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PLAS YN TROFARTH

Llangernyw, Abergele, Conwy C.B.

[NPRN 27800]

Architectural Record, 2016



FINAL REPORT

Report Ref.: 2016_008(b)_v.2 FINAL

Issue Date: 26th September 2016

A report commissioned by
The Discovering Old Welsh Houses Group
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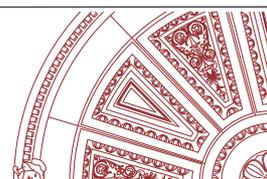
The Royal Commission on the Ancient and Historic Monuments of Wales



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PLAS YN TROFARTH

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[NRPN: 27800]

Architectural Record, 2016

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PLAS YN TROFARTH

Llangernyw, Abergele, Conwy C.B. (formerly Denbighshire)

[NMRW NRPN: 27800]

Architectural Record, 2016

Summary

Plas yn Trofarth is located c.2.3km north-west of Llangernyw village, Conwy County Borough (historically within Denbighshire) and is centred on NGR SH 8584 6907; it is a Grade II Listed building and is included on National Monuments Record of Wales (NMRW). The current report summarises the results of an architectural record of the house, made in September 2016 as part of the 'Discovering Old Welsh Houses' project, undertaken in collaboration with the Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW), and following on from a programme of dendrochronological sampling and analysis.

Plas yn Trofarth is a simple two-unit, stone-built house dating to the early years of the 16th century, occupying a basic rectangular plan and fully storeyed throughout, as it would appear to have been from its inception. Internally it is divided on a bi-partite plan at each level, with ground floor accommodation comprising a single-storey hall with integral cross-passage and paired service rooms to the outer bay, the latter divided off by a timber post-and-panel partition (partly re-set). This arrangement is duplicated at first floor level with a small, ceiled chamber to the outer bay and a larger chamber above the hall, the latter originally open to the roof. Both original first floor rooms have subsequently been sub-divided. The roof is of four bays defined by three arched-braced, collar-beam trusses supporting two tiers of side purlins with cusped wind-bracing. A short 'half-bay' to the north end of the roof is of particular significance and is suggestive of an alternative early chimney arrangement, perhaps of timber-framed form. The first floor structure is evidently secondary and was probably modified when the original chimney was replaced by a projecting, external stone stack (itself subsequently removed). The house has been subject to a particularly unsympathetic phase of modification in the mid-20th century, though retains much of interest internally.

Given the very early date indicated by dendrochronological analysis (1504-29, probably towards the earlier part of that range), Plas yn Trofarth clearly represents a building of great intrinsic interest and historical importance, marking as it does a significant stage in the transition from open-hall to the fully-storeyed house. The possible inclusion of a timber-framed chimney within a house of stone construction would be unusual though, given its early date, it may be that the original builders were tentatively drawing upon a number of different traditions in the pursuit of a new and innovative form of house.

1 INTRODUCTION

1.1 Background to the Project

- 1.1.1 The current report outlines the results of a programme of historic building recording undertaken in September 2016 in respect of Plas yn Trofarth, Llangernyw, Abergele, Conwy C.B. (historically lying within Denbighshire). The house was recorded as part of the 'Discovering Old Welsh Buildings' project,¹ undertaken

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

in collaboration with the Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW) and follows on from a programme of tree-ring dating of timbers from the house, undertaken in June 2016 by the Oxford Dendrochronological Laboratory (Bridge, 2016).

1.2 Site Location

1.2.1 Plas yn Trofarth is located to the east side of a minor, unfenced road opening off the north side of the Pentre-Isaf to Gell road, c.2.3km north-west of Llangernyw village (Figure 1); it is centred on NGR SH 8584 6907 and lies at an elevation of c.190m AOD. The house and associated agricultural ranges are sited on the southern bank of the Afon Gell, a tributary of the Afon Elwy which it joins at Pentre-Isaf 1.6km to the east; a small feeder brook runs to the south-east side of Plas yn Trofarth within a shallow, tree-lined valley (Plate 1), meeting the Gell c.200m north-east of the house.

1.3 Designations

1.3.1 Plas yn Trofarth is a Grade II Listed Building (CADW Listed Building ID: **21482**) and, as such, is recognised as being of national significance; the official listing describes the building as follows:

Late C16 two unit, end chimney, storeyed farmhouse, possibly originally timber framed, with contemporary roof and first floor structures, and plank-and-muntin partitions. Absence of smoke blackening on roof structure suggests an open-roofed chamber and enclosed fireplaces throughout. External chimney stack attached to NE gable end demolished and replaced with gable chimney before 1953. Windows enlarged and replaced, walls rendered and painted after 1953. SW gable stack also rebuilt after 1953. C16 stone arched doorway with nailed and boarded door and C19 porch removed before 1974.

Exterior

Two storey vernacular farmhouse, rectangular on plan. Built of local stone rubble on offset rubble plinth and painted roughcast render on elevations; Welsh slate gabled roof with clayware ridge and C20 gable stacks. Symmetrical front elevation, facing SE, has 3 bays of C20 steel casement windows with a central C20 lean-to porch with side entry.

Interior

Fine C16 3-bay arch braced collar roof with raking struts above collars, butt purlins and cusped wind braces. Later attic floor with single full-length axial beam. C16 first floor structure framed in 3 bays with two transverse beams, one on N side has monogram IHS carved in low relief in a sunk panel. C16 plank and muntin partitions on ground and first floors, mostly covered with later plaster finishes.

Reason for Listing

Listed notwithstanding later alterations as a late C16 farmhouse that remarkably retains its original roof structure and internal features of architectural and historic importance, particularly its plank and muntin partitions.

[Plas yn Trofarth; List entry²](#)

1.3.2 Plas yn Trofarth is included on the RCAHMW on-line database Coflein, where it is listed as NPRN **27880** with the following information.³

1. 18th century (sic.) stone, 2 storey, slated, typical vernacular.
2. A stone A-type house, perhaps originally timber-framed. The roof comprises arch-braced, wind-braced principals with butt-purlins. The lack of smoke-blackening suggests that the house may have had an open-roofed chamber and enclosed fireplaces throughout. All openings are modern.

² <http://www.britishlistedbuildings.co.uk/wa-21482-plas-yn-trofarth-llangernyw#.V6wx-DWukgY>

³ Since updated (Suggett, September 2016) to reflect the results of the current, detailed inspection.

1.4 Scope of the Report

- 1.4.1 The Historic Building Record was undertaken in accordance with a 'Design Brief for Historic Building Recording' dated July 6th 2016, prepared by the Project Director; a copy of the brief is included below as **Appendix A**.
- 1.4.2 This report outlines the results of the building survey, and has been prepared in accordance with Historic England guidelines as published in *Understanding Historic Buildings: A Guide to Good Recording Practice* (HE, 2016), the Chartered Institute for Archaeologists' *Standard and Guidance for the Archaeological Recording of Standing Buildings or Structures* (CIfA, 2014) and the Association of Local Government Archaeological Officers' *Analysis and Recording for the Conservation of Works to Historic Buildings* (ALGAO, 1997).
- 1.4.3 Fieldwork was undertaken over a period of two days on the 8th- 9th September 2016; this report has thus been prepared based upon information current and available as of September 2016.

1.5 Previous Work

- 1.5.1 The Coflein on-line database records a descriptive account of Plas yn Trofarth comprising notes, sketch-plan and truss detail, compiled by AJ Parkinson in 1974.⁴ A photographic survey of 1953,⁵ comprising five black and white negatives transferred from the National Buildings Record, evidences the appearance of the building prior to significant, late-20th-century modifications to window openings and chimneys (see Figure 3).

2 AIMS AND OBJECTIVES

- 2.1 The general objective of the architectural record, as outlined in the 'design brief' (**Appendix A**), was to generate a drawn, photographic and written record of Plas yn Trofarth to compliment the dendrochronological study, previously completed by the Oxford Dendrochronology Laboratory (Bridge, 2016).
- 2.2 Specific aims of the recording action are listed at section §.4 of the 'design brief'.

3 METHODOLOGY

3.1 Documentary Research

- 3.1.1 Documentary research into the historical background, origins and development of Plas yn Trofarth has been separately undertaken by volunteers of the Discovering Old Welsh Houses Group. Thus, no programme of documentary research into the building has been commissioned or undertaken as part of the current Historic Building Record.

3.2 Historic Building Record

- 3.2.1 The building record comprised an examination of all safely accessible areas of the building and the preparation of drawn, photographic and written records of the same, all carried out to a level commensurate with a 'Level 2/3' survey as defined by Historic England in '*Understanding Historic Buildings: A Guide to Good Recording Practice*' (HE, 2016).

Drawn Record

- 3.2.3 The drawn record comprised the preparation measured plans at principal floor levels, to a sufficient level of

⁴ Coflein Catalogue No.: C402322.

⁵ Coflein Catalogue No.: C402324.

detail to illustrate the dimensions, features (including phase breaks, blocked features, former doorways etc.) and construction of the building, together with phasing and outline development so far as was practicable from a non-intrusive survey. Representative cross-sections and timber details were recorded as necessary. Plans were prepared on site in pencil on archivally stable drafting-film, at a scale of 1:50 with measurements being obtained by a combination of taped measurement and hand-held laser. Resultant site drawings have served as the basis for the illustrations included within the current document; a register of project drawings is appended as **Appendix B**.

