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DATING OLD WELSH HOUSES GROUP

BRYNMAENLLWYD

TRAWSFYNEDD

MEIRIONNYDD Paula Burnett:

April 2013



In partnership
with



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BRYNMAENLLWYD

TRAWSFYNYDD, MEIRIONNYDD

[Just as the many-branched Welsh oaks are peculiar to the Principality, so are these buildings the natural product of the country, the true growth as it were of the soil, and show as clearly as any written history the development of the life of the people...]. If we would understand rightly the past, there is no better book for us to study than the old homes of our ancestors.

Harold Hughes and Herbert L. North, *The Old Cottages of Snowdonia*, Bangor: Jarvis and Foster, 1908, 2

Building Description

Paula Burnett

Overview

Brynmaenllwyd is a 4-bay stone-built farmhouse of the 'Snowdonia' type, the primary phase tree-ring dated to 1588 or shortly after. It is of 1.5 storeys, on a rectangular plan, with (unusually) same-height outbuildings, probably later, in line at both ends. The house is of rubble construction offset on a boulder platform E, with flank walls mainly 3.5ft thick. The low-pitched roof is slated (part of the E face of the S barn roof is of old thick irregular stone slates pegged onto laths, now rare), with low rectangular chimney stacks at both gables and 3 (later) low-set catslide dormers E. Ground-floor openings seem original. The primary ground-plan had 3 units: i) a 2-bay hall/principal room with large angle S (11ft 6in-long angle-beam/bressumer) and opposing front and back doors; ii) paired central service rooms; iii) a heated chamber N. The upper floor, accessed by a mural spiral stair S, also had a heated chamber N. Structural timbers are of oak, the principal beams ornamented. Three main phases of alteration/repair are evident: 1665, the Restoration restoration (2 roof trusses renewed and dormers probably inserted); 1889, the Victorian repair/ alteration (marked with a front-elevation date-plaque); and various C20 modernisations. The status of different parts of the house seems the key to the enigmatic variety of its original construction; structural problems with certain beams may explain subsequent interventions.

Situation

Built in an upland glacial landscape c.600ft/200m above sea level, alongside a bronze age trackway at the foot of a long hill, the house remains today in an isolated rural position in the midst of its 100+ acres, much as in the C16. Just 1.5 miles S of the ancient village of Trawsfynydd, in the Eden valley, it was and is principally a stockrearing farm for cattle and sheep, like its neighbours. Its axis is NNW/SSE (here expressed as N/S), with the principal fireplace towards the up-gradient of a gentle slope S. The front faces E towards the rising sun with a bank sheltering it from cold E winds. The W flank is exposed to the prevailing wind and rain but has few openings.

Plan

The house is of classic 'Snowdonia' type (as defined by Peter Smith), rubble-built and slate-roofed between two gables, with fireplaces at both ends of the ground floor and at one end of the upper floor (a half-storey attic). The original ground-plan, evident from the beams, was also typical, with a low, off-centre front door opposite a narrow back door, demarcating the hall (S) from service and private areas. Similar minor houses (e.g. Bodloesygad, Ffestiniog, 3 bays, built 1560s) often had service and private chambers on either side of the house axis, but here the linear extension of the house to 4 bays enabled the provision of paired service rooms (E and W) in the middle of the house, opening off an axial passage which led to a private heated ground-floor chamber, a substantial room occupying the full depth of the N gable. The hall had a large ingle (S) with mural spiral stair (W) to an upper floor.

Upstairs a shared passage room led to the N bay, reserved for a heated private room, like the solar in grander houses.

Exterior

Overall the house is 45ft long by 23ft wide. Walls are of rubble incorporating some very large boulders and some dressed stones. Flank walls are typically 3.5ft thick, the E one built on a projecting stone platform. The ingle gable (S) is 6ft thick, the N gable 3ft. The front elevation (E) is roughly rendered and whitewashed. The W wall of the building has enigmatic projections, probably the remains of a porch outside the back door, and a lean-to outbuilding between that and a substantial buttress to the ingle wall. The external irregularity in the footprint of the W flank wall may be due to the W wall of the hall having been built less thick because it was backed by an outbuilding from the outset.

