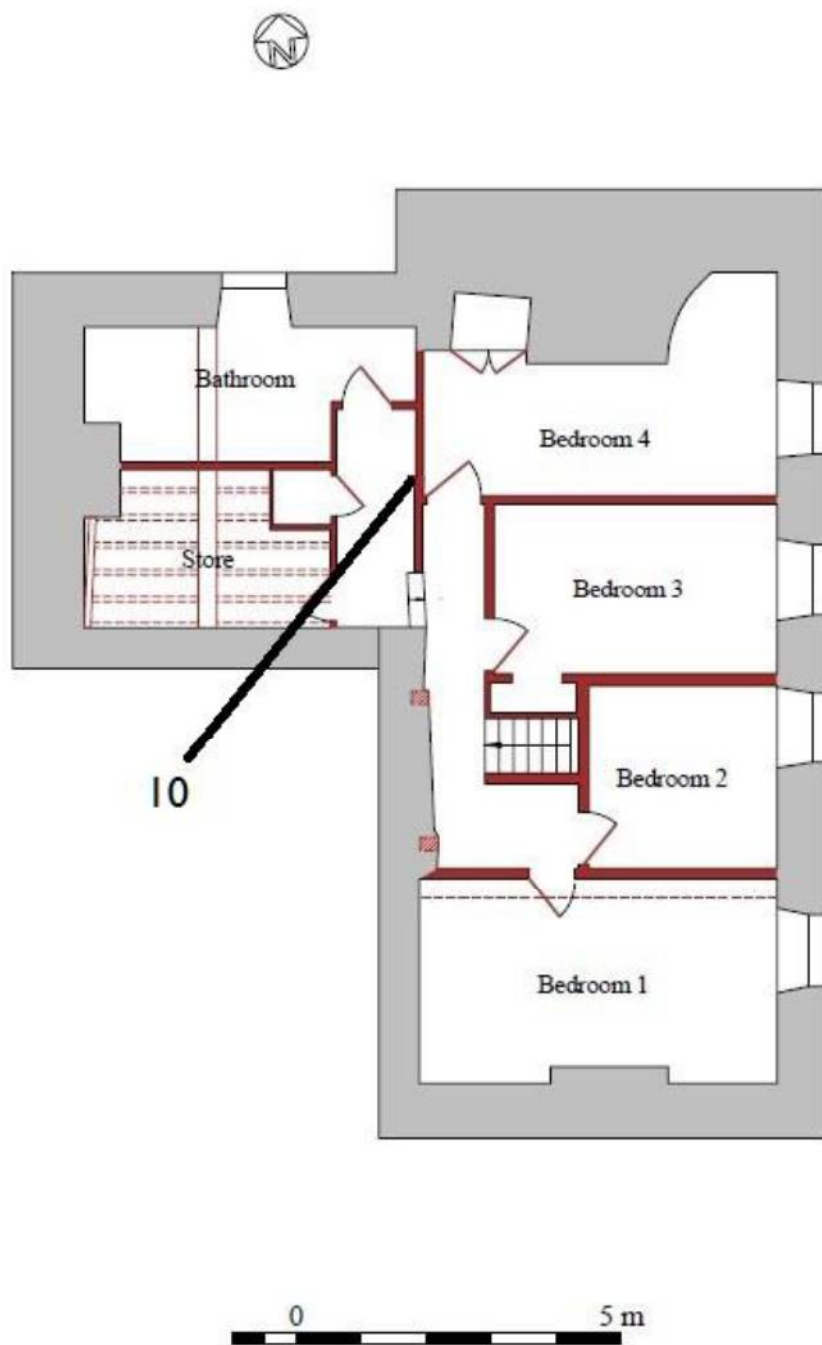


Figure 2: First Floor plan of Prys Mawr, showing the approximate positions of a sample taken for dendrochronology, adapted from original drawings by Ian Brooks