Photographic Record

- 3.2.4 To complement the drawn survey, a photographic record was made comprising high resolution digital photography using a Nikon D3000 DSLR camera. The survey extended to include general and detailed shots, contextual views of the building and accessible external elevations, general and detail views of principal interior rooms and circulation spaces, together with visible structural and decorative details (both external and internal). Where practically feasible, photographs included graded photographic scales. A register of project photographs is appended as **Appendix C**; selected site record photographs are reproduced as plates within the current document.

Written Record

- 3.2.5 A written record was maintained in the form both of annotations to site drawings and as free text to accompany the drawn and photographic records, which together form the basis for the following building description. This extended to cover a summary of the building's form and type, its function (both historically and at present), materials of construction, date and sequence of development so far as practicable from a non-intrusive survey.

4 BUILDING DESCRIPTION

4.1 Overview

- 4.1.1 Plas yn Trofarth is a simple two-unit, stone-built house dating to the early years of the 16th century. It occupies a basic rectangular plan measuring 31ft x 21½ft internally, with 3ft thick exterior walls, and is aligned approximately north-east to south-west, though this will be modified for the purposes of the current description such that the longitudinal axis of the building will be referred to as running north-south with the original entrance façade facing east.⁶ The house is fully storeyed throughout (as it would appear to have been from its inception) beneath a pitched, slate-clad roof, gabled to north and south with ridge stacks rising to both gable ends. Externally, the house presents a highly unprepossessing aspect (Plates 2/6), the result of a markedly unsympathetic phase of modification undertaken in the mid-20th century, when window openings were enlarged throughout for the insertion of steel-framed casements and the exterior walls rough-cast rendered and painted.⁷ Chimneys to north and south have been remodelled and single-storey annexes appended to the centre of both the eastern and western elevations (porch and utility room respectively).

4.2 Exterior

- 4.2.1 The principal **east elevation** (Plate 2) is symmetrically composed, of three window-bays rising through two full storeys, rough-cast rendered, above an offset plinth (stone boulders, cement rendered; Plate 5) to a plain eaves beneath a pitched, slate-clad roof, gabled to east and west. Flush ridge stacks rise above northern and

⁶ Both 'true' (grid) north and 'site north' are marked on the building plans within this report.

⁷ It is understood that significant sections of rubble stone walling were removed during works related to the insertion of the present windows, being subsequently made good in shuttered concrete before rendering with a rough-cast coat.

southern gable ends; both have evidently been remodelled.⁸ Fenestration has been renewed throughout (post-1953), comprising two and three-light steel casements with flat heads and tiled cills (Plate 3).⁹ A small, pent-roofed porch with side-entry has been appended to the centre of the elevation (Plate 4), obscuring the primary entrance door (Plate 9); the latter opening again post-dates 1953 with historical photographs (Figure 3c) indicating a semi open-sided timber porch and an original stone-arched opening housing a heavy, planked and studded door hung on 'fleur-de-lys' terminal strap hinges.

4.2.2 The **west elevation** (Plate 6) reflects the arrangements of the eastern façade, of two storeys above an offset plinth, and of three window bays housing mid-20th-century steel casements.¹⁰ As to the east, the elevation is fully rough-cast rendered and painted. The central section of the ground floor is obscured by a flat-roofed utility room extension with side entrance, introduced after 1953. A ground floor doorway within the utility room affords access to the main house; the present door was introduced after 1953 (see Figure 3b), though probably within an original opening (blocked at the time of the 1953 photo survey).

4.2.3 The **northern** and **southern gable ends** (Plates 7 and 8 respectively) are blind, rising above an offset plinth to plain verges, with flush ridge stacks in each case.

4.3 Interior

4.3.1 At **ground floor** level (Figure 4), the house is accessed via opposing doors, offset slightly towards the southern end of the plan and originally opening onto a transverse 'cross-passage'. The doorway to the east (Plate 9),¹¹ with wide, splayed reveals, represents an original location though the opening has been modified and an early stone arch removed/covered over (Figure 3c), while an early, studded plank door has been replaced, both in the later 1950s (see §.4.2.1). The western door (Plate 10), with perpendicular jambs and flat head, is a contemporary, late-1950s insertion, though its position reasonably reflects an original doorway which would have aligned directly with the eastern opening, but had been blocked by 1953 (Figure 3b). The doors would each originally have opened onto a transverse 'cross-passage' at the south side of the hall (Plate 11); the south side of the passage was defined by a full-width post-and-panel partition, the eastern section of which survives *in-situ* within [G1a] (Plate 12).¹² The partition comprises regularly-spaced posts (double-pegged top and bottom) measuring 10in. wide x 4in. deep at c.21 in. centres, with ½in. plain chamfers (Plate 13), simply stopped to top and bottom. A doorway at the western end of the surviving partition is modern, though the lack of peg-holes to the head beam over indicates that it occupies an original doorway location. This doorway opens onto room [G4] which occupies the south-east angle of the house and reflects a primary room division, and where the post-and-panel wall is again exposed (Plate 14). Room [G4] is lit by a wide, three-light steel casement window to the east wall and is heated by a small (modern) fireplace offset to the east of the south wall. Of particular interest, the ceiling over [G4] is supported on a series of five broad, stop-chamfered joists, 13/14in. wide at 28in. centres, which are morticed into the head-beam of the axial wall to the west and secured by triple pegs (Plate 14). The head-beam of the axial wall includes three widely-spaced, single peg-holes at 4½ft. centres, indicative of a former posts for a large-panel partition, reasonably furnished with mid-rails, and originally infilled with wattle and daub panels. To the western side of the house, room [G4] is mirrored by kitchen [G3] (Plate 16), though the post-and-panel passage partition has here been removed and re-set somewhat to the north (see below), such that [G3] extends northwards across the width of the original

⁸ Historical photographs of 1953 (Figure 3a) indicate a narrower (?single-flue) southern stack with stone water-tabling. Oral tradition (recorded in the list entry; §.1.3.1) holds that the northern chimney has also been rebuilt during the course of the 20th century, having formerly been arranged on a projecting, external stack plan, though this had evidently occurred before the time of the 1953 photo record and no physical or documentary evidence survives to confirm the former arrangement.

⁹ Historical photographs of 1953 (Figure 3a) indicate former 3/6 vertical sashes within reduced openings; the central, first-floor window was formerly offset towards the south end of the range, reflecting the asymmetrical nature of the interior ground plan.

¹⁰ Historical photographs (Figure 3b) again illustrate the fenestration pattern prior to the 1953 modifications, here comprising a combination of vertical sashes and small, opening casements.

¹¹ Originally covered externally by a pitched-roofed, semi-open porch, removed in 1950s.

¹² A further section of post-and-panel partition, exposed within [G2] (see below) can reasonably be interpreted as the re-set eastern continuation of the same wall.

cross-passage and is thus accessed directly via the exterior doorway in the west elevation. Little of historical significance is exposed within [G3], which has been thoroughly remodelled for contemporary use, though it is possible that the underdrawn ceiling may obscure further broad floor-joists, as per room [G4].