Ground-floor openings seem original, with rectangular lintels. Fenestration apertures (3 E, 1 W) and the front doorway (E) survive; the W doorway was blocked up before the 1930s but is internally visible. The front door is bigger than the back door: an aperture 5ft 10in high by 3ft 9in wide, splayed to 4ft 2in, as against 5ft 3in by 3ft 3in internally. Each of the original ground-floor rooms was lit by one window; the apertures seem original, all of different sizes, with splayed reveals (less wide in the service rooms). The biggest window is in the hall (external aperture 3ft 6in x 3ft 6in, splayed to 5ft internal width), with a higher lintel and stepped sill. Others have level sills. The ground-floor chamber window is 3ft high x 2ft wide, splayed to 4ft 9in. The E service room window is 2ft 6in high x 3ft wide, splayed to 4ft 2in, and that for the W service room is 2ft 8in high x 3ft wide, splayed to 3ft 9in. Internal lintels include oak and stone (all frames are modern timber with opening fanlight, c.1980).

Interior

The interior finish is of roughly squared boulders, some very large, pegged with small stones (since c.1990 largely exposed on the ground floor). The house's interior length is 37ft overall to the back of the ingle. Its interior width is 16ft 6in approx. The 4 bays are not of equal width. Distances between tie-beams are, from the S one at the ingle, 7ft 10in, 7ft 2in, 8ft 6in (service rooms), and 10ft 6in to the N wall (the chamber). The tie-beams may be closer together towards the S to enable a more impressive display of high-quality timber in the principal room, giving particular prominence to the fireplace with its massive ingle-beam and adjacent tie-beam (T1), the heavy central tie-beam (T2), the panelled partition (now absent) at T3 separating it from the service

rooms, and the 13 reed-moulded joists (centres 1ft 6in apart) which provide a boldly striped ceiling.

The W wall inside the inglenook is of superior masonry, presumably to support the stone spiral stair W (now fronted with a C19 slate-shelved cupboard). The inglenook aperture is 9ft wide, 5ft 6in high to the bottom of the bressumer and 4ft deep. On the E side of the recess is an oven (18in high x 20in wide between large boulders, now blocked up; 1588 may be early for such an oven) with a high shelf above, perhaps for salt or to warm the dough as the oven was fired. The ground-floor chamber fireplace (N) has a low stone lintel (2ft 8in from original floor, 5ft wide and 16in deep, over a 3ft fireplace). Most of the ground floor is paved with very large rectangular flagstones with irregular surfaces, many 4x3ft, some 5ft long (part of the chamber floor was raised 5in with imported smaller slabs laid on concrete c.1980).

The fireplace in the upper N chamber is now blocked up but visible in outline. Three low catslide dormers (E, 11in from floor) now light the upper floor. They presumably date from 1665 when the two S roof trusses (TS1 and TS2) were renewed, and were probably heightened in 1889. However, there is no trace in either gable's stonework (now inside the outbuildings) of any primary windows which probably originally lit the upper floor and spiral stair. The dormers combine splayed and right-angle reveals: splayed on the N side to reflect the morning light, while the right-angles maximise usable wall-space, making room for a bed against the trusses. Two small C19 ironframed opening skylights (E and W) now light the central section of the house (stairwell and bedroom/bathroom; a larger one lights the hayloft).

Timber

Structural timbers are of oak, of enigmatically various proportions and carpentry. The analysis (see report) indicates a primary phase of construction in or shortly after 1588, as supported by dates for 3 ground-floor beams (inglenook-beam and 2 tie-beams: T2 and T4) and one roof timber, a purlin with complete sapwood felled in the spring of 1588. The inglenook-beam, dated 'after 1549,' is more likely to belong to the 1588 construction than to the 1660s work (when 2 trusses were renewed): first, the latter date would mean that over a century's growth was removed in the carpentry, which seems improbably wasteful, and second, since several ground-floor timbers are of the earlier date it would be surprising if the structurally crucial inglenook-beam had not been installed at that time. However, even with the authoritative tree-ring dating of many of the timbers, their various styles remain enigmatic. The N truss (TS3, not sampled) is quite different in style from the two S trusses (TS1/2, dated to 1665), and the purlins in the N chamber (not sampled) resemble their truss in proportions but are quite unlike the other purlins. Also the 4 tie-beams are of widely different shape and carpentry (from the S, 2 & 4, unlike, dated to the 1580s, 1 & 3 undated; 3 & 4 tooled for different types of partition). There is a marked difference between timbers of roughly square section and those of distinctly oblong section.

