

Tŷ-draw, Llanarmon Mynydd Mawr, Powys — a late-medieval cruck-framed hallhouse-longhouse

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Further building recording, excavation, and tree-ring dating during restoration work at Tŷ-draw in mid Wales has permitted a radical reappraisal of this cruck-framed hallhouse with two-bayed hall, which was the subject of a classic paper by Peter Smith and Douglas Hague reporting the discovery of the building in the 1950s. Features which had suggested that the building might be unfinished can now be seen as characteristic of a distinctive group of later fifteenth- and earlier sixteenth-century hallhouse-longhouses in the Welsh borderlands. Ownership history and an analysis of the landscape context of the building suggest that it formed the focus of a medieval gafael ('holding') that became fragmented during the sixteenth and seventeenth centuries. The probable builder of Tŷ-draw is identified and his status discussed.

INTRODUCTION

The late-medieval cruck-framed longhouse at Tŷ-draw (SJ 12812792) is sited on a pronounced platform on the southern slopes of Mynydd Mawr, overlooking the steep-sided valley of the Afon Iwrch at a height about 250 metres (Fig. 1). It is approached by the narrow lane which runs along the contour of the hill from the direction of the hamlet of Llanarmon Mynydd Mawr, a community formerly within Denbighshire but transferred to Powys in 1996, which lies under a kilometre to the east.

The building was the subject of a classic paper by Peter Smith and Douglas Hague of the Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW) published in *Archaeologia Cambrensis* in 1958, soon after its discovery. Four of the five original trusses then survived in a relatively good state of preservation within a later stone agricultural range with corrugated-iron roof, with an abandoned stone-walled dwelling added at one end (Fig. 2). Although still remarkably complete at that time, the dilapidated range was said to present 'a depressing and uninviting sight'.⁴ The building was subsequently designated a Listed Building by virtue of its surviving medieval timberwork.

Tŷ-draw was revisited by the RCAHMW in October 2000 (Fig. 3), by which time two of the four trusses had almost wholly disappeared. Without remedial action it was predicted that 'it seems doubtful that the superstructure will last another winter. Tŷ-draw will become an archaeological site, one of many platforms—usually enigmatic—that are scattered throughout the Welsh uplands'.⁵

In anticipation of the imminent disappearance of the building, the site and its immediate environs were surveyed by the Clwyd-Powys Archaeological Trust (CPAT) in 2001 as part of a programme of fieldwork, funded by Cadw, studying deserted medieval rural settlement sites in Wales, many of which are represented by abandoned building platforms. During the course of this study two such building platforms were recorded within several hundred metres to the north-west of Tŷ-draw. The central truss finally toppled over during winter gales late in 2001. Daniel Miles of the Oxford Dendrochronology Laboratory was commissioned to undertake tree-ring dating of the dilapidated structure during July 2002 as part RCAHMW's tree-ring dating programme. A primary phase, obtained by sampling purlins, crucks,

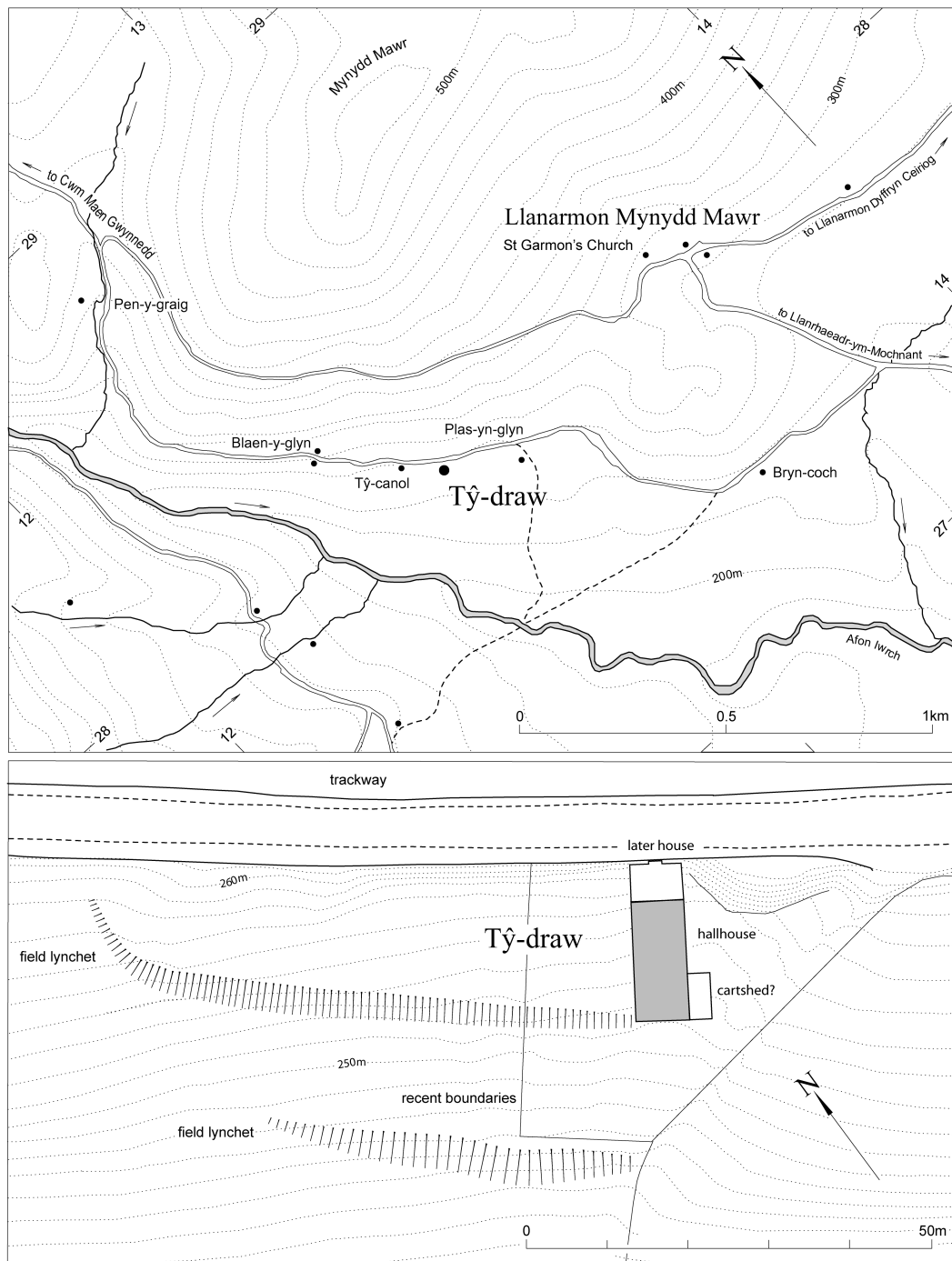


Fig. 1. *Above.* Location of Tŷ-draw in relation to the neighbouring farms, both occupied and abandoned. *Below.* Tŷ-draw in relation to earlier field lynchets.



Fig. 2. Tŷ-draw in 1952, viewed from the south-west, with the hill-slope of Mynydd Mawr to the left.
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Fig. 3. The same view in 2001, showing the seriously dilapidated condition of the building.
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a windbrace, cruck spur, raking struts and sill-beam, is dated to summer 1477 and the winter 1479/80. A repair phase, obtained from the wall-plates, is dated to summer 1641 and winter 1641/42.⁶

Smith and Hague concluded their report by recommending that ‘we would like to see such a worthy structure preserved in some way, as it is a superlative example of medieval craftsmanship’. Smith wrote formally to Lord Raglan (President of the National Museum of Wales) suggesting that it would make a splendid acquisition for the Welsh Folk Museum, as a monument to Welsh medieval craftsmanship. However, although Iorwerth Peate (Curator of St Fagans) looked at Tŷ-draw, he was not sufficiently impressed to take steps to acquire it for the museum.⁷ Leonard Monroe (formerly of RCAHMW), a Ministry of Works architect, visited Tŷ-draw in July 1959. He reported that it was ‘greatly to be deplored that this house has been allowed to pass into its present ruinous condition, with the timbers decaying, the walls crumbling and the roof timbers sagging’.⁸ He recommended that if Tŷ-draw was taken into the care of the Ministry, ‘it should be restored to its original condition and form’, as had been the policy at Tretower Court. The cost of restoration was estimated at £15–20,000. There was no action.

Sadly, the building continued to deteriorate for almost half a century before any remedial action was taken. In 2002 planning permission was granted by Powys County Council for the construction of a house designed by the architect Graham Moss which would incorporate as much as possible of the original timbers. A programme of archaeological excavation and recording was carried out by CPAT in October and December 2002 and January 2003 with the help of grant aid to the developer from Cadw. Recording of the surviving timberwork *in situ* was undertaken by the architect and by CPAT before removal to a temporary shelter on site for protection and repair work, and while in storage further recording of the timbers was undertaken. Renovation of the building was completed by 2005 (Fig. 21). Copies of the plans of the restored house have been retained with the project archive which has been retained by CPAT for the time being.

A new interpretation of the form and significance of Tŷ-draw has emerged from recent excavation and recording work both here and elsewhere in the Welsh borderland, most notably at two other hallhouses in northern Powys—Tŷ-mawr, Castle Caereinion⁹ about 24 kilometres to the south-east, and Tyddyn Llwydion near Llanrhaeadr-ym-Mochnant,¹⁰ about 3 kilometres to the south-west (see location on Fig. 15). This paper first describes the plan and structure before attempting to place Tŷ-draw in its social and landscape contexts. An appendix discusses animal stalls in Welsh longhouses.

RECORDING AND EXCAVATION AT Tŷ-DRAW

By William J. Britnell

This section attempts to combine results of recording by Peter Smith and Douglas Hague in the 1950s with evidence visible on photographs taken in the 1950s and information derived from further building recording and excavation in 2002–03. For ease of description the long axis of the building is taken to lie north–south, with the upper end to the north, though in reality it lies north-east to south-west. The plan and elevation drawings in Figures 4, 5 and 10 are based partly upon those published in 1958, partly on photographs taken in the 1950s, and partly upon a closer examination of the surviving timberwork made possible following dismantling. For convenience in this report the four bays of the longhouse (Fig. 4) are numbered 1–4 from the upper (northern) end, though to avoid confusion the numbering of trusses in the original report (A–E) from the southern end has been retained. By the time the more recent recording work was undertaken, Truss D had entirely disappeared and only the foot of the western cruck of Truss E survived *in situ*, this wall having recently been replaced by a wall of concrete blocks.

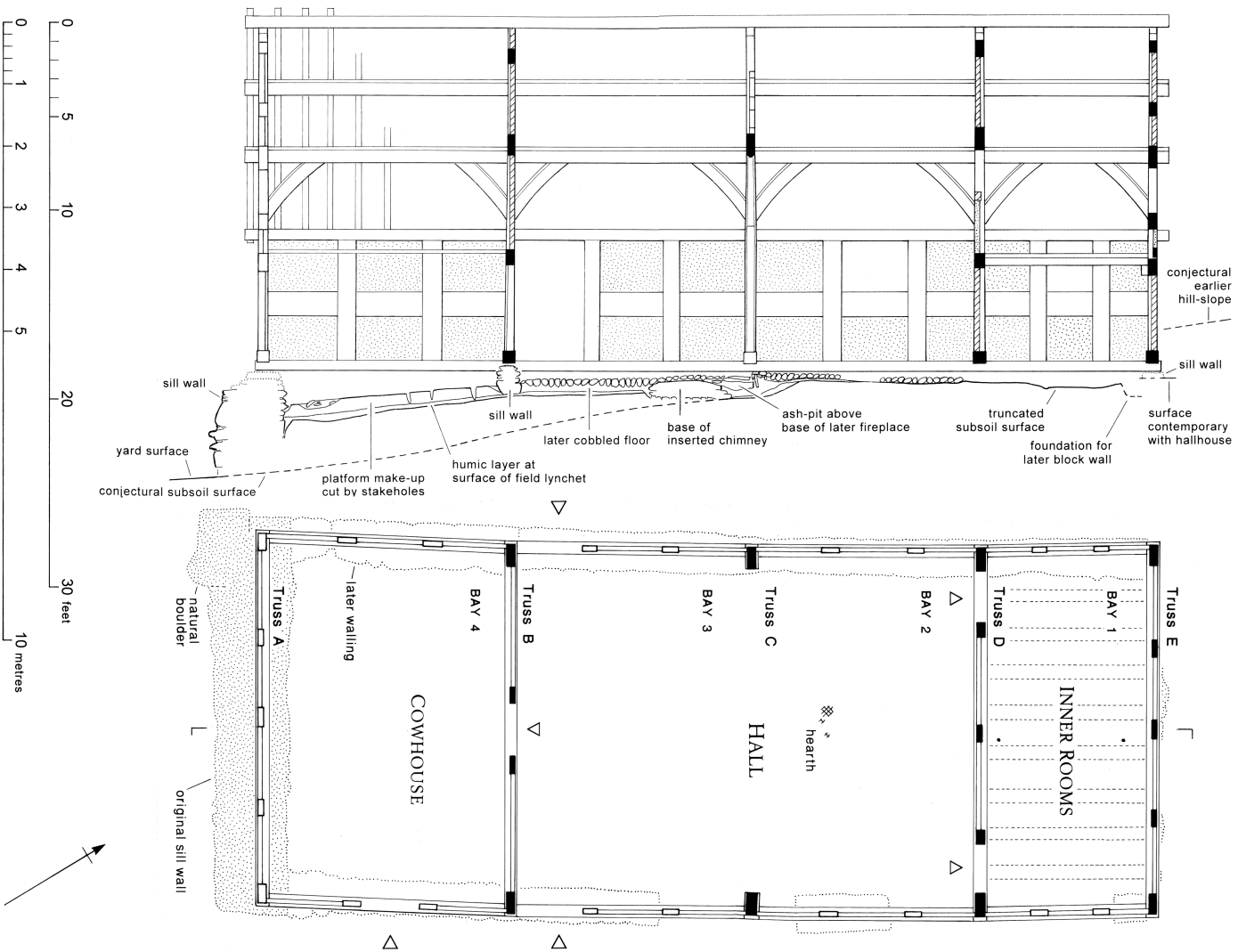


Fig. 4. Conjectural plan and long section of the original hallhouse superimposed upon a reconstructed section of structures and layers recorded during excavation in 2003.

A detailed catalogue of finds from the site is contained in the site archive, but the great majority are from late or poorly stratified contexts. Few finds have any intrinsic interest and are only mentioned in this report where they have a bearing on the dating of various periods of use. Only two sherds of pottery (both green-glazed, in an orange/red sandy micaceous fabric) were found that may relate to the primary occupation of the hallhouse, neither of which came from secure stratigraphical contexts. Excavation records, records of surviving timberwork, and an archive of photographs derived from recent photographic survey have been retained by the Clwyd-Powys Archaeological Trust. Finds have been deposited with the Powysland Museum, Welshpool.