- 4.3.2 The northern part of the ground floor is occupied by a single large room [G2] (Plate 17), extending to the full width of the house, heated by a small, modern fireplace in the north wall and lit by wide, opposing three-light casements to the lateral walls. At the south-east corner of [G2], an enclosed stair [G1b] (formerly open to the body of the room) rises to first floor level. The room is spanned by a massive, stop-chamfered spine-beam (1ft wide x 18in. deep and 21ft long; Plate 18), which extends from the north gable as far as the transverse partition defining the outer bay, where it is lodged over the associated head-beam (Plate 19). A 2-inch differential in soffit-height¹³ between this beam and the head beam of the axial partition within the 'outer bay' to the south indicates that, although of similar size and detailing, they are clearly two discrete timbers. Further, the first floor structure over [G1/2] is supported on regularly-spaced, stop-chamfered common joists, 7in. wide at 16in. centres (Plate 20), of a form markedly different to the broad joists of [G4]. Thus it would appear that the floor structure over [G1/2] is of a separate phase to that over the outer bay and arguably represents a secondary insertion, though reasonably replacing an earlier precursor; this aspect of the design will be discussed at more length at section §.6 below. To the west, the south side of room [G2] is again defined by a length of post-and-panel wall (Plate 21), which includes a Christogram 'IHS' (with a small 'bar' over)¹⁴ in relief within a shallowly sunk panel (Plate 23) on the head-beam above an original door opening (Plate 22). Stylistically similar to the wall flanking the south side of [G1a], it is argued here that this section of post-and-panel partition has in fact been moved northwards by c.5½ft. when room [G3] was enlarged, and that it originally formed part of the full-width cross-passage partition, which would thus have been furnished with two adjacent doors serving the outer bay rooms (see putative reconstruction at Figure 9c).
- 4.3.3 **First floor** level (Figure 5) is accessed via a stair [G1b], inserted within the area of the former hall, rising as a straight-flight aligned west to east to a half-landing before splitting to rise as short independent flights to north and south (Plate 24), serving bedroom [F6] and landing [F1] respectively. Landing [F1] is flanked to the south by a post-and-panel partition (Plate 25), the wall continuing within bathroom [F4] to the west (Plate 26),¹⁵ thus forming a full-width, transverse partition aligned immediately above the wall defining the south side of the original hall at ground floor level. The first floor wall includes a single primary door to the outer bay (Plate 28) with a shallow, pointed head cut into the depth of the head-beam (as opposed to being furnished with an independent lintel as at ground floor level; Plate 22). The outer bay is again formed of two rooms, [F2/3], though unlike at ground floor level, there is no clear evidence for an axial partition, and it is assumed that the rooms formerly comprised a single chamber. The ceilings over the outer bay rooms have been raised, though large mortices within the primary spine beam, exposed within [F3] (Plates 29/30), indicate original broad joists (14 x 3in. at 26in centres) as per [G4] at ground floor level. The northern part of the range has been subdivided by a series of inserted partitions, though it is assumed to have originally formed a single 'great chamber'. As at ground floor level, a massive axial beam, here with a deep, c.2½in. plain-chamfer, stopped with stepped run-outs to north and south, spans from the north gable end to the post-and-panel partition defining the outer bay, the beam again being simply lodged over the associated head-beam (Plate 31). Where exposed (within bathroom [F4]), first floor ceiling joists are 6in. wide with a ½ in. plain chamfer and are set at 16in. centres. The recorded evidence clearly indicates that, while the short 'outer' bay to the south was ceiled from its inception, the ceiling over the northern part of the house represents a secondary insertion, and thus it would appear that the original 'great chamber' would have been open to the roof above.
- 4.3.4 The **attic level** (Figure 6) is reached via an enclosed, straight-flight stair rising from south to north and opening off the north side of landing [F1] (Plate 32). The **roof** is of four uneven bays (see Figures 6/7), here numbered I to IV from south to north and defined by three arch-braced, collar-beam trusses (Plate 33), here numbered **T1-T3**, a system that would appear to reflect a system of original numbering evidenced by lightly scratched Roman

¹³ Measured immediately to either side of the transverse post-and-panel partition.

¹⁴ Conventionally, the IHS Christogram would often include a cross above the central letter 'H', which may be the intention of the 'bar' here.

¹⁵ The head-beam of the P&P partition in [F4] displays clear evidence for having been trestle sawn (Plate 27).

numerals evident on each of the trusses (see Plate 34).¹⁶ Trusses are of uniform design, with heavy principals rising from the wall head to double-pegged apex (14in. deep to base tapering to c.12in.) and cranked collars (up to 18in. deep on centre-line of range) with raking v-struts over (Plate 35). Arch-braces (Plate 36) rise in two parts (jointed just above the level of the wall head; Plate 37) from below the level of the wall-head to form a broad, curved profile (Figure 8), multi-pegged to both collar and principal. The arch-brace/collar joint has failed in a number of places and has been repaired with iron straps and timber wedges (Plate 38). Distinctive evidence for trestle sawing was noted on the western principal of truss **T1** (Plate 39). Common rafters, of which many originals survive, rising from eaves to apex in a single length, are supported on two tiers of threaded side purlins (5in. x 10in.) and a square section ridge piece housed within a notched apex to trusses **T1-T3**. Purlins are cut mainly in single bay sections, jointed at trusses **T1/2** with bridled scarfs (Plate 40) with the lower face of the purlin being shallowly notched to accommodate the principal, while purlins at Bays III/IV to the north appear to be formed of single lengths (of c.13½ft). Both tiers of purlins are braced with cusped wind-braces (Plate 41) at Bays I-III (though not to Bay IV; see below); seven of an original twenty braces survive *in-situ*, while one brace at Bay II (E) has been renewed. All trusses would appear to have been ‘open’ in their original form, though truss **T1** displays secondary stave holes within the soffit of its arch-braces (Plate 42) and upper principal, and pegging to the north face of the collar for shallowly lapped uprights (Plate 43; Figure 8), together suggestive of Bay I having been closed off at some stage. It is of note that truss **T1** does not align with the transverse ‘outer-bay’ partitions at ground and first floor levels, being offset by c.2ft. to the south

4.3.5 The arrangements of Bay IV to the north end of the roof are of particular interest. Firstly, the bay is significantly shorter, measuring only just over 5ft wide from the centre-line of Truss **T3** to the masonry of the northern gable end,¹⁷ somewhat in the manner of a ‘smoke-bay’ though only limited and very localised soot blackening of the adjacent roof timbers was noted, more characteristic of seepage from an enclosed chimney. Secondly, Bay IV lacks the wind-bracing of Bays I-III, which would appear to negate the range having been truncated at this end and thus the short bay reasonably represents an original feature. Thirdly, a number of the common rafters here were noted to be comprised of two lengths, with that section above the upper purlin being discrete while rafters were unpegged at the ridge-piece, in contrast to Bays I-III (compare Plates 43/44). Taken together, the recorded evidence would seem to indicate some form of original, enclosed internal chimney or ‘smoke hood’, possibly of timber-framed construction, the subsequent removal of which would account for remodelling of the first floor structure, noted above (§.4.3.2); this will be discussed at more length at section §.6 below.

5 TREE-RING DATING

5.1 A programme of tree-ring dating was undertaken by the Oxford Dendrochronology Laboratory prior to the commencement of the current study, and has been reported separately (Bridge, 2016). A summary of the details of the core samples is included below as Table 1 while sample locations are indicated on Figures 4 and 6-8 below.

Sample number	Timber and position	Date of series	H/S boundary date	Sapwood complement	No of rings	Felling date range
* pynt01	Bay 1, common rafter	1437-1487	1487	H/S	51	1498-1528
pynt02	Bay 1, common rafter	1391-1489	1489	H/S	99	1500-1530
* pynt03	Truss 1, collar	1428-1490	1490	H/S	63	1501-1531
pynt04	Truss 2, collar	1386-1488	1488	H/S	103	(1500-1530)
pynt05a	Truss 2, rear arch-brace	1395-1461	---	---	67	
pynt05b	<i>ditto</i>	1428-1459	---	---	32	
* pynt05	Mean of 05a and 05b	1395-1461	---	---	67	After 1472
pynt06a	Truss 3, front arch-brace	1409-1487	1487	H/S	79	
pynt06b	<i>ditto</i>	1393-1467	---	---	75	

¹⁶ Numbering of timbers is by no means comprehensive or systematic, but numbers were identified in at least one location on each truss (variously on collar, principal and arch-brace).

¹⁷ Bay I = 8½ft; Bay II = 9ft 10in.; Bay III = 8½ft.

* pynt06	Mean of 06a and 06b	1393-1487	1487	H/S	95	1498-1528
* pynt07e	Bay 1, joist (in living room)	1407-1456	c.1486	---	50 (+30NM to H/S)	After 1495
* pynt08	Bay 1, joist (in living room)	1422-1489	1489	+15NMC	68	1504-1530
* pynt42m	Mean of 02 and 04 (same tree)	1386-1489	1489	H/S	104	1500-1530
* = included in site mean TROFARTH		1386-1490			105	

TABLE 1: Summary of dendrochronology samples (based on Bridge, 2016, table 1).

Key: H/S bdry = heartwood/sapwood boundary - last heartwood ring date; C = complete sapwood, winter felled; ½C = complete sapwood, felled the following summer. NM – not measured

- 5.2 The mean heartwood / sapwood date for the dated timbers is 1488, giving a likely felling range of 1499-1529, modified with reference to sample 08 to 1504-29, with a probability of falling towards the earlier part of the range (Bridge 2016, 4).

6 DISCUSSION

- 6.1 Plas yn Trofarth was originally constructed on a simple two-unit plan, reasonably fully floored from its inception though having been subject to significant modification. At ground floor level, a 'cross-passage' with opposing doors would have divided a single-storey hall to the north from an outer bay to the south; it is unclear whether the north side of the cross-passage was originally enclosed, either by a screen or shielded by short speres, or whether it was open to the body of the hall. The southern side of the cross-passage was defined by a full width post-and-panel partition, while the outer bay was formed of two rooms of equal size (parlour/service), divided by a 'large-panel' partition with wattle and daub infill panels, evidenced by surviving peg-holes to the head beam. The bi-partite plan would appear to have been repeated at first floor level, where a second, full-width post-and-panel wall survives directly above the ground floor partition, originally defining a large 'great chamber' to the north, open to the roof, and a ceiled, single-room outer bay to the south. The primary pattern of fenestration together with the original means of vertical access within the early building have been lost to later phases of modification.
- 6.2 The primary arrangements and subsequent development of the hall are less straight-forward to define and the interpretation presented here remains largely conjectural. The form of the four-bay, arch-braced roof clearly suggests an original, fully floored structure with the roof open to a large, first-floor chamber, there being no differentiation in truss form as one might expect in an open-hall, and the spine-beam supporting the first floor ceiling evidently being of two distinct sections, that part over the northern bays being secondary. An original two-storey arrangement is also clearly indicated by the original, superimposed post-and-panel partitions at the lower end of the hall, with integral doorways at each level. The spine-beam supporting the first floor structure over the hall, however, would also appear to be a secondary insertion (evidenced by the differential in soffit height to either side of the ground-floor post-and-panel partition, and by the variant form of common floor joists), suggesting some phase of historical modification. In this respect, the short Bay IV at roof level, which lacks longitudinal wind-bracing and includes a number of two-part common rafters, is significant and would seem to imply some form of internal, enclosed chimney/smoke hood, perhaps of timber-framed construction, pre-dating the introduction of an external, projecting stack to the north gable, the latter subsequently demolished (see fn.8). Thus it would seem reasonable to argue that the first-floor structure was altered when the arrangements of the northern stack were modified, and that the original upper floor was supported either on a more traditional system of transverse beams, or on a shorter, axial spine-beam framed in to the structure of the putative timber stack. The lack of any mortices for longitudinal joists within the post-and-panel partition suggests the latter arrangement is more probable. The inclusion of a timber-framed chimney (a feature more characteristic of houses of the timber-framed zone in the border counties of eastern Denbighshire, Montgomery and Radnorshire) within a house of stone construction would be unusual,¹⁸ though given the very early date indicated here by dendrochronological analysis, it may be that the original builders