The status of the principal room (architectural descendent of the medieval hall) is indicated by the carpentry. The great inglenook-beam is 11ft 6in long, 18in deep, and 15in thick at its upper edge tapering to 7in at the lower edge, which is chamfered and endstopped. The arriving visitor would also be impressed by tie-beams of substance: from the S, T1 is 11x8in, T2 11x11in (both in full view, chamfered and end-stopped) and T3 is 24x8in, grooved for an elegant post-and-panel partition (some pegs still in

place). The reed-moulded joists are equally prominent on both sides of the central tiebeam T2 as if intended to be seen as one room, not subdivided for a cross-passage (T2 is not grooved for a partition). A single reed-moulded joist extends N over the former axial passage between the service rooms as far as the chamber door, maintaining the impressive effect. However, the N tie-beam (T4) between the service rooms and the chamber is less grandly carpentered for the older-style in-and-out boarding (11.5in boards, 2 pegs per board, now absent), and slotted for the door-jambs (only 2ft 6in apart). The joists of the chamber ceiling are also cruder, with rough chamfering and variable paddle-shaped end-stops against the N wall. However, they are superior to the service-room joists which are plain.

Just as the main beams in the high-status room downstairs are squared and ornamented, the heated chamber upstairs (N) has chamfered and squared truss (8x6in), purlins (c.6x5in) and collar, demonstrating its status as a private bedroom. It is evident that the upstairs rooms were open to the ridge as the timbers in the N chamber's roof-space bear traces of whitewash (plaster ceilings were inserted at collar level probably in the C19).

Interpretation

The two S roof trusses were replaced in 1665 but the original purlins (the E one dated to 1588) were reused. These long purlins, though well carpentered, are slimmer (c.10x3in) than those in the heated upper chamber, and have no chamfering. They are both trenched (each with a notch, 5in and 4in wide) indicating that they were originally placed edge-on to the primary trusses, which were evidently of less square section than the surviving N truss (presumably primary). (That this edge-on practice has continued is evident from the later purlin over the stairs and the relatively recent roof of the N barn.) In renewing the 2 S trusses it seems the opportunity was taken to increase the available room-space by placing their feet further apart, as a large square boss on the upper surface of the tie-beam in the floor, forward of the W foot of the present S truss, shows 4 sawn-off pegs presumably anchoring the original truss to the tie-beam below, rather than seating it in the wall as now. This suggests that the originally available timber was of barely adequate proportions for the planned size of the house, and that the attic space was compromised by the intruding beams.

In 1665 the reused purlins were pegged, now flat-side-on, to the new, further apart trusses, perhaps for strength, then flanked with baulks of timber to regain the roof height. Just 2in is inserted on the W, but 6in on the E side, presumably to facilitate the raising of the dormers (the N dormer has insertions of c.5in). The renewed trusses of the 1660s are not chamfered, like the 1588 purlins, and are likewise of more oblong, blade-like section (c.12x5in). They are of irregular shape following the contours of the tree (with clear trestle saw-marks). Thus both phases of the work to the S roof confirm the lesser status of the upstairs passage-room. However, these later trusses are structurally robust, having strong triple-pegged mortice-and-tenon joints at the ridge, while the (presumed) earlier, squared N truss has a simpler crossed joint, doublepegged. None today carries a ridge-piece, however.

The tie-beam T3 to the N of the hall (which was quick-grown timber and didn't yield a date) is exceptionally deep (2ft) and projects 12in above the floor level upstairs. Although trimmed of 2in in the bedroom doorway it still necessitates a step of about 9in over the 8in-wide top. Its lower edge has been bevelled to give headroom over the

stairs, presumably at the C19 installation of a central staircase. The feet of the 1665 truss above (TS2) are jointed directly to this unusually deep beam (oblong in section and grooved below for panelling), whereas the feet of the 1665 truss TS1 are secured in the stonework above the primary tie-beam T2 which lies below the upstairs floor.

