

# DUGOED, PENMACHNO, BETWS-Y-COED, CONWY

[NPRN 26415]

## Architectural Record



**FINAL REPORT**

**August 2011**



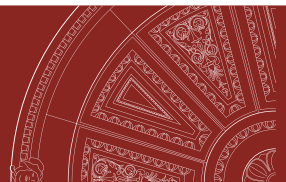
in partnership with



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# DUGOOD

## Penmachno, Betws-y-Coed, Conwy

[NPRN: 26415]

### Architectural Record

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# DUGOED

## Penmachno, Betws-y-Coed, Conwy

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### Architectural Record

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#### *Summary*

*Dugoed is located is located off the east side of the B4406, which follows the valley of the Afon Machno, 2.17km NE of Penmachno village and 4.75km SSE of the town of Betws-y-Coed in the County Borough of Conwy, centred on NGR SH 8062 5218. It is a Grade II listed building and is included on the National Monuments Record of Wales. An architectural record of the building was made in June 2011 as part of the North-West Wales Dendrochronology Project, undertaken in partnership with the Royal Commission on the Ancient and Historic Monuments of Wales, and following on from a programme of dendrochronological analysis.*

*The origins of the farmhouse at Dugoed are intriguing and potentially of major significance. The recorded evidence would appear to indicate, at least ostensibly, that it originated as a Smith 'Type A' end chimney house, stone-built on a two-unit plan, fully storeyed with a two-bay hall to the east and service bay to the west, that is to say a house approximating to the 'Snowdonia' plan which was to become the dominant house form of the sub-medieval period in north-west Wales. An alternative interpretation may be that Dugoed represents an updated open-hall house of medieval origin, the details of which remain obscure. In either case, the early dating of the floor by dendrochronology to 1515/17 is of particular significance. On the balance of the current evidence, the former interpretation appears more likely, implying that Dugoed represents the earliest dated storeyed house yet recorded in Snowdonia, pre-dating the earliest known example of the 'mature' Snowdonia plan house by a full generation. It is noted that supplementary dendrochronological sampling has the potential to inform a fuller understanding of the origins and early development of the house.*

*In the later 16<sup>th</sup> century, a perpendicular range was appended to the north of the primary house, perhaps as an attached kitchen or parlour wing or, given its independent access, as a separate dwelling following the unit-system. An undated, pent-roofed outshut was subsequently appended to the western side of the kitchen range, perhaps housing a dairy.*

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## **1 INTRODUCTION**

### **1.1 Background to the Project**

- 1.1.1 Dugoed farmhouse, Penmachno, Betws-y-Coed, Conwy was recorded in June 2011 as part of the North-West Wales Dendrochronology Project,<sup>1</sup> undertaken in partnership with the Royal Commission on the Ancient and Historic Monuments of Wales (RCAHMW).

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<sup>1</sup> <http://www.datingoldwelshhouses.co.uk/>

- 1.1.2 Dugoed occupies an isolated, elevated position atop a rock outcrop high on the steeply sloping eastern valley side of the Afon Machno, a tributary of the Afon Conwy, at a height of c. 230mAOD. It is located at the end of a steeply sloping track opening off the east side of the B4406, 2.17km north-east of Penmachno village and 4.75km south-south-east of the town of Betws-y-Coed in County Borough of Conwy; it is centred on NGR SH 8062 5218 (Figures 1 and 2).
- 1.1.3 Dugoed is a Grade II listed building (CADW Listed Building ID 5919)<sup>2</sup> and is included on the National Monuments Record of Wales (NMRW), NPRN 26415.<sup>3</sup>
- 1.1.4 The building record follows on from a programme of dendrochronological sampling undertaken by Dr D Miles and Dr MC Bridge of the Oxford Dendrochronology Laboratory (Miles and Bridge, forthcoming; see section §.5).

## 1.2 Scope of Report

- 1.2.1 The Historic Building Record was undertaken in accordance with a 'Design Brief for Historic Building Recording' prepared by the Project Director; a copy of the brief is included below as **Appendix A**.
- 1.2.2 This report outlines the results of the building survey, and has been prepared in accordance with English Heritage guidelines as published in *Understanding Historic Buildings: A Guide to Good Recording Practice* (EH, 2006), the Institute for Archaeologists' *Standard and Guidance for the Archaeological Recording of Standing Buildings or Structures* (IfA, 2008) and the Association of Local Government Archaeological Officers' *Analysis and Recording for the Conservation of Works to Historic Buildings* (ALGAO, 1997).
- 1.2.3 This report has been prepared based upon information current and available as of June 2011.

## 2 AIMS AND OBJECTIVES

- 2.1 The general objective of the architectural record, as outlined in the design brief, was to generate a drawn, photographic and written record of Dugoed to supplement the dendrochronological survey.
- 2.2 Specific aims of the recording action are listed at Section §.5 of the project brief, reproduced at **Appendix A** below.

## 3 METHODOLOGY

### 3.1 Documentary Research

- 3.1.1 Documentary research into the historical background, origins and development of Dugoed is to be undertaken by volunteers of the North-West Wales Dendrochronology Project. No programme of documentary research into the buildings has thus been undertaken as part of the current Historic Building Record.

### 3.2 Historic Building Record

- 3.2.1 The Historic Building Record comprised an exterior and interior examination of the structure of the house and the compilation of drawn, photographic and written records as follows:

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<sup>2</sup> <http://www.britishlistedbuildings.co.uk/wa-5919-dugoed-bro-machno>  
<sup>3</sup> <http://www.coflein.gov.uk/en/site/26415/details/DUGOED+FARMHOUSE/>

*The Drawn Record*

- 3.2.2 Measured plans were generated on site at principal floor levels, marking significant architectural and archaeological detail. Plans were prepared on site at a scale of 1:50, using pencil of archivally stable drafting film, measurements being captured by a combination of hand tape and hand-held laser measurement. In addition, two representative cross-sections were prepared, one each of the two principal ranges making up the farmhouse. A register of project drawings is included below as **Appendix B**.

*The Photographic Record*

- 3.2.3 The photographic record comprised high resolution digital photography using a Nikon D3000 digital single lens reflex camera (10MP) and was commensurate with a 'Level 3' record as defined by English Heritage (2006, 14), extending to include both general and detail shots, contextual views and accessible exterior elevations, visible structural and decorative details (interior and exterior), and general interior views of principal rooms and circulation areas. Where possible, photographs included graded photographic scales. All photographs were recorded on *pro-forma* recording sheets detailing subject, orientation, photographer and date. A register of project photographs is included below as **Appendix C**; digital copies of photographs in \*.jpg format are included on CD appended to the rear cover of the report.

*The Written Record*

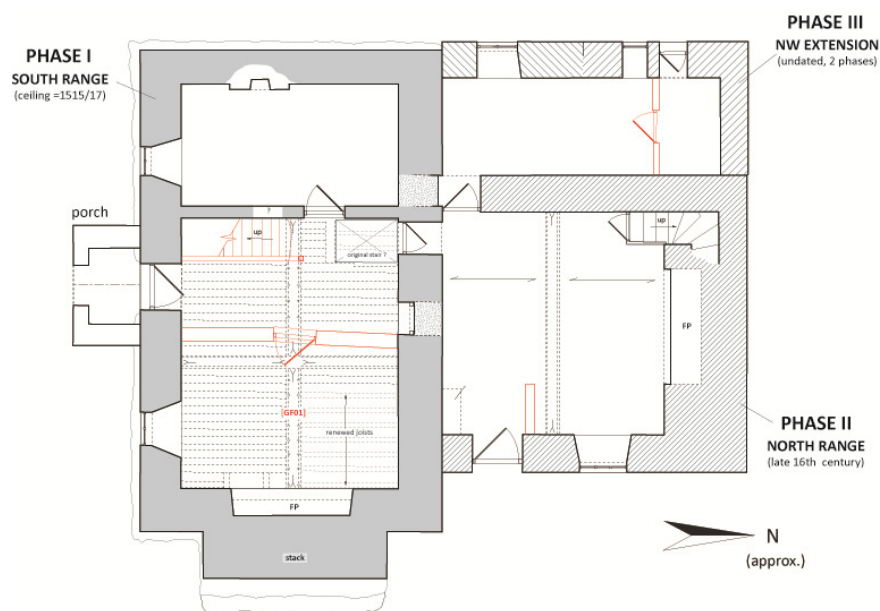
- 3.2.4 To accompany the drawn and photographic records, a written account of the farmhouse buildings was made as free text; this forms the basis of the following description.

## 4 BUILDING DESCRIPTION

### 4.1 Overview

- 4.1.1 The extant farmhouse at Dugoed can be split into three principal elements (see sketch plan overleaf). The earliest part lies to the south, a stone-built range on a two-unit plan aligned approximately east-west with projecting end chimney stack to the east and rising to two full storeys beneath a pitched slate-clad roof, gabled to east and west. A perpendicular range extending to the north of the north elevation represents a secondary addition; again of two storeys beneath a pitched roof, the range opens to the east via a characteristic 'cyclopean' doorway and is cut into the natural bedrock to the north. A pent-roofed extension has been appended, in two phases, to the western side of the northern range.
- 4.1.2 A series of stone-built agricultural outbuildings including cow stalls, piggeries and a two-storey barn,<sup>4</sup> together with a number of late 20<sup>th</sup>-century steel sheds, are arranged around the southern and western sides of the main yard (Plate 1) located immediately to the south of the farmhouse, the whole being partially enclosed by a curving stone wall and tree planting (Figure 3).

<sup>4</sup> These buildings are beyond the scope of the current study.



*Dugoed: Sketch plan showing principal features described in text (see also Figures 4-6)*

## 4.2 The South Range

### Exterior

- 4.2.1 The south range is built on a rectangular plan with external measurements of c.11m (36ft) east-west x 7m (23ft) north-south. The principal **south elevation** (Plate 2) of the farmhouse is of stone construction rising to two full storeys above an offset, rough stone-rubble plinth (Plate 6) beneath a pitched, slate-clad roof, gabled to east and west. A projecting, shouldered stack is located to the east (Plate 5), while a plain ridge stack rises above the western gable. The principal doorway is set centrally to the elevation, protected by a secondary, gabled porch the doorway of which displays a 'Caernarfon' arch with convex corbels supporting a monolithic slate lintel (Plate 3). Fenestration is of single, symmetrically opposed, two-light timber casements at ground and first floor level to east and west, the upper windows being of smaller dimensions than those at ground floor level. An additional, single-light opening casement is located directly above the ridge of the central porch.
- 4.2.2 The **west elevation** (Plate 4) presents a blind gable end, cement rendered above a projecting stone rubble plinth and with plain ridge stack; the **east elevation** (Plate 5) is again blind and is dominated by a massive projecting, shouldered stone stack rising to a square chimney. The offset stone plinth of the south elevation continues around the base of the stack. The **north elevation** is for the most part obscured by secondary work, namely the north range and north-west extension, though small, square casement windows are located at first floor level to east and west, the latter opening above the pent roof of the north-west extension.