¹⁸ Although the possibility of an original timber-framed range, as previously postulated in the list description, cannot be categorically discounted (access to the wall-plate of the house would have the potential to resolve this issue), all of the recorded evidence here would appear to suggest that Plas yn Trofarth was stone-built from its inception.

were tentatively drawing upon a number of different traditions in the pursuit of a new and innovative form of house.

- 6.3 Though the interpretation presented here is necessarily conjectural, perhaps inevitable given the ‘non-intrusive’ nature of the present study, it is nonetheless clear that Plas yn Trofarth represents a building of great intrinsic interest and historical importance, marking a significant stage in the transition from open-hall to fully-storeyed house. This significance is enhanced by the early date indicated by dendrochronological analysis, and by the results of archival research which, it is understood, have traced ownership of the house back to its earliest times.

7 ACKNOWLEDGEMENTS

- 7.1 The project was commissioned by Mrs Margaret Dunn, Project Director of the Discovering Old Welsh Houses Group, to whom thanks are given for help and cooperation throughout. Thanks also to Mrs Jane Roberts, owner of Plas yn Trofarth for allowing and arranging access to the property for the purposes of survey. Thanks also to Mr Richard Suggett (RCAHMW) and Dr. Martin Cherry (DOWHG) for valuable on-site discussions on interpretation.
- 7.2 Site recording and assessment were undertaken by Mr Ric Tyler MCI(A) who also wrote, collated and illustrated the current report.

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a) Published Sources

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b) Unpublished Sources

Bridge M, 2016. 'The Dendrochronological Dating of Timbers from Plas yn Trofarth, Llangernyw, Abergele, Conwy (Denbighshire)'. Oxford Dendrochronology Laboratory report No. **2016/20**.

c) Online Sources

- www.britishlistedbuildings.co.uk.
- <http://www.archaeologists.net>
- www.coflein.gov.uk
- <https://historicengland.org.uk>



Plas yn Trofarth
farmhouse



(a) 'View of House from NE'; Coflein Catalogue No. C448643 (compare Plate 1).

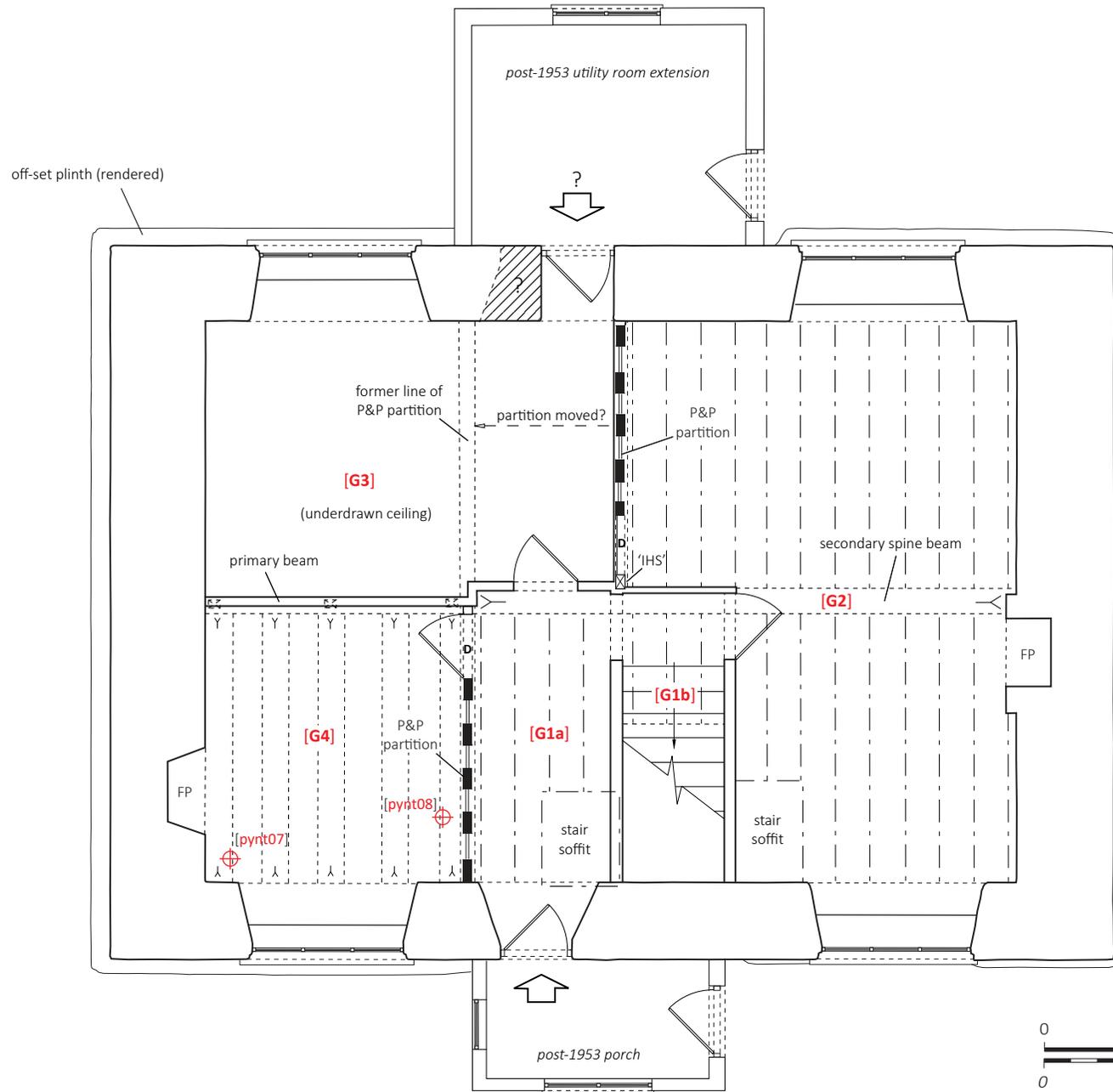
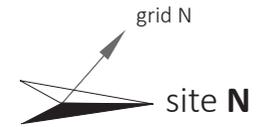


(b) 'View of House from NE'; Coflein Catalogue No. C448644 (compare Plate 6).



(c) 'Detail of south door'; Coflein Catalogue No. C448645.