The two S trusses may have needed early renewal because of timber deterioration. That the long thin primary purlins (S) were prone to warping is shown by the section removed, presumably in 1889, from what at that date became the staircase bay, which now rests in the NW roofspace. It is possible that the original S trusses likewise either warped or developed serious splitting, like the inge beam. Dr Daniel Miles, the house's dendrochronologist, thought that the inge beam split had probably happened within 10 years of installation. Understandable concerns over the inge's stability may thus go back to the house's early life and account for a number of interventions, such as what looks like a stone buttress, cemented at the top, built out from the W flank, and attempted repairs: the inge beam was braced to the adjacent tie-beam with an oak splint (possibly in 1665), and an iron clamp (now sprung) was pinned round the split (probably in 1889 though perhaps earlier). However, after 400 years it seems likely to survive. The two S trusses were replaced after barely 80 years perhaps in part to reduce the roof load carried by the inge-beam. If the original trusses also split as they seasoned, in a way which crucially weakened the roof, replacement may have been the only course.

On the ground-floor the N tie-beam (4) of c.1588 is of much smaller section than those in the main room (only 7x7in). Dendrochronology showed the tree to have been 'in terminal decline' for a century before felling (though presumably its narrow growth rings made it relatively dense and therefore strong for its size). It seems probable that the oak available when the house was first built was limited in quality and dimensions, perhaps as much due to the upland climate as to funds. The better timbers would have been allocated to the higher-status rooms, with the hall getting all the best, the heated private chambers the next best, and the service rooms and shared upper room the least. It therefore seems likely that the original trusses for the lowstatus upstairs passage room (S) were less substantial than their N neighbour TS3 (itself relatively modest) and not strong, making early replacement imperative.

At an unknown date four 5in post-holes were cut in the hall flagstones presumably for a partition, 3 under the central tie-beam (centres 3ft apart) and one at right angles to that nearest the front door. This pair are 3ft from the wall corner with centres 15in apart, presumably to support a doorcase (angled small holes in the beam over the centre of this doorway may suggest fixings for a shaped doorhead). This would have created a separate cross-passage, with doors left and right, and the back door ahead.

The faces of the ground-floor beams are stained black; those upstairs are of natural colour untreated. Smoke marks in the SE bay of the main bedroom from rush lights or candles suggest perhaps work at a spinning wheel or loom (post 1665). Peg holes at regular intervals along the slim purlins may be fixings for side panelling (with storage space behind), as in the S barn which still has remnants of such panelling, indicating that the hayloft was slept in by farmhands (this was still the practice in the mid-C20. Pers.comm. Kit Price Jones). Upstairs flooring is of C19 6.5in pine boards (bathroom/landing 5.5in). C19 tongue-and-groove pine partitions (6.5in) subdivided the upper floor into 3 rooms (one presumably open to the stairwell, though the

provision of a skylight to both roof slopes suggests a further room may have been panelled off from the stairs with now lost panelling). C20 pine partitions (4.5 and 5.5in) now subdivide the ground floor into 2 rooms, partitioning off a storage room within what had been the ground-floor chamber, and a bathroom and airing cupboard upstairs. Internal C19 panelled doors (one reused and still in place as a cover over the hayloft internal hatch) were replaced in the C20 with latch-and-brace doors. The front door is early C20 with 6 upper lights.

Outbuildings

The attached outbuildings are: S, a stable/cartshed with hayloft/granary (with single door and double door E, and upper hay door S), and N, a lofty byre (originally with 3 doorways E, for 2 feeding walks and cleaning walk between, and one wider door W), lean-to calf pen and pigsty (both with E door). The date of these is not known. The cleaning walk has a very large fossil-bearing stone slab at its threshold, and other similar slabs inside. The stable floor has a grooved stone to drain the upper level. The E roof of the S barn retains thick, random, single-hole stone slates pegged in graduated tiers on hazel laths, supported on peeled-branch purlins. The S barn's gable has kneelers for coping stones. The S hill is cut away for a track, presumably to give better cart access to the hayloft (some local equivalents exhibit the reverse, with an artificial mound to give pedestrian access to a hayloft door, e.g. Grade II listed barn at Berth Ddu, half a mile N). The pigsty yard has a trough (6ftx1ft6in) carved from a single piece of slate. Large stones are piled to form a rough, outside staircase to the hayloft (probably late C20, earlier internal ladder lost). There are several detached outbuildings nearby: a small stone and slate peat store to NE (the only other building on the 1840 map); remains of a later open-sided hay barn to W of byre with high stone gable, and adjacent lean-to dairy with pit for waterwheel to drive a churn (C19/20; slate roof, supported on metal columns and blue brick end-piers E, removed c.2000); and an open-fronted cartshed with corrugated iron roof between pigsty and peat store (mid-C20, built by Gwyndaf Owen). The wall between W corner of this and the pigsty was rebuilt by Elfyn Owen c.2007 (he also rebuilt field walls near main road, S of access road, and a small 'demonstration' stretch 100 yards above house). An excavation with associated retaining wall in the bank across the track from the front door may be the site of an earlier outbuilding, or possibly an older cottage. There are also a well-built Meirionnydd-style field byre near the main road, probably built after the turnpike cut through the farm's land in the 1820s (new rectangular fields were then laid out W of the road, possibly to pen drove herds for a fee), and the ruins of a later one (N, known to the Owens as the 'new barn'). Behind the peat store is a mid-C20 concrete-built sheep dip, now disused.