Siting: the earlier field lynchet underlying the house

Smith and Hague noted that Tŷ-draw 'stands on a levelled platform, partly excavated out of a hillside and partly built up on a stone base, the main axis being at right-angles to the contour'. Excavation has shown that the platform is partly composed of a pre-existing field lynchet (Fig. 1) representing a more extensive complex of ancient fields which pre-dates the modern field pattern (Fig. 18, discussed below in the section on Tŷ-draw's landscape context).

The house overlaid one end of a strip field up to about 20m wide and 80m long running roughly along the contour of the hill below the trackway. The surface of the field slopes by about 3m across its width, having been cut into the slope by ploughing to a depth of a metre or more on the uphill side and built up by the gradual migration of ploughsoil on the downhill side. A second field terrace extends about 15m further down the slope. Excavations both inside and on the western side of the building (Figs 4, 10) showed that the lynchet at the lower end of the house is formed of a layer of dark yellowish-brown ploughsoil 0.8m thick which became more humic towards the top of the layer.

A limited examination of the pollen record from two pollen columns taken from the lynchet deposits beneath the house at Tŷ-draw was undertaken by Astrid Caseldine of the Department of Archaeology, University of Wales Lampeter.¹¹ The results suggest that cultivation was taking place immediately prior to the construction of the house, with no conclusive evidence to indicate that there was an intervening period when the land was abandoned for pastoral use, though because of the possible movement of more recent pollen down the profile, differential pollen preservation and faunal mixing, the results must be treated with caution. There was some evidence to suggest a more wooded landscape, predominantly alder but with some oak and hazel, prior to cultivation and the development of the lynchet.

A large irregular boulder about a metre across below the south-west corner of the building (Figs 2–3), at the foot of the lynchet at the lower end of the building, is one of a number of large erratic boulders in the locality and seems likely to have been rolled into this position during field clearance, perhaps in an earlier, pioneering phase of agricultural activity. The beginning of this phase of activity is undated, though a significant period of cultivation is implied by the depth of soil carried downhill by the plough.

The late-medieval hallhouse

Survey and excavation now shows that the original building had a central two-bay open hall flanked at the upper end by a storeyed accommodation bay, and by a cowhouse at the lower or southern end. The elements of the late-medieval cruck-built hallhouse that survived until recently comprised in summary: the sill wall at the southern end of the building; Truss B and the sill wall below it; Truss C; the sill-beam and part of the lower end of the western cruck of Truss E; various floor deposits, particularly within Bays 3 and 4, towards the lower end of the building. As noted by Smith and Hague, there is no field evidence for the existence of any detached buildings associated with the hallhouse at any period of its existence.¹²

The original drystone sill wall at the southern end of the house, which was up to 1.2m thick and 1.5m high, acted as a foundation for the later end wall of a bay with ventilation slits (Figs 2–3). As noted above,

the sill wall incorporated a large boulder, showing signs on the outer face of having been roughly dressed, which coincided with the lower edge of a pre-existing field lynchet. The rest of the southern sill wall had up to about ten courses of stone, mostly composed of large rounded boulders probably also derived from field clearance. None of the original framing of the side walls had survived, and the original sill walls had evidently been dug away for the foundations of later stone walls. Low drystone sill walls, about 0.25m high and composed of two or three courses of small rounded stones, again probably derived from field clearance, still survived below the sill-beams of the northern end wall, Trusses B and E (Figs 5, 10). The top of the sill wall below Truss E at the northern end of the building was about the same level as those at the southern end of the building and below Truss B, suggesting that the original timber-framed building was fairly horizontal throughout its length.

Upper-end truss

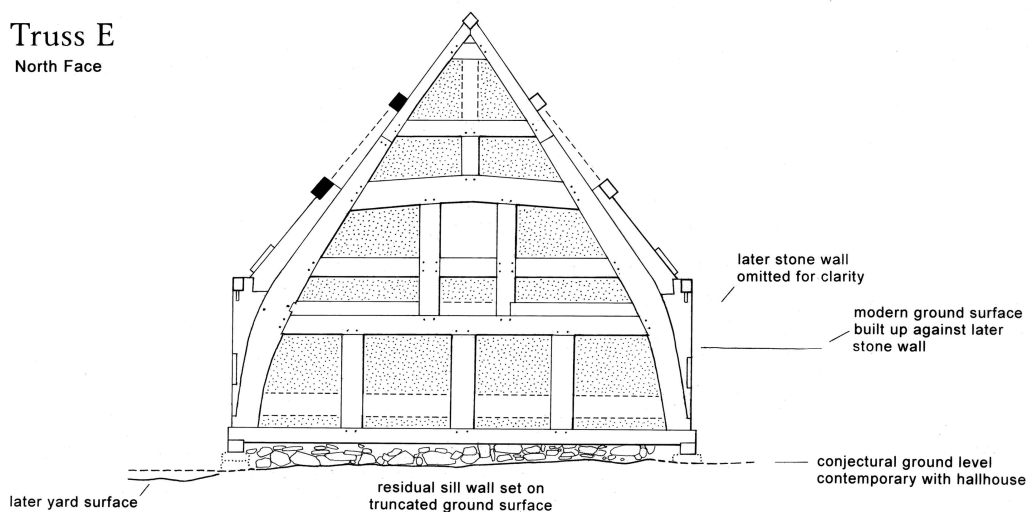
Truss E (Fig. 5) had largely disappeared some years after it was recorded by Smith and Hague, apart from part of the sill-beam and the foot of the cruck and vertical wall-post on the west side. Photographic evidence indicates that the eastern wall-post had already disappeared by the 1950s, but it probably resembled the western post. Like the western wall-post attached to Truss C (Fig. 10), it appears to have been broad at the top and fitted to the upper surface of the cruck blade. The cruck blades, which (unusually) had both been extended by additional timbers above the collar, were linked by a tie-beam and two upper collars with vertical posts between, probably defining a first-floor window opening to light a chamber over the parlour. The panels were filled with wattle and plaster panels which replaced the original wattle and daub infill. The truss seems to have undergone considerable repair and alteration, and possibly included reused material from the missing lower end gable, including the three vertical posts below the tie-beam. The only mortises visible in the surviving sill-beams corresponded to these three posts. Assuming that the sill is original, there is no evidence for the closer studding recorded in the upper bays of a number of other hallhouses in the region.¹³ Smith and Hague considered that the tie-beam might not be original since there were no mortises for floor joists corresponding with those in Truss D. The tie-beam would have been too low to support level floor beams, however, which suggests that the northern ends of the floor joists were supported by an additional bridging beam at a slightly higher level which rested on the wall-plates to either side and butted against the inner face of the tie-beam. The tie-beam was said by Smith and Hague to have been reinforced by an additional beam directly above it (reconstructed on Fig. 5 from photographic evidence) which appears to have formed part of the original structure and which may have acted as a blocking piece set against the suggested bridging beam. Smith and Hague reconstructed a low middle rail, below the level of the middle rails along the side walls, which appears to be confirmed by what survived of the base of the western cruck of Truss E.

Dais-end truss

Truss D (Figs 5–8) had been removed on some unknown occasion since the 1950s. Both the illustration and description of the truss are necessarily based upon the account by Smith and Hague. Stub tenons at the base of each of the crucks were held by mortises in the transverse sill-beam which was attached by a lap joint to the sill-beams of the side walls, none of which had survived. Photographs (e.g. Fig. 8) show that the sill-beam was supported on the remnants of a low wall of one or two courses of stone, but this had disappeared along with the truss before the recent recording work was undertaken. The framework of the truss was composed of the cruck blades, tie-beam and collar with vertical posts between them, and a short upper piece probably tenoned into the crucks at the apex of the roof. Fitting into the curve of each blade was a pointed arched doorway, the jambs having ‘hollow’ (concave) chamfers on the hall side,

Truss E

North Face



Truss D

North Face

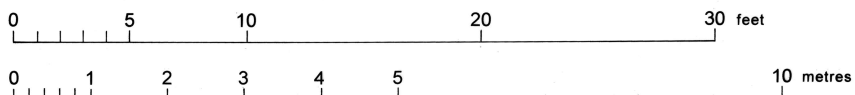
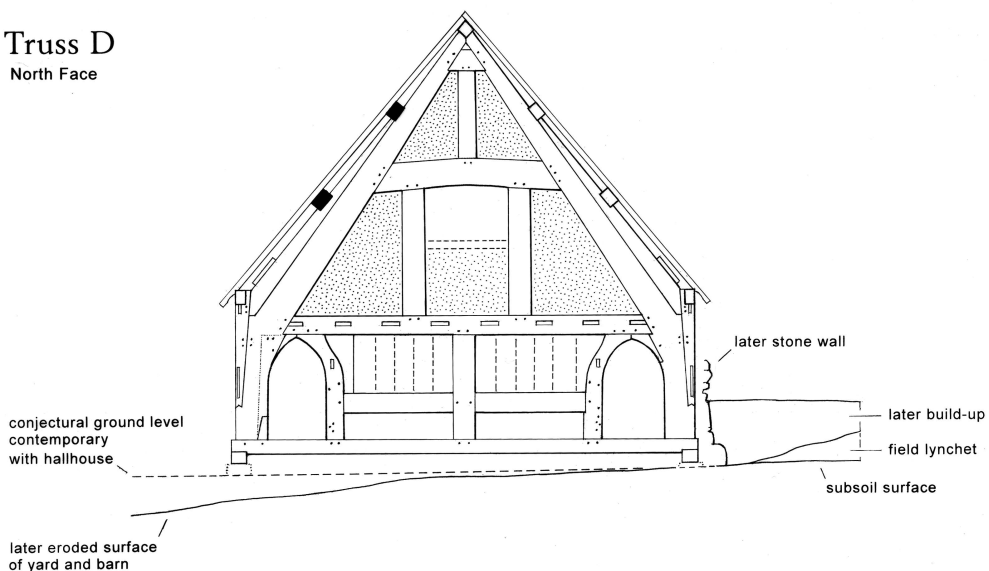


Fig. 5. Reconstruction of the upper-end truss (Truss E) and dais-end truss (Truss D). Truss E is largely based on the drawings by Smith and Hague (1958) with additional detail from photographs taken in the 1950s and on recording work in 2002–03 when the sill-beam, sill wall, and the foot of the western cruck were identified and recorded. Truss D is based entirely on the drawings in Smith and Hague (1958).

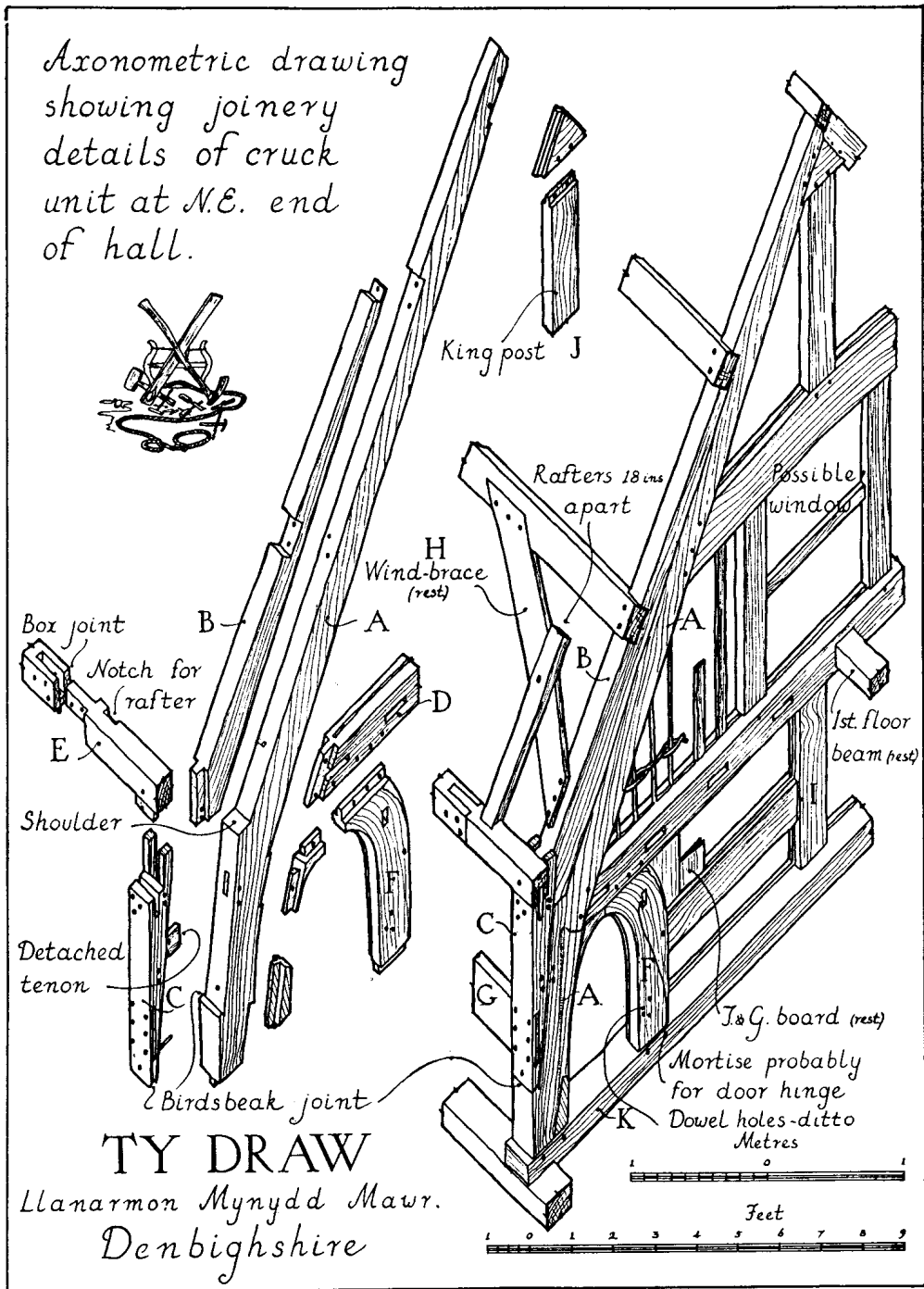


Fig. 6. Joinery details of Truss D by Douglas Hague, from Smith and Hague (1958).

