

Archaeological Investigations Ltd

Marsh Mill, Leominster, HEREFORDSHIRE

*Archaeological building recording and watching
brief*



December 2011
Hereford Archaeology Series 828

ARCHAEOLOGICAL INVESTIGATIONS LTD

Managing Director: A Boucher BSc MIFA

Archaeological Investigations Ltd is a trading company wholly owned by the Hereford City and County Archaeological Trust Ltd, a registered charity founded in 1997 to further the work of the City of Hereford Archaeological Committee (founded in 1974) throughout Herefordshire. The Company maintains a core staff with a broad range of expertise, whilst also making extensive use of specialist contract personnel. Besides working on the buried archaeology of Hereford and the country in general, the Company specialises in geophysical survey, historical illustration and the archaeological recording and analysis of standing buildings. Work is usually on a commission basis on behalf of organisations such as English Heritage, the National Trust, and the Landmark Trust. The Company also accepts commissions from local authorities and private developers and provides specialist consultancy advice in relation to archaeology in the planning process and general environmental issues.

**Marsh Mill, Bridge Street, Leominster, Herefordshire:
Archaeological building recording and watching brief, 2009**

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For: P.E.P Developments Ltd

Cover picture: Marsh Mill viewed from Bridge Street

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1 Summary

Site name: Marsh Mill, Bridge Street, Leominster, Herefordshire: Archaeological building recording and watching brief, 2009 (Project 1389)

Grid reference: NGR SO 49365 59701

SMR number: 49162

Museum Accession Number: HFD-MG-2009-41

Planning ref: DCNC2008/0978/F

Archaeological Investigations Ltd was commissioned by P.E.P Developments Ltd to carry out building recording and a watching brief at Marsh Mill, Bridge Street in Leominster in advance of development.

A condition on the planning permission to develop the site required a survey of any surviving elements of the mill complex and the monitoring of ground works on the site during the development. The site was not a scheduled monument or a listed building.

The scope of the work encompassed building recording to level 2 R.C.H.M.E, (later upgraded to level 3).

The findings were that contrary to what had been expected, a large amount of the late Medieval/Post Medieval mill building survived reasonably intact. The watching brief monitored the excavation of two trial pits and identified backfill deposits within the former mill leat.

2 Introduction

2.1 Client

Archaeological Investigations Ltd. was commissioned by P.E.P Development Ltd to carry out building recording and a watching brief at Marsh Mill, Bridge Street in Leominster.

2.2 Location

The site lies on the northern side of Leominster at NGR SO 4936 5970. It is bounded to the north, east and south by existing properties, while the eastern side of the site faces onto Bridge Street (Figure 1).

2.3 Topography and geology

The site lies at a height of approximately 72mOD and the underlying geology consists of shale, silt and sandstone of the Devonian Lower Old Red Sandstone with soils of the Bromyard association. The preservation of archaeology on the site was not known prior to work commencing.

2.4 Reason for the project

A planning application was submitted to the County of Herefordshire District Council to develop the site. The proposed works were considered likely to affect a site of archaeological significance. Under Section 91 of the Town and Country Planning Act 1990 and in line with Planning Policy Guidelines Note 16, and Policies ARCH 6 and LA 6 of Herefordshire Unitary Development Plan the Planning Authority was advised that a program of archaeological work was required, taking the form of building recording (to R.H.M.E. level 3) and an archaeological watching brief.

2.5 Dates of fieldwork

Fieldwork was conducted between 11/10/2009 and 23/03/2009

3 Historical and archaeological background

Historical maps figures 2-7

No there is no record of archaeological work having taken place on the site previously.

The earliest reference to Leominster is the foundation of a religious house there in c. 660 AD. Whilst little archaeological evidence has been recovered to support this, it seems likely that Leominster was starting to form as a settlement prior to the 11th century. The name *Leomynstre* was first used in 1046AD when a nunnery, dissolved by 1066, is known to have existed. The Benedictine Priory, (dissolved in 1539), later replaced the nunnery. The Domesday Book states that before the Conquest the manor of Leominster was held by Queen Edith.

Leominster expanded in the 13th century, but declined after the Black Death, recovering only towards the end of the 15th century.

The area of the site was marshy, and Bridge Street was known as Middle Marsh until the 19th century.

Several excavations have taken place in the area, including one at the former Poultry Packers site on the corner of Bridge Street and Mill Street (NGR SO 4956 5947), which uncovered evidence for what seems to have been medieval 'ribbon development'. The excavation found evidence for a short period of intense activity on the site including hearths and floor surfaces. These dated to the late 12th to 13th centuries, at a time when the medieval population was probably at its height. The fact that activity on the site ceased after the 14th century with occupation recommencing only in the 16th century, could be that given its suburban situation it was only occupied during population peaks. What seems to have been tanning waste was recovered during salvage excavations at the Hop Pole Inn (SMR 21465) close to the development site. This reflects the marshy nature of the area; water being essential for the medieval tanning industry. There was also a tannery at "Old Tanworks" on Bridge Street dated to the 17th century (SMR147).

During the medieval period industrial activity, particularly that considered to be antisocial or hazardous, frequently occurred outside of the centre of the town.

Work at Porters Mill Close, to the east of the site, revealed a small quantity of medieval pottery (13th to 15th centuries), suggesting that occupation during this period may have extended a considerable distance to the north and east of the town centre. A lack of features on this site was possibly due to later truncation through lowering of the ground level.

Many of the buildings on Bridge Street date to the 17th or 18th centuries.

Development of No.104 Bridge Street in 2008 (opposite the current Site) revealed evidence for 17th/18th century tenement buildings which were known to have existed on the site. No archaeological deposits predating the 17th century were revealed.

William Galliers Plan of Leominster (1825) shows a building on the site of Marsh Mill. It's position and dimensions suggest that it relates to Building 3 (Figures 8-11). The Sites and Monuments Record (entry 8909) indicates that this was the location of a post medieval mill and probably the site of a medieval mill. The 1967 Ordnance Survey map labels the building as a 'disused mill'.

4 Aims and objectives

4.1 Significance

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

4.2 Aims

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

4.3 Objectives

The project objectives were:

- To carry out a rapid survey of any surviving elements of the mill complex
- To carry out a watching brief during ground works associated with the development.
- Identify the date and nature of features being investigated.
- Assess survival, quality, condition and relative significance of any archaeological features, deposits and structures within the study area.

- Produce a record of the features.
- Produce a report
- Deposit the archive

5 Method

5.1 Building recording

Background research was undertaken using information held by the County Records Office and the Archaeological Investigations Ltd. company library. Sources consulted included historic maps, trade journals, and published reports on nearby sites.

The buildings on the site were rapidly recorded through photography and annotations to the existing Architects plans (Level 2 English Heritage). The buildings were located using a total station.

Prior to work commencing on the site only a small part of the mill building appeared to survive, however, initial survey alongside demolition of adjacent buildings showed that most of the mill building stood intact and only the north-east and south-west ends of the building had been significantly altered. As a result Julian Cotton, the Archaeological Advisor for Herefordshire Council, identified a need for the production of detailed scale drawings of the trusses and wall frames, a detailed plan of the building, including truss locations and locations of original blocked openings.