NB: for illustrative purposes only, do not scale from this drawing



⊕ location of dendro sample

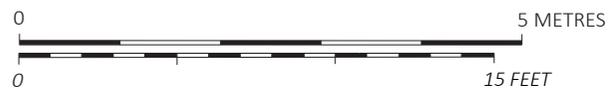
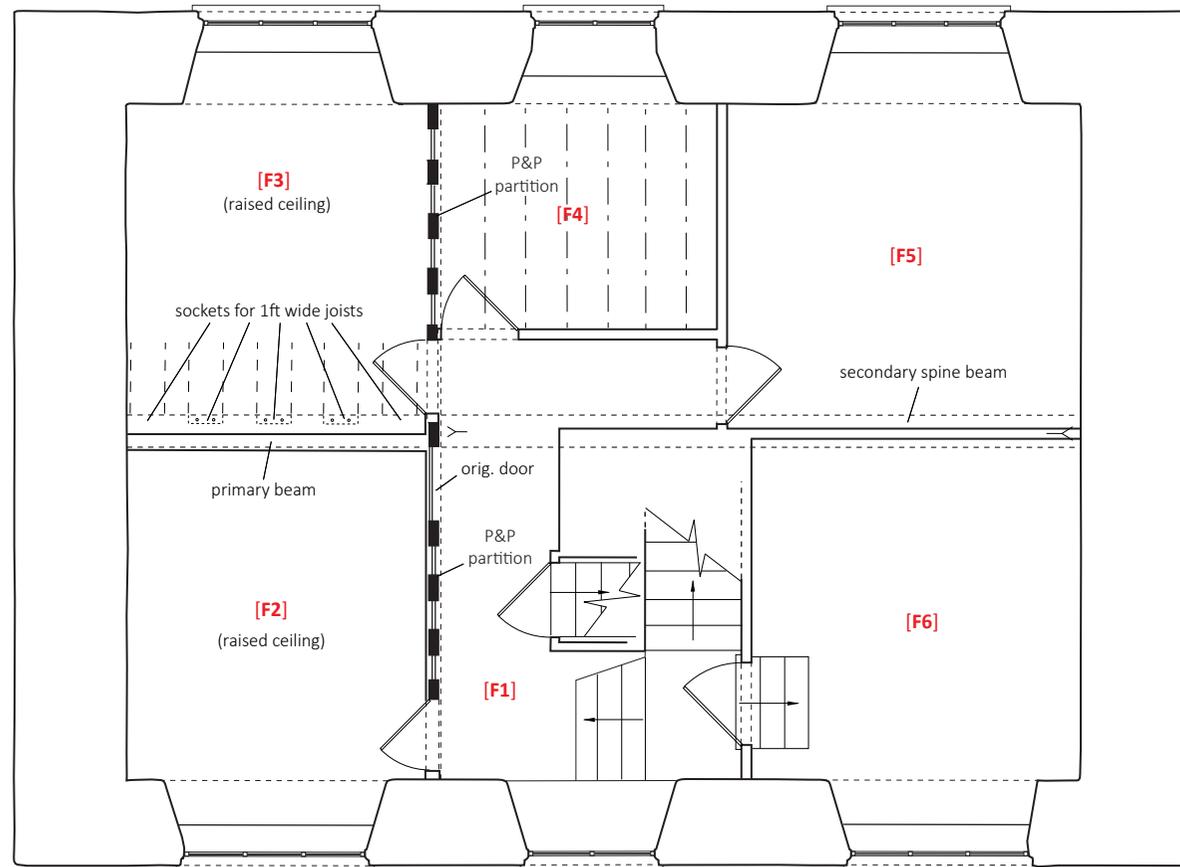
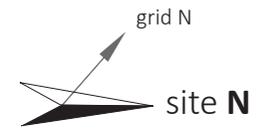


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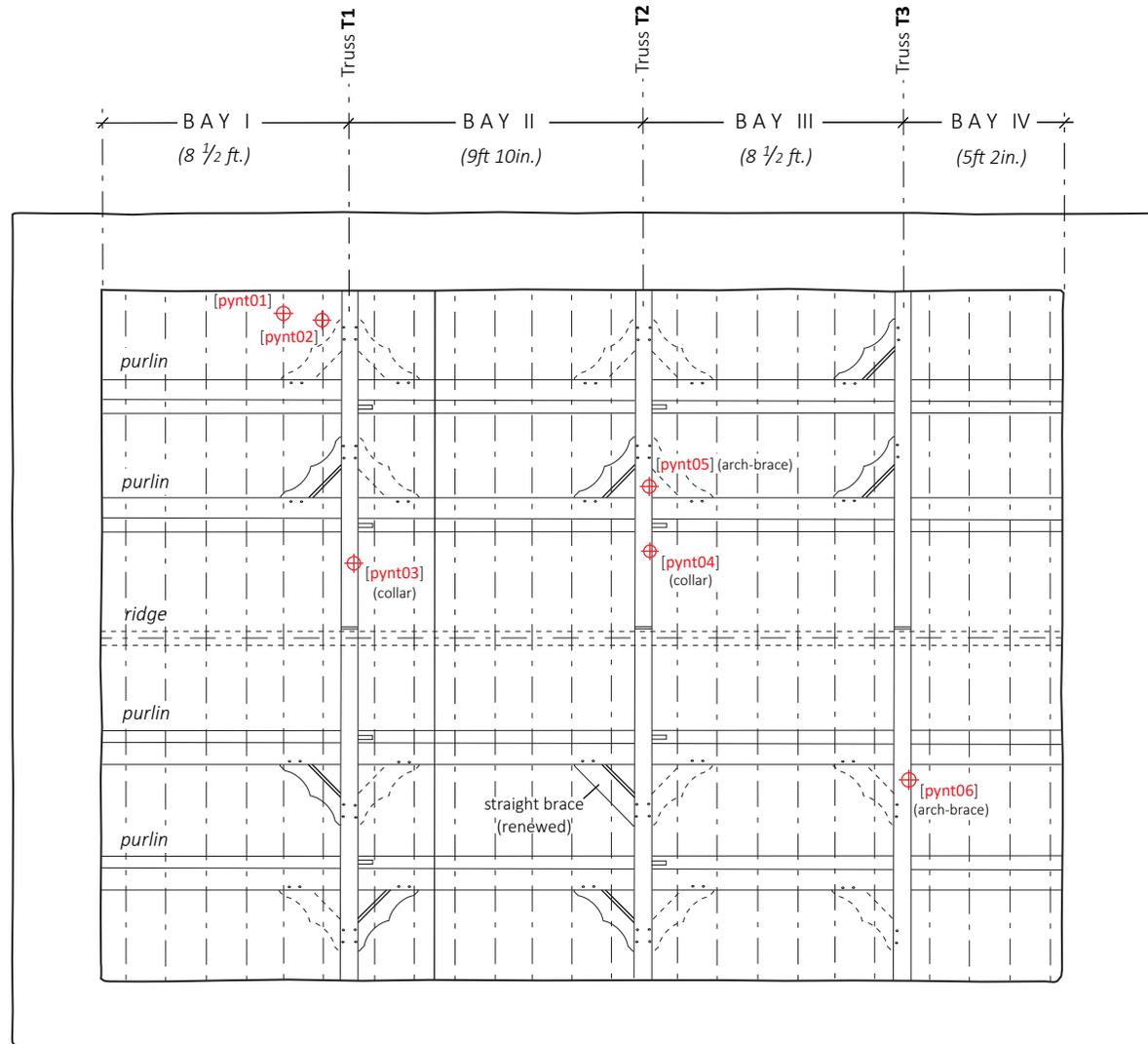
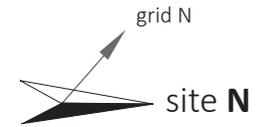
Plas yn Trofarth, Llangernyw, Abergele, Conwy C.B.
Figure 4: Ground floor plan