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Fig. 7. Dais-end truss from the inner bay, looking south. View of part of the western end of the north face of Truss D, with the western doorway to the right and the mid-rail and tie-beam with mortise holes for the floor beams to the right, photographed in the 1950s. Part of the arch-braced central cruck-truss (Truss C) is visible beyond. © Crown Copyright: RCAHMW.

similar to the moulding on the arch of Truss C (Fig. 7). Access to the upper bay involving stepping over the raised sill. A previously published drawing (Fig. 6) shows that an additional fillet of wood had been added to the foot of the inner face of the eastern cruck in order to give vertical door jambs, probably compensating for inadequacies in the size of timber used for the cruck. Photographic evidence suggests that a similar piece had also been attached to the western cruck. Possible hinges for doors opening into the upper bay were represented by upward-slanting mortices towards the top and arrangements of peg holes towards the bottom on each of the door jambs towards the centre of the building (Figs 6–7). The tie-beam had mortises in its northern face for the joists of an upper floor in the inner bay. Grooves in the

framing (the central vertical post and middle rails, the sill-beam and the soffit of the tie-beam) indicate that the panels between the doors had been filled with vertical boards, described by Smith and Hague as ‘a form of tongue and groove panelling’, with one board surviving above the middle rail, abutting the eastern doorway. Applied to the southern side of the middle rail were two boards, butt-jointed at the central upright post, described as decorated with ‘coarse beads and blind crenellation’, having a roll moulding at the top and one hollow and two roll mouldings at the base (Fig. 8). The dating and significance of these decorated boards, which enhanced the upper, dais end of the hall, are discussed below. With the exception of a possible window opening in the upper half of the panel between two studs above the tie-beam, the rest of the upper framework was slotted and augered to take wattle and daub panels.

Central ‘open’ truss

Truss C (Fig. 10) is described by Smith and Hague as ‘the most ornate, as is demanded by its conspicuous position over the hall’, and together with Truss D was said to be ‘distinguished by the high quality of their workmanship’. It has an arch-braced collar-beam supporting two cusped struts. The arch has a moulding of hollow chamfers with a carved floral boss at the centre of the soffit of the arch (Fig. 10). The foot of the western cruck blade, which was better preserved than that on the east, had a stub tenon fixed into a



Fig. 8. Dais-end truss, looking north. The lower central portion of the south face of Truss D, photographed in 1952, showing the crenellated boards applied to the middle rail. © Crown Copyright: RCAHMW.



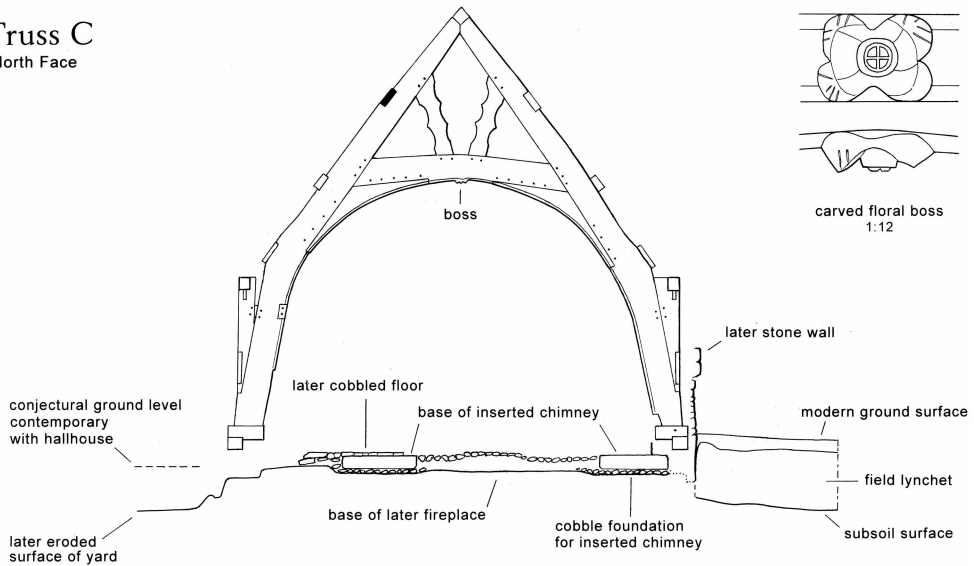
Fig. 9. Carved floral boss at the centre of the soffit of the central open truss. *Photograph: CPAT CS02-013-024.*

short transverse beam which had been sawn off more or less in line with the inner face of the cruck. This had a lap-joint on its lower face, showing that it had been attached to the sill-beam below the west wall. It seems unlikely that the sawn-off beam formed a permanent sill subdividing the hall,¹⁴ though it may represent a temporary sill locking together the base of the two crucks during construction and largely removed once the cruck had been raised into position. Notches on the inner faces at the base of the two crucks suggest that (as in the case of foot of the eastern cruck of Truss D) additional fillets of wood may have been added to complete the lower curve of the arch. A lap-joint with peg holes about 1.5m above the base of the eastern cruck seems likely to represent a later doorhead, contemporary with the inserted chimney noted below.

Passage-partition truss

Truss B (Fig. 10) had been set on a low wall about 0.4m high with up to four or five courses of small stones and pebbles. Some of the stones were pointed with a lime mortar, suggesting that the wall had been repaired and its foundations possibly deepened at a later date. The framing indicates a plain central doorway through the truss, across the high sill-beam, represented by vertical posts between sill-beam and tie-beam, with missing middle rails between the door posts and the crucks and a missing vertical central post above the lower tie-beam. Smith and Hague noted that one of the cruck blades (the eastern one) was insufficiently long and had been extended by 'another piece fitted on to give it sufficient length to reach the ridge which is given an additional support in the form of a post standing on an upper collar'. Re-examination of the surviving timberwork suggests that in fact the tops of both cruck blades were mortised into what is in effect a short king-post which probably supported the ridge beam. The similarity of this arrangement to the apex of the corresponding truss at Tyddyn Llwydion hallhouse, Montgomeryshire,¹⁵ suggests that it may have been a device to allow smoke to escape from the apex of the southern gable without weakening the roof structure at this point. As in the case of Trusses D and E, packing pieces had been inserted above the crucks to carry the purlins, but in this instance it is uncertain how they were attached to the wall-posts. The central opening was about 0.8m wide, and though considered unusually wide for an ordinary doorway by Smith and Hague is only marginally bigger than the doorways in Truss

Truss C
North Face



Truss B
North Face

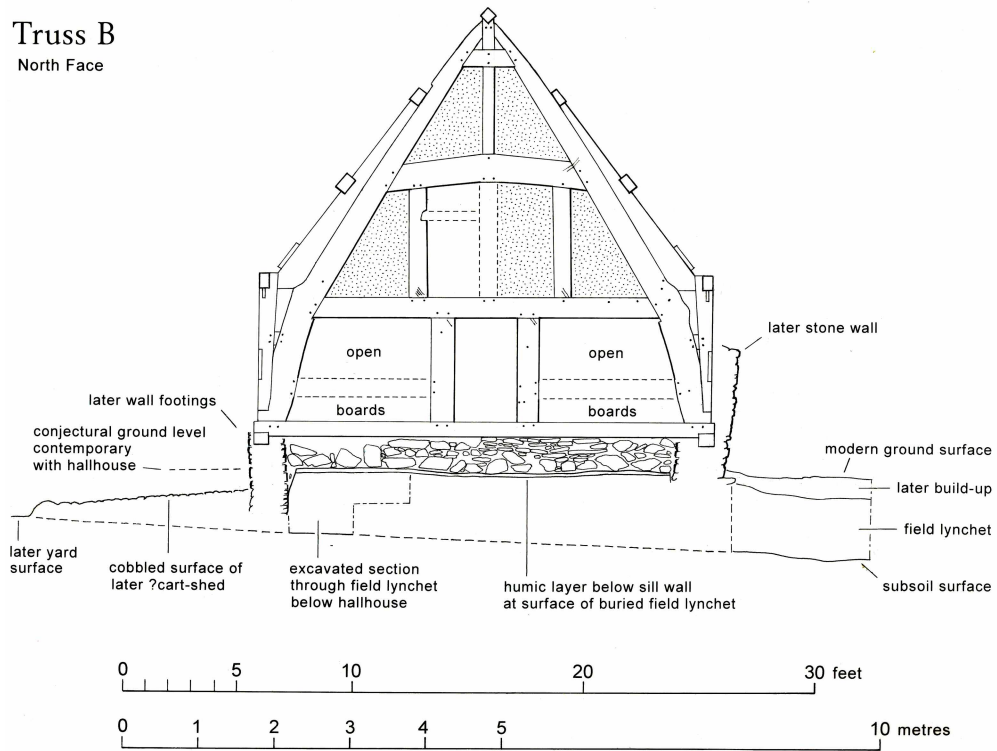


Fig. 10. Central truss (Truss C) and passage-partition truss (Truss B), based upon recording work in 2002–03 with the addition of some details from Smith and Hague (1958).

D. There is no clear evidence of door fittings apart from several peg holes in the posts defining the doorway. The absence of stave holes or grooves in the soffit of the tie-beam indicates that the upper panels below the tie-beam to either side of the doorway were left open. A broad groove in the upper surface of the sill-beam, about 30mm deep and 60mm wide, indicates that the lower panels to either side of the door were filled with one or more horizontal boards. Smith and Hague were puzzled by the lack of evidence for infilled panels, quoting the view that 'drapery hangings may have served instead', or alternatively that the building 'was abandoned when incomplete'. It is now clear, however, that the building belongs to a distinct class of late-medieval hallhouses in the Welsh borderlands having open feeding panels between a cross-passage and a cowhouse at the lower end (discussed in greater detail below). This is confirmed by the evidence for animal stalls found during the excavation of the lower bay at Tŷ-draw (Bay 4, see below). Stave holes in the upper surface of the tie-beam, in the upper and lower faces of the collar and short upper collar, and on the lower face of the crucks show that the panels above the tie-beam (with the possible exception of those at the apex of the roof) were filled with wattle and daub, though a mortise in one of the upright beams above the tie-beam suggests that there may have been an original opening here. There is no other evidence that the lower bay had an upper floor but it seems unlikely that this space would have remained unused, providing valuable dry storage space for hay throughout the winter. It therefore seems probable that a floor was laid on transverse bridging beams set between the wall-plates along either side of the building. This loft would have been reached via a ladder placed in the passage whenever access was needed, as the doorway above the tie-beam of the truss shows (Fig. 10).

The timber used for the crucks was fairly narrow and consequently (as noted by Smith and Hague) standing on or next to the outer face of each cruck, and jointed to it by means of a free (detached or slip) tenon, were wall-posts tapered to the base which carried both the middle rail and the wall-plate. In some instances the relatively deep middle rails were tenoned and in other instances they were trenched into the cruck blades. The wall-plates were fixed by means of free tenons held by slots in the tops of the upright posts. Smith and Hague's reconstruction of the side walls of the building was made upon the basis of the surviving wall-plates which are now known to be secondary, having been shown by tree-ring dating to date from about 1641—over a century and a half later than the construction of the original hallhouse. Since, in addition, neither of the original sill-beams along the sides of the building survived, direct evidence for the reconstruction of the side walls is limited to the jointing for the middle rails in the surviving wall-posts. In the conjectural long section presented in Figure 4 the position of external doors and windows is made upon the basis of evidence recovered during excavation and upon analogy with similar hallhouses within the region, discussed more fully below.

Evidence of the original roof is provided by the housing for the original trenched purlins, some of which survived. In the case of the large open truss (Truss C), the purlins were set into the upper surface of the cruck blades. The timber used for the other surviving crucks was inadequate for this purpose and in these instances the purlins were carried by additional packing pieces pegged to the upper face of the crucks. In some instances these were let into a shoulder cut into the top of the cruck and supported at their lower end by tenons let into a slot cut into the top of the wall-posts, alongside the wall-plate (see Fig. 6). As Smith and Hague noted, only the lower purlins are original. Several fragments survived which had mortises for windbraces whose lower ends would have been trenched into or pegged to the top of the crucks or to packing pieces set on cruck blades. Peg holes in the face of the original purlins indicate common rafters spaced at approximately 0.4 metre intervals (Fig. 4). No evidence of original roofing material has survived, but this is likely to have been thatch since slates were not recovered from contemporary deposits during excavation.

As Smith and Hague noted, various details were designed to enhance the focal significance of the dais (northern) end of the hall. Though much of the timberwork was plain, Truss C was more ornate, with a

carved floral boss on the soffit of the arch (Fig. 10). The fair faces of Trusses B and C were arranged to be visible from the upper end of the hall, and the prominence of the dais partition (Truss D) was further emphasized by the boards with carved crenellations and mouldings, noted above, applied to the middle rail. Carpenters' marks are present on the northern faces of Trusses C and B, and have been partly recorded (Fig. 10). No prop sockets, which might assist in reconstructing the order in which the building was erected, have been noted on these two surviving trusses.

There is no other evidence that the floor level inside the building was levelled up to the bottom of the sill-beam, as Smith and Hague proposed.¹⁶ Instead, the sill walls along either side of the building probably increased in height both internally and externally, this having the practical benefit in the case of the lower cow-bay of affording some protection to the wattle and daub infill panels.

As well as taking advantage of the earlier field lynchet, an attempt was made to level up the floor surfaces inside the building by cutting into the slope at the upper end and by building up at the lower end (Fig. 4), a procedure closely paralleled at the excavated hallhouses at Tŷ-mawr (Castle Caereinion) and Tyddyn Llwydion.¹⁷ The sill wall at the northern end of the building was thus set on the truncated subsoil surface, which must also have formed the floors in the upper part of the house from about the position of open truss at the centre of the hall. The soil dug away from the upper end of the platform had evidently been used to build up the lower bay, where the earlier ploughsoil was sealed by a layer of about 0.2m of redeposited stony subsoil, the surface of which constituted the floor surface. It seems likely that the floor levels throughout the building were generally fairly level, though the floor surface in the lower bay—the cowhouse—dropped by about 0.25m from north to south, which may have been designed to improve drainage.

The original floor level in Bay 1 had been severely eroded, particularly on the eastern side and no original floor surfaces survived. The only features identified here were several stakeholes, two of which (shown on Fig. 4) fall along the axis of the building and may possibly represent an original partition wall (see Fig. 12). No evidence was found for access to the upper floor of this bay, either by permanent stairs or by a removable ladder. The original floor level had again been disturbed in Bay 2 when a chimney was inserted and a cobbled floor was laid in a later phase. However, several small patches of reddening were identified on the subsoil surface within an area about 0.2m by 0.6m across on the centre line of the building, just to the north of Truss C (Fig. 4), stratigraphically earlier than the fireplace associated with the later inserted chimney. This can be interpreted with reasonable confidence as the site of the original open hearth contemporary with the open hall. A small patch of compacted floor surface was identified close to the reddening which appeared to represent part of the original floor level within the open hall, the surface of which produced a single sherd of red slipware of eighteenth-century date. As far as the evidence goes, the reddening suggests a linear area of burning at right-angles to the long axis of the building, similar to the hearths identified at Tŷ-mawr (Castle Caereinion) and Tyddyn Llwydion.¹⁸ Much of Bay 3 had again been disturbed when the chimney was inserted and a new clay floor was laid.