Dendrochronological dating of the truss and wall frame timbers was considered but not carried out. Nigel Nayling (Lampeter University Dendrochronology Dept) was consulted regarding the potential for dating the timbers. Through the consultation it was decided that the timbers that were available for dating were insufficient for the purpose, as at least ten timbers were required that had bark, and at least fifty growth rings each to enable this.

5.2 Watching Brief

The initial watching brief included the excavation of two trial pits. Trial pit 1 measured 1.50m long by 0.80m wide by 1.30m deep, Trial pit 2 measured 1.80m long by 1m wide by 1.25m deep.

Temporary site bench marks were set up on site using Trimble R6 GPS.

Each trench was excavated using a mechanical mini excavator equipped with a toothless trenching bucket under constant archaeological supervision. The stratigraphic sequence of archaeological deposits was ascertained by recording/sampling the sections exposed. The base and sections of trenches were cleaned to assist with recording strata exposed.

Selected, representative trench sections were produced at a scale of 1:10.

Photographs were taken using 35mm monochrome and colour film. Digital photographs at a resolution of 7mmp were also taken for reporting purposes.

A system of context records was kept and numbered independently by trench. Recording was in accordance with Archaeological Investigations Ltd's site manual.

Registers were kept for all context records, photographs and drawings.

5.3 Sampling

No finds were present from deposits predating 1700AD and no finds were retained.

No general biological samples were required as the features encountered were modern.

6 Results

6.1 Building recording

Four buildings were surveyed on the site at Marsh Mill, Bridge Street, Leominster. The buildings were marked on the architects drawings as Buildings 1-4. Buildings 1 and 4 were entirely modern brick/block/steel framed factory units. Building 2 was a 19th century brick building of at least 2 phases that incorporated a first floor timber framed wall that is actually part of Building 3. Almost half of the south-west end of Building 3 was modern. As these buildings were modern, no further description of them is required or made.

Building 3 was the stone and timber late medieval or Post Medieval Mill building, which had survived remarkably intact. (In use till 1920, pers' com Dr John Eisel).

The descriptions below follow site north, not magnetic north.

Building 3, the former mill (Figures 8-11)

The mill building was rectangular in plan measuring internally 9.40m long by 5.80m wide. The ground floor was built of dressed stone, except for a 0.33m high brick arch located at the bottom of the northwest wall where the leat used to enter the building. The brick arch for the leat was only visible on the inside face of the wall at 3.20m from the angle with the northeast wall, the arch span was 2.50m wide.

At ground floor level in the northeast wall there had been an original doorway located east of centre, and a small original square window, located west of centre. Both of these openings had later been blocked. In the northwest wall there had been another primary doorway located towards the southwest end of the building. The doorway was partially blocked at a later stage creating a small square window, this being subsequently completely blocked. The building appeared to be predominantly intact only missing the southwest end wall, and 1.80m of the south end of the southeast wall.

The first floor level was approximately 2.17m above the present (concrete) floor level. The first floor structure was built of square timber framing in oak, with five oak trusses, two of which were supported on posts with tie beams and raking struts from the wall frames. The five trusses included two gable trusses and three trusses evenly spaced throughout the roof space.

At first floor level on the southeast side, the northern end of the original timber framed wall panelling survived in good condition but exhibited a few later alterations. On the northwest wall at first floor level, there was a similar but more complete, badly decayed, original timber wall frame. The timber frame walls had been removed from the northeast and southwest gable ends of the mill building, leaving just the trusses and tie beams intact. The north gable had been bricked in around the truss; the south end was left open and had been altered through a modern extension to the building.

The northeast gable truss was largely hidden within the later brick wall, but the principle rafters were visible, as was the tie beam. Due to the surface finish fine details were not visible but it appeared that nothing else survived of that truss.

Trusses 1 and 2 were located in the roof space at the north end of the building. The two trusses were similarly constructed with collar, tie beam and king posts on the collars. The tie beams of both trusses were supported by posts that were also part of the wall frames, and by raking struts set on a tie beam at first floor level (also part of the wall frames).

The principal rafters of Truss 1 were from a single trunk, split length-ways into two matching halves. The rafters each had a redundant mortice on the under side, close to the bottom ends, and adjacent to the tie beam. The mortices had cut off tongues still pegged in place. The west rafter of Truss 1 was broken near the middle, and the truss was re-enforced by a modern truss on its south side.

The collar of Truss 1 had an exaggerated curve that was almost half round. All the old trusses in Building 3 had a more modern truss re-enforcing them on their south side, except for Truss 4 which had a new truss on its north side.

The collar of Truss 2 had an applied iron strap to support its west end which had pulled out of the mortice. The truss also had a redundant mortice on the underside of the rafters, located near the apex. Stave holes were present on the underside of the rafters, and along with the redundant mortices implied that the timber was probably re-used from an earlier structure.

In the case of Truss 3, only the rafters and a short section of the king post at the apex survived. There was a mortice on the underside near the middle of each rafter where raking struts or possibly a collar could have been removed. There was a spindle in the apex that could well have been part of the workings of the former mill. A new truss had been built against the south-east side of Truss 3, with a post supporting it against the southeast wall. No evidence was visible to say whether the truss had originally been tied into the wall frames, as had been the case with trusses 1 and 2.

Truss 4 appears to be the original gable truss and was tied into the wall frame on the west side of the building. The southeast end of the truss was supported on a modern post. The truss had a high collar, nailed in and therefore secondary, and the rafters were lapped at its apex. The rafter on the south-east side had stave holes along the under side, as well as an open mortice. The mortice was mirrored on the north-west rafter and they may have formerly held raking struts, or possibly a collar. All the other timbers appear to have been added much later.

The northwest frame was the most complete. It comprised vertical set members with a wall plate above and a sill beam below. These appear to have been set approximately 800mm apart (centre to centre), with a horizontal beam jointed at mid-height creating square panels. The first four uprights from the southwest end appear to be in their original position. The next two were probably reset when the six light window was inserted here, the last surviving one to the northeast probably still being in its original position. The panels have subsequently been in-filled with brick noggin, glazing, and breezeblock.

Probable 19th century and later phases of this and the adjacent building can be identified through the use of brick in their construction. Building 2, which lay to the south of the mill, was a two storey brick built structure. The ground floor was of English Garden Wall bond, however, from the bottom of the lintel over the window in the south elevation up, the brick bond changed to a composite bond of three courses stretcher plus one course alternating headers and stretchers. It had a wide opening onto the street frontage which was later blocked, with concrete internally and a brick external skin. There is an inserted or possibly enlarged window in the S elevation.

6.2 Watching brief

No significant archaeological deposits were revealed during the watching brief.

7 Discussion

The key feature of historic interest on this site is the remains of what is probably an early post-medieval mill with a stone lower floor and timber framed upper structure. The framing is small square framing as seen in many buildings in the second half of the 17th century in Herefordshire. The structure has, however, been much altered.

There are two trusses that might be original – although they are rusticated in design and use of materials. Sufficient framing survives along the side elevations to give an indication of the overall style of construction of the building.

Operationally the only real clues are the brick arch where the leat passes laterally through the base of the building implying that the structure had an internal wheel pit and therefore possibly a direct drive. A spindle in the apex of truss 3 could well be associated with an original hoist system.

8 Conclusion

The building survey started as an English Heritage Level 2 recording. However, it rapidly became obvious that there was a much greater survival of the building than had previously been expected. The result was the need to hand record trusses and two wall frames using scaffold towers for access, producing a Level 3 record.