In conclusion, the 1588-built house shows three principal periods of alteration:

1) 1665, the Restoration restoration

Renewal of 2 S trusses, reusing original 1588 purlins; probable insertion of dormers.

2) 1889, marked by plaque on front elevation

Probable heightening of dormers; insertion of central timber staircase (probably like that at Bryn Re), involving loss of one of the two service rooms in centre of house; closure of mural stair (fronted downstairs with slate-shelved cupboard and boarded-up upstairs); probable strengthening of split in-gable by bracing with iron band and linkage to tie-beam above; probable raising/levelling of floor above main room by

reseating joists in tie-beam; probable closure of inge by installation of range; insertion of 6.5in pine partitions and panelled doors, creating new central bedroom upstairs; removal of warped section of original purlin, replaced with 7x3in purlin on edge above stairs, original stored in NW roof space, which implies that the whole house was reslated at this date; insertion of 2 small iron-framed skylights; probable insertion of upstairs plaster ceilings (certainly before 1970s); possible blocking up of back door (before 1930s, pers. comm. Kit Price Jones; so likely to stem from the major remodelling of 1889).

3) C20 modernisations

a) Early C20: construction of W open-sided hay barn with dairy alongside, and pit for water wheel; construction of hillside reservoir for piped water supply and to power water wheel for churn, with stone-flagged path from back door; planting of windbreak conifers W of house (Scots pine and larch, 1920s, one felled, dated from tree-rings).

b) 1960s: septic tank (W beyond conifers); bathroom (not there in 1950s, pers. comm. Kit Price Jones); electricity; window-frames with fanlights presumably replacing C19 sashes; 1889 timber stairs replaced with open-tread staircase with handrail but no banisters; partitioning of ground floor into two large rooms with hardboard, also bathroom from landing; mini-porch inside front door; back-boiler fire inserted in inge (some of these items possibly earlier, though in place by 1970s; pers. comm. Dr J. T. Green); open-fronted drystone cart shed with corrugated iron roof built by Gwyndaf Owen (pers. comm. Aled Owen).

c) 1970s/80s Dr. Green's work: reconstruction of dormers including scarfing of new timber to N dormer roof, and of old part of S barn roof; guttering; insertion of hardboard linings between rafters upstairs; replacement of hardboard partitions with pine boards; construction of kitchen units, shelves and storage room; relocation of doorway to N room (now with kitchen recess W) from near the W wall to under stairs; removal of internal lobby; raising of part of N room floor, laid with imported slate slabs over concrete; exposure of inge-beam and inge by removal of modern fire installation, and construction of raised fireplace and slate hood; exposure of N ground-floor fireplace; installation of central heating/hot water system including boiler and large-capacity oil tank in S barn; demolition and rebuilding of part of S barn wall nearest house; remodelling of water intake in field above house with lined channel, dam, twin tanks, etc. (all of this work done personally by Dr Green, who also made the hinged brass curtain rods upstairs).

d) 1980s/90s Work under proprietorship of Central Electricity Generating Board (deduction from comparison of Dr Green's work with state of house in 1998): replacement of staircase with more solid pine stairs with banisters; replacement of panelled doors with new latch-and-brace doors; removal of plaster from most of downstairs walls to expose stone; insertion of 2 loft trapdoors; plastering of downstairs ceilings between joists; lowering of pathway across front of house to improve drainage (removing old irregular stone paving, digging down, and replacing with concrete paving and a small flight of wooden steps S to barn door).