The platform make-up in the lower bay had been partly disturbed by rodents, particularly around the margins of the outer walls, and had been repaired with patches of clay and small stones on a number of occasions. About 300 small stakeholes were found penetrating the floor, represented either by voids, soil-filled sockets or by poorly-preserved surviving wood (Fig. 11), some of which penetrated into the ploughsoil sealed beneath the floor make-up. Some of the stakes were roundwood and some (perhaps a majority) were of split hardwood, many quite thin and pointed. The points of the surviving roundwood stakes were up to 20mm in diameter and those of the split hardwood stakes about 10–50mm across and 5–10mm thick. Twenty-seven wood samples from stakeholes in the lower cow bay were examined by Astrid Caseldine and Catherine Griffiths, University of Wales Lampeter.¹⁹ In a number of samples the wood was too poorly preserved to permit identification, but 9 samples were identified as oak

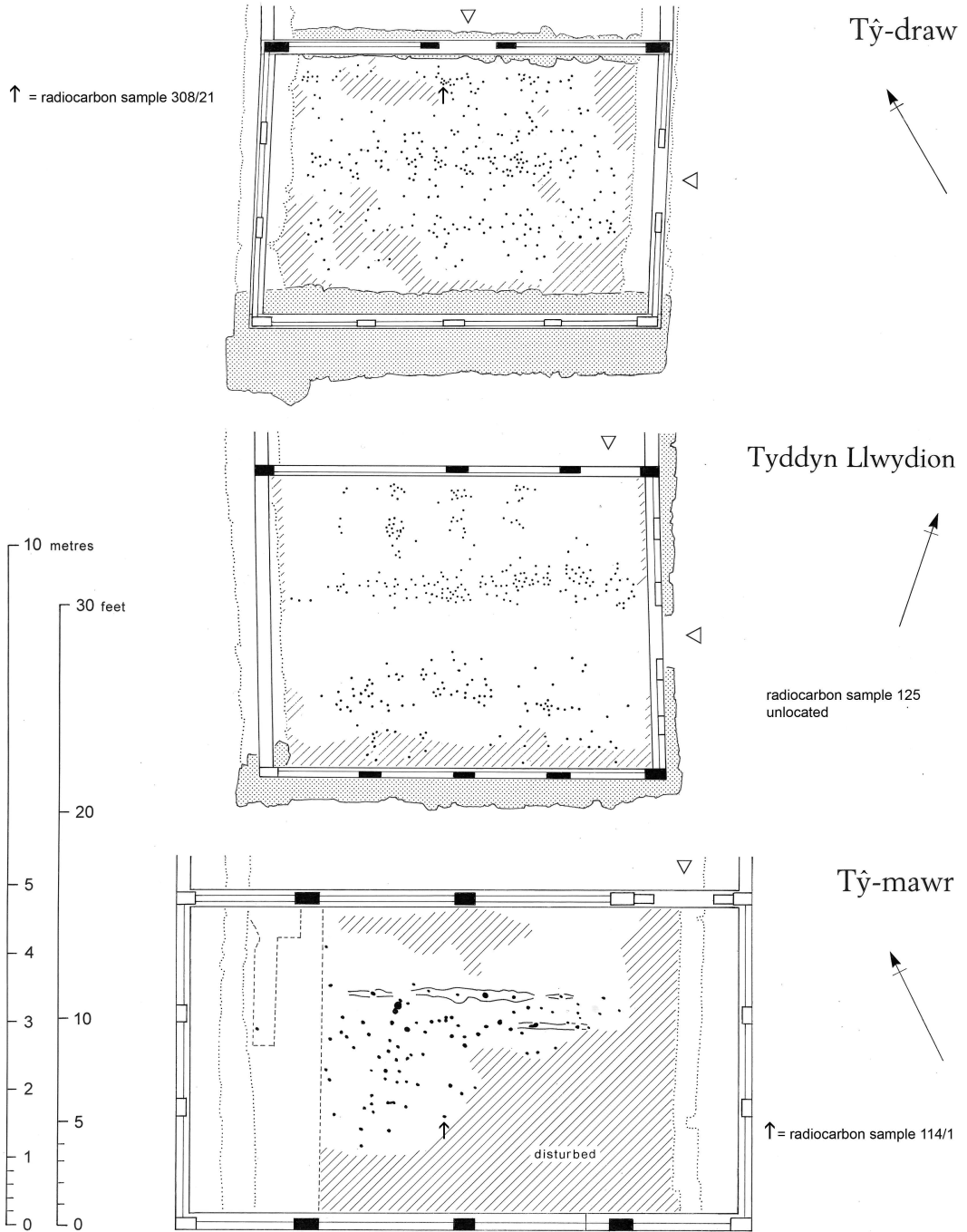


Fig. 11. Comparative plans of stakeholes in the lower bays of three Montgomeryshire hallhouse-longhouses—Tŷ-draw near Llanarmon Mynydd Mawr, Tyddyn Llwydion near Llanrhaeadr-ym-Mochnant, and Tŷ-mawr near Castle Caereion.

(*Quercus* sp.), 6 samples were identified as either definitely or probably willow/poplar (*Salix/Populus*), and 1 sample was identified as ash (*Fraxinus excelsior* L.).

Similar evidence was found in the lower bays of the related timber buildings at both Tŷ-mawr (Castle Caereinion)²⁰ and Tyddyn Llwydion (Fig. 11),²¹ where they were interpreted as representing animal stalls made of wickerwork hurdling replaced upon numerous occasions, providing accommodation for cattle overwintered under cover between about November and March/April. Further parallels are discussed by Eurwyn Wiliam in Appendix 1. The ends of one of the stakes from Tŷ-draw (the location of which is shown on Figure 11) has provided a radiocarbon date of 280±30 BP (SUERC-24511), which calibrates at 68.2% probability to between cal. AD 1520–1660, and at 95.4% probability to between cal. AD 1490–1800. For details of this radiocarbon date and radiocarbon dates of single stakes from Tŷ-mawr and Tyddyn Llwydion see Appendix 2.

As at Tŷ-mawr and Tyddyn Llwydion, it is likely that only a proportion of the original stakeholes have been recorded, but some patterning can be observed. Small clusters of stakes suggest wicker panels woven between uprights spaced between about 0.4–0.5m apart. Two rough lines of stakes, about 1.0–1.2m apart, suggest a transverse passageway from doorways in the middle of either or both of the east and western walls of the bay. These lines appear to define a broader bay up to about 1.5–1.6m across to the north, adjacent to Truss B, and a narrower bay between 1.0–1.2m wide at the southern end of the building, both of which may have been subdivided by further hurdles along the axis of the building. Three larger clusters of stake points just to the south of Truss B almost certainly relate to the western cruck blade and the two central doorposts of this truss and suggest that the end of hurdles may have been tied to these timbers in some way.

The doorways into the lower bay were needed not only for the movement and tending of animals but also for mucking out, a task perhaps undertaken at the end of the winter, when the hurdling may have been temporarily removed. The fact that stake settings appear to impede the doorways in both the northern and eastern walls of the lower bay suggests that layout of the stalls and the function of the doorways changed over time. The absence of internal drains at Tŷ-draw (as at Tŷ-mawr and Tyddyn Llwydion and indeed in the later phases at Tŷ-draw itself), shows that these were inessential: the sloping floor level in the lower bay was clearly sufficient to protect the central hall from contamination.

Later history of Tŷ-draw

Two major subsequent periods of use can be identified, the first involving the subdivision of the open hall by the insertion of a chimney and the possibly contemporary reframing of the walls in the 1640s, the second the conversion of the former hallhouse to an agricultural range and the addition of a dwelling at the northern end of the range by about the 1750s (Fig. 12).

The mid-seventeenth-century house

In the first of the later periods a fireplace was inserted into the former open hall, creating a three-unit house with lobby entered via doorways in the east and west walls (the old cross-passage), and probably still with a cowhouse at the lower end whose floor remained unchanged. The early floor surfaces on the western side of the building had been cut through for a stone chimney base, subdividing the central hall into two unequal halves more or less on the line of Truss C. The surviving lowest courses of the fireplace, made up of large horizontal stone slabs up to 0.4m by 1.3m across and bonded with lime mortar, were laid on a foundation layer of pitched cobbles set in a U-shaped foundation trench and built around the western cruck blade of Truss C (Fig. 13). The upper part of the chimney and possibly the lower side walls were probably timber-framed. The fireplace heated the hall/kitchen to the north, and had a cobbled floor which at one period butted up against an ash-pit edged with vertical stones set towards the rear of the



Fig. 12. Suggested phasing and development of Tŷ-draw.



Fig. 13. Interior of the open hall during the course of excavation in 2002 (following removal of the surviving crucks), viewed from the north, showing the base of the inserted fireplace. Note on the right-hand side that the partially-surviving slabs representing the basal courses of the fireplace overlie a pitched cobbles set in a U-shaped foundation trench and are in turn overlain by later walling on the northern side of the building. Scale 2m. *Photograph CPAT 1321.4.*



Fig. 14. Later cobbled and slab floors in Bays 2 and 3 (not shown on the published plans), concealing the foundations of the inserted chimney. The far sill wall divides Bay 4 from Bay 3 and is on the line of Truss B. The 2m ranging pole in the foreground is on the line of Truss D. *Photograph CPAT 1319.2.*

fireplace. A new clay floor was laid in the cross-passage which formed a small lobby to the south of the fireplace.

It seems likely that the chimney was inserted at the same time as the wall-plates were replaced and the side walls reframed, which tree-ring dating has shown was carried out with timber felled in 1641/42. Mortises for studs and stave holes for wattle and daub panels on the underside of the wall-plates provide evidence for the position of external doorways at this period (Fig. 12) which probably show continuity from the earlier hallhouse. Shallow stave holes on either side of the building at the southern side of the lobby in Bay 3 suggest small wattle and daub panels above door-heads, corresponding with the suggested cross-passage of the earlier hallhouse. The absence of stave holes in the middle of the east wall of the lower cowhouse indicate a tall doorway in this position. It is unknown whether there was access to the cowhouse directly from the lobby during this period, but as noted above a doorway between the lobby and the living room is probably indicated by a lap-joint in the eastern cruck blade of Truss C. The western doorway in Truss D may have been blocked at this period, if not earlier, as indicated by the presence of grooves and holes for wattle infilling. The lack of wear on the threshold of this doorway suggested to Smith and Hague that the door had been blocked fairly early in the life of the building. There is again no evidence of the roofing material at this phase though it probably continued to be thatch.

The mid-eighteenth-century house

The next and last period of use probably represents a number of discrete phases involving the demolition of the chimney, the conversion of the building into a stone-walled and slate-roofed agricultural range with a new stone-built dwelling at the upper end, both of which appear to be represented on a map of the 1750s (Fig. 17). It seems likely that because the southernmost truss (A) is missing, this south gable was the first of the outside walls to be replaced in stone. The gable wall, with ventilation slits and built of quarried stone, was superimposed upon the existing southern sill wall of the timber-framed building, possibly whilst the three-unit house with fireplace to the north still remained in use. The side walls, erected after the demolition of the chimney, were generally thinner and founded on two rows of orthostats, one below the inner face and one below the outer face of the wall, with packing between, which totally removed the earlier sill walls. The side walls were composed of a mixture of material that included some freshly-quarried material, stone probably obtained from field clearance, and some reused material—parts of the southern wall, for example, were composed of burnt stones that had clearly come from the demolition of the chimney. Reused mortar from the demolition of the chimney had been spread over the floor of the former lobby in Bay 3 and used as a foundation for a cobble floor covering in this bay, separated from Bay 2 by a partition wall founded on a sill-beam set on a low sill wall across the open cruck of Truss C (Fig. 14). One doorway (later blocked) was left on the line of the former cross-passage in the western wall and four new openings were created to the east, allowing access to either side of Trusses C and D, the eastern ends of which were left exposed. The functions of the different bays are conjectural, but the lower bay was now probably used as a calf-pen or loose box, the two former bays of the hall as a cowhouse, and the upper bay was possibly a dairy or service-room for the added dwelling.

Partial clearance showed that the new dwelling built at the northern end of the range with freshly-quarried stone was about 4m by 5m across internally, with plastered walls, a cobbled floor, fireplace with oven and pivot stone for a pot-hanger in the north wall, and a door in the east wall (Fig. 12). Photographs taken in the 1950s indicate that dwelling, described by Smith and Hague as ‘probably a hovel to house a shepherd or a herdsman’, was lofted with single windows facing east in the ground-floor and first-floor rooms. Excavation suggested a lean-to structure, possibly a cart-shed, had also been attached to the south-east corner of the building, which probably accounts for the L-shaped plan of the building shown on the Tithe Map of 1839. This may have been timber-framed, set on a low stone sill wall, with a roughly

cobbled floor. An unpaved yard surface formed on the eroded subsoil surface was found on the eastern and southern sides of the building. The building is unnamed on the first edition of the 25-inch Ordnance Survey map of 1875, suggesting that it may have been uninhabited by that date. The building continued in agricultural use until the recent collapse prior to renovation.

TŶ-DRAW REVISITED

By Richard Suggett

The first person to look at Tŷ-draw with a professional eye was Bernard Mason, the National Buildings Record photographer, who recognised its importance and in 1952 took the splendid record photographs of the building now in the National Monuments Record for Wales, some of which are reproduced in this article (Figs 2, 7, 8) and in *Archaeologia Cambrensis*, volume 107.²² Some years later Mason told Peter Smith about his discovery, and in 1955 he and Douglas Hague (both then working for the Royal Commission on the Caernarvonshire *Inventory*) surveyed the building. The house was clearly of more than ordinary interest, and Lord Raglan and Professor R. A. Cordingley, founder members of the Vernacular Architecture Group, were invited to view it. Fox and Raglan had already published their pioneering study of medieval *Monmouthshire Houses* (1951) and Cordingley was an authority on timber construction. Fox and Raglan had identified the cruck-framed house with an open hall as a characteristic 'highland' house type. At Tŷ-draw it was realised that upland halls were scaled-down versions of aristocratic great halls, and distributed throughout the Welsh countryside. Smith went on to develop this insight with great authority in *Houses of the Welsh Countryside* (1975), identifying the three-unit hallhouse as a characteristic late-medieval 'yeoman' house type.

However, the dating of these structures was intuitive. Fox and Raglan had suggested perceptively that Owain Glyndŵr's revolt was 'an historical event of the greatest importance' when determining the chronology of houses in Monmouthshire, proposing that 'when opinion hovers between the late fourteenth and early fifteenth century as the date of a particular building (always a difficult problem), a date after the end of the revolt in 1415 is much more probable than one before it.'²³ Smith and Hague had this dating dilemma at Tŷ-draw but, following Cordingley, they considered that the house belonged to the end of the fourteenth century, partly because some features of the house appeared quite roughly finished in contrast to the refined timberwork of the greater part of the house. Indeed, Cordingley concluded that the house had never been finished. It was suggested that 'it is hence perhaps not being too romantic to put forward the hypothesis that Tŷ Draw was erected shortly before Glyndŵr's rebellion and abandoned incomplete because of this upheaval.' They considered that the sixteenth-century house nearby, Plas-yn-glyn, 'may represent the reoccupation of the farm and the district more than a century later', the old house being found unsuitable for conversion. It was felt that 'this would explain why the house has been so little damaged, why there are no farm-buildings such as would be expected to be associated with what was clearly the centre of an important farm, and why the later house was not built near its predecessor, which is usually the case.'²⁴ This was an attractive narrative but dendrochronology has since shown that it is chronologically impossible. We now know that Tŷ-draw was built two generations after Owain Glyndŵr's revolt. One of the crucks was felled in 1477 and the purlins, presumably the last structural timber to be secured, were felled in winter 1479/80. Tŷ-draw was therefore built during the War of the Roses, not long after the Crown had granted the lordship of Chirk to Sir William Stanley in 1475.