9 Site archive

The site records are currently held by Headland Archaeology at their offices in Hereford. Following the completion of all work on the project and subject to agreement of the client the archive will be deposited with Hereford City Museum.

10 Bibliography

- | | |
|------------------|--|
| AIL, 2005 | <i>Field Recording Manual</i> . An unpublished report. |
| AIL, 2008 | <i>100 Template Road: Written Scheme of Investigation</i> . An unpublished report. |
| Crooks, K. 1999. | The former Poultry Packers site, Leominster. Archaeological excavation and salvage recording. HAS 436. |
| IFA, 2008 | <i>Standard and guidance for archaeological evaluation</i> . Institute of Field Archaeologists |

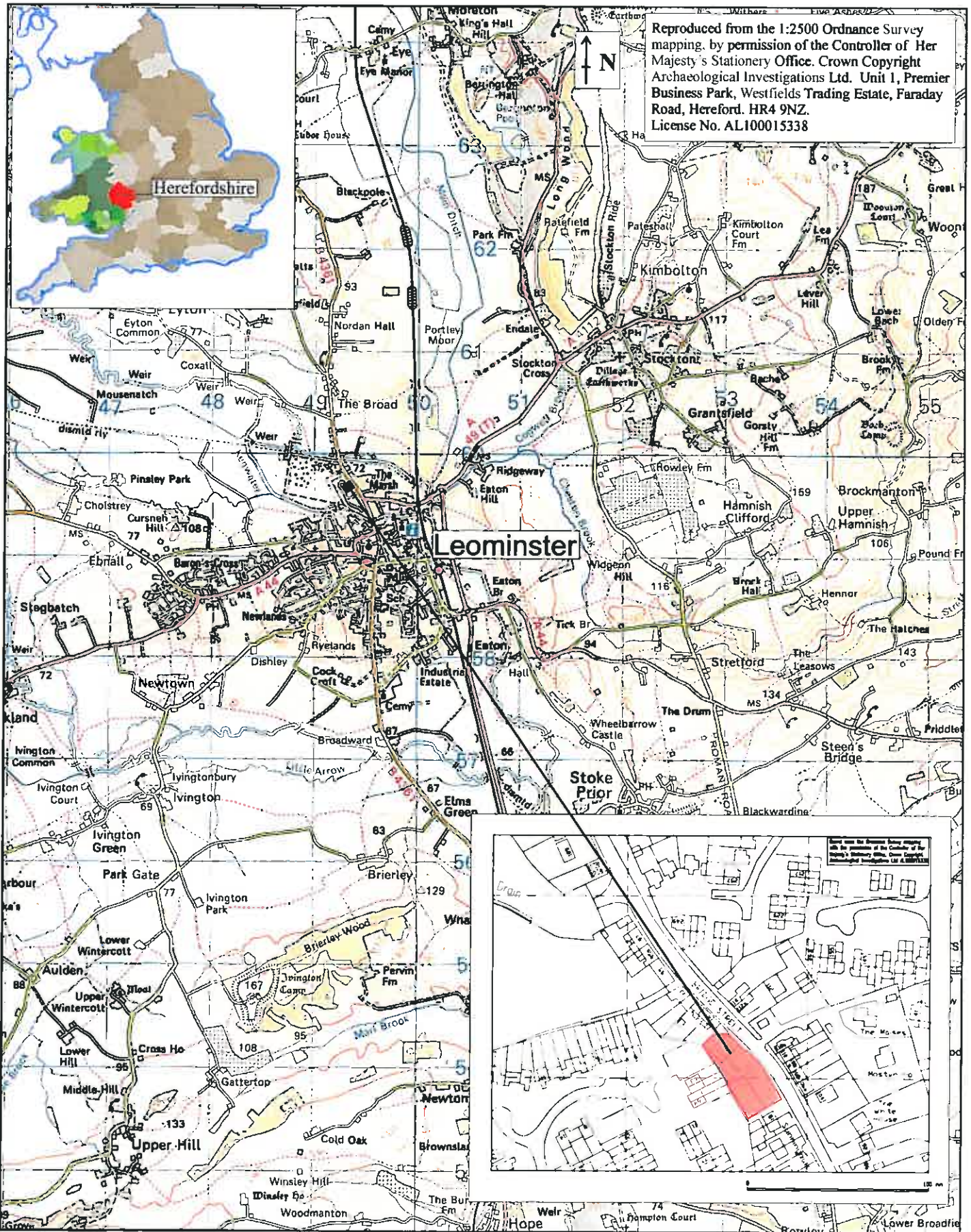
Appendix 1 – Sources Consulted

Title	Reference/location	Relevance
17 th century record of the mills on the River Wye and River Lugg	Hereford Records Office (HRO)	Survey did not record as far as Marsh Mill
1837 map of Leominster based on 1831 OS map	HRO K38/D/26	Shows site in limited detail
1840 tithe map (copy)	HRO AK2/4	Site present
Article on water mills of Herefordshire by C Holmes	HRO AS94/104	Marsh Mill not mentioned
Broad Marsh Fields 1769	HRO AD4/128	No relevance
Deeds relating to the Lower Marsh area of Leominster	HRO A52/1-13	No relevance
Deeds relating to the Lower Marsh area of Leominster	HRO B2/8-18	No relevance
Deeds relating to the Lower Marsh area of Leominster	HRO C94/116	No relevance
Deeds relating to the Lower Marsh area of Leominster	HRO B50/1	No relevance
General mill notes	HRO BN30 passim	Does not mention Marsh Mill
Marsh Court Sales (1890 & 1895)	HRO M5/18/11,12	No relevance
Marsh Mills, Water Wheel. Personal letter (1864)	HRO A63/III/43/7 passim	Gives details of water wheel arrangement
Notes on the marshes of Leominster	HRO BN30 passim	General - Nothing specific
Ordnance Survey Map (1967)	HRO	Shows Site
Ordnance Survey Map 1 st ed (1887)	HRO	Shows site
Ordnance Survey Map 2 nd ed (1904)	HRO	Shows Site

William Galliers map of Leominster HRO BY30
(1825)