NB: for illustrative purposes only, do not scale from this drawing



SCALE 1:75 @ A4

NB: for illustrative purposes only, do not scale from this drawing



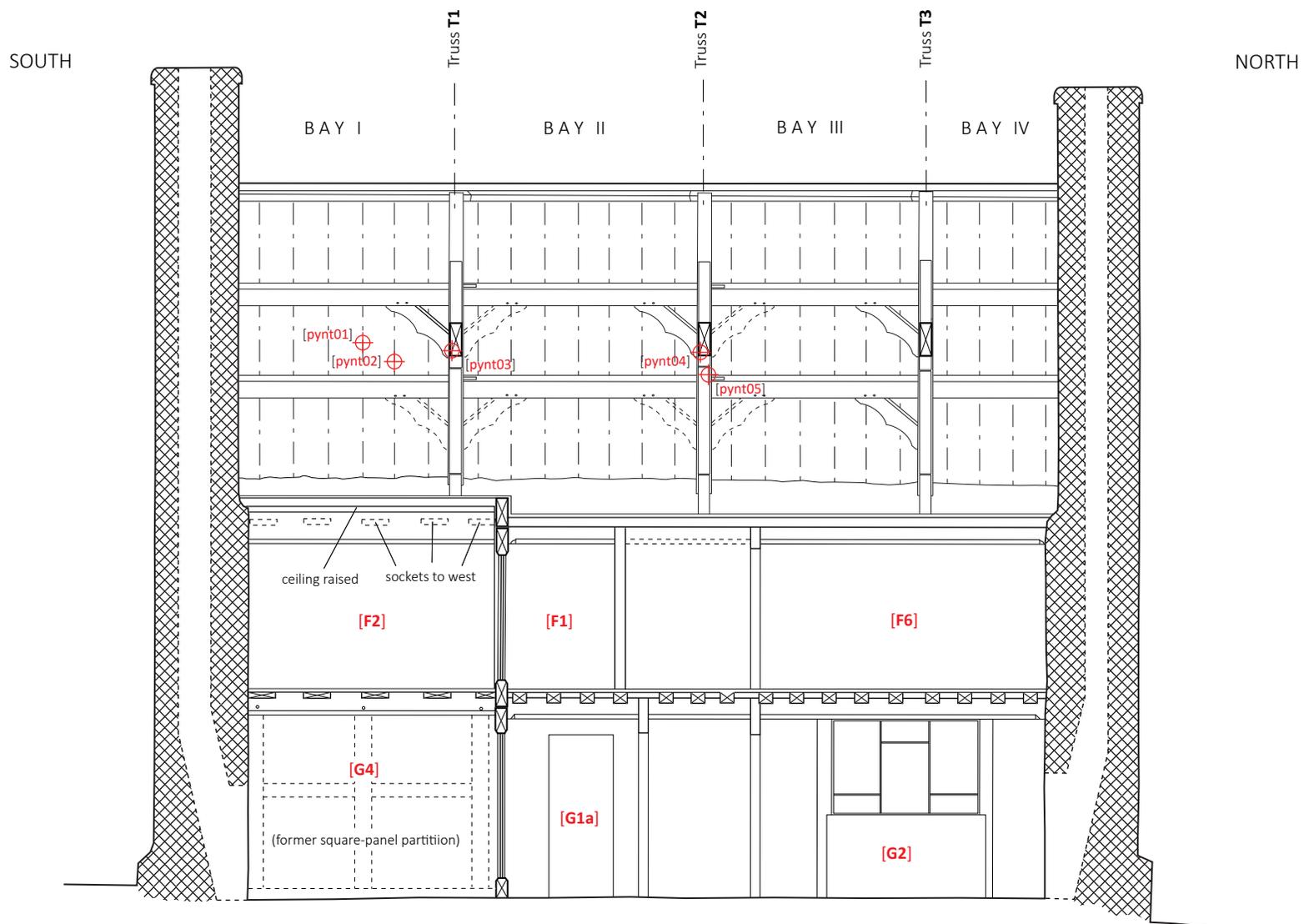
KEY

- wind-brace *in-situ*
- wind-brace missing
- location of dendro sample



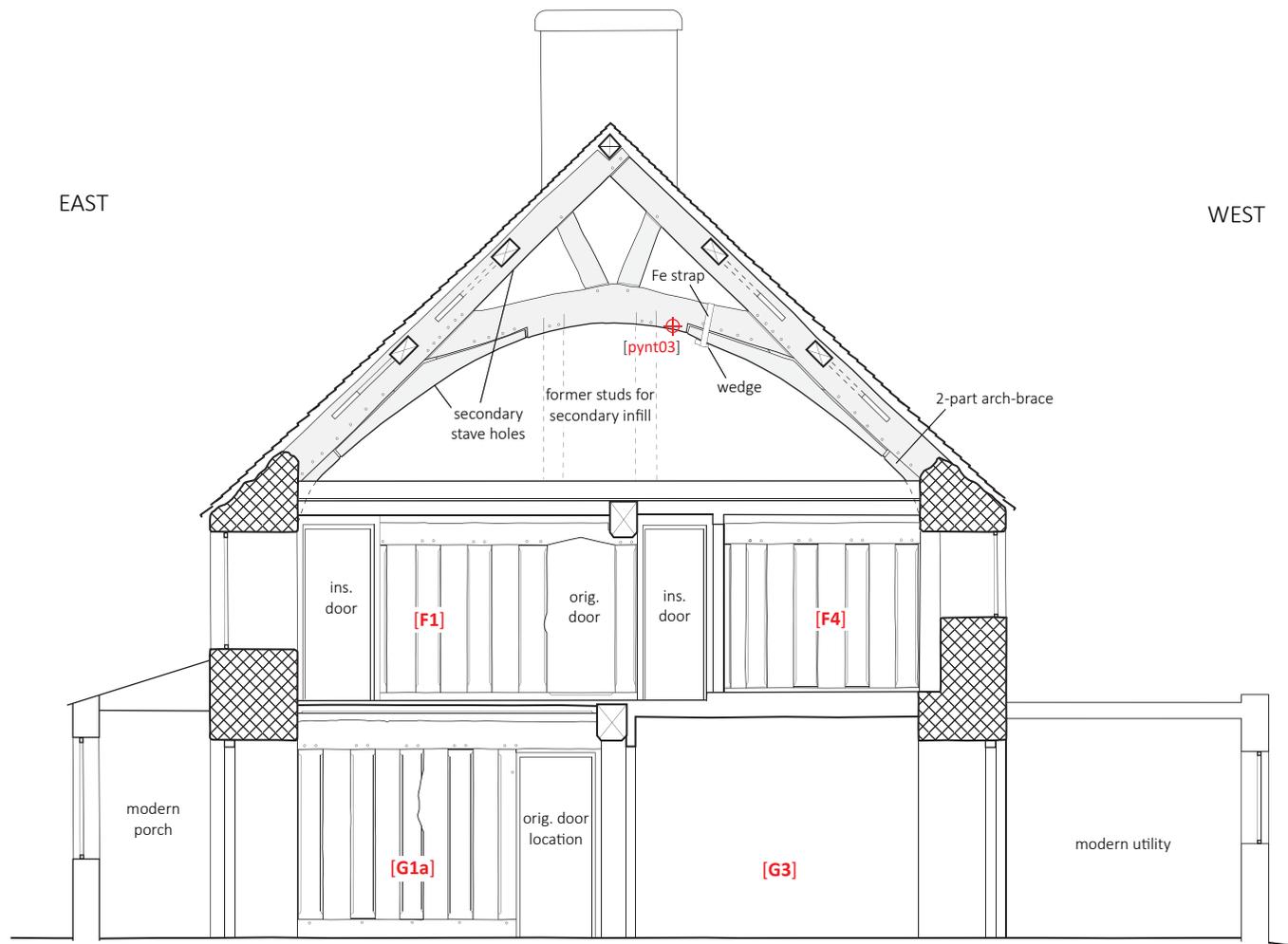
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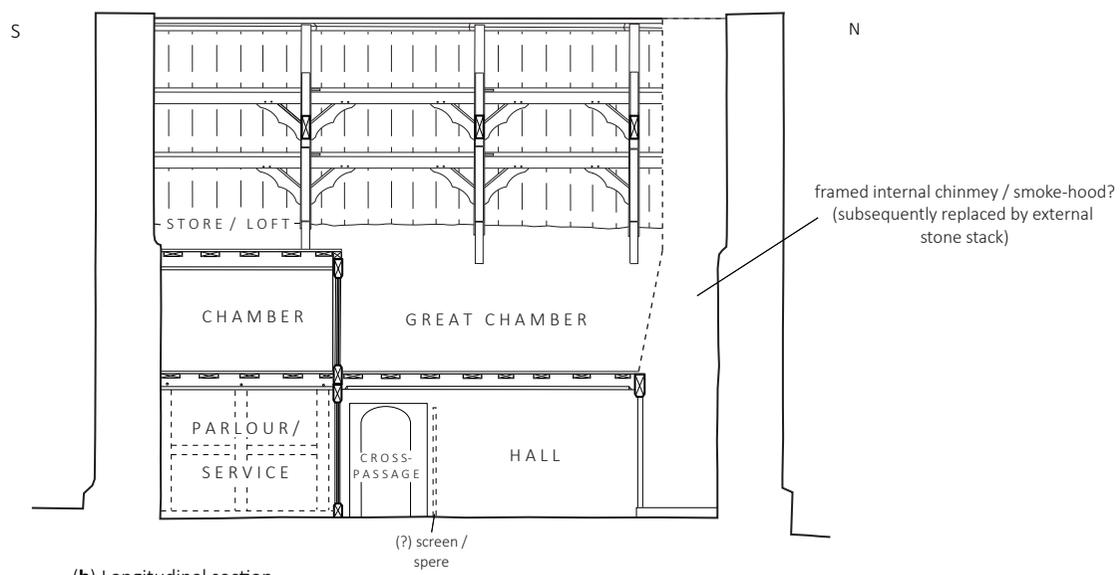
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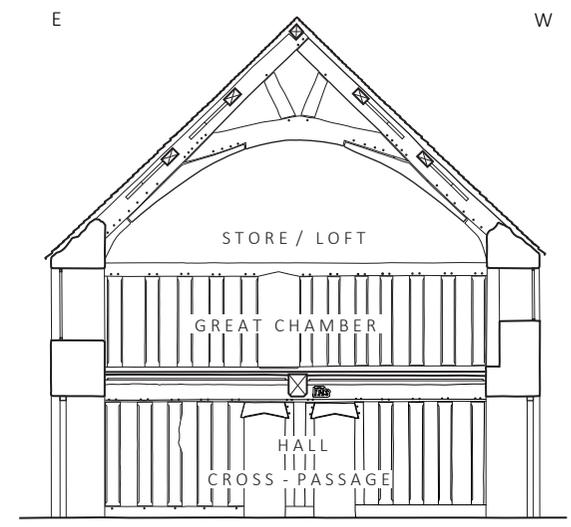
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NB: for illustrative purposes only, do not scale from this drawing

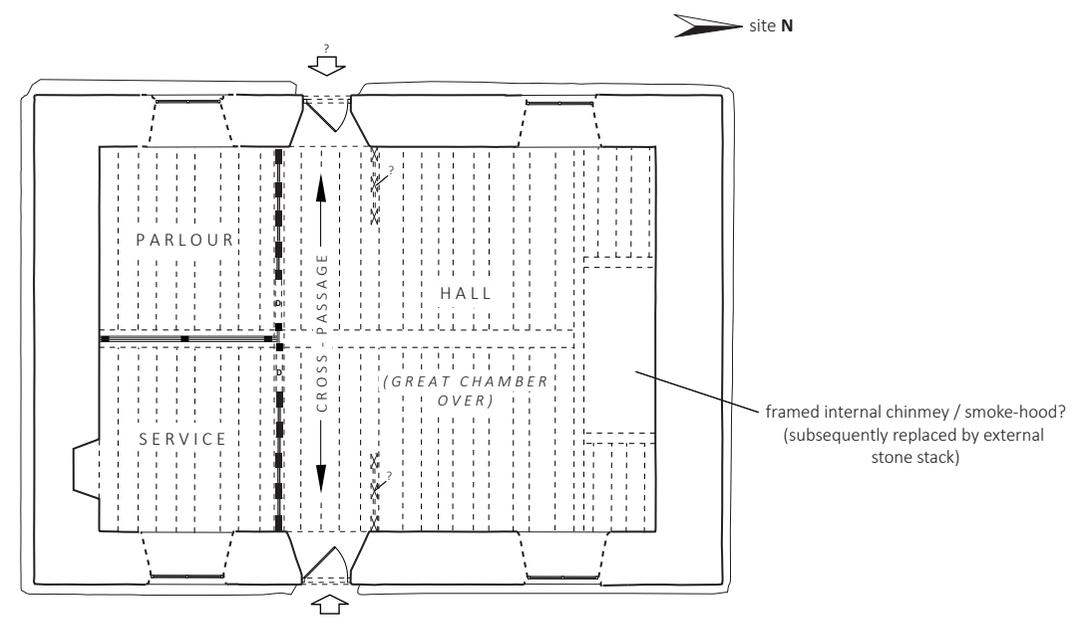




(b) Longitudinal section



(c) Transverse section



(a) Ground floor plan

NB. Original fenestration pattern unknown



Plate 1: Contextual view of Plas yn Trofarth looking south-west with the tree-lined valley of the feeder brook to the Afon Gell in the foreground.