The plan of Tŷ-draw presented the original surveyors with some problems of interpretation. Fox and Raglan had established that their two-bayed Monmouthshire halls had upper and lower ends, but Hague and Smith initially had difficulty identifying the high end of the hall. It was concluded from the more

elaborate partition and the orientation of the best faces of the trusses that the dais was at the physically upper end of the building. But having established the orientation of the hall, a number of questions remained unresolved. The most pressing interpretative problems were the position of the cross-passage—whether inside or outside the hall—and the function of the end bays. The end bays were not symmetrical. It was concluded, in the absence of any direct evidence, that the lower-end bay was longer than the upper-end bay because it accommodated a cross-passage as well as a service area.²⁵ The upper-end bay was then interpreted as a solar.

Certain unusual features had suggested to the original surveyors that the hallhouse may never have been finished. The absence of infilling of the panels below the tie-beam of the passage partition (Truss B) was particularly striking. Moreover, the doorway in Truss B (which they thought was the entrance into the hall) was unexpectedly plain, and the backs of the arched doorways in the dais-end partition (Truss D) had a rough and incomplete appearance. In addition, ‘the floor level seems never to have been made up . . . to the level of the sill-beams’, and Smith and Hague found it ‘impossible to believe that it has merely been washed away.’²⁶ A number of other features taken to suggest that Tŷ-draw was incomplete would today be seen as unexceptional. Now, for example, it would be assumed that the sill-beams of Trusses B and D were set above floor level on a low stone wall rather than buried, as suggested in the 1950s. In addition, now that the building form can be seen to be multi-functional—combining both domestic and agricultural activities—it would no longer be essential to assume that the house was necessarily accompanied by other agricultural buildings.

In the half-century since the original survey was undertaken at Tŷ-draw some notable advances have been made in our understanding of the structural history, dating and social context of buildings of this kind, many detailed in Peter Smith’s authoritative survey, *Houses of the Welsh Countryside*. We know now that halls of this two-bayed cruck-framed type were characteristically built in the second half of the fifteenth century. So far about twenty sites have been successfully sampled by dendrochronology, the majority dating from between 1450–1525; Tŷ-draw falls in the earlier half of this distribution.²⁷ Significantly, Tŷ-draw can now be seen to belong to a small but distinctive group of late-medieval halls in the central borderland area having partition trusses with low, open panels between cross-passage and a lower byre or cowbay, the passage functioning as a feed-passage as well as affording the primary access to the house. Analogy with similar buildings elsewhere suggests that the byre would probably have been entered from a doorway in the middle lower bay, probably on the eastern side. The houses in this group seem to have been particularly well finished. More usually, passage-partition trusses (where they survive) tend to be less well finished, lacking the integrated partition found in heartland of the March.²⁸

Since Stanley Jones first proposed the interpretation of this type of truss as functioning in relation to a feed-walk, some fourteen examples of hallhouse-longhouses with low, open partitions have been identified.²⁹ This group of buildings currently has dendrochronological dates spanning a period of over a century between the 1430s and the 1550s, and covering a broad social spectrum ranging from high-status spere-truss halls and two-bayed ‘gentry’ halls to single-bayed ‘peasant’ halls. The range in social status of these hallhouse-longhouses from aisled hall to peasant dwelling is quite remarkable. However, the social range—which is also a chronological progression—illustrates the way in which lesser hallhouses were miniature versions of greater halls. The arrangements of a mid-sixteenth-century peasant hallhouse reflected the planning of a mid-fifteenth-century gentry hallhouse with open hall between storeyed end bays. It is not improbable that the fifteenth-century gentry hall in its turn may have reflected the planning of a high-status or aristocratic hall of the fourteenth century. It is certainly not incongruous that a gentry dwelling could have taken the form of a hallhouse-longhouse. The social importance of cattle in late-medieval Wales has to be appreciated, and the longhouse plan reflected the significance of cattle as a primary form of wealth. It is reasonable to suppose that for convenience and security the best

cattle and horses (both a form of capital) would be kept close at hand, especially when over-wintered. The hierarchical planning of the hallhouse made it appropriate that the cowhouse should have been located in the lower-end bay.

Excavation recently undertaken at two of the buildings within this group—the aisle-trussed hall at Tŷ-mawr (Castle Caereinion) and at Tyddyn Llwydion—has provided some evidence for the function of different bays which has confirmed and extended interpretations reached from an analysis of the surviving structural evidence, including simple open hearths on the earthen floors towards the middle of each of the original halls. At both sites patterns of stakeholes probably representing hurdling were found in the lower-end bays (Fig. 11), seemingly confirming that these bays were used for tethering stock (see the discussion by Eurwyn Wiliam below).

Carpentry and status

Tŷ-draw, as we now understand the house, is a classic three-unit hallhouse of longhouse type. It has an open hall of two bays set between inner and outer rooms, the outer room functioning as a cowbay. The carpentry, as Hague and Smith pointed out, is sophisticated, and in some respects more refined than the cruck construction recorded in Monmouthshire by Fox and Raglan. In particular, as Hague's explanatory drawing (Fig. 6) shows, the framing of the dais partition at Tŷ-draw employed a detached and hidden slip-tenon (labelled 'detached tenon' on Fig. 6) to join cruck blade with wall frame rather than the more obvious robust spur employed in Monmouthshire.³⁰ The upper-end (dais) partition, the central truss, and the passage partition have carpentry of a refinement that is not generally encountered even in other houses with two-bayed halls. The central truss is cusped, arch-braced and moulded, and has a boss—a stylised flower (Figs 9–10)—on the soffit of the collar. Bosses are a relatively rare type of ornament and only some twenty examples have been noted among several hundred surviving central trusses.³¹ Beyond the truss was the dais partition. The partition itself is unusual and does not have the partition of post-and-panel type which was generally favoured for the dais end.³² Instead there was a framed partition with a two-tiered arrangement of V-jointed panelling between the two pointed doorways. This partition formed the back of the dais seat and incorporated a 'mid-rail' (not in fact centrally placed) presumably so that the distinctive crenellated moulding already referred to could be applied to it. A moulding in this position is unusual but the evidence suggests that it is contemporary. A somewhat similar arrangement survives in Shropshire at Great Binnall, Astley Abbots, where a moulded rail with only a single row of crenellations has been applied to the mid-rail; the upper panels of the partition are coved.³³ The photographic record of the partition at Tŷ-draw (Fig. 8) shows two high mortices in the door-posts at either end of the screen with a series of vertical peg-holes below. These may have been used for securing the high bench ends, rather than fittings for the door. The seat would have been fixed into the bench ends, and no doubt supported by feet, but further securing peg-holes can be detected in the mid-rail. The crenellated moulding would have been positioned immediately above the level of the seat with the vertical timbers of the V-edged panels forming the high seat back.

The dais bench was the focus of authority in the hall. What was the significance of the distinctive moulded embellishment of the seat? Crenellated mouldings survive only in late-medieval buildings of high status and the crenellations may have conveyed an association with lordship. This moulding of blind crenellations become fashionable in the late fourteenth century and, like other popular high-status decorations, did not have a restricted geographical distribution but was generalised throughout England and Wales in the fifteenth century. The earliest tree-ring dated examples occur in Kent and have a single row of crenellations.³⁴ The moulding might be placed at both the low and (more usually) high ends of the hall. Several examples have been found in Wales, but it should be noted that the example at Tŷ-draw, which has four rows of staggered crenellations above a roll moulding, is the most elaborate. In

Radnorshire at Bryndraenog, tree-ring dated 1436, the moulding (two tiers of crenellations) occurs both at the passage and dais ends of the hall. At Upper Skynlais (Glasbury) the headbeam of the screens partition at the entry to the hall has two tiers of staggered crenellations. At Tŷ-mawr the ‘brattishing’ of the spere-posts may be a stylised form of this type of decoration. In ecclesiastical contexts the moulding may occur in the chancel as a cornice or ashlar applied to the wall-plate. Indeed the domestic mouldings are virtually indistinguishable from those used in ecclesiastical contexts and were presumably produced in the same carpentry workshops.³⁵

Tŷ-draw was a substantial house with refined carpentry, and there can be little doubt that a freeholder of high status commissioned the house in about 1480. The building was an assertion of status having a capacious hall of two bays, a refined central truss, and an elaborate dais bench with a crenellated moulding. Elsewhere, these dwellings with two-bayed halls have been described as ‘gentry halls’, but the term needs explanation.³⁶ Substantial freeholders were indeed sometimes styled gentlemen in contemporary documents but they might also be described as yeoman. Welsh freemen as a class referred to themselves as *uchelwyr*, literally ‘high men’ or men of elevated status. They had pedigrees which not only recited their genealogy but provided a kind of title to their inherited lands. There were usually only one or two men of this status in each parish and from this class were drawn the elite, truly gentlemen, involved in lordship administration. Occasionally in legal documents the *uchelwyr* (‘freeholders’) are referred to as franklins—freemen, or more broadly, in the definition of the *Oxford English Dictionary*, ‘a class of landowners ranking next below the gentry’.³⁷ A Welsh franklin like a yeoman of England would have owned and cultivated a small estate but there was a significant difference between them: the *uchelwyr* were conscious of themselves as a class with noble origins, and led an aristocratic lifestyle indulging in conspicuous expenditure, with the building of a durable hall as the most impressive act of consumption.

The Welsh *uchelwyr* were proud of their noble origins. The bards recorded their pedigrees and sang poems in praise of the *uchelwyr*, and many genealogies and elegies have been preserved. The sources for contextualising a late-medieval gentry house are potentially much richer in Wales than in England. Given the available poetry and pedigrees it should prove possible, in theory at least, to establish the family associations of a gentry hall. This is however easier said than done because there was an instrumental aspect to the preservation of genealogies. Genealogies might be preserved only in so far as they remained socially relevant. Genealogies (in the memorable image of a social anthropologist) tended to open and close rather like concertinas according to changes in fortune.³⁸ As families failed their genealogies were suppressed; as families prospered their genealogies expanded to connect with important lineages.³⁹ However, even when genealogies have been preserved it may not prove possible to link a specific family with a particular house. Houses were generally known as the *neuadd* (‘hall’) or *llys* (‘court’) of a particular owner rather than by a topographical name. In the absence of topographical names the linkage of houses and families can be difficult to establish, and where several *uchelwyr* families resided in a particular locality it may prove impossible to make a conclusive identification.

But that said, it is certainly possible to place Tŷ-draw securely in an historical context. Tŷ-draw lay in the township and chapelry of Mynydd Mawr (sometimes Mynydd Mawn) within the ringildry of Mochnant—Mochnant Is Rhaeadr being one of six commotes in the marcher lordship of Chirk. The history of the house is inseparable from a consideration of the tenurial history of the lordship. In 1391–93 an extent was completed for the lordship of Chirk.⁴⁰ All the gafaels (Welsh *gafaelion*, ‘holdings’) in the townships of the lordship were listed with the names of the tenants and the customary rents and dues. The tenements in the township of Mynydd Mawr (‘Menyth Mawn’) were recorded in two sections which distinguished between free and unfree tenures. The gafaels have names, some rather extraordinary, that may have originated in the twelfth or thirteenth centuries. The holdings are listed in this way: ‘Gavella

Jean Duy ap Mably. Gruff ap Jean Gethin, liber, tenent dictam gavellam & reddit' ('The gafael of Ieuan Du ap Mabli. Gruffudd ap Ieuan Gethin, freeman, holds the said gafael and renders'). There then follows a list of customary dues, amounting to 2s 8d in this instance.⁴¹

The status of the tenants was important. Only three of the tenants in Mynydd Mawr are distinguished as freemen: Iorwerth ap Philip, Madog ap Moilduy, and Gruffudd ab Ieuan Gethin. Gruffudd seems to have been the principal freeman in the vill, holding another gafael, 'Gavella yr Eurych' ('the goldsmith's gafael'), as well as other lands in adjoining townships.

The distinction between free and bond land was important. Some tenants (but not all) in this survey are called 'liber', that is a free tenant rather than a tenant at will or an unfree tenant ('nativus'). Llinos Smith suggests that some free tenants (like Gruffudd ab Ieuan Gethin) were consolidating estates by purchasing former bond land in the latter part of the fourteenth century and later. The rent rolls for Chirkland continued to try and distinguish between free and bond tenants in the Elizabethan period, but the situation was confused: in 1591 there were 28 tenants in Llanarmon Mynydd Mawr, many endorsed 'nat[ivi]' or bondmen, but the surveyor comments 'the tenure of this towne I like wise doubt'. In the following year the tenure of the township was noted as 'uncertain'.⁴²

Identifying the builder of Tŷ-draw

Is it possible to identify any of the gafael named in 1391–93 with Tŷ-draw? Identifying a gafael is fraught with difficulty. Named late-medieval gafael survived into the Elizabethan period in only a few instances. By a royal charter in 1506 partible inheritance and Welsh tenure was abolished in Chirkland, as among other northern Welsh lordships.⁴³ The historic names of the gafael fell into disuse, and holdings became known by the names of their owners (or tenants) and subsequently increasingly by topographical names, a process that seems linked with a more active land market. By the time of the late-Elizabethan surveys very few tenements retained their old gafael names especially as tenure was modernised, particularly under the earl of Leicester as lord of Denbigh (1563–88), and rents and services were extinguished and consolidated into a single payment.⁴⁴

Tracing a gafael forward in time from the late fourteenth century is often very difficult, despite the completeness of the late-fourteenth-century extent of Chirkland. In most cases there is little if any documentation between this survey, which is arranged according to gafael, and the 1569 survey, which is a list of tenants arranged by township. In most cases one has to work backwards rather than forwards to establish a chain of ownership. This is the case with Tŷ-draw. The starting point is the map of Mynydd Mawr ('Voel Vawr') of c. 1750 (Fig. 17) which shows the tenements on the south-western flank of the hill with their intermixed fields, and names the owner of the unnamed Tŷ-draw as 'Price Maurice, Esq.'. He can be identified as Pryce Maurice of Denbigh, a lawyer, the inheritor of the Lloran estate, who married Anne Owen the heiress of Ynysymaengwyn.⁴⁵ Tŷ-draw remained part of the Lloran-Ynysymaengwyn estate until its break up in the nineteenth century. The Lloran deeds were fortunately preserved as a group for their antiquarian interest by W. R. M. Wynne of Peniarth who assisted in the sale of the estate.⁴⁶ As it happens, two documents have survived which record the purchase of Tŷ-draw in the third quarter of the seventeenth century. Tŷ-draw was then called Tyddyn Rees ap Maddock ap Howell but its identity with Tŷ-draw is established by the continuity of names for the 'outground' of the holding (Table 1), that is, the land detached from the main holding.