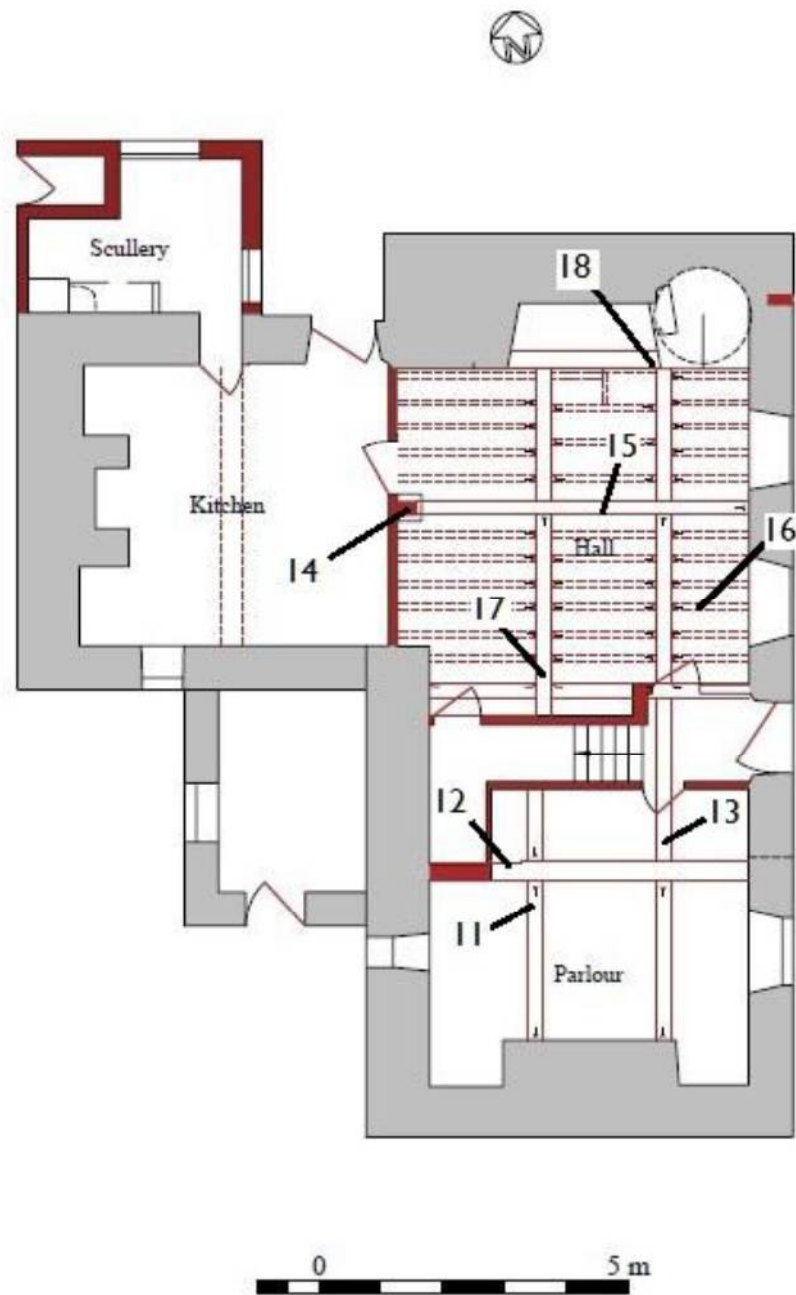


Figure 3: Ground Floor Plan of Prys Mawr, showing the approximate positions of samples taken for dendrochronology, adapted from original drawings by Ian Brooks

Table 1: Details of samples taken from Prys Mawr, Llanuwychlyn.