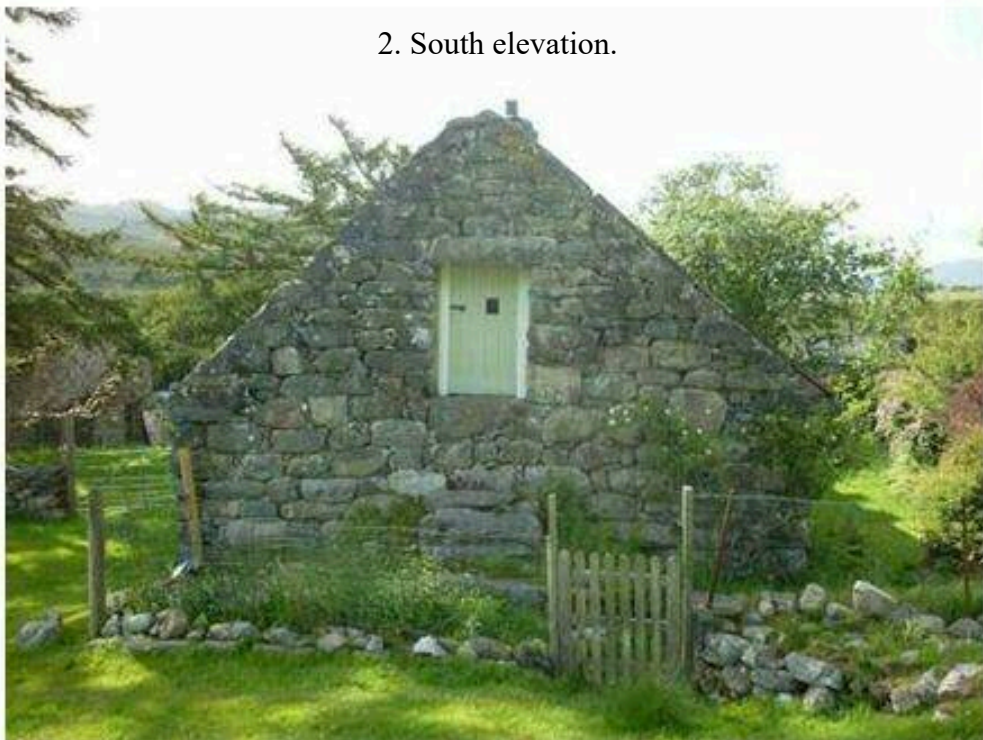
BRYNMAENLLWYD BUILDING DESCRIPTION APPENDICES

1. ELEVATIONS

East elevation



2. South elevation.



3. South-west elevation.



4. West elevation.



5. West elevation showing projections.



6. North elevation.



2 EXTERNAL DETAILS.

1. 1889 renovation plaque on east elevation under eaves.