### Interior

- 4.2.3 Internally, the south range is arranged on an original two-unit, end-chimney plan, though this is obscured to an extent by later modifications; at ground floor level, an inserted transverse partition within the original

two-bay hall to the east of the range has been introduced to form an enclosed entrance/stairway hall while at first floor level, studwork partitions create a simple three bay division.

*Ground Floor (Figure 4)*

- 4.2.4 Room [GF01] is located to the east end of the range; it is lit by a small, two-light timber casement with splayed reveals in the south wall and heated by a small, modern fireplace set within a wide, original recess, spanned by a heavy bressummer, within the east gable end (Plate 11). The dominant feature of the room is the exposed timber ceiling structure (Plate 12) of a former, two-bay hall; the ceiling structure extends into room [GF02] to the west, the inserted partition wall being located immediately west of the principal transverse beam. The principal members of the framed ceiling comprise a single main beam aligned transversely across the range into which are jointed two subsidiary longitudinal beams of equal scantling (c.1ft square); all are elaborately moulded with two orders of plain chamfer and quirk, stopped with stepped run-outs and elongated broach stop (Figure 9; Plate 13).<sup>5</sup> The two secondary beams are double-tenoned to the principal transverse beam and double pegged. Original, wide-section joists (6½-7in. wide), unchamfered and aligned north-south, survive to the south-east quadrant of the floor, those to the north-east having been mostly renewed, and are jointed to the longitudinal floor beams using barefaced soffit-tenons, single-pegged. Dendrochronological analysis has established a felling date of 1515/17 for the timbers used in this ceiling structure, a notably early date the implications of which will be discussed further below (see §.6).
- 4.2.5 The eastern fireplace lacks the stone or framed stair that might be expected in such a plan (and is indeed present in the north range) and primary access to the first floor was presumably originally via some form of ladder access, possibly located within [GF02] (see below).
- 4.2.6 To the west, Room [GF02] (Plate 14) represents a secondary entrance / stairway hall, extending across the width of the range and created by the insertion of a transverse partition into the former two-bay hall formed by [GF01] and [GF02] combined. Access from the exterior is via a doorway, set unusually towards the eastern end of the south wall with through access to the north range via a doorway at the west end of the north wall.<sup>6</sup> Doorways serving [GF01] and [GF03] are located within the east and west walls respectively. A low recess at the eastern end of the north wall includes a stout timber frame and may represent a former, low doorway.
- 4.2.7 The ceiling structure of [GF01], described above, continues here, represented by the western longitudinal beam and a number of primary joists to north and south. An inserted, straight-flight stair of 20<sup>th</sup>-century date, with closed string, stick balusters and turned newel rises from north-south against the west wall; the introduction of this feature necessitated the removal of two primary ceiling joists, the cut-off tenons of which survive within the south face of the longitudinal beam, here shaved-back to enhance head-space at the base of the stair. Within the north-east quadrant of the floor, a trimmed opening, closed over with secondary joists, may indicate an original ladder/stair location (see Figure 4).
- 4.2.8 A single door opens off the west side of entrance hall [GF02], immediately north of the ceiling spine beam, serving Room [GF03] which occupies the full extent of the western bay of the range. The room is lit by a two-light casement within the north wall, mirroring that within [GF01], and is heated by a small (inserted) fireplace within the west wall. No features of archaeological or architectural interest are exposed. Convention would dictate that the room originally functioned as paired service rooms related to the hall to the east, though any evidence for the bi-partite partition of the space has been effectively obscured by modern finishes; likewise no evidence was recorded for a second access doorway within the eastern wall.

<sup>5</sup> No stops are visible to the north side of the floor, the result of the dry-lining of the north wall.

<sup>6</sup> The non-alignment of doorways within the longitudinal elevations suggests some degree of alteration; primary doors would normally be directly opposed forming an entrance passage towards the lower end of the hall. No obvious evidence for a former opening is visible externally within the south elevation or within the under-stair cupboard to the west of the current doorway.

4.2.9 All doors at ground floor level are contemporary, of vertical, reeded tongue and groove boards with horizontal batons to the rear, hung on strap hinges with either plain or spearheaded terminals.  
*First Floor* (Figure 5)

4.2.10 The first floor is accessed via the inserted straight-flight stair rising against the west wall of the entrance hallway; this opens onto a wide landing [1F02] opening to the east onto bedroom [1F01] and, to the north, onto bedroom [1F03] and bathroom [1F04]. A doorway within the north wall gives, via a single step down, onto room [1F05] within the north range. All partitions at first floor level of studwork construction while doors are modern insertions; little fabric of interest is visible. The exception is the foot of the northern and southern principal rafters of the easternmost roof truss, visible below the inserted ceiling of bedroom [1F01] (Figure 7; Plate 15).

*The Roof* (Figures 6 and 7)<sup>7</sup>

4.2.11 The roof structure of the south range (Figure 6) is of three bays (here numbered 1 to 3 from east to west) and retains a single early truss to the east, at Bay 1/2, above room [1F01] (where the principal rafter feet are visible below an inserted ceiling); the truss is of collar beam form with massive (18in. deep) principals, cranked collar and upper V-strutting (Figure 7; Plate 16), the lower leading edge of the collar and lower principals being plain chamfered. No evidence was recorded for original infilling of the truss, in the form of stave holes to support primary wattle and daub panels, and the truss is assumed to have been open in its original form. The principals support two tiers of side-purlins, trenched over the upper face of the principals, while a redundant socket at the ridge evidences an original, square-section ridge piece (Plate 17). Empty mortices within both the principal rafters and purlins evidence the former existence of longitudinal wind bracing to both levels (Plates 18/19). The western truss of the roof has been renewed in softwood (Plate 20), though wind-brace mortices within the purlins, as observed within Bay 2, indicates that it occupies a primary truss location. Common rafters have been renewed throughout.

### 4.3 The North Range

#### Exterior

4.3.1 The north range (Plate 7) is built on a square plan 7m (23ft square) and is appended to the north side of the earlier southern range, set slightly off-centre to the east; at the northern gable, the range is cut into the natural bedrock of a pronounced knoll (Plate 9). The principal **east elevation** (Plate 7) is stone-built rising to two full storeys beneath a pitched, slate-clad roof, gabled to the north and abutting the earlier range to the south. Entry is gained via a doorway of 'Cyclopean' form<sup>8</sup> with monolithic, arched lintel and jambs of massive upright slabs (Plate 8); to the north, superimposed window openings at ground and first floor level house timber casements, of three-lights to ground floor and two-lights to first floor, the first floor opening having been reduced to the north, evidenced by a clear area of blocking. The **north elevation** presents a blind gable rising to a square ridge stack, the exterior ground level is here raised, corresponding approximately to the interior first floor level, due to the 'terracing' of the range into a natural rock outcrop (Plates 7/9). The western eaves includes a corbelled stone kneeler beneath which a straight joint denotes the junction with the north-west extension.

<sup>7</sup> Physical access to the roofspace of the south range was highly restricted, being limited to a small hatch within the ceiling of [1F02]. The following description and drawings/plates included within this report are based upon a visual inspection from this location and upon limited measurements.

<sup>8</sup> See Smith 1988, 485; Map 35.

Interior*Ground Floor* (Figure 4)

- 4.3.2 Internally, the north range comprises a single room at each floor level, lit by superimposed casement windows within the east wall. The ground floor room, [GF04] is spanned east to west by a substantial timber beam with deep (2½ in.) chamfer with straight cut stops to east and west (Plate 22), and is furnished with a wide fireplace opening at the centre of the north wall (Plate 21), spanned by a substantial timber lintel, currently blocked in and housing a Rayburn range. To the west of the fireplace opening, a modern door opens onto a primary, stone-built winder stair (Plates 23/4), rising to the upper floor of the range. A sloping section of ceiling (Plate 25) at the south-west corner of the room, adjacent to the exterior door, is suggestive of a former stair soffit, rising south-north and cutting through the northern wall of the primary range from room [GF01]; modern wall treatments, in particular the dry lining of the north wall of the latter room,<sup>9</sup> negate the verification of this feature.

*First Floor* (Figure 5)

- 4.3.3 First floor level, accessed via the fireplace stair, again comprises a single space [1F05], lit by a single (reduced) window opening in the east wall housing a two-light timber casement. Wardrobes aligned against the north wall obscure any evidence related to an original fireplace at this level. A door within the south wall of [1F05] communicates, via a single step up, with the upper level of the south range. The room is spanned by two transverse, boxed-in beams (Plate 26); the location and alignment would suggest tie beams associated with the roof trusses above.

*Roof* (Figures 6 and 8)<sup>10</sup>

- 4.3.4 The roof of the north range is of three unequal bays defined by two trusses of collar beam form (Figure 8; Plate 27) supporting two tiers of side purlins, trenched over the principals and set into the masonry of the northern gable and southern wall, and a square section ridge piece. Purlins (9 x 4in. scantling) are unchamfered and carry original common rafters (5 x 2in.), five to seven per bay; no evidence was recorded to indicate longitudinal wind bracing. Principal rafters are again of substantial scantling, being 16in. deep, the leading edge both below and above collar level being plain chamfered; the collars, gently cambered and triple pegged to principals, are also chamfered to both bottom and top edges suggesting that they would originally have been exposed to the first floor chamber below.

**4.4 The North-West Extension**

- 4.4.1 A stone-built, single-storey extension with mono-pitch, pent roof occupies the north-west angle between the north and south ranges (Plate 10). A straight joint within the stonework of the west elevation indicates that the extension was added in two phases, though the relative chronology is unclear. Internally, the fitting out of the extension as a modern kitchen / utility room (divided by modern partition) has served to obscure any original arrangements.

**5 TREE-RING DATING**

- 5.1 A programme of tree-ring dating was undertaken by the Oxford Dendrochronology Laboratory prior to the current study (Miles and Bridge, forthcoming) though no full report was available at the time of collation of this report. A summary of the details from the draft report is included in Table 1 overleaf; approximate sample locations are indicated on Figures 4 and 6 below.

<sup>9</sup> See fn.4.