Shows site

illustrations



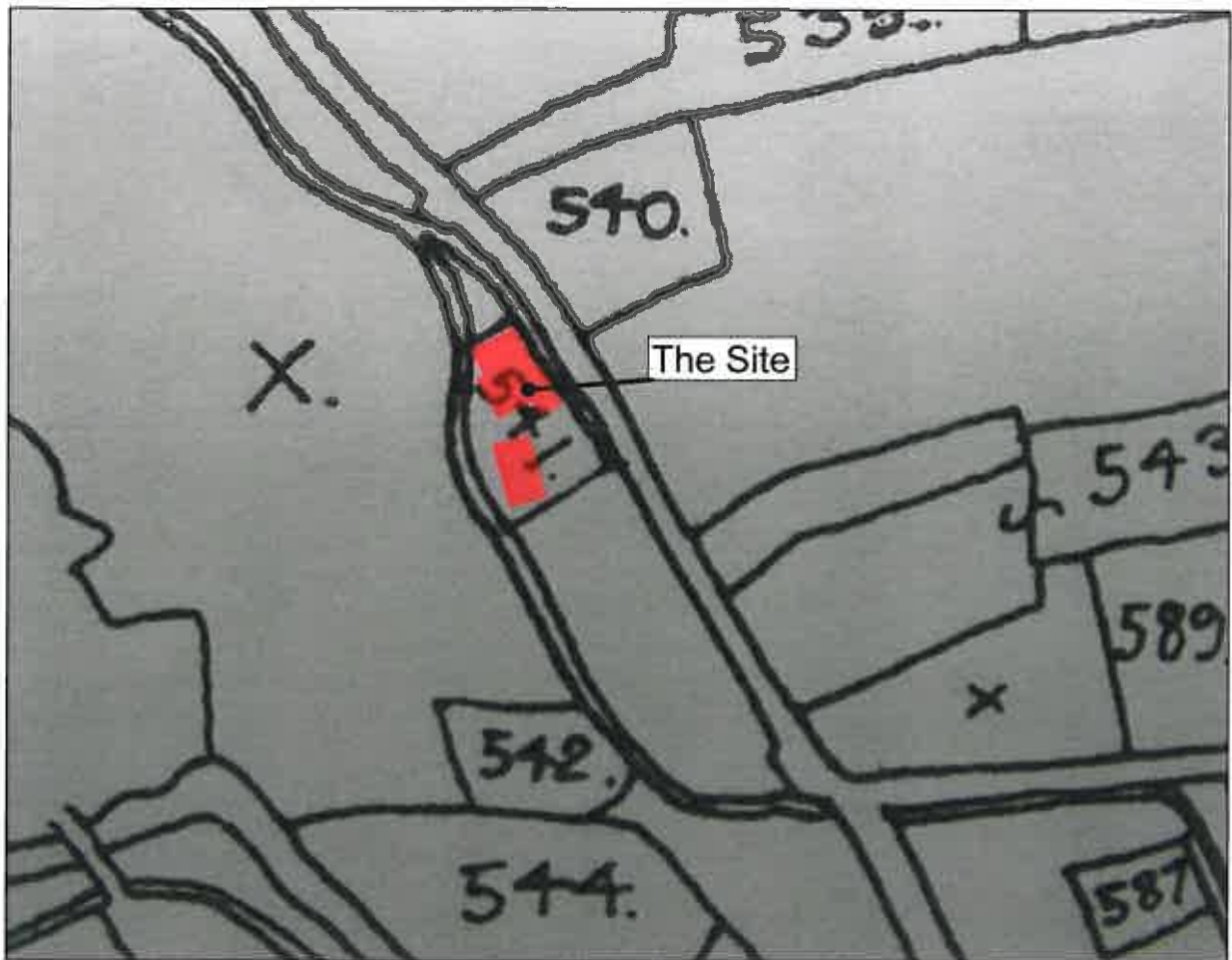
Location of the site of Marsh Mill on Bridge Street, Leominster, Figure 1.



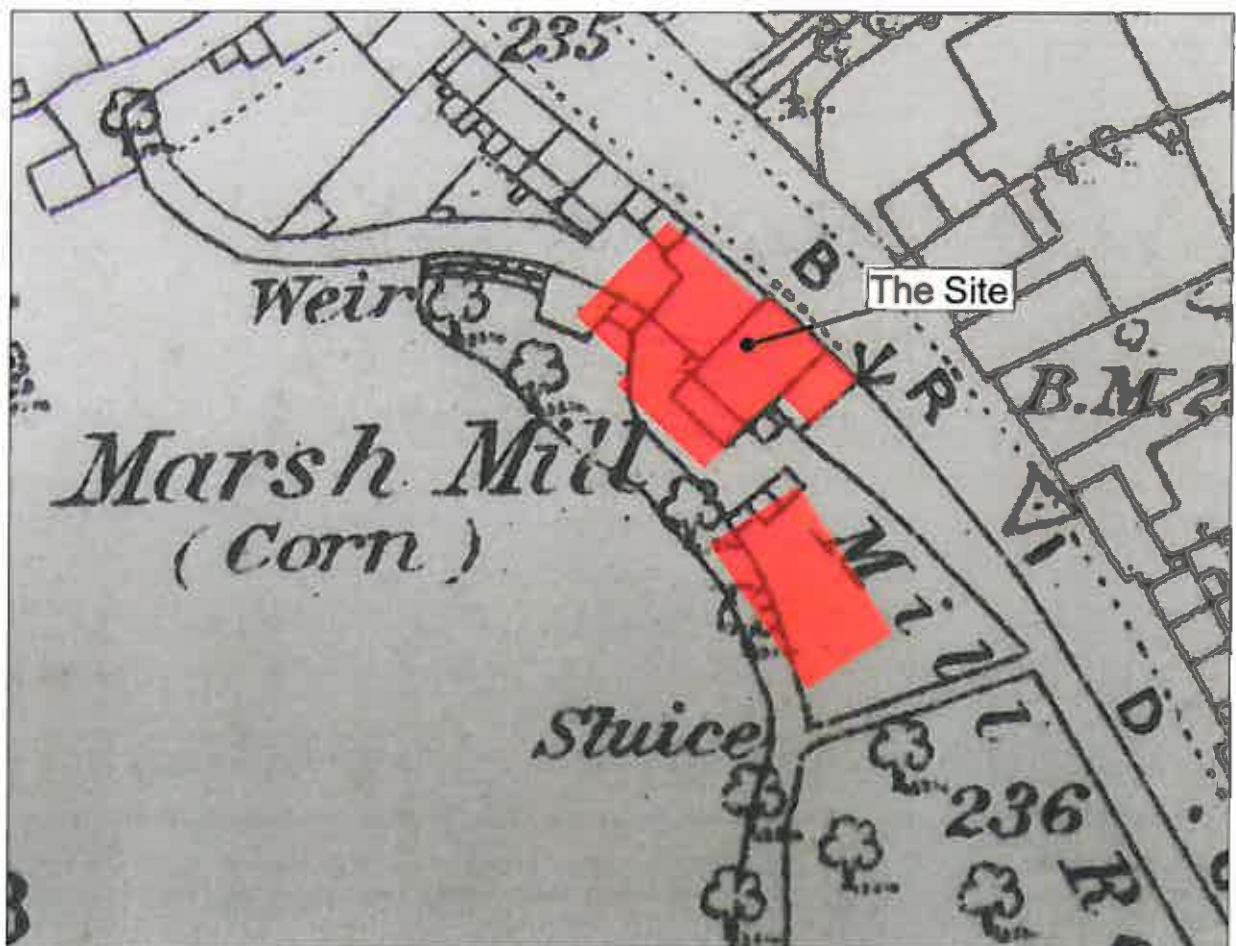
Marsh Mill on an extract from William Galliers 1825 "Plan of Leominster", Figure 2.