Plate 2: Principal east (original front) elevation, oblique view looking south-west with single-storey porch extension (post-1953; compare Figure 3a).



Plate 3: Unsympathetic steel-framed windows, introduced throughout in late 1950s.



Plate 4: Pent-roofed porch appended to east elevation after 1953.



Plate 5: Rendered off-set plinth.



Plate 6: West (original rear) elevation, oblique view looking north-west with single-storey utility extension (post-1953; compare Figure 3b). Note general drop in ground level from south to north (left to right).



Plate 7: North gable end.



Plate 8: South gable end.



Plate 9: Main doorway of east elevation (compare Figure 3c).



Plate 10: 1950s door opening to west elevation.



Plate 11: Line of original 'cross-passage' [G1a] looking east.



Plate 12: Post and panel partition defining south side of passage [G1a].



Plate 13: Joinery detail of post-and panel partition.



Plate 14: Post-and-panel partition to cross-passage, as exposed within [G4].



Plate 15: Detail of 1ft wide ceiling joist over [G4].



Plate 16: Kitchen [G3] looking south-west.



Plate 17: Room [G2] looking north-east.



Plate 18: Axial 'spine-beam' extending across [G1b] and [G2].



Plate 19: South end of spine beam at P&P partition [G1a].



Plate 20: 7in., stop-chamfered common joist over [G2].



Plate 21: Post-and-panel partition to south side of [G2] (assumed relocated from cross-passage).



Plate 22: Primary door within P&P partition with independent lintel beneath head-beam.



Plate 23: Christogram 'IHS' in head-beam of P&P partition.



Plate 24: Stair rising to first floor, splitting at half-landing.



Plate 25: Post-and-panel partition at south side, [F1].



Plate 26: Continuation of P&P partition, exposed within bathroom [F4].



Plate 27: Evidence for trestle sawing in head beam of P&P partition.



Plate 28: Primary doorway (blocked) within P&P partition [F1].



Plate 29: Sockets for 1ft wide ceiling joists in axial beam, exposed below raised ceiling within [F3].



Plate 30: Detail of joist socket (NB. double peg-holes).



Plate 31: Stop-chamfered spine beam at P&P partition.



Plate 32: Enclosed, straight-flight stair rising to roof-space from landing [FB1].



Plate 33: Roof-space looking south with Truss T2 to foreground.



Plate 34: Scratched numerals; Truss T3 (wind-brace).



Plate 35: Detail of v-strutting above cranked collar (T3).



Plate 36: Detail of arch-brace (Truss T3).



Plate 37: Multiple pegging of arch-brace to principal.
NB. 2-part brace, jointed just above level of wall-head.



Plate 38: Repair of arch-brace/collar joint with iron strap and wedge.



Plate 39: Distinctive evidence for trestle sawn timber;
Truss **T1** (west principal).

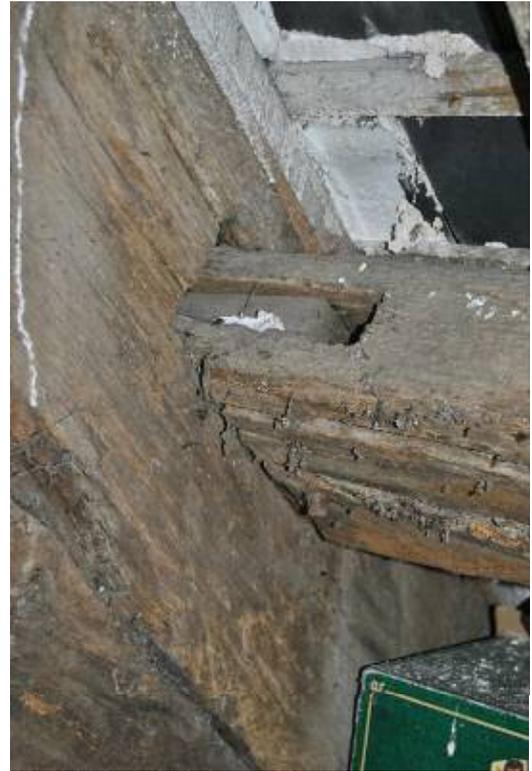


Plate 40: Detail of bridled scarf joint to threaded purlin.
INB. purlin notched to respect principal



Plate 41: Detail of cusped wind-bracing.



Plate 42: Secondary stave holes to soffit of arch-brace;
Truss **T11**.



Plate 43: Pegging for secondary infill of truss T1.



Plate 43: Ridge-piece over Bay III with pegs securing staggered primary common rafters.



Plate 44: Unpegged common rafters over Bay IV.

APPENDIX A: Project Design Brief

1. Project background

1.1. The Discovering Old Welsh Houses Group aims to identify, sample and date using dendrochronology, and record Tudor/Elizabethan buildings with suitable original timber. Volunteers undertake documentary research and the results are widely disseminated and deposited in regional Historic Environment Records (HERs) and Coflein. The copyright of all project reports and materials belong to the Group.

1.2. Since April 2016 further work by the Group has continued in north Conwy CPC and you are invited to quote for work at an as yet unspecified number of houses (probably 4-6).

1.3. This document sets out the requirements for the historic building recording aspect of the project. Tenders / inclusive daily rates (7 hr day) for work should reach the Secretary, Bryn Bedd, Nantgwynant, Gwynedd, LL55 4NL, by noon on 7th August 2016. (by post or email)

2. Site locations

The three buildings (Plas yn Trofarth, Hen Wrych & Plas Uchaf, Glan Conwy) were dated in June 2016 using dendrochronology and now that the RCAHMW has re-opened we will be checking the detail in any RCAHMW building recordings of them. The dendrochronology reports will soon be on the Group's website: www.discoveringoldwelshhouses.co.uk. Other building will probably be added.

3. General Requirements

3.1. 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.

3.2. Contractors and sub-contractors are expected to

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

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

3.4. 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.

4. Building Detail Record of each building

4.1. 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.

4.2. An important component of the dating programme will include a detailed, measured and drawn, record of the timbers dated and the position of sampling cores.

4.3. 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
- 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.

4.4. The minimum requirement for recording of dendrochronologically-dated timbers should include:

4.4.1. 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)

4.4.2. 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.

4.4.3. Brief written statement of possible potential for future recording.

4.4.4. **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.

4.4.5. 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.

5. Time Scale

It is hoped that the building recording can take place very soon in January / early February 2015, with further visits arranged with the owner of a building as necessary.

6. Reports

Reports for all buildings will be required by **30th September 2016** or before if possible.

7. Monitoring

The Project will be monitored by experienced members of the Group to ensure the fulfilment of the brief and specifications.

8. Payment

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

9. 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:** *Discovering Old Welsh Houses Group. We have an agreement to put the report as PDF on Coflein RCAHMW's on-line database as part of partnership.*
8. **Archive.** *Archive to be deposited in RCAHMW's archive (National Monuments Record for Wales) as part of partnership.*
9. **Logos.** *Discovering Old Welsh Houses logo can be obtained from the Secretary.*

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.