<sup>10</sup> As with the south range (see fn.5), physical access to the north range roof was restricted, the description here is based upon observations made from the single access hatch within room [1F05].



| Sample number                           | Timber and position                | Date of series   | H/S boundary date | Sapwood complement | No of rings | Felling date range |
|---|------------------------------------|------------------|-------------------|--------------------|-------------|--------------------|
| <b>SOUTH RANGE</b>                      |                                    |                  |                   |                    |             |                    |
| * dug1                                  | East transverse beam, GrdFlr       | 1413-1515        | 1476              | 39C                | 103         | Winter 1515/16     |
| * dug2                                  | Middle longitudinal beam, GrdFlr   | 1433-1516        | 1492              | 24C                | 84          | Winter 1516/17     |
| <b>NORTH RANGE</b>                      |                                    |                  |                   |                    |             |                    |
| dug11                                   | Transverse beam, GrdFlr            | undated          | -                 | 12?C               | 52          | unknown            |
| * dug12                                 | West upper purlin, South bay       | 1424-1593        | 1529              | 64½C               | 170         | Spring 1594        |
| * dug13                                 | West lower purlin, middle bay      | 1397-1545        | 1545              | H/S                | 149         | 1556-86            |
| * dug14                                 | West principal rafter, south truss | 1443-1551        | 1551              | H/S                | 109         | 1562-92            |
| * = included in site mean <b>DUGOED</b> |                                    | <b>1397-1593</b> |                   |                    | <b>197</b>  |                    |

TABLE 1: Summary of dendrochronology samples (from Miles and Bridge, draft report).

Key: H/S bdy = heartwood/sapwood boundary - last heartwood ring date; C = complete sapwood, winter felled; ½C = complete sapwood, felled the following summer.

- 5.2 A total of five samples dated of which [dug1] and [dug2] from the south range ceiling were shown to come from trees felled in winter 1515/16 and 1516/17 respectively. Timbers from the north range roof form a group and clearly indicate a later 16<sup>th</sup>-century date for the construction of the kitchen/parlour extension.

## 6 INTERPRETATION

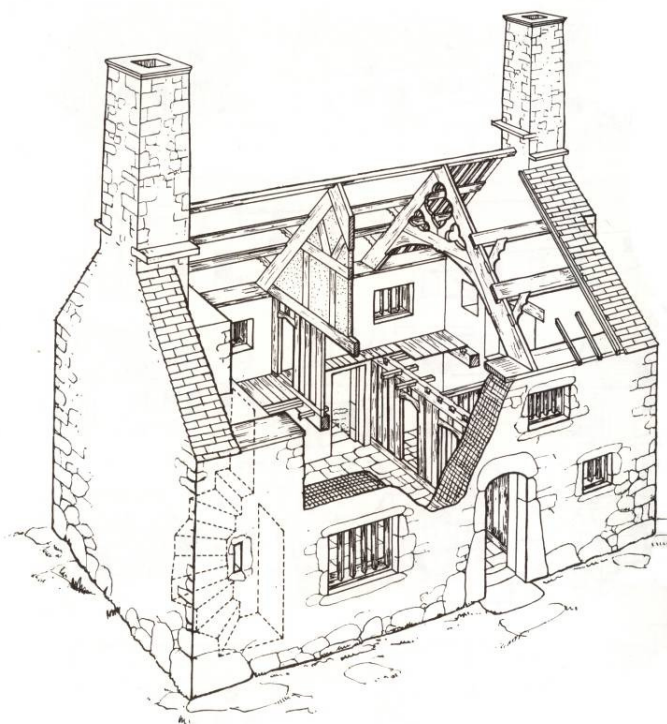
### 6.1 Origins

- 6.1.1 The origins of the farmhouse at Dugood remain somewhat ambiguous. The recorded evidence would appear to indicate, at least ostensibly, that Dugood originated as a Smith 'Type A' end chimney house, stone-built on a two-unit plan, fully storeyed with a two-bay hall to the east and service bay to the west, that is to say a house approximating to the 'Snowdonia' plan which evolved to become the dominant house form of the sub-medieval period in north-west Wales (see Smith 1988, 157-8; Map 27; Suggett and Stevenson 2010, 57-63). The absence of the stone or framed stair adjacent to the ground floor fireplace, a feature that was to become ubiquitous in later houses, is a characteristic of early Snowdonia houses,<sup>11</sup> while other details of Dugood do not correspond well with the 'mature' Snowdonia plan (see inset overleaf). The location of the principal 2-bay chamber directly above the 2-bay ground floor hall, for example, is at variance with the developed plan where the pattern of principal room division is normally reversed at first floor level.
- 6.1.2 The secure dating of the ground floor ceiling to 1515/17 is of clear significance in this respect as the Snowdonia plan is accepted to extend only as far back as the mid-16<sup>th</sup> century, specifically to c.1540 (Suggett and Stevenson 2010, 61). As such, if the first floor is interpreted as part of a primary proto-'Snowdonia' plan structure, then it pre-dates the earliest known examples by some 25 years.
- 6.1.3 An alternative interpretation is that Dugood may represent an updated open-hall house, perhaps of medieval origin. The presence of an offset, rough stonework plinth to the exterior of the south range has been proposed as evidence that this may be the case (Suggett, *pers. comm.*), though no other unambiguous, supporting evidence for this assertion has been recorded as part of the current study. At Tŷ-Mawr, Wybrnant,<sup>12</sup> cut-off cruck blades were revealed within the lateral walls during refurbishment work, indicating the reworking of an early open hall (Suggett and Stevenson 2010, 72), though it should be noted

<sup>11</sup> See Smith 1988, 472; Map 33. Suggett and Stevenson (2010, 59) note the absence of this feature at Y Garreg-fawr, Waunfawr, Caernarfonshire, of 1540/54 (relocated to St Fagans in 1984) and at Uwchlaw'r-coed near Harlech as late as 1585.

<sup>12</sup> NMRW NPRN 16966. A National Trust property located 3.7km west of Dugood.

that the conversion at Tŷ-Mawr was later (1560s) and followed the, by then, established model of the mature 'Snowdonia plan'.<sup>13</sup> The first documentary reference to the conversion of an open-hall house in Wales dates to 1573 when a chimney and upper chamber were inserted into a house at Abergele in Denbighshire (Suggett 2007, 166). Certain discrepancies within the fabric would appear to indicate a degree of alteration having been undertaken at Dugoed, for example the non-alignment of the ground floor doorways within [GF02], though precise details are difficult to identify with certainty.



Cut-way projection of a 'typical' Snowdonia plan house (from Smith 1988, fig. 81).

- 6.1.4 The process of conversion from open-hall to storeyed house involved the insertion of both a ceiling and chimney into an existing building, the latter being necessary to supersede the former open hearth. The normal location for an inserted stack was either within the body of the hall, or within the entrance passage, the latter resulting in a classic lobby-entry plan, in both cases the secondary ceiling frame would retain evidence for a former stack location. At Dugoed, the ceiling frame displays no such evidence and the extant, stone built stack is located within the eastern gable end, external to the area of any early, open hall.
- 6.1.5 On the balance of the current evidence the former interpretation, *viz.* that Dugoed represents a purpose-built 'proto-Snowdonia' plan house, appears more likely with the clearly significant implication that it represents the earliest, dated storeyed-house yet recorded in Snowdonia, pre-dating the earliest known example of the 'mature' Snowdonia plan house by a full generation. Consideration should be given to supplementary dendrochronological sampling of the collar beam truss over the first floor chamber and the mantel beam spanning the ground floor fireplace within [GF01], as these elements have the potential to inform a fuller understanding of the origins and early development of the house.

<sup>13</sup>

In this context, the potential for invasive work, including the removal of modern wall and ceiling finishes, to expose archaeological evidence for the origins and development of the house should be highlighted.

## 6.2 Later Development

- 6.2.1 Whatever the origins of Dugood, the south range would appear to have reached its current form by the later years of the 16<sup>th</sup> century (most likely in the mid-1590s) when a secondary range, square in plan and again of two storeys, was appended to the northern elevation of the primary range. The new range was aligned perpendicularly to the earlier structure and was terraced in to a natural rock outcrop to the north. The range includes a number of distinctive features such as the Cyclopean door of the east elevation and the stone winder stair to the west of the gable fireplace. The range may have been added as a parlour or kitchen wing to the main range or, given its independent means of access via the eastern door, as a separate dwelling following the 'unit system' of development (Smith 1988 166-8; Suggett 2010, 64-5).
- 6.2.2 In a later phase of extension, a small stone built extension with pent roof was erected (in two phases) to the west of the north range, perhaps originating as a dairy.

## 7 ACKNOWLEDGEMENTS

- 7.1 The project was commissioned by Mrs Margaret Dunn, Project Director of the North-West Wales Dendrochronology Project, to whom thanks are given for help and cooperation throughout. Dugood is a property of the National Trust, part of their Ysbyty Ifan estate; grateful thanks are also extended to Mr and Mrs Lloyd, tenants of Dugood, for their understanding and hospitality during the course of work. Thanks also to Mr Richard Suggett of the RCAHMW for informal discussions on the interpretation of Dugood and for comments on the draft text of the current report.
- 7.2 Site recording and assessment were undertaken by Mr Ric Tyler AlFA who also wrote, collated and illustrated the current report.

## 8 SOURCES

### a) Published Sources

Alcock NW, Barley MW, Dixon PW and Meeson RA, 1989. *Recording Timber-Framed Buildings: An Illustrated Glossary. Practical Handbooks in Archaeology No.5.* London, Council for British Archaeology.

ALGAO, 1997. *Analysis and Recording for the Conservation of Works to Historic Buildings.*

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English Heritage, 2006. *Understanding Historic Buildings: A Guide to Good Recording Practice.*

Institute for Archaeologists, 2008. *Standard and Guidance for the Archaeological recording of Standing Buildings and Structures.* University of Reading, IfA.

Smith P, 1988. *Houses of the Welsh Countryside: A Study in Historical Geography,* 2<sup>nd</sup> Ed. London, HMSO.

Suggett R, 2007. *Houses and History in the March of Wales; Radnorshire 1400-1800.* Aberystwyth, RCAHMW.

Suggett R and Stevenson G, 2010. *Introducing Houses of the Welsh Countryside.* Y Lolfa/RCAHMW.

### b) Unpublished Sources

Miles D and Bridge MC, forthcoming. 'The Tree-ring Dating of Dugood, Penmachno, Betws-y-Coed, Conwy'. Oxford Dendrochronology Laboratory, Report No. 2011/\*\*.