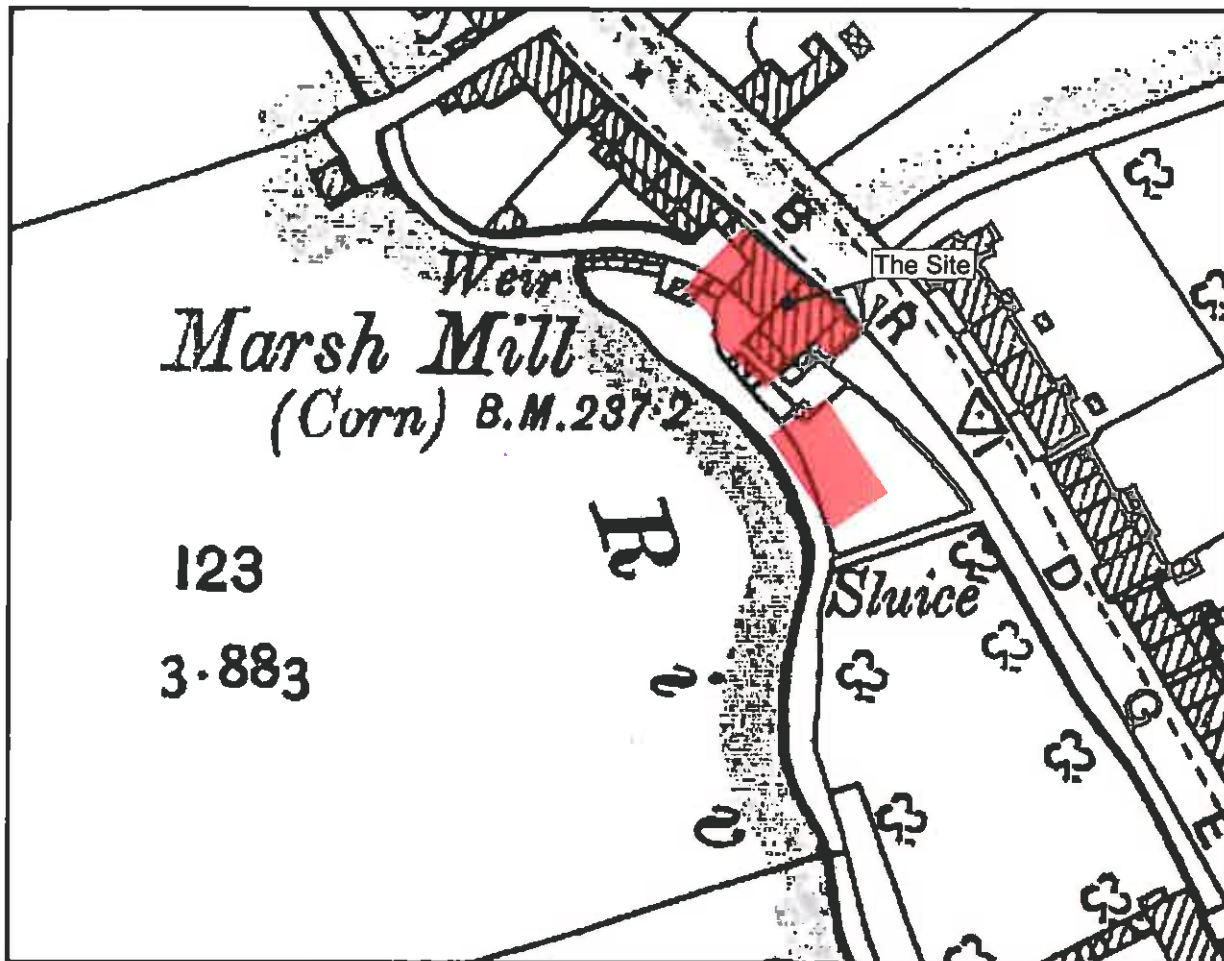
The site on an extract from an 1837 copy of an 1831 Ordnance Survey map, Figure 3.



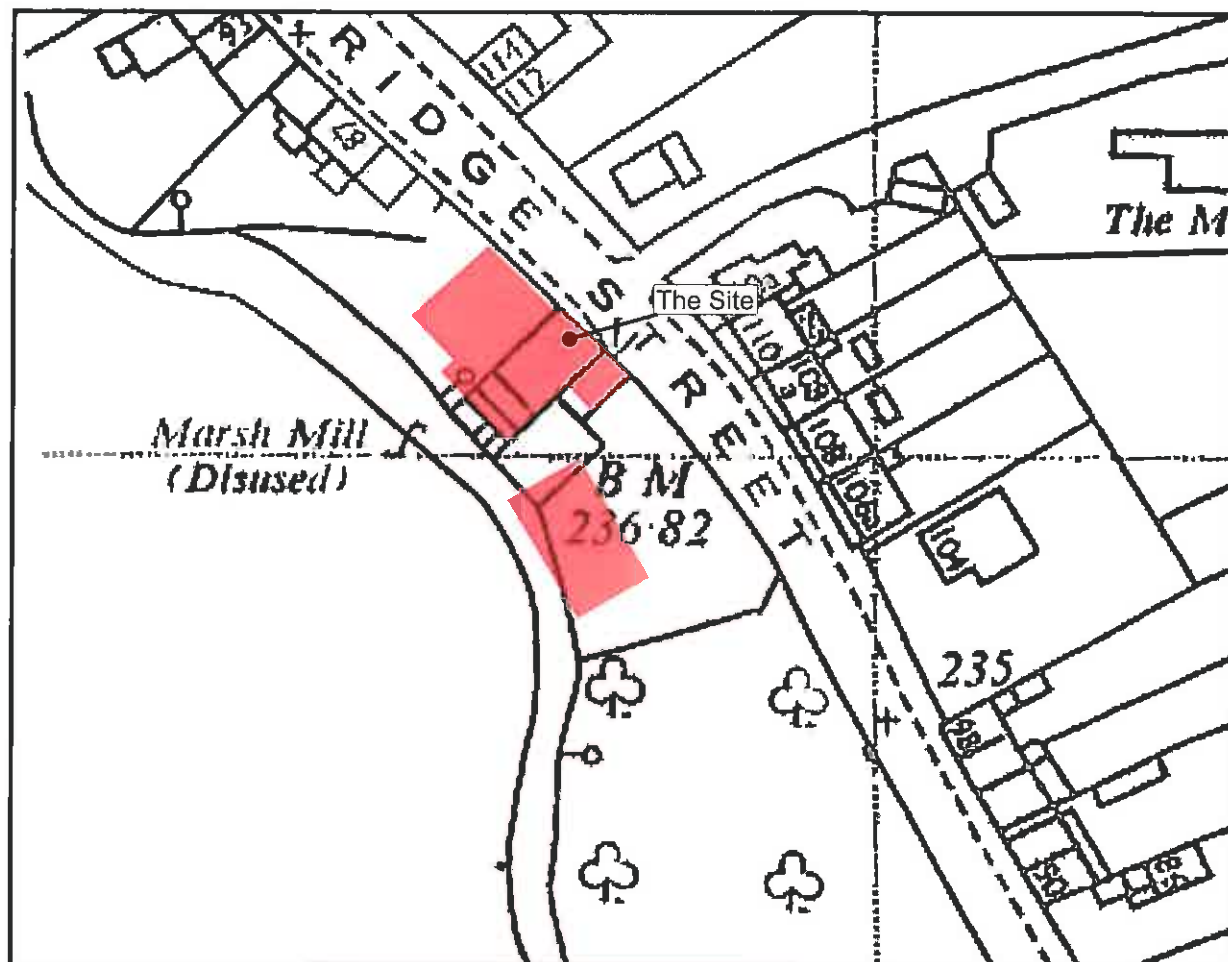
Marsh Mill on an extract from the 1840 Tithe map, Figure 4.



Marsh Mill on the 1897 Ordnance Survey map, Figure 5.