In 1665/66 Edward Maurice of Glyn, esquire, bought from David ap Evan of Llanarmon a tenement called Tyddyn Rees ap Maddock ap Howell with certain parcels of named 'outground'. A supporting document explains that this tenement was the jointure land of Jane ferch David ap Howell (d. 1637) who had married Morus ap Rheinallt.⁴⁷ The marriage settlement had involved a marriage portion of £120 (six score), a considerable amount, and the jointure land (Tŷ-draw) settled by Morus's father, Rheinallt ap



Fig. 15. Location of Tŷ-draw in relation to the Berwyn mountain and the boundaries of the Chirkland and Mochnant and a number of places mentioned in the text. Source of boundaries: Melville Richards, *Welsh Administrative and Territorial Units* (University of Wales Press: Cardiff, 1969).

Morus David ab Ieuan. Tŷ-draw was evidently part of the family patrimony and Rheinallt's four-generational patronymic takes us straight back to the mid-sixteenth century. Can anything further be learnt of the family?

Rheinallt's grandfather, David ap Ieuan, is named as a free tenant of Mynydd Mawr township in the 1569 survey of the lordship, holding a tenement of 52 acres of land and paying 6s 7d rent. In addition he held a share in 'Gafael Ithel Goch'. He was one of two substantial free tenants in the township; the other, Hugh ap Morris ap Howel, was assessed for 60 acres and a mill, paying 8s 6d. It is in fact possible to

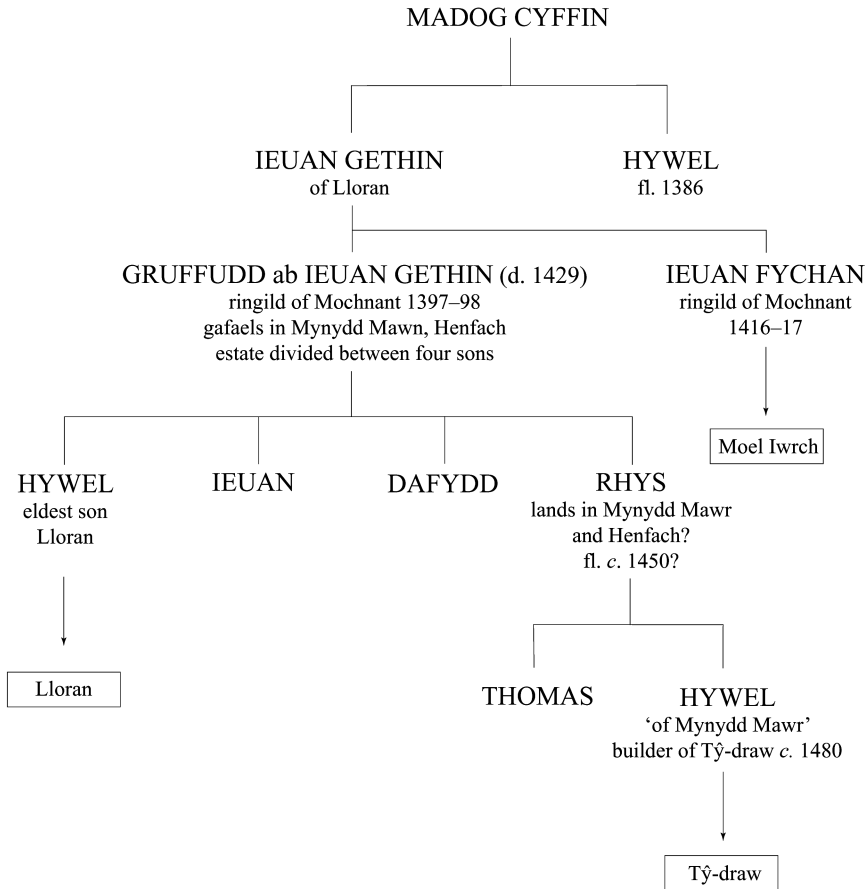
Table 1: Field-names of the ‘outground’ at Tŷ-draw

1665/66	c. 1750	1827
NLW, Peniarth NB 240	NLW, Chirk 5538F	NLW, Sale Catalogue Denbs 392
Y Paley	Pale Issa	Pala-nessaf
Erw Marred	–	Tir-Morfydd
Y Kay Hen ar Ynys	Dryll tan y Sarn (above ‘Ynys’)	Drill (not shown on map)
Erw yr Kyl	Cay Kiln	Kay-Kil
Erw Heer	Cae Hir	Dol-glan’r-afon
Y Palley yn y Glyn	Pale Ucha	Pala-pella
Other lands referred to in 1626		
NLW, Peniarth NB 181		
Y Priscoed	–	Bruscoed
Gwernyrillie	–	–
Y Tyr Talo	–	Tyr Tola

identify David ap Ieuan in the pedigree books. Only two families in Mynydd Mawr had sufficient status for their genealogies to have been recorded. One family, Lloyd of Mynydd Mawr, was associated with a holding called ‘gafael Madog Fychan’. The other family descended from Hywel ap Rees, a member of the Cyffin clan which was influential in Chirkland in the fourteenth and fifteenth centuries. Hywel ap Rees was the grandson of Gruffudd ab Ieuan Gethin (Cyffin) who held several gafaels in Mynydd Mawr (recorded in the Extent of 1391–93) which, it is now reasonable to conclude, included Tŷ-draw. These genealogical connections are best expressed by the following diagram (see p. 184).⁴⁸

Hywel ap Rhys is the first member of the family to be specifically described as ‘of Mynydd Mawr’ (‘Hywel o Fynydd Mawn’).⁴⁹ He may be assumed to have built Tŷ-draw after inheriting part of his father’s estate which had descended from Gruffudd ab Ieuan Gethin. It is possible that his name is preserved in the older name for Plas-yn-glyn, current in the seventeenth century, Tyddyn Hywel.⁵⁰

Hywel ap Rhys may have been the builder of Tŷ-draw but the family’s fortunes had been laid in the later fourteenth century by his great-grandfather, Ieuan Gethin, and his son Gruffudd. They were a clan with many branches who competed with other families for advantage in the lordship. Sir John Wynn’s comment is well known: the Cyffins and the Trefors were at ‘continual strife one with another’ contending for the sovereignty of the country.⁵¹ Llinos Beverley Smith singles out Gruffudd ab Ieuan Gethin and his immediate kin as exemplifying a successful family at commotal level. They held important offices in Mochnant: ringild of Mochnant, reeve of Llanrhaeadr, and forester of Mochnant.⁵² The family are well represented in the 1391–93 Extent, holding many gafaels in Mochnant. They took advantage of the availability of bond land in Mochnant to take over several tenements. The Cyffins were among the substantial freemen of the district who declared for Owain Glyndŵr and seem to have been present at Glyndyfrdwy when Owain Glyndŵr was proclaimed Prince of Wales. The family managed to re-establish their influence after the revolt. They were not necessarily wealthy in terms of moveable wealth—almost certainly they were not—but they built up substantial estates that were distributed and redistributed among their progeny, who by the second half of the fifteenth century had the resources to build durable hallhouses of distinction which were scattered like bright stars along the hillsides of the March.⁵³



This was a proud family. The Maurice cousins of Lloran (also descended from Gruffudd ab Ieuan Gethin) preserved their genealogy on ‘an immense parchment roll some yards in length’. The roll compiled from the information of the herald-bards demonstrated the descent of the family from Elystan Glodrydd, founder of the fifth royal tribe of Wales. Beyond that there was an intoxicating legendary genealogy which was traced from Belinus Magnus, king of Britain, who began his reign in Anno Mundi 3893, about 47 years before the birth of Christ. Beli was the father of King Lud the builder of Caerludd (London). This was a mighty inheritance for a family, and the hall at Tŷ-draw asserted the pride of a freeman in his lineage whose generations were as numerous as the crenellations of the moulding of the dais seat.⁵⁴

Tŷ-DRAW’S LANDSCAPE CONTEXT

By Robert Silvester, Richard Suggett and William J. Britnell

Tŷ-draw is one of a cluster of farms and former farms dotted along the lower of two trackways skirting the lower slopes of Mynydd Mawr (Figs 1, 16), on the south-eastern flanks of the Berwyn mountain. To the south-east the trackway leads to the hamlet of Llanarmon Mynydd Mawr and the medieval market-



Fig. 16. Aerial view from the south in 2003 with Plas-yn-glyn in the foreground, Tŷ-draw in the middle distance, the river Iwrch to the left, and the hillside of Mynydd Mawr to the right. *Photograph: CPAT 03-C-081.*

town of Llanrhaeadr-ym-Mochnant; to the north-west it gives access to Cwm Maen Gwynedd, the deeply glaciated upper valley of the Iwrch, a tributary of the Tanat and ultimately of the Severn. Like many other early farms in the region—notably the excavated Montgomeryshire hallhouse-longhouses at Tŷ-mawr⁵⁵ and Tyddyn Llwydion⁵⁶ (see locations on Fig. 15)—Tŷ-draw is sited towards the upper limit of the more anciently enclosed land, just below the moorland edge, a location which gave ready access to both lowland fields and mountain pasture.⁵⁷

The farms occupied a sloping shelf of farmland at the lower slopes of Mynydd Mawr on the northern side of the more open part of the Iwrch valley. This area of Llanarmon Mynydd Mawr, referred to as Glyn Iwrch, or simply as Glyn by the seventeenth century, lies between a height of about 200–270 metres, before dropping down into the more steeply-sided ravine cut by the river. Wending their way along the lower part of the shelf are a series of terraces of fluvio-glacial origin, one of which rises to a height of several metres. The farms dotted along the lower trackway occupied increasingly marginal locations as this shelf of more hospitable farmland gradually peters out towards the north-west. This is reflected in

their present condition, which today shows a gradual progression from the inhabited farmhouses of Bryn-coch and Plas-yn-glyn, the recently restored farmhouse at Tŷ-draw, to what are now no more than relict field monuments at Tŷ-canol and Blaen-y-glyn towards the north-west.

Something of the landscape context of Tŷ-draw and the other farms in this complex can be pieced together with the help of cartographic and other sources, working backwards in time from the modern map, early editions of the Ordnance Survey 25-inch map dating from 1875, the Llanarmon Mynydd Mawr tithe map and accompanying schedule of 1839–40, the large map of Chirk lordship dating to about 1790,⁵⁸ and the map of the southern side of Mynydd Mawr drawn by Edward Matthews in the 1750s (Fig. 17).⁵⁹

Both Bryn-coch and Plas-yn-glyn originated as timber buildings (cruck-framed in the case of Bryn-coch) which were later encased in stone, probably during the seventeenth or eighteenth centuries. Plas-yn-glyn was named as ‘Tythin Howell, otherwise Plas-yn-glyn’ in 1666.⁶⁰ It was one of few properties named in the eighteenth-century parish registers of Llanarmon Mynydd Mawr and had evidently become the most important holding in Glyn Iwrch by that date. It is frequently referred to in other eighteenth-century documents, reflecting the standing of the Morrises, the family who occupied it, who were respected tenants of the Myddeltons of Chirk.

Tŷ-draw, the next farm from the east, was constructed as a cruck-framed hallhouse-longhouse in about 1480. As already noted, the house was known in the second half of the sixteenth century as ‘Tyddyn Rees ap Maddock ap Howell’,⁶¹ and in the eighteenth and early nineteenth centuries was called Glan’r-afon.⁶² By 1827 Tŷ-draw had been amalgamated with Plas-yn-glyn. The range is unnamed and described simply as a barn on the tithe map and schedule. The name Tŷ-draw (‘house yonder’) dates from the later nineteenth century, and is first recorded on the second edition Ordnance Survey 25-inch map of 1899.

Tŷ-canol (‘middle house’) and Blaen-y-glyn Issa (‘lower [house] at the head of the valley’) are both shown on Edward Matthews’ map of the 1750s and are named on the large map of Chirk lordship dating from about 1790. By the tithe survey Blaen-y-glyn Issa appears to have been uninhabited and its name confusingly reassigned to Tŷ-canol, though this is possibly an error since by the first edition of the Ordnance Survey 25-inch map (1875) Tŷ-canol had disappeared and the westernmost farm was again named as Blaen-y-glyn. Vestiges of both farms can still be identified on the ground. Tŷ-canol, the more poorly preserved of the two, evidently lay across the slope on the downhill side of the trackway, its position indicated by slight undulations within traces of a small garden enclosure which is shown on the tithe map. The ruinous stone-built house and attached outbuilding which survive above the trackway at Blaen-y-glyn Issa may represent a later farmhouse dating from the later seventeenth or earlier eighteenth century. An earlier house is suggested by a building platform lying across the slope below the trackway, described as a barn on Edward Matthews’ map of the 1750s. The site is typical of other house platforms in the region in having a built-up apron rising to a height of over a metre at the lower end and a fan cut into the slope on the uphill side.⁶³ On the platform there are traces of a building about 14m by 7m across represented by residual sill walls and earthwork scarps, features suggesting a timber-framed range of similar size to Tŷ-draw, as well as indications of additional structures in this area. This building below the trackway had disappeared by the publication of the first edition of the Ordnance Survey 25-inch map of 1875. Prior to 1839 Blaen-y-glyn had been amalgamated with Bryn-coch.

Today, the sites of these farms are set within a pattern of relatively large straight-sided fields (Fig. 16), generally greater than 3–4 hectares (8–10 acres), extending from the north bank of the Iwrch up to the summit of Mynydd Mawr. This represents a radical phase of landscape reorganisation and enclosure that took place between the tithe survey of 1839–40 and the first edition of the Ordnance Survey 25-inch map of 1875. This reorganisation came hard on the heels of the amalgamation of the Blaen-y-glyn, Tŷ-canol and Tŷ-draw holdings with Plas-yn-glyn and Bryn-coch, and probably also indicates an increasing emphasis on stock grazing.