### c) Online Sources

- <http://www.britishlistedbuildings.co.uk>
- [www.coflein.gov.uk](http://www.coflein.gov.uk)
- <http://datingoldwelshhouses.co.uk>

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**APPENDIX A: Project Brief**

**DATING OLD WELSH HOUSES  
NORTH WEST WALES DENDROCHRONOLOGY PROJECT  
DESIGN BRIEF FOR HISTORIC BUILDING RECORDING.**

**1 Project Background**

- 1.1 The North West Wales Dendrochronology Project (2009-2012) aims to identify, sample and date using dendrochronology, and record Tudor buildings with suitable original timber. Volunteers will undertake documentary research and the results will be widely disseminated and deposited in regional Historic Environment Records (HERs) and Coflein. The copyright of all project reports and materials will belong to the Project.
- 1.2 Project Phase 1 [September 2009 - June 2010] will include buildings in the following areas i) parts of south Denbighshire; ii) Anglesey; iii) parts of Arfon & Dwyfor in Gwynedd. Project Phase 2 [April 2010 – March 2012] will include buildings in iv) Conwy, v) parts of Merioneth in Gwynedd and vi) some possibly other buildings across the region.
- 1.4 Grants have been obtained for the Project costs from a wide range of organisations, each with their own conditions. In order to meet these conditions it was necessary as part of the grant application to identify potential buildings and obtain the owner's written permission. A long list of potential buildings has been drawn up for each area, with a short list in order of potential priority.

**2 Site Locations**

- 2.1 The dendrochronologists will block several days work in an area. They will visit the buildings on the short list for that area in order of priority and will determine whether or not there are sufficient suitable timbers to sample. They will move down the priority short list visiting and sampling buildings until the money allocated for dendrochronology in that area has been used.
- 2.2 As it will not be certain beforehand how many building phases are contained within any particular building, it cannot be stated how many buildings will be involved. See the accompanying letter. There may be additional buildings located elsewhere.
- 2.3 Most of the buildings are scattered farmhouses, but in some areas town houses will be included.
- 2.4 Some may have already been surveyed in detail by RCAHMW or others.

**3 Background of each Site**

- 3.1 As part of 1.4., existing sources of information were consulted. This included the RCAHMW inventories and records, Cadw listed building schedules and local knowledge. All buildings were visited. Most but not all buildings are listed grade II or II\*.
- 3.2 The teams of trained volunteers will be undertaking further documentary research whilst the professional dendrochronology and building recording work proceeds.

3.3 Some recording may take place alongside the dendrochronologists and / or the volunteers.

#### **4 General Requirements**

4.1 The building recording must be undertaken by an appropriately qualified individual or organisation, fully experienced in work of this character. Access to small awkward loft spaces may be necessary.

4.2 Contractors and sub-contractors are expected to

- i) conform to standard professional guidelines;
- ii) meet all Health and Safety requirements, including the Project's risk assessments;
- iii) possess current adequate insurance cover

4.3 If contingencies arise, such as the need for additional work to record unexpected and important features, the Project Director should be contacted immediately and before any additional work is undertaken.

4.4 Many people in North Wales speak Welsh as their first language, and many of the archive and documentary references are in Welsh. Contractors should therefore give due consideration to their ability to understand and converse in Welsh.

#### **5 Building Detail Record of each Building**

5.1 The amount of recording required will depend on what has already been undertaken by RCAHMW or others. The aim is to provide sufficient information of the early historic features to identify their significance. Detailed recording will be reserved for components which have been dendro-dated during this Project. Because of the nature of the timber samples required (certain numbers of rings) it is likely that the timbers will be structural timbers and probably, mostly, roof trusses and ceiling/floor beams.

5.2 An important component of the dating programme will include a detailed, measured and drawn, record of the timbers to be dated.

5.3 Particular attention should be paid to diagnostic features, detail and structure, as the association of dendrochronological dates with the shape or style of the timbers has the potential to contribute to the development of a dated typology of such features.

In particular, attention should be paid to details such as:

- i) the scale and positioning of collar beams and tie beams
- ii) the detail of major joints, for example, mortice and tenon, lap-joints, scarf joints
- iii) the presence or otherwise of struts springing from collars or king-posts
- iv) the number and position of peg holes at joints and any re-pegging
- v) the presence, or indication, of panelling between the spaces of structural members of trusses (seen as grooves/dowel holes)
- vi) the presence of decorative features, such as cusping, bosses, chamfering and fancy stops; and mortices below collars, tie-beams or floor/ceiling beams to accommodate stud partitions
- vii) the presence, or indication (seen as mortices), of arched braces and wind braces;
- viii) that some collar beam trusses with arched braces exhibit an arched profile at the level of the collar - some are more pointed than others and this is likely to be a chronological feature

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- ix) the number of purlins (distinguish between butt purlins and through-purlins with scarfed joints); re-cutting of purlin slots and positioning and re-pegging of joists could be an indication of a reset truss or a re-vamped roof.
- 5.4 The minimum requirement for recording of dendrochronologically-dated timbers should include:
- 5.4.1 **Contextual Information**
- i) Brief description of the building from which the sample is taken.
  - ii) Summary of period phases represented in the building.
  - iii) Brief description of the relationship to other contemporary features and other relevant, non-contemporary features within the building. (Written description, preferably supplemented by sketch plans/elevations and/or photographs)
- 5.4.2 **Detailed Recording**
- Structural features being dated require measured drawings, in elevation and cross section, including associated components. That is, if part of a truss is being dated, the complete truss should be recorded. Similarly, if a ceiling/floor beam is recorded, the style of chamfer/chamfer stops, cross section of beam and style and spacing of joists should be recorded.
- 5.4.3 **Brief Written Statement of Possible Potential for Future Recording.**
- 5.5.1 **Photographs** should be used not only to show the appearance of the building but also to record the evidence on which the analysis of its historic development is based. Each print should be clearly labelled with the subject, orientation and the date taken, and cross-referenced to its negative and or digital file.
- 5.5.2 If utilising digital technology, high resolution images (preferably in tiff. format) must be produced. These should be presented within the report as a hard copy and a compact disc must be included as an archive to accompany the report.
- 6 Time Scale**
- It is expected that the dates when the dendrochronologists will be in each area will be known by late January 2011. It is hoped that the building recording can take place very soon after the results of the dendrochronological sampling has been received, with further visits arranged with the owner of a building as necessary.
- 7 Reports**
- Reports will be required by the deadline (given in advance) for each block of work, usually within 3-4 weeks of site visits.
- 8 Monitoring**
- The Project will be monitored by experienced members of the Project to ensure the fulfilment of the brief and specifications.



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**9 Payment**

- 9.1 Only a finite amount of money has been allocated to this aspect of the project.
- 9.2 Once the work has been satisfactorily completed, invoices, including VAT etc, should be sent to the Project Director.

**10 Summary re. Surveys & Reports:**

1. Follow the attached RCAHME Recording Historic Buildings Specification. It has to be adjusted to for digital survey. Copies are available from Margaret Dunn.
2. The emphasis should be on SURVEY & DRAWINGS and PHOTOGRAPHY. By and large others cover the history and interpretation though sometimes detailed descriptions are needed.
3. A ground-floor plan is always needed, simplified first-floor plan with position of roof trusses and fireplaces, cross-sections with the key historic trusses; architectural detail. Location of samples if possible.
4. Photography – as RCAHME specification.
5. Each site is different and some have been recorded before. There will to be a different specification for each site.
6. Final report in digital format is essential with hard copies including plans at relevant scale, with summary: i) Description. ii) Ground-floor plan, roof plan, cross-section of historic trusses (= level 3); iii) Photography (= level 3.) ; iv)Final report in digital form and hard copy.
7. **Copyright:** North-west Wales Dendro Project with agreement to put the report as PDF on Coflein RCAHME's on-line database as part of partnership.
8. **Archive.** Archive to be deposited in RCAHME's archive (National Monuments Record for Wales) as part of partnership.
9. **Logos.** Partnership with RCAHME to be noted on cover of report.

**APPENDIX B:** Register of Project Drawings

**NB:** All site drawings were prepared in pencil on archivally stable drafting film at a scale of 1:50 and/or 1:20 as appropriate.

| <b>Drg. No.</b> | <b>Subject</b>              | <b>Format</b> | <b>Scale</b> | <b>Date</b> | <b>Recorder</b> |
|-----------------|-----------------------------|---------------|--------------|-------------|-----------------|
| 2011-005/001    | Ground floor plan           | A3            | 1:50         | 27.06.11    | R Tyler         |
| 2011-005/002    | First floor plan            | A3            | 1:50         | 27.06.11    | R Tyler         |
| 2011-005/003    | Roof plan                   | A3            | 1:50         | 27.06.11    | R Tyler         |
| 2011-005/004    | Transverse cross sections   | A3            | 1:50         | 27.06.11    | R Tyler         |
| 2011-005/005    | South range ceiling details | A3            | 1:20         | 27.06.11    | R Tyler         |

**APPENDIX C: Register of Project Photographs**

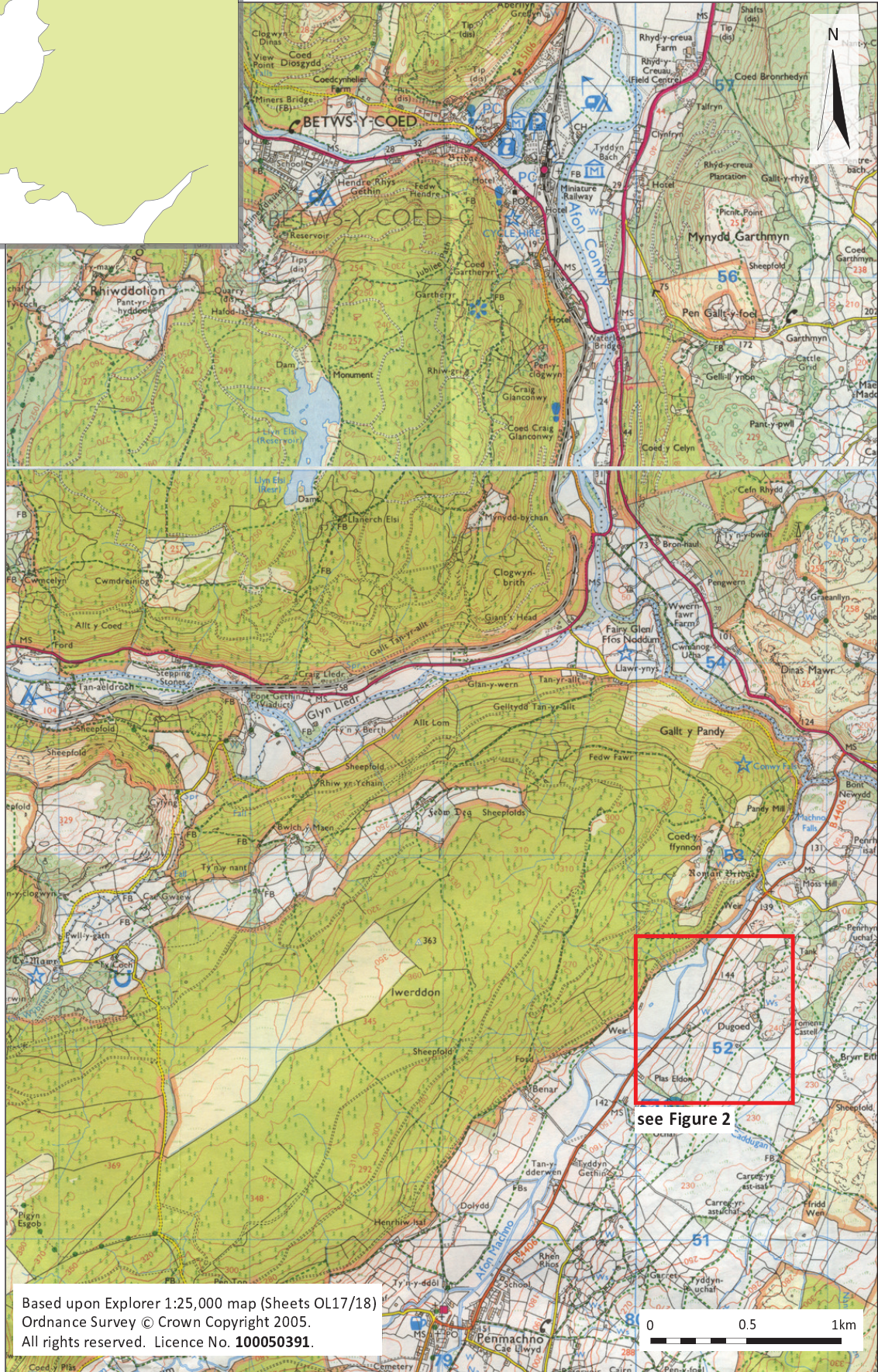
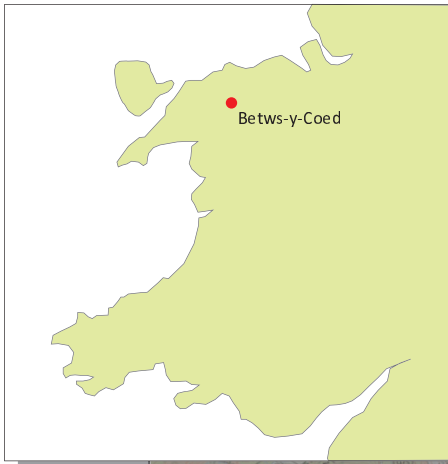
**NB:** All photographs taken with Nikon D3000 digital SLR camera, 10 mega-pixels. Files are included in .jpg format on the CD appended at the back of this report. Photos marked with an asterisk (\*) are reproduced as plates within the current document.