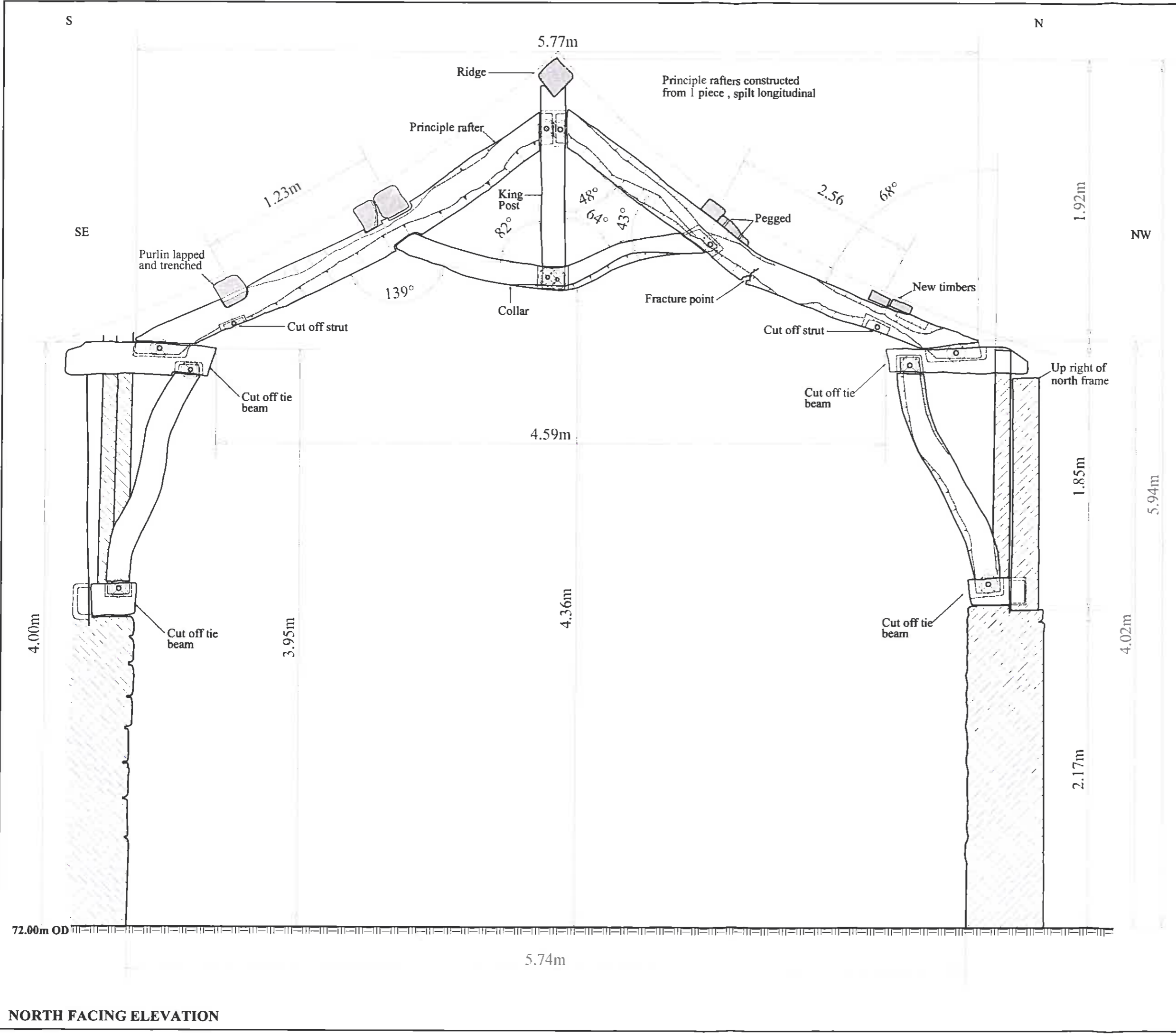


Marsh Mill on the 1904 Ordnance Survey map, Figure 6.

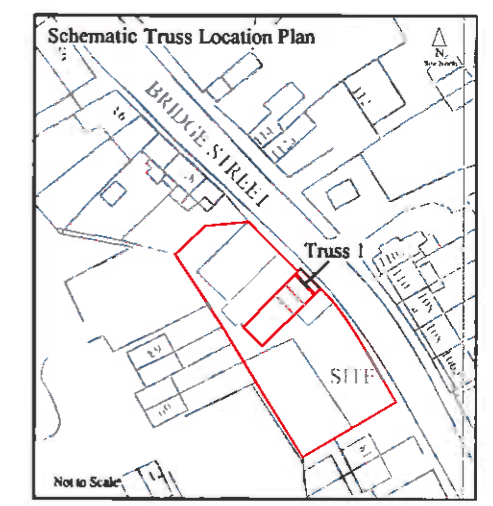


Marsh Mill on the 1967 Ordnance Survey map, Figure 7.

MARSH MILL LEOMINSTER TRUSS 1



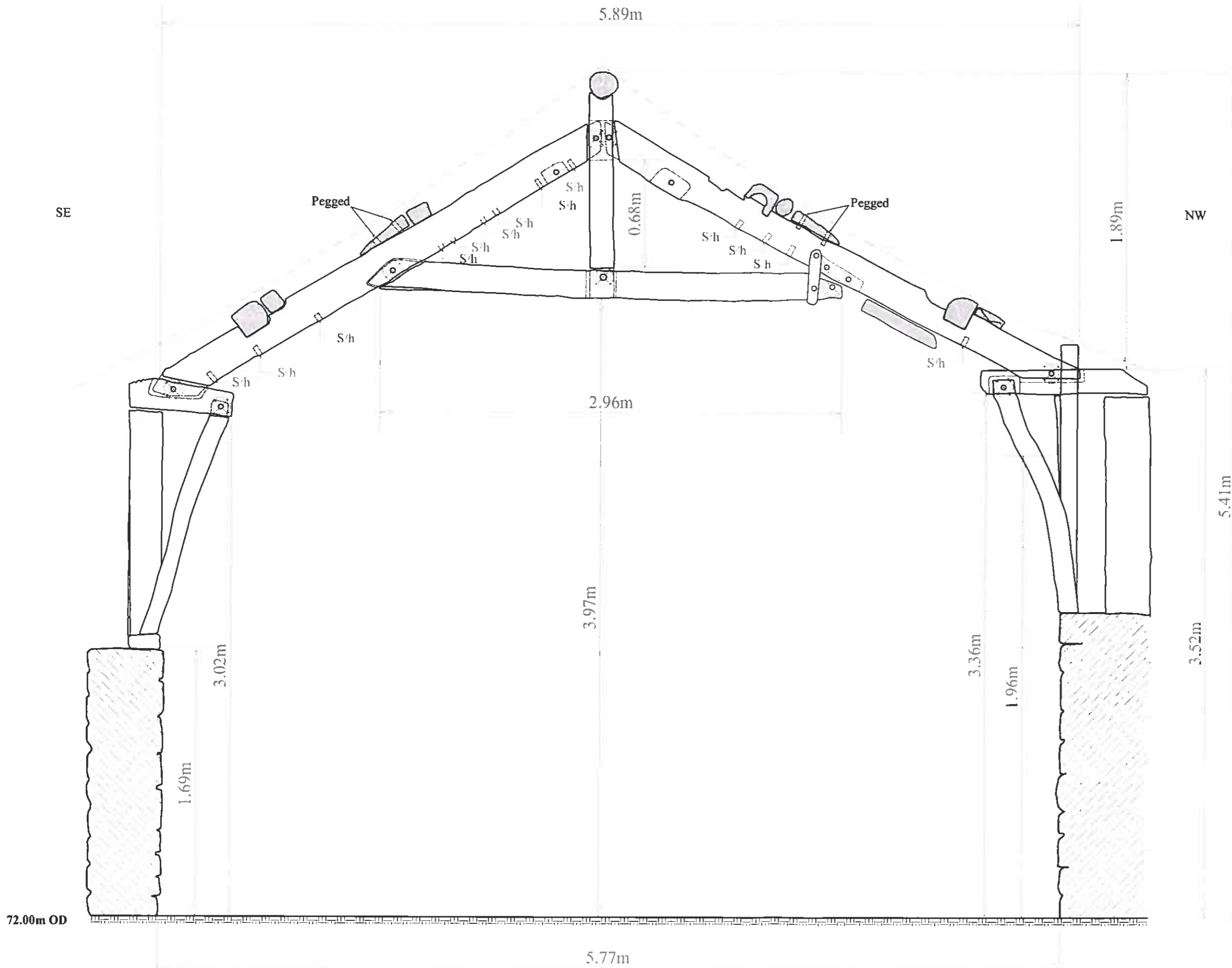
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	Carpenters Marks
	Sand Stone
	Indication of joint location
	Assumed peg hole location
	Peg Direction
	Point End
	Hammer End