2. East roof of south barn with old thick pegged

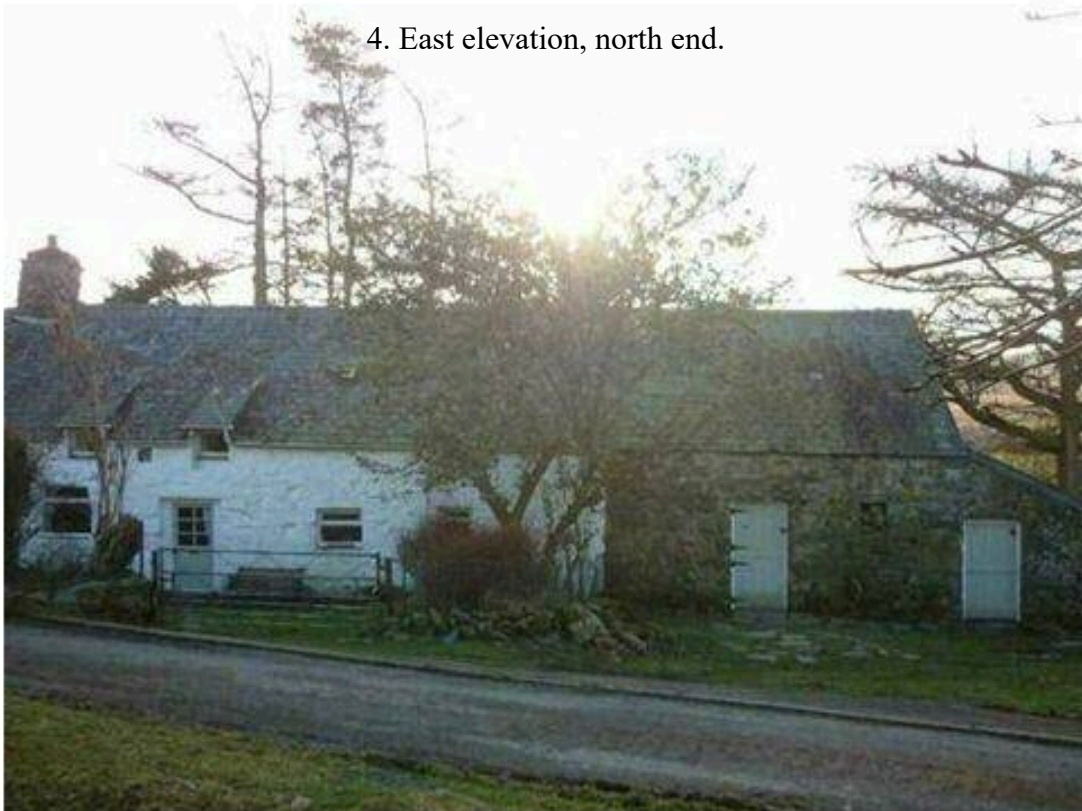


slates

3. East elevation, south end.



4. East elevation, north end.



5. The house's sheltered position: snow December 2010.



3. GROUND FLOOR.

1. Main room, south. Tie-beams, ingle beam, and joists, designed to impress. The wall

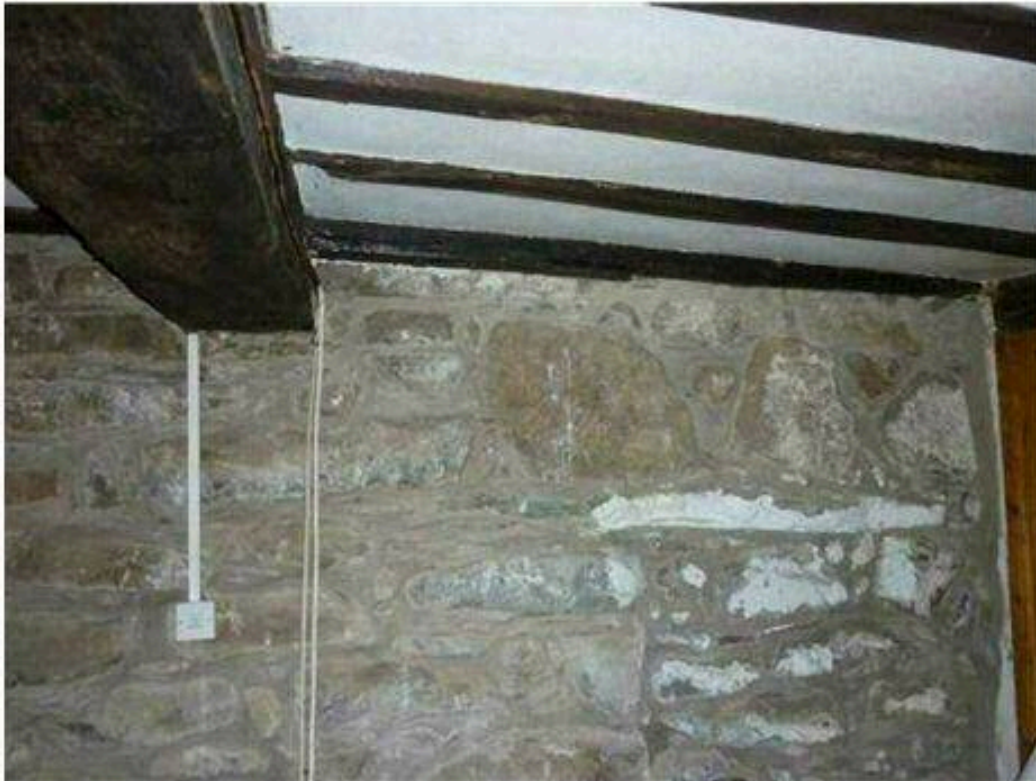
cupboard, right (of 1889), closes the primary mural spiral stair.