| Photo No.        | Subject  | Orientation | Date     | Photographer |
|------------------|--|-------------|----------|--------------|
| DSC_0289         | Dugoed, long view from south-east                | → NW        | 27.06.11 | R Tyler      |
| DSC_0290         | Dugoed, long view from east                      | → W         | 27.06.11 | R Tyler      |
| DSC_0291         | Dugoed, long view from east                      | → W         | 27.06.11 | R Tyler      |
| <b>DSC_0292*</b> | South elevation                                  | → N         | 27.06.11 | R Tyler      |
| DSC_0293         | South and west elevations                        | → NE        | 27.06.11 | R Tyler      |
| DSC_0294         | South elevation, porch                           | → N         | 27.06.11 | R Tyler      |
| DSC_0295         | South elevation, fenestration                    | → N         | 27.06.11 | R Tyler      |
| DSC_0296         | South elevation, ground floor window             | → N         | 27.06.11 | R Tyler      |
| DSC_0297         | South elevation, first floor window              | → N         | 27.06.11 | R Tyler      |
| DSC_0298         | South elevation, porch                           | → NW        | 27.06.11 | R Tyler      |
| <b>DSC_0299*</b> | South elevation, porch doorhead                  | → NE        | 27.06.11 | R Tyler      |
| DSC_0300         | South elevation, porch doorway                   | → NE        | 27.06.11 | R Tyler      |
| <b>DSC_0301*</b> | South elevation, rubble stone plinth             | → NW        | 27.06.11 | R Tyler      |
| DSC_0302         | South elevation, rubble stone plinth             | → NW        | 27.06.11 | R Tyler      |
| DSC_0303         | South elevation, straight joint at porch         | → NW        | 27.06.11 | R Tyler      |
| DSC_0304         | South elevation, main door within porch          | → N         | 27.06.11 | R Tyler      |
| DSC_0305         | South elevation, main door within porch          | → N         | 27.06.11 | R Tyler      |
| <b>DSC_0306*</b> | West elevation                                   | → E         | 27.06.11 | R Tyler      |
| DSC_0307         | NW extension                                     | → NE        | 27.06.11 | R Tyler      |
| DSC_0308         | West elevation; rubble stone plinth              | → NE        | 27.06.11 | R Tyler      |
| DSC_0309         | West elevation; rubble stone plinth              | → NE        | 27.06.11 | R Tyler      |
| <b>DSC_0310*</b> | East elevation, projecting stack                 | → NW        | 27.06.11 | R Tyler      |
| DSC_0311         | East elevation (south range)                     | → W         | 27.06.11 | R Tyler      |
| DSC_0312         | East elevation (south and north ranges)          | → W         | 27.06.11 | R Tyler      |
| DSC_0313         | East elevation (south and north ranges)          | → W         | 27.06.11 | R Tyler      |
| DSC_0314         | East elevation (south range); projecting stack   | → N         | 27.06.11 | R Tyler      |
| DSC_0315         | East elevation (south and north ranges)          | → W         | 27.06.11 | R Tyler      |
| DSC_0316         | East elevation (north range)                     | → W         | 27.06.11 | R Tyler      |
| DSC_0317         | North range Cyclopean doorway                    | → W         | 27.06.11 | R Tyler      |
| <b>DSC_0318*</b> | North range Cyclopean doorway                    | → W         | 27.06.11 | R Tyler      |
| DSC_0319         | North range Cyclopean doorway (head)             | → W         | 27.06.11 | R Tyler      |
| DSC_0320         | East elevation (north range)                     | → W         | 27.06.11 | R Tyler      |
| DSC_0321         | East elevation (north range)                     | → SW        | 27.06.11 | R Tyler      |
| DSC_0322         | North elevation                                  | → S         | 27.06.11 | R Tyler      |
| DSC_0323         | North elevation                                  | → S         | 27.06.11 | R Tyler      |
| DSC_0324         | North elevation                                  | → S         | 27.06.11 | R Tyler      |
| DSC_0325         | North elevation; detail of kneeler to west eaves | → S         | 27.06.11 | R Tyler      |
| DSC_0326         | East elevation (south and north ranges)          | → W         | 27.06.11 | R Tyler      |
| <b>DSC_0327*</b> | East elevation (south and north ranges)          | → W         | 27.06.11 | R Tyler      |
| DSC_0328         | East elevation (south range)                     | → SW        | 27.06.11 | R Tyler      |
| DSC_0329         | North range Cyclopean doorway                    | → W         | 27.06.11 | R Tyler      |
| DSC_0330         | Collar beam truss over south range               | → E         | 27.06.11 | R Tyler      |
| <b>DSC_0331*</b> | Collar beam truss over south range               | → E         | 27.06.11 | R Tyler      |
| DSC_0332         | Collar beam truss over south range               | → E         | 27.06.11 | R Tyler      |
| DSC_0333         | Collar beam truss over south range               | → E         | 27.06.11 | R Tyler      |
| DSC_0334         | Collar beam truss over south range               | → E         | 27.06.11 | R Tyler      |

|                  |   |      |          |         |
|------------------|---|------|----------|---------|
| DSC_0335         | Collar beam truss over south range                      | → E  | 27.06.11 | R Tyler |
| DSC_0336         | Collar beam truss over south range                      | → E  | 27.06.11 | R Tyler |
| <b>DSC_0337*</b> | South range roof, purlin and wind brace socket          | → E  | 27.06.11 | R Tyler |
| DSC_0338         | South range roof, collar pulled out of principal        | → E  | 27.06.11 | R Tyler |
| DSC_0339         | South range roof, renewed softwood truss                | → W  | 27.06.11 | R Tyler |
| DSC_0340         | South range roof, renewed softwood truss                | → W  | 27.06.11 | R Tyler |
| DSC_0341         | South range roof, renewed softwood truss                | → W  | 27.06.11 | R Tyler |
| <b>DSC_0342*</b> | South range roof, renewed softwood truss                | → W  | 27.06.11 | R Tyler |
| <b>DSC_0343*</b> | South range roof, socket for ridge piece                | ↑    | 27.06.11 | R Tyler |
| DSC_0344         | South range roof, angle struts above collar             | ↑    | 27.06.11 | R Tyler |
| DSC_0345         | South range roof, upper purlin and wind brace socket    | → NE | 27.06.11 | R Tyler |
| DSC_0346         | South range roof, purlins                               | ↑    | 27.06.11 | R Tyler |
| <b>DSC_0347*</b> | South range roof, upper purlin and wind brace socket    | → NE | 27.06.11 | R Tyler |
| DSC_0348         | North range roof, collar beam truss                     | → N  | 27.06.11 | R Tyler |
| DSC_0349         | North range roof, collar beam truss                     | → N  | 27.06.11 | R Tyler |
| DSC_0350         | North range roof, collar beam truss                     | → N  | 27.06.11 | R Tyler |
| <b>DSC_0351*</b> | North range roof, collar beam truss                     | → N  | 27.06.11 | R Tyler |
| DSC_0352         | North range roof, collar beam truss                     | → N  | 27.06.11 | R Tyler |
| DSC_0353         | North range roof; ridge piece                           | ↑    | 27.06.11 | R Tyler |
| DSC_0354         | North range roof  | → N  | 27.06.11 | R Tyler |
| DSC_0355         | North range roof  | → N  | 27.06.11 | R Tyler |
| <b>DSC_0359*</b> | Room [GF04] (north range); looking NE                   | → NE | 27.06.11 | R Tyler |
| DSC_0360         | Room [GF04] (north range); winder stair to west of FP   | → NW | 27.06.11 | R Tyler |
| <b>DSC_0361*</b> | Room [GF04] (north range); winder stair to west of FP   | → N  | 27.06.11 | R Tyler |
| DSC_0362         | Room [GF04] (north range); looking SW                   | → SW | 27.06.11 | R Tyler |
| <b>DSC_0363*</b> | Room [GF04] (north range); detail of transverse beam    | ↑    | 27.06.11 | R Tyler |
| <b>DSC_0364*</b> | Room [GF01] (south range); FP to east wall              | → E  | 27.06.11 | R Tyler |
| DSC_0365         | Room [GF01] (south range); ceiling structure            | ↑    | 27.06.11 | R Tyler |
| <b>DSC_0366*</b> | Room [GF01] (south range); ceiling structure            | ↑    | 27.06.11 | R Tyler |
| DSC_0367         | Room [GF01] (south range); ceiling structure            | ↑    | 27.06.11 | R Tyler |
| DSC_0368         | Room [GF01] (south range); ceiling structure (detail)   | ↑    | 27.06.11 | R Tyler |
| <b>DSC_0369*</b> | Room [GF01] (south range); ceiling structure (detail)   | ↑    | 27.06.11 | R Tyler |
| DSC_0370         | Room [GF01] (south range); ceiling structure (detail)   | ↑    | 27.06.11 | R Tyler |
| DSC_0371         | Room [GF01] (south range); ceiling structure (detail)   | ↑    | 27.06.11 | R Tyler |
| DSC_0372         | Room [GF01] (south range); ceiling structure (detail)   | ↑    | 27.06.11 | R Tyler |
| DSC_0373         | Room [GF01] (south range); ceiling structure (detail)   | ↑    | 27.06.11 | R Tyler |
| DSC_0374         | Room [GF01] (south range); ceiling structure (detail)   | ↑    | 27.06.11 | R Tyler |
| DSC_0375         | Room [GF02] (south range) looking south                 | → S  | 27.06.11 | R Tyler |
| DSC_0376         | Room [GF02] (south range) inserted stair                | → SW | 27.06.11 | R Tyler |
| DSC_0377         | Room [GF02] (south range) ceiling to north of stair     | ↑    | 27.06.11 | R Tyler |
| DSC_0378         | Room [GF03] (south range) looking south                 | → S  | 27.06.11 | R Tyler |
| DSC_0379         | Room [GF03] (south range) looking north                 | → N  | 27.06.11 | R Tyler |
| DSC_0380         | Room [GF02] (south range) blocked opening in north wall | → N  | 27.06.11 | R Tyler |
| DSC_0381         | Room [1F02] (south range) looking north                 | → N  | 27.06.11 | R Tyler |
| DSC_0382         | Room [1F02] (south range) looking south                 | → S  | 27.06.11 | R Tyler |
| DSC_0383         | Room [1F01] (south range) looking north                 | → N  | 27.06.11 | R Tyler |
| DSC_0384         | Room [1F01] (south range) looking south                 | → S  | 27.06.11 | R Tyler |
| <b>DSC_0385*</b> | Room [1F01] (south range); foot of principal rafter     | → W  | 27.06.11 | R Tyler |
| <b>DSC_0386*</b> | Room [1F05] winder stair to W of FP                     | ↓    | 27.06.11 | R Tyler |
| DSC_0387         | Room [1F05] winder stair to W of FP                     | ↓    | 27.06.11 | R Tyler |
| <b>DSC_0388*</b> | Room [1F05]; boxed in beams to ceiling                  | ↑    | 27.06.11 | R Tyler |
| DSC_0389         | Room [1F05]; boxed in beams to ceiling                  | ↑    | 27.06.11 | R Tyler |
| DSC_0390         | NW Extension, west elevation                            | → E  | 28.06.11 | R Tyler |
| <b>DSC_0391*</b> | NW Extension, west elevation                            | → E  | 28.06.11 | R Tyler |