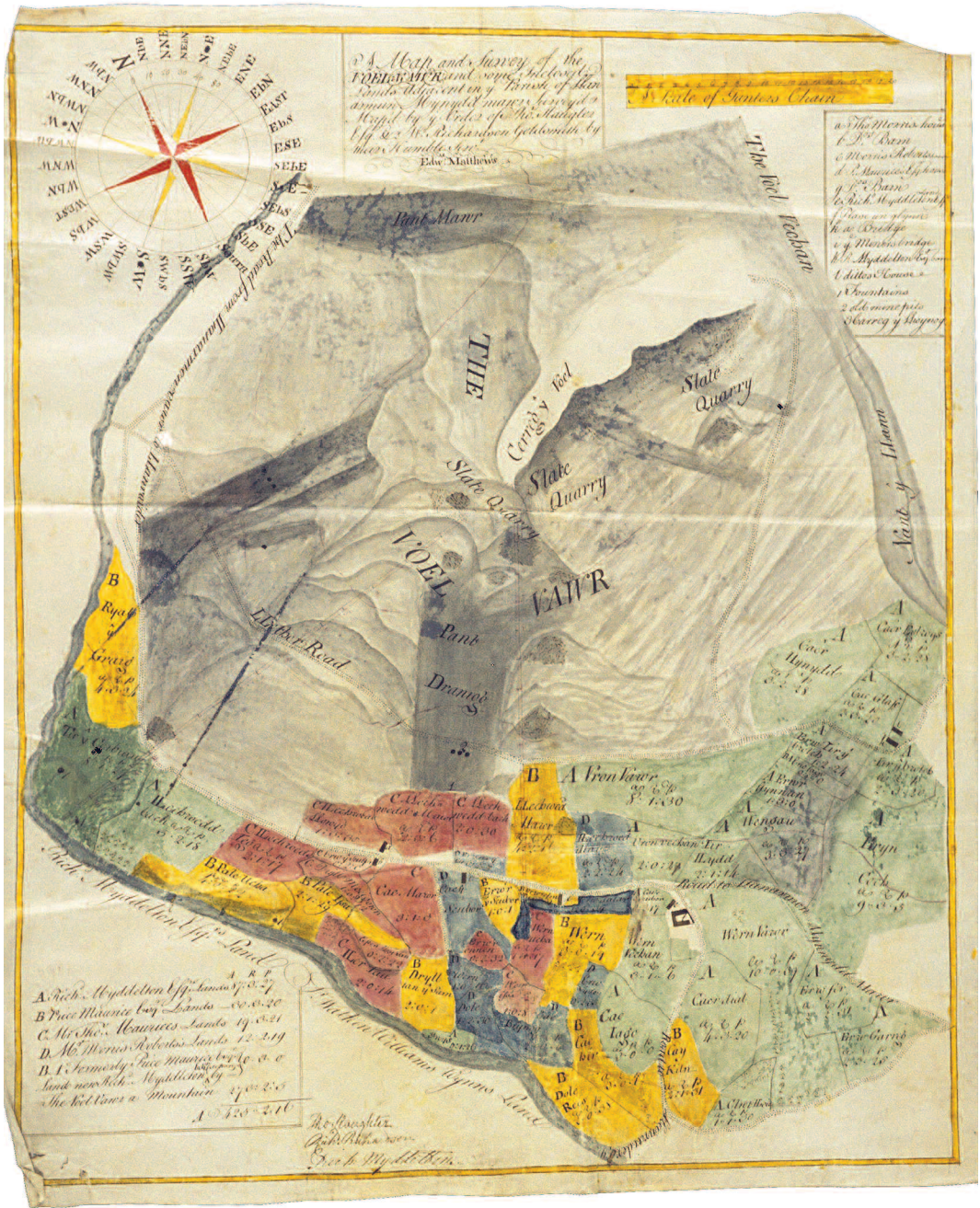


Fig. 17. Edward Matthews' map of the southern side of Mynydd Mawr ('Voel Vawr') dating from the 1750s (NLW, Chirk F 5538). By permission of Llyfrgell Genedlaethol Cymru/The National Library of Wales.

A more ancient pattern of field divisions, still in existence at the time of the tithe survey, is shown on the Edward Matthews' map of the 1750s (Fig. 17). The map shows a pattern of smaller, intermingled fields, generally under 2 hectares (5 acres), belonging to Blaen-y-glyn, Tŷ-canol and Tŷ-draw on the lower flanks of Mynydd Mawr (Fig. 18). Most of Mynydd Mawr remained unenclosed common until after 1840, though parts of the hill had already begun to be enclosed in piecemeal fashion by the second half of the sixteenth century.⁶⁴

The pattern of irregular fields at the foot of the hill was partly determined by the natural topography, though a number of fields have a quilled appearance. A significant proportion of these fields were evidently under cultivation during 1750–1840 as arable land or gardens, having field-name elements such as *erw* ('acre'), *dryll* ('piece') and *talar* ('headland') which are often indicative of cultivated land.⁶⁵ Enclosed pasture, meadow and rough grazing is likewise indicated by such field-name elements as *dôl*, *gweirglodd* and *wern*.

Some of these relict fields can still be traced in faint scarps and banks, including the narrow strip fields—represented by lynchets created by ploughing—below the trackway at Tŷ-draw (Fig. 1), one of which has been shown by excavation to underlie the hallhouse, and was later used as a garden plot.⁶⁶ Tŷ-draw lay within a narrow enclosure elongated along the slope to the north-west. An interesting parallel can be drawn with the hallhouse at Tyddyn Llwydion, on the southern flanks of the Berwyn mountains further to the west, which was found to have been superimposed upon former ploughlands. It is tempting to interpret this evidence in the light of the suggestion made in the previous section that some free tenants

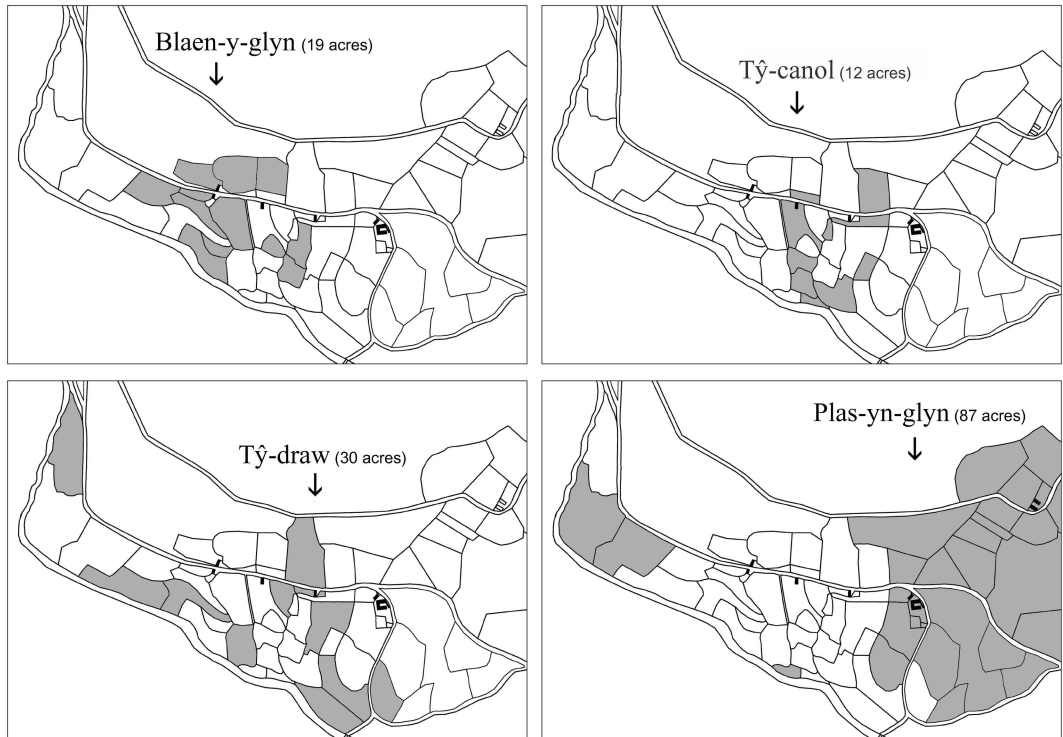


Fig. 18. Intermingled ownership details of the enclosed land on the southern side of Mynydd Mawr, based on Edward Matthews' map of the 1750s (see Fig. 17).

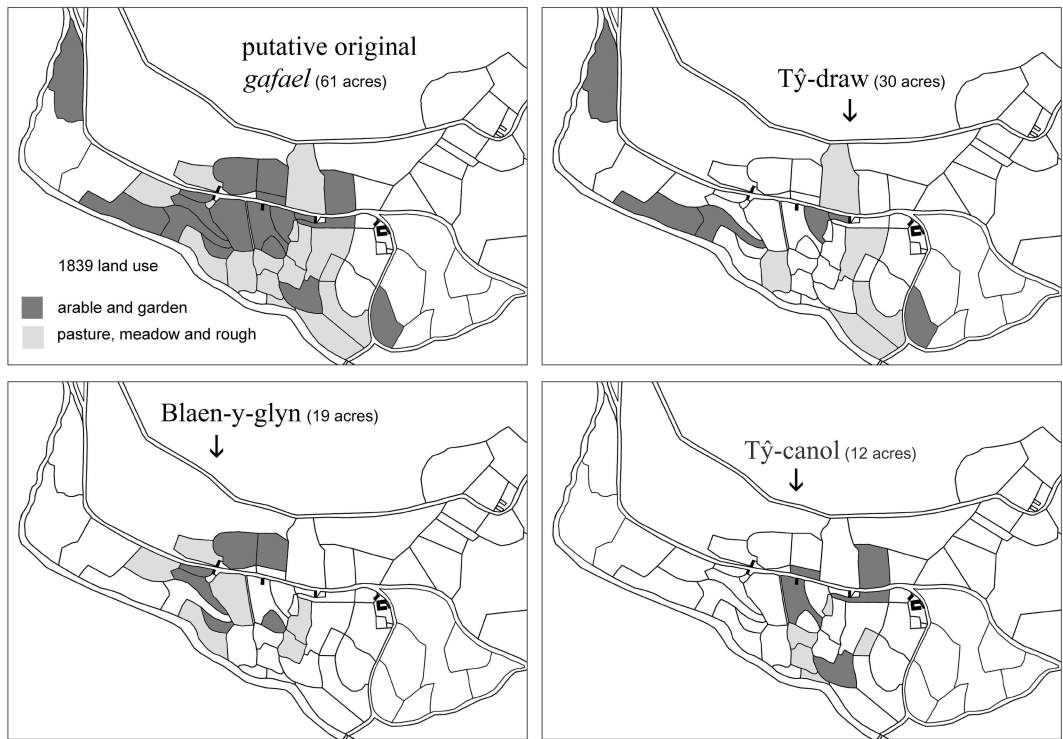


Fig. 19. Reconstruction of the putative original *gafael* ('holding') in Glyn Iwrch from which Tŷ-draw, Blaen-y-glyn and Tŷ-canol probably derived.

like Gruffudd ab Ieuan Gethin—the grandfather of Hywel ap Rhys, the probable builder of Tŷ-draw—were consolidating estates by purchasing former bond land in the latter part of the fourteenth and earlier fifteenth centuries.

Tŷ-draw lay more or less in the centre of Glyn Iwrch, with outlying fields both to the west and the east: to the west was 'Ryall y Graig' and to the east 'Erw y Kil' and a detached field on Cae-Coch. The intermixed nature of the holdings of Tŷ-draw, Tŷ-canol and Blaen-y-glyn shown on Edward Matthews' map of the 1750s hints at the subdivision of an original *gafael* ('holding') by partible inheritance—though possibly in stages and at a relatively late date. The combined holdings of Tŷ-draw, Tŷ-canol and Blaen-y-glyn (about 61 acres) is not dissimilar in size to the tenement of lands estimated at 52 acres held by David ap Ieuan which (as noted in the previous section) is recorded in the 1569 survey of Chirkland. The record of land use given in the tithe schedule of 1839 suggests that the process of subdivision took into account a sharing of the scarce enclosed land suited to both arable and pasture (Fig. 19) in addition no doubt to common rights to grazing on Mynydd Mawr.

What happened to Tŷ-draw after Hywel ap Rhys built the house in about 1480? Genealogies and deeds (summarized in the following table) suggest that there was piecemeal division and sale of the family holding. The main conclusion is that the estate was fragmented by the early seventeenth century. Although gavelkind had been formally abolished it seems to have remained common practice to divide estates between male heirs. A late Elizabethan document (1598) has a list of the 'names of all men that divided their lands which were undivided in Chirk lordship'.⁶⁷

HYWEL ap RHYS ap GRUFFUDD ab IEUAN GETHIN

builder of Tŷ-draw c. 1480

Tŷ-draw built

RHYS

IEUAN

DAVID ab IEUAN

free tenant 1569, holds Tŷ-draw

MORUS = JANE ferch DAVID ap HOWELL

living 1600 jointure = Tŷ-draw; will proved 2 March 1637

holding divided

RHEINALLT

sells land in Glyn
(NLW, Peniarth NB 181)

IEUAN (EVAN), gent.

buys Cefnyrhodfa 1624
(NLW, Ruthin 1698)

ROBERT

sells land in Glyn
(NLW, Peniarth NB 181)

Tŷ-draw modernised

MORRIS

? Blaenyglyn
(NLW Peniarth NB 101)

ROBERT ab EVAN
of Cefnyrhodfa, gent. (d. 1677)
Tŷ-yn-y-glyn or Tŷ-canol

DAVID ab EVAN
(d. 1685)

sells Tŷ-draw 1665/66
(NLW, Peniarth NB 240)

Tŷ-draw sold

Different members of the family sold parcels of the family patrimony, probably with the death of Morus ap David ab Ieuan. Morus's widow, Jane ferch David ap Powell, lived on at Tŷ-draw. Tŷ-draw was part of her dower, and 'she refused to yield possession' of it, according to a seventeenth-century memorandum. She lived until 1637, and in her will she made small bequests to a large family. With Jane's death Tŷ-draw passed to the next generation. It was probably then that the house was modernised and reframed with timber felled in 1641/42. Twenty-five years later in 1665/66 the house was sold by Jane's grandson, David ab Evan, sixth in descent from Hywel ap Rees the probable builder of Tŷ-draw. The purchaser was a distant kinsman, Edward Maurice of Plas-yn-glyn, a member of the Lloran family, whose common ancestor was Gruffudd ab Ieuan Gethin.⁶⁸

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Fig. 20. Tŷ-draw before excavation, in February 2002. *Photograph: CPAT 1143-29A.*



Fig. 21. Tŷ-draw following renovation, viewed from the south-east, during a visit by (from left to right) Graham Moss, Peter Smith, Richard Suggett and Julian Freeman-Atwood in 2005. Peter Smith first surveyed the house with Douglas Hague just 50 years before. © Crown Copyright: RCAHMW.

helpful comments on a draft of the report. Peter Smith took an active interest in the restoration project, visiting Tŷ-draw several times, and his observations on the original survey and interpretation have been incorporated in this article.

APPENDIX 1
ANIMAL STALLS IN WELSH LONGHOUSES
By Eurwyn Wiliam

The stakeholes recorded in the lower bay of Tŷ-draw (Fig. 11) suggest a single row of cattle each tied to slight uprights approximately one metre apart. Some of these uprights in turn appear to have been tied to the main timbers of the partition truss. There is also a suggestion that the cattle were separated one from another by wickerwork hurdles. That such may have been the case, and that there was a transverse passage perhaps one metre wide behind the cattle, is reinforced by the much clearer pattern of stakeholes recorded at Tyddyn Llwydion.⁶⁹ In both cases, the lower side of the passage is defined by a further row of stakeholes, giving a one metre-wide space running the width of the building and hard against the gable, which could have been used to house calves or for storage. If this was indeed the arrangement at Tŷ-draw, then the doorway to the transverse passage may not have been in the middle of the long wall, since the stakeholes seem to run right through the gap.