Sample number	Timber and position	Date of series	H/S boundary date	Sapwood complement	No of rings	Mean width mm	Std devn mm	Mean sens	Felling date range
Kitchen Wing Roof									
pmr01	North principal rafter, truss 2	-	-	H/S	100	1.27	0.86	0.30	-
pmr02	South principal rafter, truss 2	-	-	H/S	77	1.47	1.18	0.30	-
pmr03	North upper purlin, east of truss 2	-	-	-	<40	NM	-	-	-
pmr04	North lower purlin, west of truss 2	-	-	+30NM	54	1.42	0.89	0.22	-
pmr05	South principal rafter, truss 1	-	-	H/S +24NM	43	0.92	0.63	0.29	-
pmr06	North principal rafter, truss 1	-	-	19	65	1.22	0.82	0.32	-
pmr07	South upper purlin, west of truss 1	-	-	17½C	90	0.96	0.56	0.25	-
Main House									
pmr10i	Post in rear wall at north end of house, inner part	-	-	-	40	1.74	0.90	0.24	-
pmr10ii	<i>ditto</i> , outer part of core	-	-	-	44	1.55	0.37	0.17	-
pmr11	West ceiling beam in south Grd Flr room	-	-	-	150	1.14	0.93	0.23	-
pmr12	Main E-W beam in south Grd Flr room	-	-	H/S	<40	NM	-	-	-
* pmr13	East ceiling beam in south Grd Flr room	1428-1483	-	-	56	1.26	0.35	0.24	after 1494
pmr14	Post in rear wall of parlour	-	-	-	<40	NM	-	-	-
* pmr15	Central W-E beam in hall	1421-1527	1527	H/S	107	1.23	0.41	0.25	1538-68
pmr16	Joist, 3 rd from door	-	-	-	<40	NM	-	-	-
* pmr17	Ceiling beam in SW quadrant	1440-1531	1531	H/S	92	1.94	1.07	0.29	1542-72
pmr18	Fireplace lintel	-	-	H/S	90	1.67	0.80	0.27	-
* = included in site master	PRYSMAWR	1421-1531	1529	H/S	111	1.46	0.49	0.24	1540-70

Key: H/S bdy = heartwood/sapwood boundary - last heartwood ring date; std devn = standard deviation; mean sens = mean sensitivity; NM = not measured; C = complete sapwood; ½C = complete sapwood, tree felled the following summer

Table 2: Cross-matching between samples

Sample	<i>t</i> -values		
	pmr06	pmr15	pmr17
pmr05	7.7	-	-
pmr13		2.3	4.0
pmr15			3.6

Table 3: Dating evidence for the site master **PRYSMAWR AD 1421–1531** against dated reference chronologies, regional chronologies in **bold**

<i>County or region:</i>	<i>Chronology name:</i>	<i>Short publication reference:</i>	<i>File name:</i>	<i>Spanning:</i>	<i>Overlap (yrs):</i>	<i>t-value:</i>
Wales	Royal House, Machynlleth	(Miles <i>et al</i> 2004)	ROYALHS1	1363–1560	111	7.2
Cumbria	Wetheral Priory	(Arnold <i>et al</i> 2004)	WPGASQ04	1410–1511	91	7.1
Wales	Cefn Caer Pennal	(Miles and Worthington 1999)	CEFNCAR1	1404–1525	105	6.6
Wales	Ty Cerrig, Llanfwrog	(Miles <i>et al</i> 2011)	DENBY7a	1420–1500	80	6.6
Wales	Ucheldref Rhug, Corwen	(Miles <i>et al</i> 2010)	DENBY4	1373–1597	111	6.4
Wales	Branas-Uchaf, Llandrillo	(Miles <i>et al</i> 2010)	DENBY6	1388–1763	111	6.3
Staffordshire	Biddulph Old Hall	(Miles <i>et al</i> 2005)	BIDDULPH	1404–1524	104	6.2
Wales	Trefrechan barn	(Miles <i>et al</i> 2004)	TREFECHN	1423–1606	109	5.9
Shropshire	St Swithin's Church, Clunby	(Tyers 2000)	CLUNBY	1239–1494	74	5.9
Wales	Plas Coch, Anglesey	(Miles <i>et al</i> 2011)	PLASCOCH	1402–1591	111	5.8
Wales	Llannerchfelin, Rowen, Conwy	(Bridge <i>et al</i> 2013)	LLANNFEL	1419–1578	111	5.8
Wales	Plas Tan-y-Bwch, Maentwrog	(Miles <i>et al</i> 2006)	BDGLRT23	1411–1535	111	5.7
Wales	Rose and Crown, Gwydwn	(Miles and Worthington 2000)	GWYDWN	1411–1571	111	5.7