|                  |  |      |          |         |
|------------------|--|------|----------|---------|
| DSC_0392         | NW Extension, west elevation (SJ)                                | → E  | 28.06.11 | R Tyler |
| DSC_0393         | NW Extension and south range                                     | → S  | 28.06.11 | R Tyler |
| DSC_0394         | South range window of [1F04] above pent roof extension           | → S  | 28.06.11 | R Tyler |
| <b>DSC_0395*</b> | North range terraced into natural bedrock at NE corner           | → NW | 28.06.11 | R Tyler |
| DSC_0396         | North range, 1F window (with infill to right)                    | ↑    | 28.06.11 | R Tyler |
| DSC_0397         | South range, window of [1F01]                                    | ↑    | 28.06.11 | R Tyler |
| DSC_0398         | South range, window of [1F01]                                    | ↑    | 28.06.11 | R Tyler |
| DSC_0399         | North range Cyclopiian doorway                                   | → W  | 28.06.11 | R Tyler |
| DSC_0400         | North range Cyclopiian doorway                                   | → W  | 28.06.11 | R Tyler |
| DSC_0401         | North range, Room [GF04]; angled ceiling suggesting former stair | → SE | 28.06.11 | R Tyler |
| <b>DSC_0402*</b> | North range, Room [GF04]; angled ceiling suggesting former stair | → SE | 28.06.11 | R Tyler |
| DSC_0403         | North range, Room [GF04]; angled ceiling suggesting former stair | → SE | 28.06.11 | R Tyler |
| DSC_0404         | South range; longitudinal beam above inserted stair              | ↑    | 28.06.11 | R Tyler |
| DSC_0405         | Room [GF02] (south range) ceiling to north of stair              | ↑    | 28.06.11 | R Tyler |
| DSC_0406         | Room [GF02] (south range) ceiling to north of stair              | ↑    | 28.06.11 | R Tyler |
| <b>DSC_0407*</b> | Room [GF02] (south range) [GF02] ceiling structure               | ↑    | 28.06.11 | R Tyler |
| DSC_0408         | Room [GF02] (south range) [GF02] ceiling structure               | ↑    | 28.06.11 | R Tyler |
| <b>DSC_0409*</b> | Dugoed, long view from south-east                                | → NW | 28.06.11 | R Tyler |
| DSC_0410         | Dugoed, long view from south-east                                | → NW | 28.06.11 | R Tyler |
| DSC_0411         | Dugoed, long view from south-east                                | → NW | 28.06.11 | R Tyler |
| DSC_0412         | Dugoed, long view from south                                     | → N  | 28.06.11 | R Tyler |
| DSC_0413         | Dugoed, long view from south                                     | → N  | 28.06.11 | R Tyler |
| DSC_0414         | Dugoed, long view from south                                     | → N  | 28.06.11 | R Tyler |
| DSC_0415         | Dugoed, long view from south-east                                | → NW | 28.06.11 | R Tyler |
| DSC_0416         | Old aerial photo, hanging in [GF02]; undated (?1970s)            | ---  | 28.06.11 | R Tyler |
| DSC_0418         | South range; ridge stack to west gable                           | ↑    | 28.06.11 | R Tyler |





Based upon Explorer 1:25,000 map (Sheets OL17/18)  
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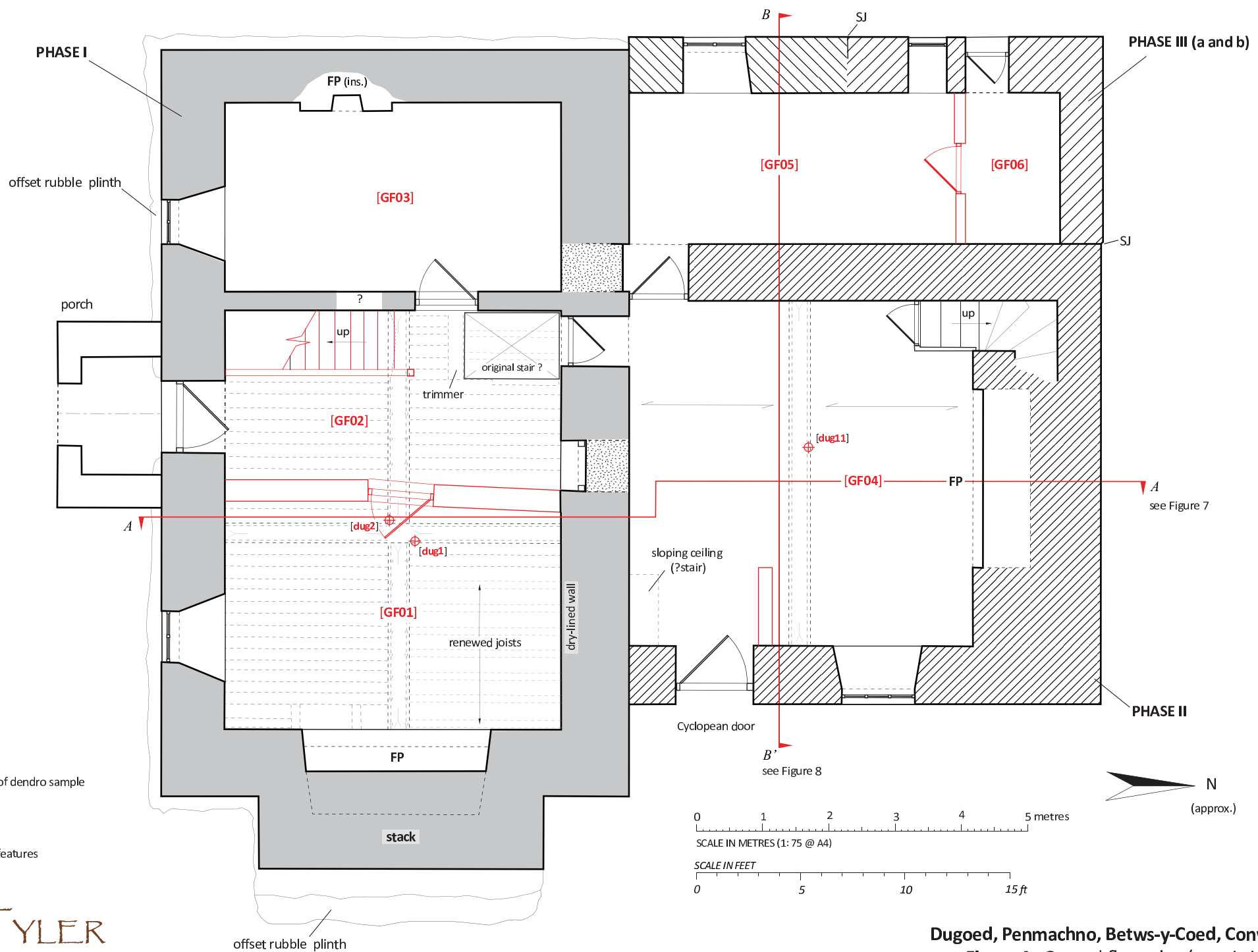