Drg. No.	Subject	Format	Scale	Date	Recorder
2016-008b/001	Ground floor plan	A3	1:50	08.09.2016	R Tyler
2016-008b/002	First floor plan	A3	1:50	08.09.2016	R Tyler
2016-008b/003	Roof plan	A3	1:50	08.09.2016	R Tyler
2016-008b/004	Longitudinal cross-section looking west	A3	1:50	08.09.2016	R Tyler
2016-008b/005	Transverse cross-section at truss T1, looking south	A3	1:50	08.09.2016	R Tyler
2016-008b/006	Detail of post and panel partition at [G2] (S)	A3	1:50	09.09.2016	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.	Plate No.	Subject	Orientation	Date	Photographer
DSC_0001*	2	East (front) elevation, oblique view looking south-west	→ SW	08.09.16	R Tyler
DSC_0002		East (front) elevation	→ W	08.09.16	R Tyler
DSC_0003*	3	East (front) elevation; detail of 1950s steel-framed window	→ W	08.09.16	R Tyler
DSC_0004*	4	East (front) elevation; detail of 1950s porch	→ NW	08.09.16	R Tyler
DSC_0005		East (front) elevation; detail of 1950s porch	→ SW	08.09.16	R Tyler
DSC_0006*	5	East (front) elevation; detail of offset plinth	↓	08.09.16	R Tyler
DSC_0007		East (front) elevation; detail of offset plinth	↓	08.09.16	R Tyler
DSC_0008*	8	South gable end	→ N	08.09.16	R Tyler
DSC_0009*	6	West (rear) elevation, oblique view looking north-east	→ NE	08.09.16	R Tyler
DSC_0010		West (rear) elevation, oblique view looking north-east	→ NE	08.09.16	R Tyler
DSC_0011		West (rear) elevation, detail of 1950s utility extension	→ NE	08.09.16	R Tyler
DSC_0012		West (rear) elevation, oblique view looking south-east	→ SE	08.09.16	R Tyler
DSC_0013		West (rear) elevation	→ E	08.09.16	R Tyler
DSC_0014*	7	North gable end	→ S	08.09.16	R Tyler
DSC_0015		North gable end, oblique	→ SE	08.09.16	R Tyler
DSC_0016		North gable end, oblique	→ SE	08.09.16	R Tyler
DSC_0017		Detail of offset plinth	↓	08.09.16	R Tyler
DSC_0018		Contextual view from east	→ W	08.09.16	R Tyler
DSC_0019*	1	Contextual view from east	→ W	08.09.16	R Tyler
DSC_0020		Contextual view from east	→ W	08.09.16	R Tyler
DSC_0021*	9	Former main door, east elevation (exterior)	→ SW	09.09.16	R Tyler
DSC_0022		Former main door, east elevation (interior)	→ E	09.09.16	R Tyler
DSC_0023*	12	Post and Plank partition to south side of [G1a]	→ SE	09.09.16	R Tyler
DSC_0024		Post and Plank partition to south side of [G1a] (with orig. door)	→ SW	09.09.16	R Tyler
DSC_0025*	13	Detail of P&P partition	---	09.09.16	R Tyler
DSC_0026		Detail of orig. door opening at west end of P&P partition [G1a]	→ SW	09.09.16	R Tyler
DSC_0027*	11	[G1a] looking east	→ E	09.09.16	R Tyler
DSC_0028		Soffit of stair over east end of [G1a]	↑	09.09.16	R Tyler
DSC_0029		P&P partition visible within [G4], looking north	→ N	09.09.16	R Tyler
DSC_0030*	14	P&P partition visible within [G4], looking north	→ N	09.09.16	R Tyler
DSC_0031		P&P partition visible within [G4], looking north-east	→ NE	09.09.16	R Tyler
DSC_0032		Ceiling over [G4]	↑	09.09.16	R Tyler
DSC_0033*	15	Detail of broad ceiling joist [G4]	↑	09.09.16	R Tyler
DSC_0034*	19	Northern section of axial spine-beam lodged over head-beam of P&P partition [G1a]	↑	09.09.16	R Tyler
DSC_0035*	18	Massive, secondary spine-beam over north end of house [G1a/2]	→ N	09.09.16	R Tyler
DSC_0036		Massive, secondary spine-beam over north end of house [G1a/2]	→ N	09.09.16	R Tyler
DSC_0037*	16	Kitchen [G3] looking south-west	→ SW	09.09.16	R Tyler
DSC_0038		Kitchen [G3] looking south-east	→ SE	09.09.16	R Tyler
DSC_0039*	10	Western external door (from [G3])	→ W	09.09.16	R Tyler
DSC_0040		Western external door (from utility extension)	→ E	09.09.16	R Tyler
DSC_0041*	17	Room [G2] looking north-east	→ NE	09.09.16	R Tyler
DSC_0042		Room [G2] looking south-west	→ S	09.09.16	R Tyler

DSC_0044*	20	Common joist detail over [G2]	↑	09.09.16	R Tyler
DSC_0045*	21	P&P partition to south side of [G2]	→ S	09.09.16	R Tyler
DSC_0046		Joinery detail of P&P partition	---	09.09.16	R Tyler
DSC_0047*	22	Original door at east end of P&P partition; [G2]	→ S	09.09.16	R Tyler
DSC_0048		Doorhead of original door (detail of DSC_0047)	→ S	09.09.16	R Tyler
DSC_0049		Detail of door lintel/post joint	→ S	09.09.16	R Tyler
DSC_0050*	23	Detail of 'HIS' Christogram to head-beam of P&P partition	---	09.09.16	R Tyler
DSC_0051		Stair soffit over SE corner of [G2]	↑	09.09.16	R Tyler
DSC_0052		Stair [G1b] rising to half-landing	→ E	09.09.16	R Tyler
DSC_0053*	24	Half-landing with stairs rising to north and south.	→ N	09.09.16	R Tyler
DSC_0055*	25	Post and panel partition defining south side of landing [F1]	→ SW	09.09.16	R Tyler
DSC_0056		Post and panel partition defining south side of landing [F1]	→ SE	09.09.16	R Tyler
DSC_0057*	28	Original door (blocked) within P&P partition	→ S	09.09.16	R Tyler
DSC_0058		Detail of doorhead (cut into head-beam)	→ S	09.09.16	R Tyler
DSC_0059		Continuation of P&P partition within bathroom [F4]	→ SW	09.09.16	R Tyler
DSC_0060*	26	Post and panel partition exposed within [F4]	→ S	09.09.16	R Tyler
DSC_0061		Carpentry detail of P&P partition.	---	09.09.16	R Tyler
DSC_0062*	27	Evidence for trestle sawing; head beam of P&P partition [F4]	---	09.09.16	R Tyler
DSC_0063*	29	Axial beam to outer bay (Room [F3]), with sockets for broad joists	→ E	09.09.16	R Tyler
DSC_0064		Massive, secondary spine-beam over north end of house [F1/5]	→ N	09.09.16	R Tyler
DSC_0065*	30	Detail of wide joist-mortice; [F3]	→ E	09.09.16	R Tyler
DSC_0066		Original door (blocked) within P&P partition; [F1]	→ S	09.09.16	R Tyler
DSC_0067*	31	Northern section of axial spine-beam lodged over head-beam of P&P partition [F1]	→ SW	09.09.16	R Tyler
DSC_0068*	32	Enclosed stair rising to attic level	→ N	09.09.16	R Tyler
DSC_0070		Enclosed stair rising to attic level	→ N	09.09.16	R Tyler
DSC_0072*	33	Roof looking south, truss T2 to foreground	→ S	09.09.16	R Tyler
DSC_0073		Head of stir rising from 1F level	↓	09.09.16	R Tyler
DSC_0074		Truss T3 (E) looking north-east	→ NE	09.09.16	R Tyler
DSC_0075*	36	Truss T3 (E) looking north-east (detail of arch-brace)	→ NE	09.09.16	R Tyler
DSC_0076*	35	Truss T3; detail of v-strutting above collar	↑	09.09.16	R Tyler
DSC_0077		Truss T3 (W); detail of collar/arch-brace/wind-brace	→ NW	09.09.16	R Tyler
DSC_0078*	41	Detail of cusped wind-brace; Bay III (W)	→ W	09.09.16	R Tyler
DSC_0079*	37	Detail of two-part arch-brace	↓	09.09.16	R Tyler
DSC_0080		Detail of (strapped) arch-brace/collar	→ S	09.09.16	R Tyler
DSC_0081*	40	Detail of bridled purlin scarf-joint	---	09.09.16	R Tyler
DSC_0082		Detail of bridled purlin scarf-joint	---	09.09.16	R Tyler
DSC_0083		Detail of two-part arch-brace	↓	09.09.16	R Tyler
DSC_0084		Truss T1, looking south-east	→ SE	09.09.16	R Tyler
DSC_0085*	42	Secondary stave holes to soffit of arch-brace (T1)	---	09.09.16	R Tyler
DSC_0087*	43	Pegging for lapped (secondary) uprights; T1 (collar)	→ SW	09.09.16	R Tyler
DSC_0088		Truss T1; detail of arch-brace	→ NW	09.09.16	R Tyler
DSC_0089		Truss T1; detail of arch-brace / wind-bracing (Bay I)	→ NW	09.09.16	R Tyler
DSC_0090*	39	Evidence for trestle sawing; principal rafter (W), truss T1	---	09.09.16	R Tyler
DSC_0091*	34	Carpenter's numbering (truss T3)	---	09.09.16	R Tyler
DSC_0092		Common rafters; Bay I (W)	→ W	09.09.16	R Tyler
DSC_0093*	38	Strapped repair of arch-brace/collar	---	09.09.16	R Tyler
DSC_0094		Detail of arch-brace/collar/principal rafter	---	09.09.16	R Tyler
DSC_0095		Pegging of common rafters at ridge piece	↑	09.09.16	R Tyler
DSC_0096*	43	Pegging of common rafters at ridge piece	↑	09.09.16	R Tyler
DSC_0097*	44	Unpegged common rafters (Bay IV)	↑	09.09.16	R Tyler