Figure 4: Scan of cores **pmr01** and **pmr02**, showing bands of narrow rings. Some areas have been cut with a scalpel to aid in distinguishing ring boundaries.

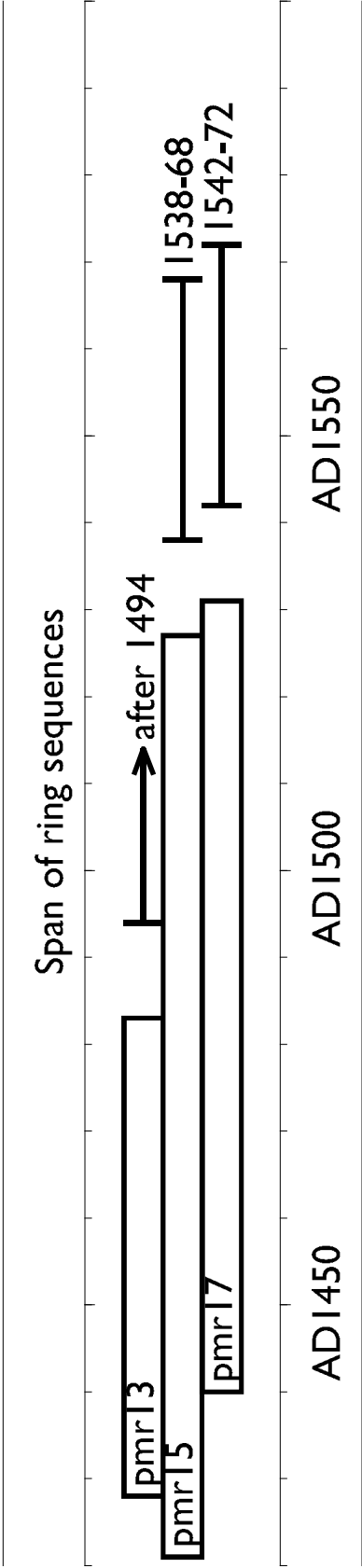


Figure 5: Bar diagram showing the relative positions of overlap of the dated series, along with their interpreted likely, or actual, felling date ranges. Hatched yellow sections represent sapwood rings, and narrow sections of bar represent additional unmeasured rings

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Appendix 3: Context Summary

Context Number	Relationships	Description
1	Above 2, 3, 4, 5	Topsoil. Varying in depth from 0.09 m (near to the house) to approximately 0.2 m over the majority of the garden.
2	Below 2 Within 3	Dark yellowish orange clayey soil with the occasional fleck of mortar and small (less than 30 mm) slate fragment.
3	Below 2 Contains 2	The foundation trench for the front of the house. A wide (1.19 m) trench which narrows to 0.24 m at a depth of 0.35 m below the current garden level. The top part of the feature has sloping sides whilst the lower part appears to be nearly vertical.
4	Below 1 Within 5	Mid brown silty soil with a moderate quantity of small (less than 20 mm) sub-angular stones and a few modern roots.
5	Below 1 Contains 4	A feature appearing only in the northern side of one of the legs of the drainage trench. Where it appears the feature is 0.44 m in diameter with sloping sides and a rounded base. The full extent of this feature is unknown, however its size would suggest a small pit or large post-hole.