2. Front doorway interior.



3. Lintel of the former back door visible opposite the front door.



4. TREE-RING DATING.

1. Drilling the ingle beam, January 2012.



2. One of the drill cores.



3. The purlin which gave a precise felling date of 1588. The blue sticker marks the drill site. Smoke marks indicate rush lights or candles used after the purlin was re-set against new trusses in 1665.



5. GROUND-FLOOR TIMBERS.

1. The north tie-beam cut for in-and-out boarding.



2. The tie-beam between main room and service rooms, grooved for a post-and-panel partition, pegs still in place.



3. Reed-moulded joist like those of the main room ceiling; this one extended over the primary passageway between service rooms to the private chamber, and was not stained black.



6. TRUSSES.

1. North truss: squared timbers crossed and simply pegged (not dated).



2. Collar to north truss (not dated).



3. Central replacement truss of 1665: timbers of oblong section, with strong mortice and tenon joint at apex.

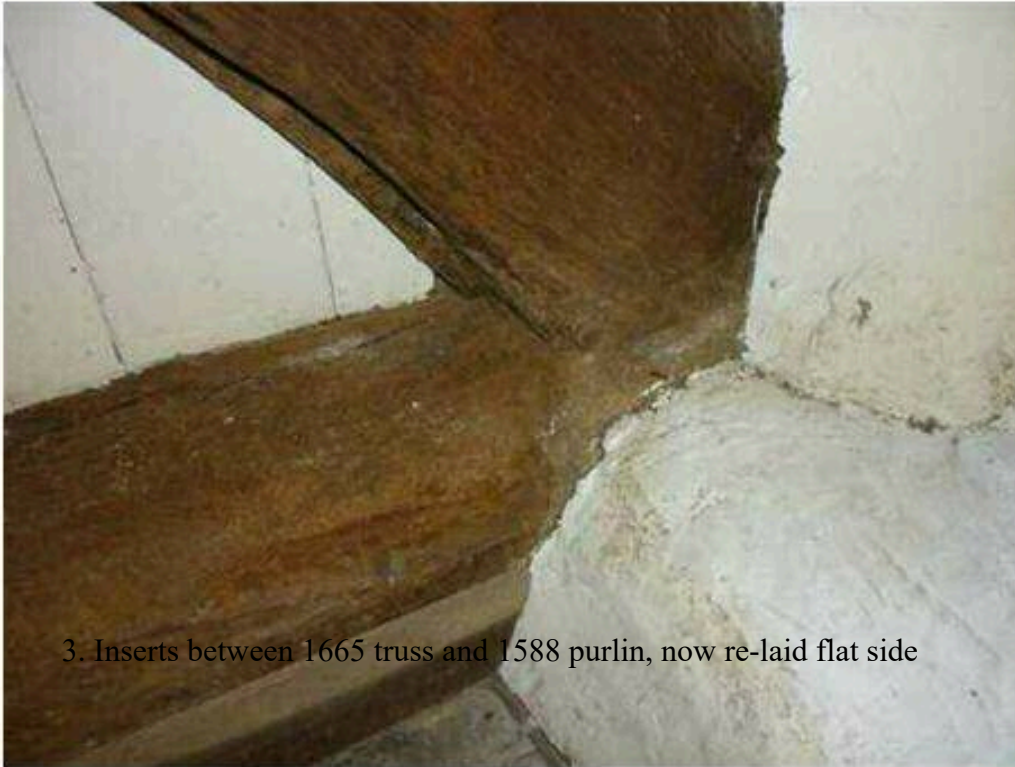


7. UPSTAIRS TIMBERS.

1. Boss in floor of upstairs south room: sawn off pegs indicate this was probably where original truss was seated. Present truss of 1665 seated in wall above, giving greater strength and more headroom.



2. Central 1665 truss seated directly on the exceptionally deep tie-beam (undated), probably a contemporary replacement.



4. Trenching of the south purlins proves they were originally installed edge-on to their truss.



5. 1665 truss, trestle-sawn.