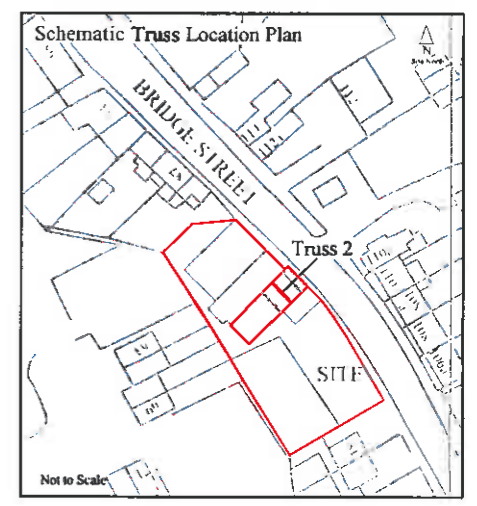
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NORTH FACING ELEVATION

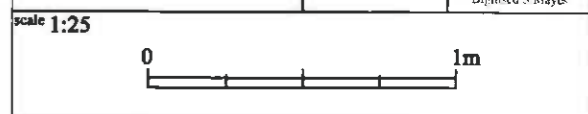
MARSH MILL LEOMINSTER TRUSS 2



Key Symbols 4x Scale	
	Open Peg Holes
	Carpenters Marks
	Stave Hole
	Indication of joint location
	Assumed peg hole location
	Peg Direction
	Point End
	Hammer End



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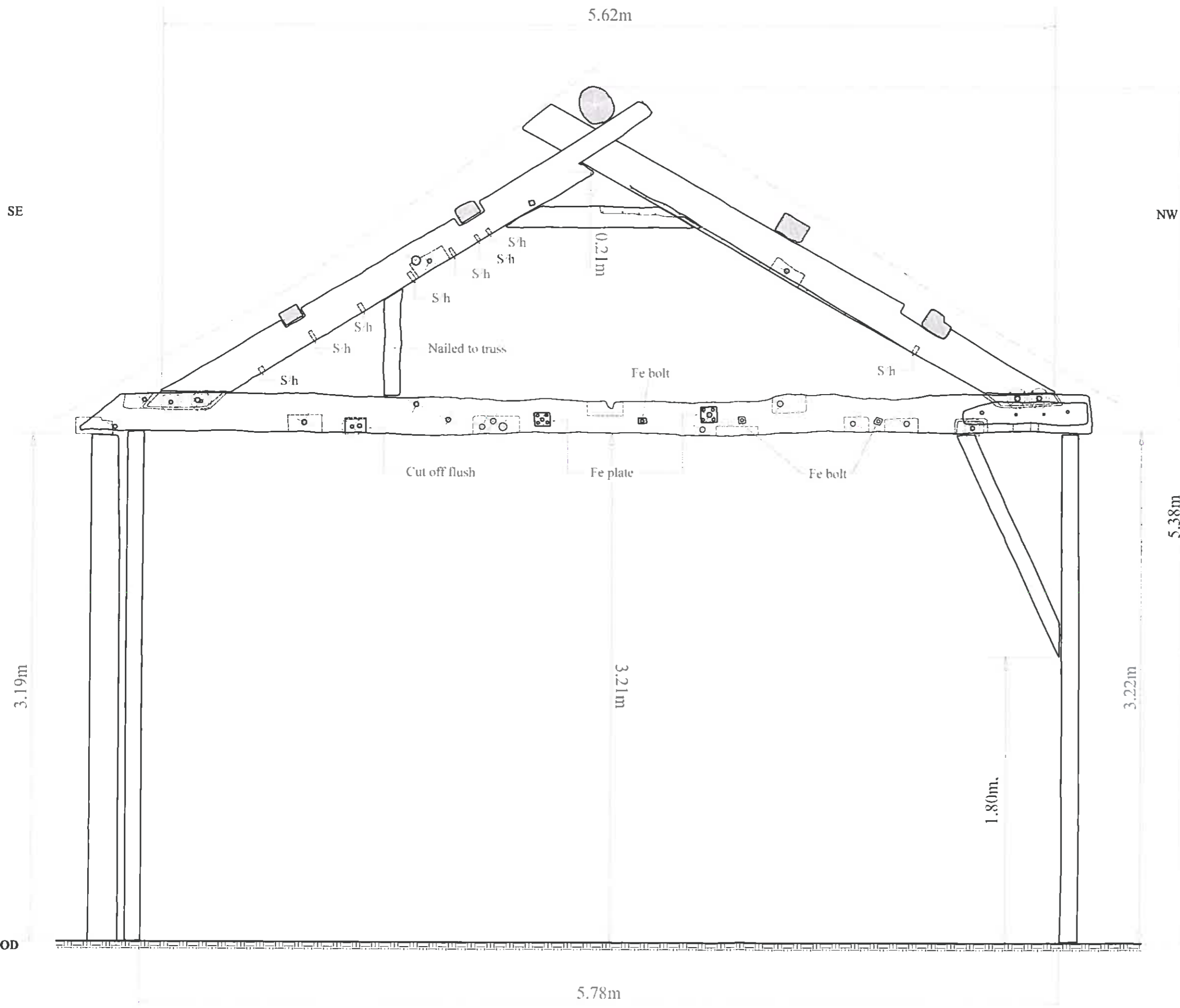
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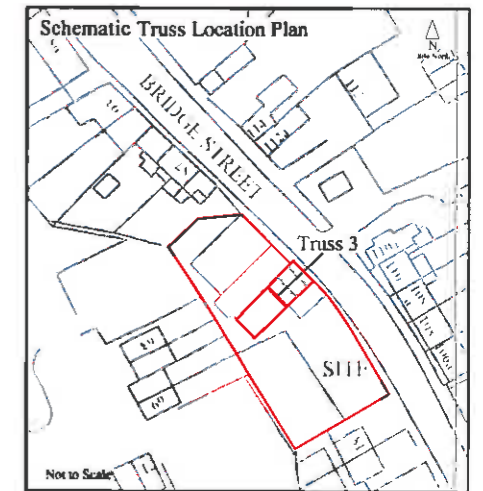
NORTH FACING ELEVATION