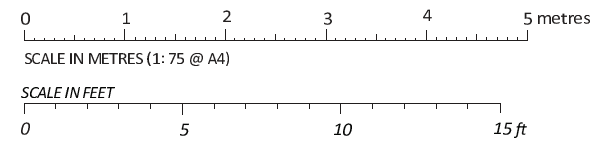
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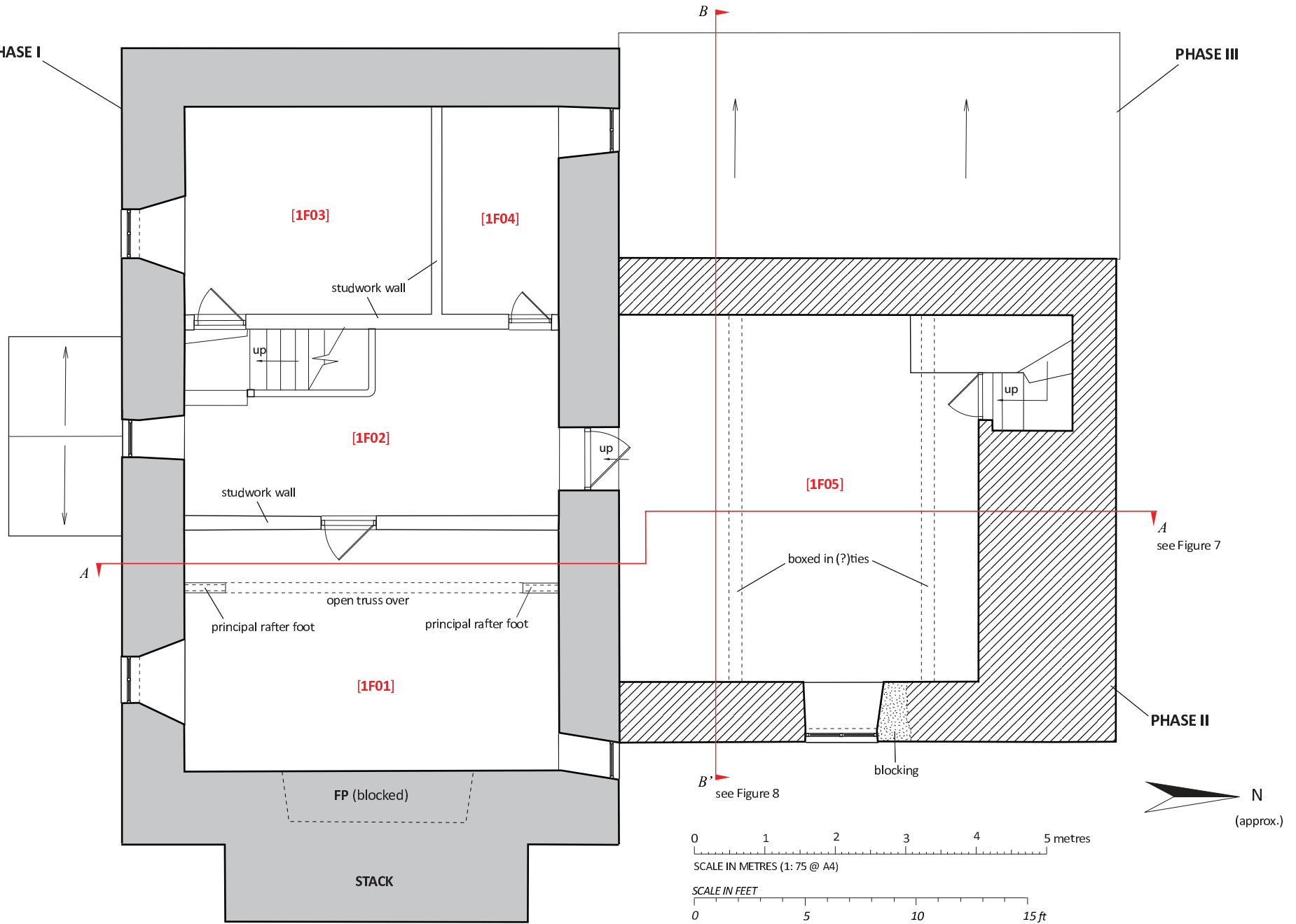


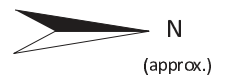
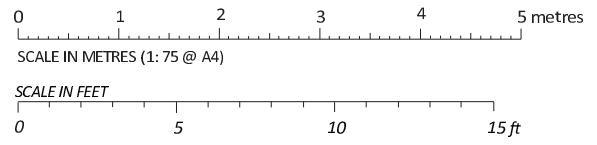
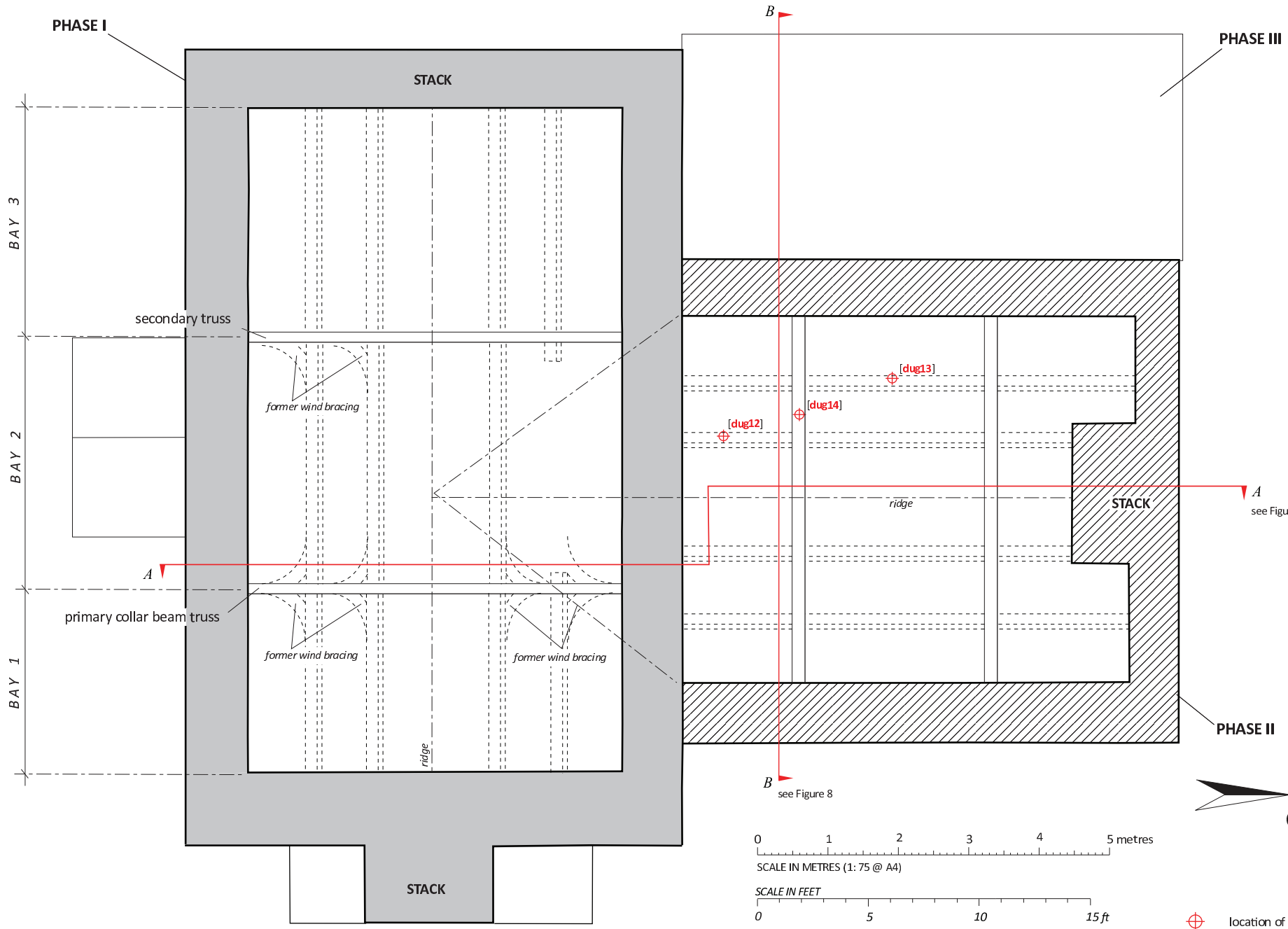
- KEY**
-  location of dendro sample
  -  blocking
  -  inserted features