72.00m OD

MARSH MILL LEOMINSTER TRUSS 3



Key Symbols 4x Scale	
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	Carpenters Marks
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	Indication of joint location
	Assumed peg hole location
Peg Direction	
	Point End
	Hammer End

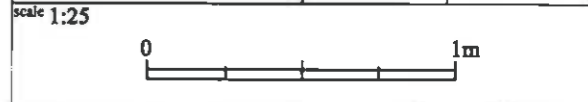


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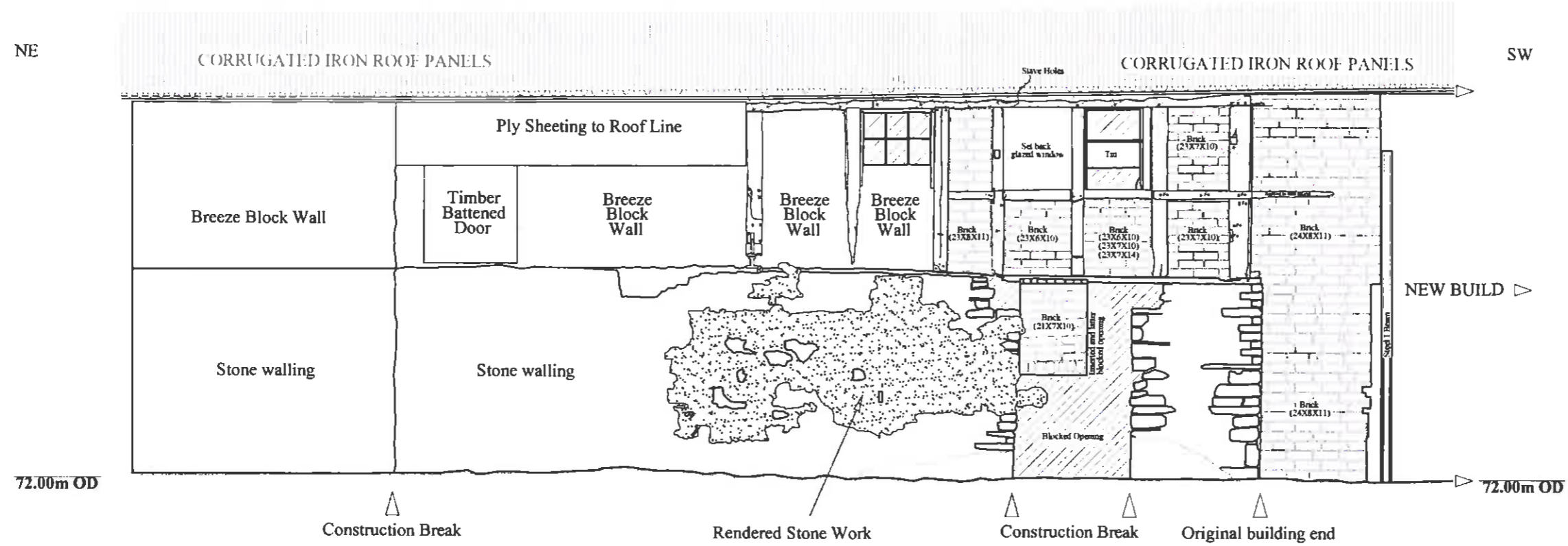


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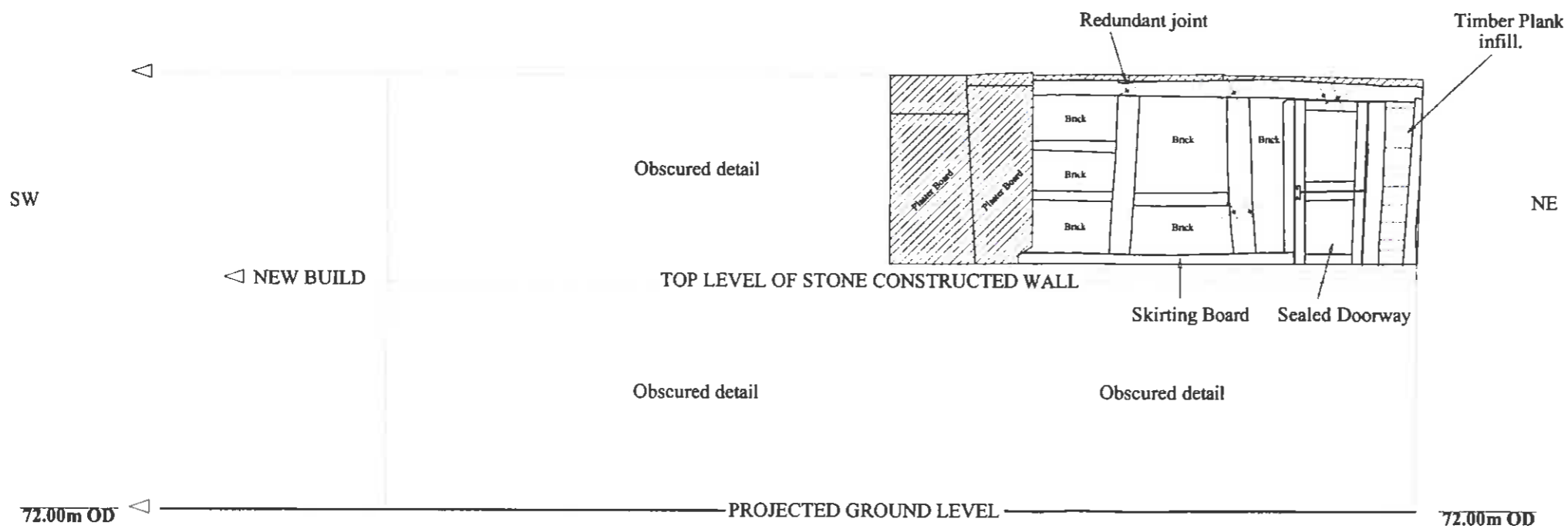
NORTH FACING ELEVATION

72.00m OD

MARSH MILL LEOMINSTER FRAME DRAWINGS

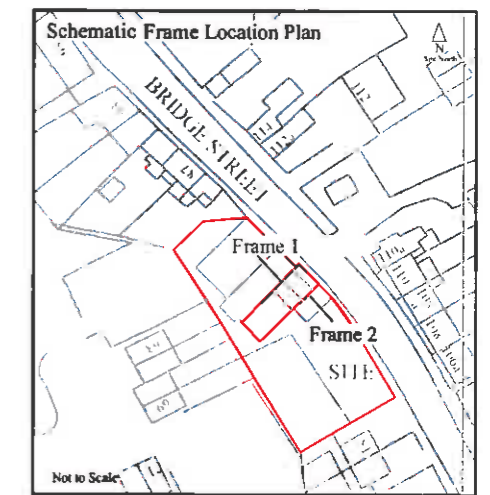


North west facing frame elevation.
FRAME 1



South east facing frame elevation.
FRAME 2

Key Symbols 4x Scale	
	Open Peg Holes
	Carpenters Marks
	Stave hole
	Indication of joint location
	Assumed peg hole location
	Peg Direction
	Point End
	Hammer End



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