PHASE I

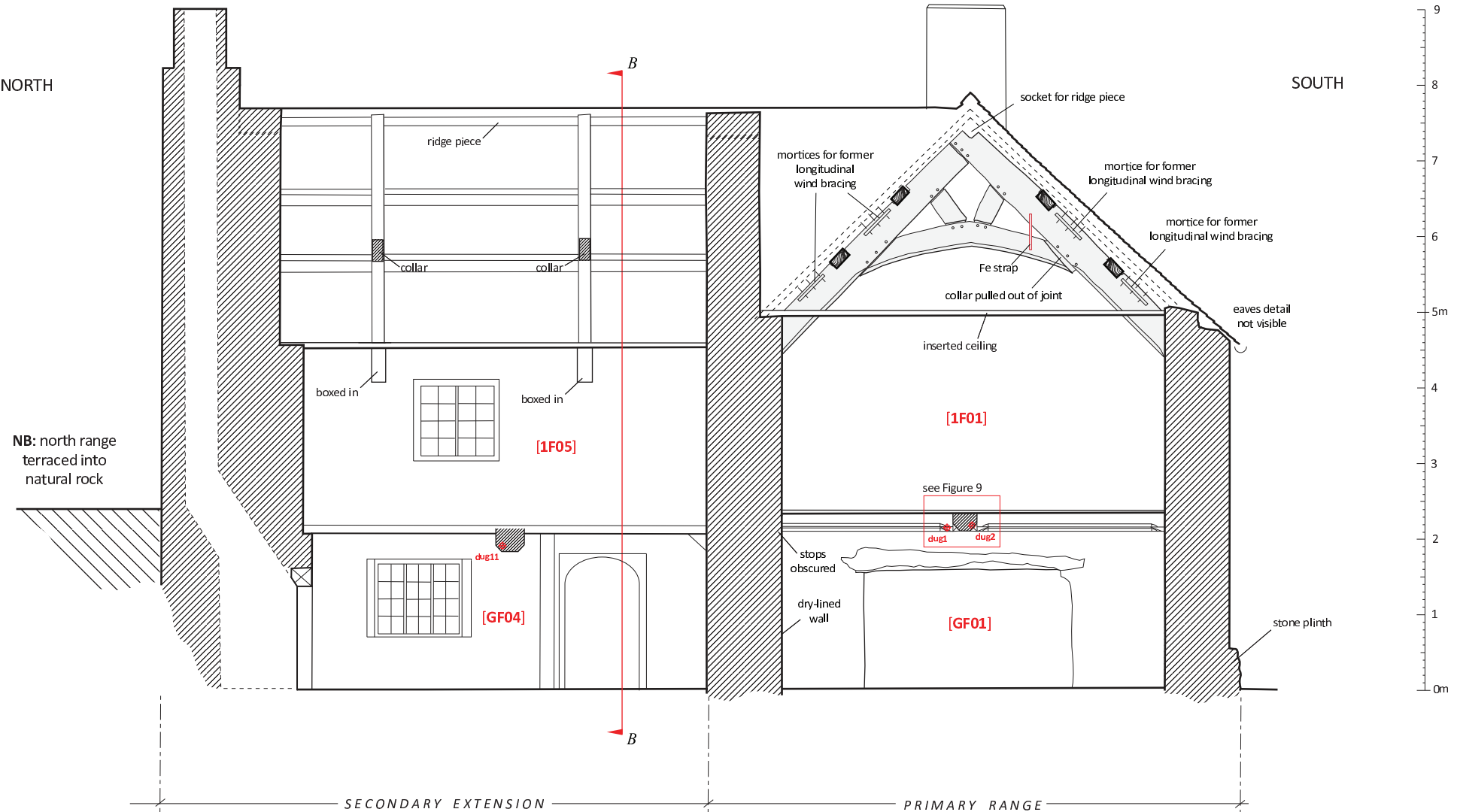
PHASE III





NORTH

SOUTH



NB: north range terraced into natural rock

SECONDARY EXTENSION

PRIMARY RANGE

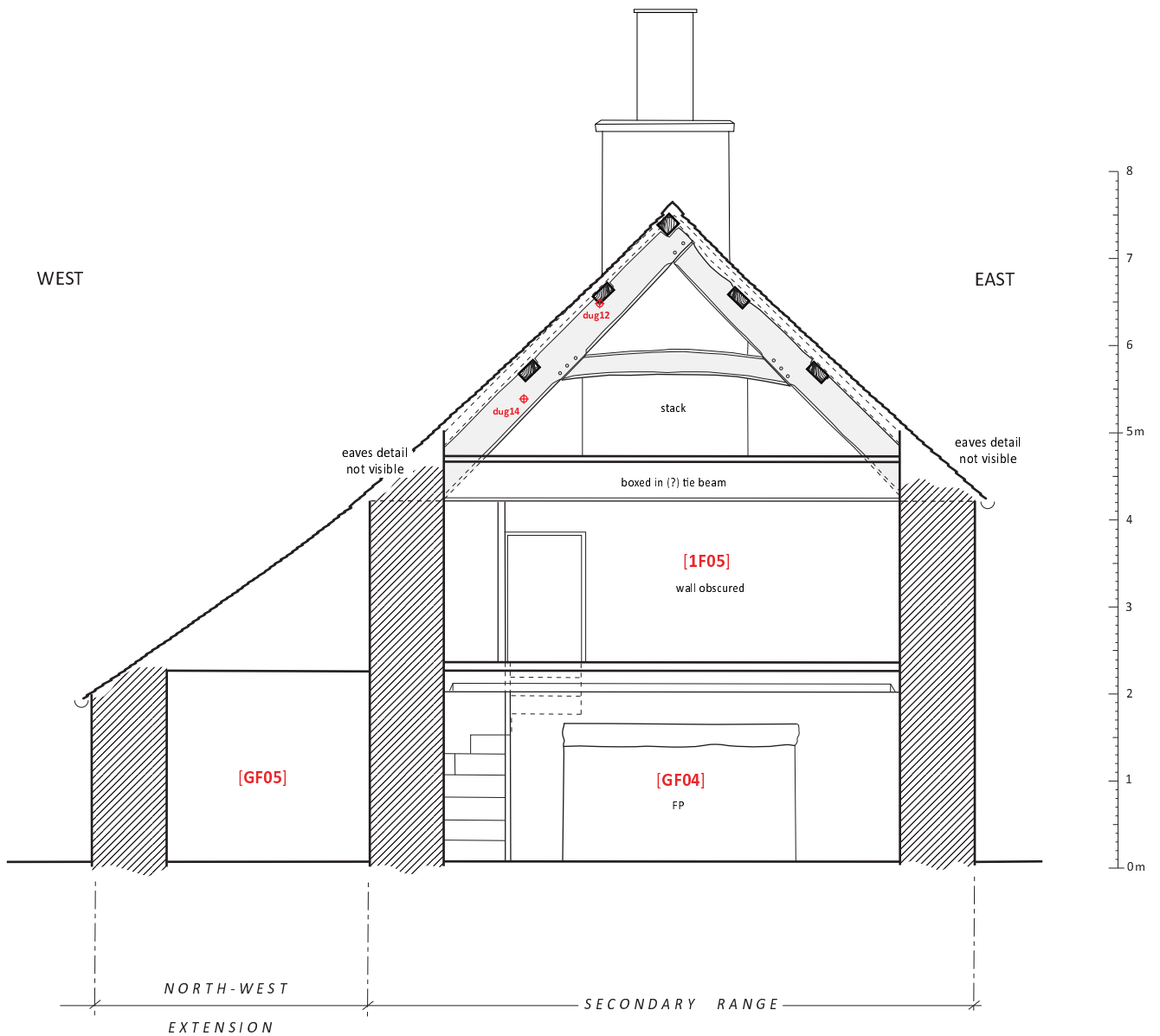
0 1 2 3 4 5 metres

SCALE IN METRES (1: 75 @ A4)

SCALE IN FEET

0 5 10 15 ft

⊕ location of dendro sample



⊕ location of dendro sample

0 1 2 3 4 5 metres

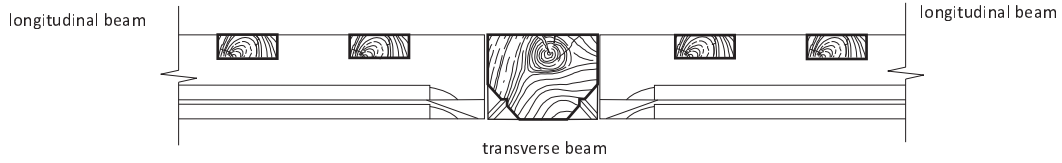
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SCALE IN FEET

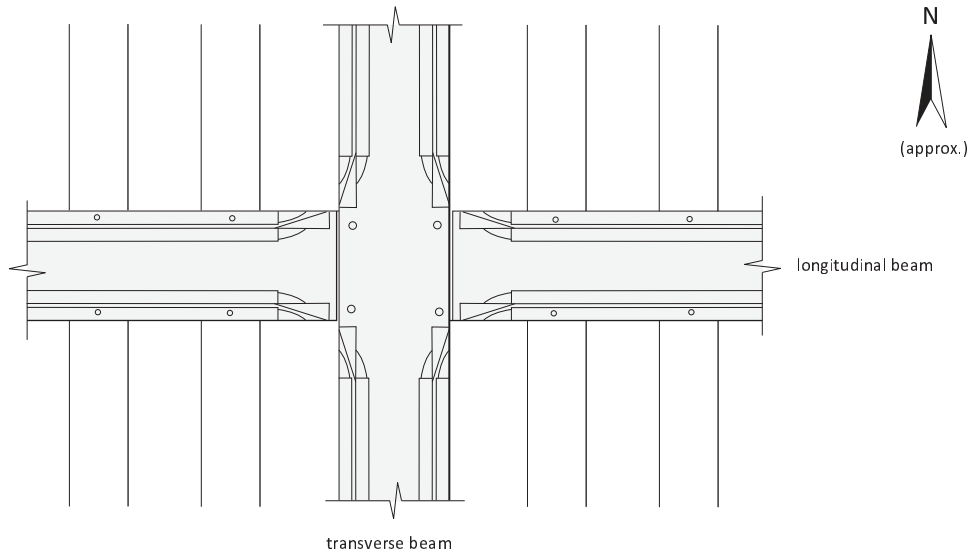
0 5 10 15 ft

WEST

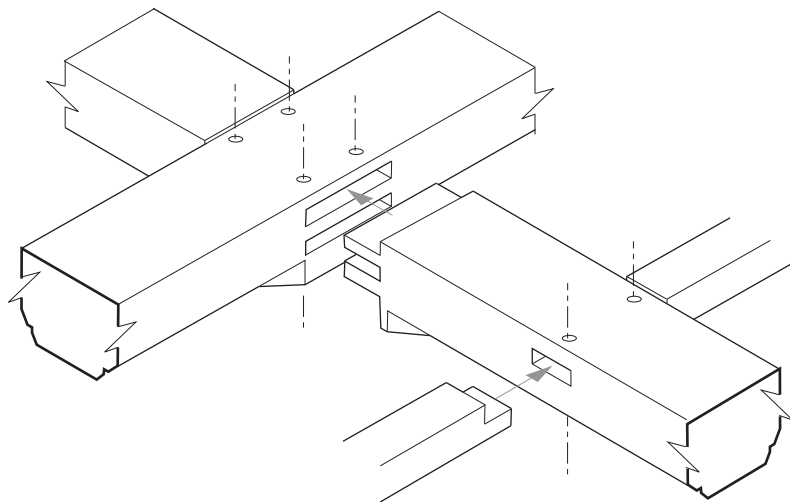
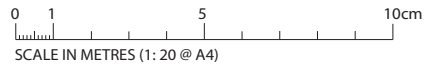
EAST



(a) Elevation



(b) Soffit plan



(c) Exploded view (NTS)





**Plate 1:** Dugoed in context, long view of farmstead looking north-west with Machno Valley beyond, note early outbuildings to west and south of farmhouse.



**Plate 2:** South range, principal (south) elevation.





Plate 3: South elevation, detail of porch doorhead.



Plate 4: Cement rendered west elevation with ridge stack.



Plate 5: Projecting shouldered stack to east.





Plate 6: Offset rough stone plinth at base of primary range, south elevation.



Plate 7: South range, east gable (left) and secondary north range; east elevation (right).





Plate 8: Cyclopean doorway to secondary range.



Plate 9: Detail of bedrock at north-east corner.



Plate 10: Undated, pent-roofed extension to north-west corner (note straight joint to right of boundary wall).





Plate 11: Room [GF01], principal fireplace to east wall.



Plate 12: Room [GF01], moulded ceiling beams (dated to 1515/17) and primary joists.





**Plate 13:**Detail of moulding at intersection of transverse (left) and longitudinal (right) floor beams [GF01].



**Plate 14** Continuation of primary floor within hallway [GF02].



**Plate 15:** Principal rafter foot vis. within [1F01].





**Plate 16:** Primary collar beam truss at Bay 1/2.



**Figure 17:** Collar beam truss; apex detail.



**Plate 18:** Collar beam truss, socket for former wind bracing (upper purlin, north).



**Plate 19:** Collar beam truss, socket for former wind bracing (lower purlin, south).





Plate 20: Renewed softwood truss at Bay 2/3.



Plate 21: North extension, Room [GF05] looking north-east.



Plate 22: North extension, Room [GF05] detail of transverse beam.



Plate 23: Winder stair from [GF04].



Plate 24: Winder stair from [1F05].





Plate 25: Sloping section of ceiling at south-east corner of [GF04] suggestive of former stair.



Plate 26: Boxed in transverse (?tie)beams within [1F05].



Plate 27: Northern extension; roof structure.