It is unclear what the stakeholes defining the transverse passage mark. If they do indeed mark the location of wattle hurdles, it might suggest that the cattle were penned in from behind, in addition to being tied by the head. Such an arrangement would have impeded easy mucking-out, though there is testimony from Scotland that some longhouse byres were only cleaned out in spring, the gable having to be dismantled to do so.⁷⁰ This is not known from the surviving historic record from Wales. Alternatively, these stakeholes might record some sort of low-level definition to the edge of the standing beneath the cattle, as cobbles did in later cases. They may equally represent entirely different usage, such as penning in sheep for shearing during summer. Allowing for a door from the hall, the byres at both Tŷ-draw and Tyddyn Llwydion seem to have housed five cattle, with a manure passage behind them. The cattle may have been fed through the open partition, with fodder from the loft above pushed through from the hall. Alternatively, the transverse passage may also have served as a feeding-walk, with the open partition being no more than a relict feature, recalling a time when cattle were indeed fed from the hall.

Stakeholes were also found in the lower bay of Tŷ-mawr, Castell Caereinion.⁷¹ Tŷ-mawr, however, was a house of much higher social standing and correspondingly larger size, wider by a third than Tŷ-draw and Tyddyn Llwydion. The internal layout of the cowhouse also seems to have been different. An area 1.30m wide next to the hall partition, free of stakeholes, and delimited by a row of stakeholes, suggests a feeding passage next to the hall. A second sill-beam and more stakeholes appear to define a manger. The greater sophistication of the house may thus be reflected in the cowhouse, where up to eight cattle could have been stalled facing the hall, but separated from it by an internal cross-passage.

How do these arrangements fit with what is known of longhouse byres? In very crude terms, there seem to have been three typological stages to the development of longhouses. Early or 'primitive' longhouses often seem to have left no evidence for partitions between the house and the byre. This is true of Neolithic and Iron Age Europe, and there are many medieval archaeological examples from the West Country, as well as much later examples from the Hebrides and France.⁷² The absence of partitions may be partly accounted for by the old Celtic belief that the cattle would give more milk if they could see the flames of the fire, itself rationalised from the fact that cattle do produce more milk if housed indoors over winter.⁷³ Some early longhouses, such as those of the first to the fifth centuries AD from Feddersen

Wierde, Germany, housed a substantial number of cattle along the length of the building, separated by well-defined wattle partitions.⁷⁴ The typological next stage seems to have had a half-height partition between house and byre. The late medieval houses we are discussing here were of this form, and there is photographic evidence for the survival of the custom into the early twentieth century in Brittany. William Weston Young saw this in the Vale of Neath in the early nineteenth century: 'Many of the farm houses are constructed in a manner suitable to a pastoral people; one end of the building is occupied by the family, the other (separated only by a wattle partition) by the cattle, which they inspect during the night. I have many times passed the night in houses in this description and have been much gratified with the order and neatness observed in both divisions'.⁷⁵ The third and last stage in the development of the longhouse is represented in Wales by the surviving stone examples, which had a stone division between the house and byre. Seventeenth-century examples in south-east Wales have small cowhouses, which have survived because later cowhouses were built separately. Nineteenth-century examples in south-west Wales had long byres for all the cattle.

We only have evidence surviving of internal arrangements from this last stage, but there is archaeological evidence of byre arrangements found in the two typologically earlier stages. At Garrow and Treworld, both in Cornwall, the presence of drains and stone feeding troughs showed that the cattle were stalled along the building.⁷⁶ Some twenty-five longhouses survive with their byres unaltered in Devon, mostly on Dartmoor. They date from the fifteenth to the eighteenth centuries. These had long byres, usually with independent access for the animals in addition to the cross-passage. The cattle were tethered along the building, with a large central drain behind them and granite mangers in front. They were tied singly to upright poles, with the stakes set into drilled stones (often the only evidence of tying that remains). The cattle were tied singly with no partitions between them. Separation between the dwelling and the cowhouse varied from being entirely open to a solid stone wall.⁷⁷

In Brittany, the cattle seem to have been housed with no division between them until very recently. The well-known longhouse of Plumelin, Morbihan, recorded in 1944, had two cows and a calf at the bottom end of a cruck-framed house with no separation between the house and the animals, or between the animals.⁷⁸ Photographic evidence of typologically later Breton longhouses also show no partitions between the cattle. In one instance there is a rudimentary partition of horizontal planks reaching to the head height of the cattle with a central doorway, the doorway being partly blocked by a cow; three cows are tied to light upright posts by the partition, where a horse is also tied in this fashion. In another example, a more solid partition of stone, topped by a wooden manger, has the cattle tied in pairs to heavy uprights, whilst a third example has a full-height partition separating the animals from the dwelling house. A circular cut-out in the partition accommodates the heads of four cattle who can thereby access mangers placed inside the dwelling.⁷⁹

The byre arrangements suggested by the Tŷ-draw evidence represent the oldest commonly surviving form of cowhouse in Wales. This type, with the cattle tied facing along the length of the building and at right-angles to the entrance, could be used to house either milking cows or fatstock, though up to the mid-nineteenth century it was mostly used for the former. The smallest surviving examples (as here) have room only for four to six cattle, presumably reflecting this division in stock-keeping. As a rule, this form of cowhouse was declining in favour of having the cattle in one long row across the building by the mid-nineteenth century. In Llanarmon Dyffryn Ceiriog in south-east Denbighshire, for example, 90 per cent of the cowhouses of pre-1839 date, and for which the internal arrangements either survive or can be reconstructed, had the cattle facing along their length. By 1900 the number had fallen to under 60 per cent.⁸⁰ The few late-medieval, Tudor and Jacobean byres which survive in longhouses certainly had the cattle housed in this way, as did some of the later longhouses of Carmarthenshire and elsewhere. In the earlier, smaller longhouses it seems that only half-a-dozen cattle were housed, and those in a row facing

the cross-passage from which they could be easily fed: a good published example is Cwm-dows, Abercarn, in the west Monmouthshire hills, where five or six cattle were housed in the 3.7-m wide byre, though here there was a solid wall between them and the cross-passage.⁸¹

The simplest form of this type of cowhouse had only one row of cattle, with the building invariably forming part of a larger range, whether a longhouse or agricultural buildings. It seems probable that this form is also earliest within the type. Perhaps significantly, it is particularly common in the Berwyn region of north Montgomeryshire and south Denbighshire, where it accounted for over three-quarters of the along-the-building layouts. In only a handful of cases does it seem to have been the only cowhouse found on a farm, and those farms were small. At Tre-brys, Llangedwyn, Denbighshire, there were four such cowhouses in a timber-framed row dated 1826, which had a stable at one end. It thus seems clear that this form catered for the small farm on poor ground.⁸² The number of cattle housed in these surviving examples varied between three and six. Feeding passages are not known, the manure passage behind serving to bring the food as well. Apart from the problem of ventilation—only the outer animals had an adequate supply of fresh air—there was little to fault this design. It is difficult to assign a terminal date from the form: while in Staffordshire it continued to be built right up to 1880,⁸³ in Llanarmon Dyffryn Ceiriog parish none were built after 1839, though they were the single most common type before then.⁸⁴

At a later date longhouse byres increased in length and a further row of animals was accommodated back-to-back with the first row, as at Cilewent, the Radnorshire longhouse re-modelled in 1734⁸⁵ and now at the Museum of Welsh Life, or at Dan-y-bwlch, Bwlch Trewyn, Monmouthshire, which could have housed a dozen cattle in two back-to-back rows in its 4-metre length.⁸⁶ Here the central passage between the two rows was used as a joint feeding and manure passage. This is a rarer form but occurred in several of the Carmarthenshire longhouses recorded by the Royal Commission on Land in Wales in 1894. Blaen-waun (Llansadwrn), and Lan and Nant-y-ffin (Llandeilo), were good examples, all with two rows of five cattle standing back-to-back and in two cases with feeding walks in front of both rows.⁸⁷ The form had the advantages of an economical use of space and the easy removal of dung without the disadvantages of the cattle breathing over each other, though not all the cattle had the advantage of a separate feeding passage.

Another sub-group of this simple form had two rows of cattle facing each other over a central feeding passage. The earliest dated example yet known in Wales, Tyn-y-celyn, Glynceiriog, bears a datestone of 1725. The freestanding cowhouse was partly built into the hillside, so that the low loft was entered as from a ramp. The cattle were stalled singly, six to each side of the feeding passage. In all other recorded examples in which the original stalling arrangements survived, the cattle were stalled in pairs, three, or in two cases four, pairs to each side of the feeding passage.⁸⁸ This type of cowhouse thus normally held six cows, and occasionally eight. In only a few examples was a through passage recorded, though a manure hole was not uncommon.

Very complex permutations of the cattle-along-the-building cowhouse can be found. They are often double versions of the forms already discussed, the halves separated by a feeding passage. Examples housing three rows of cattle are particularly common in late-nineteenth-century Carmarthenshire longhouses: one row was fed from the cross-passage separating the byre from the house, with another row back-to-back to the first one. The second row faced a third row across another feeding passage, with a manure passage beyond them: three rows of cattle thus required four doors, two opening to feeding passages and two to manure passages. Good examples of this type were Tŷ'r-celyn, Llandeilo, and Ystradaman, Betws. The animals in both instances were stalled in rows of five, each cow being allocated a width of between 0.9–1m, and a depth of 1.8m.⁸⁹ At Cwmeilath, Llansadwrn, a dozen cattle were housed in two back-to-back rows of six animals each, while Esagair in the same parish had two back-to-back rows as well as another at right-angles to them, so that the gutters formed a T-shape.⁹⁰

It is clear, however, that this form of cowhouse layout is far older than the late nineteenth century, for examples dating from the first half of the eighteenth century are known in Radnorshire. At Tyn-y-cwm, Newchurch, a new barn with a cowhouse under one end was built in 1713. The cowhouse was slightly wider than the barn, and measured 7.4 by 7.8m. It had three doors in its gable, the outer two providing access for the cattle which faced each other across the central feeding passage. Eighteen animals were housed in this fashion. Upper Cwm-brith, Cefnlllys, had a similar barn-cowhouse built in 1759. This was 6.8m square, the cattle again facing each other across a central feed-passage, though in this case this was entered only from the barn above. Sixteen cattle were housed in this building.⁹¹

It is possible that the type is actually even older than this, for the size of some seventeenth-century cowhouses built as an integral part of barns would otherwise be very wasteful of space. The barn at Nant-y-march, Llangwm Ucha, Monmouthshire, is a case in point.⁹² The two bays taken up by the lofted cowhouse measure 6m wide and 5m long internally: there are two doorways in the gable and a central window. There is a central feed-opening in the stud and panel partition separating the cowhouse from the threshing floor, exactly as in the two Radnorshire examples. If the cattle were housed alongside the threshing floor, they would only have required 2m of the 6m available; housed in two rows facing each other, much better use could have been made of the space and ten animals could have been stalled instead of the six the other way. Two seventeenth-century cowhouses at Parc, Llanfrothen, Merioneth, can also be presumed to be of this type. A field-house called Beudy Newydd, dated 1666 on its gable, is 17m long and 5.5m wide; the only sensible interpretation of its layout, bearing in mind that the doorways are in the gables, is that it was of this form. Another structure attached to the barn, of exactly the same size but with two original central doorways, is also suggestive of this layout.⁹³

In Wales, the cattle, if kept in a cowhouse rather than in loose boxes, were always tied. In almost all surviving examples they were tied to a stake, the fastening being free to slide up and down with the animal's head. All were tied with chains, though formerly withies were used, as specifically recorded for Merioneth in the 1880s and as generally recorded in the Land Commission's Report. An old man from Llanuwchllyn, Merioneth, sold wood cow-ties at Bala market up to the second world war.⁹⁴ It is recorded from the Llanrhaeadr-ym-Mochnant area that it was once customary to tie the cattle with no partitions between them; rather, the cow with the longest horns was tied first, and so on until all the cattle were tied.⁹⁵ It is clear that single tying was once usual in Wales. The spacing of the tethering posts in eighteenth-century cow-houses in Radnorshire shows that this was certainly true of that area then, and the published plans of the Carmarthenshire longhouse group show that as late as 1894 single tying was usual there. The partitions were about 0.9m apart, and in one or two instances, such as Lan, Llandeilo, were of wattle.⁹⁶

Later, however, double tying became usual. Double partitions were usually some 1.8m apart, and varied in length from 1.2–1.5m. They were from one metre to 1.5m high at their lowest outer end. In some areas, such as parts of Glamorgan, the cattle were separated only by a single sloping stake. Crude but solid wooden partitions were more usual, however, supported by two upright posts which ran up to the loft floor. The manger was often delineated simply by two crude posts running along the ground, giving it a width of half a metre and a depth of no more than 0.1m. In the Llangwm area of Denbighshire, three or four thin poles running all the way up to the ceiling were used instead of a solid timber stall partition. It may be that this form was once typical of a highland area where it was fairly easy to get timber of small scantling, but difficult to obtain trees large enough to be sawn for partition timbers. Slate partitions are particularly characteristic of west and mid Wales. In the older examples only the feeding-passage partitions are of slate, the stall partitions being of timber. At a later date both partitions occur in slate, on the better class of farmstead beautifully cut and polished. Dated examples are all of nineteenth-century date but it is clear that the practice survived until at least 1900.⁹⁷

In these later examples, the floor of the stall almost invariably sloped, draining to the gutter behind the cows. Since the slope was only slight, there was no danger of lameness or abortion, which some of the agricultural writers raised as objections. Cobble floors were common in some regions. The standing underneath the cattle could be paved with cobbles running at right-angles to the animals, to prevent them slipping, the gutter and the area behind it being cobbled in the other direction. An open drain ran behind the cows: to facilitate cleaning, it was often wide, and sometimes had no step up behind it. This, however, was not an ideal arrangement from the farmer's point of view, and normally there was a raised walkway, known *y llwybr* ('the path') in some regions, behind the drain. Some drains had square sides, others sloping ones, but the square-sided drains were safer in that they were less easy to slip on them when they were covered with liquid manure. Where the cattle stood back-to-back, it was rare to find a central drain. Usually the sloping floor alone sufficed for drainage.⁹⁸

APPENDIX 2

RADIOCARBON DATING OF STAKES FROM THE LOWER BAYS OF TÛ-DRAW, TYDDYN LLWYDION, AND TÛ-MAWR HALLHOUSE-LONGHOUSES

By William J. Britnell

The tips of single stakes from the lower bays of the TÛ-draw, Tyddyn Llwydion and TÛ-mawr hallhouse-longhouses⁹⁹ were submitted for dating to the Scottish Universities Environmental Research Centre AMS Facility (SUERC), the results of which are given below. The calibrated dates shown here and in the text have been calculated by OxCal 4.1.3 Bronk Ramsey (2001) using the IntCal04 atmospheric calibration curve (Fig. 22). Identification of the samples used for dating were provided by Astrid Caseldine of the Department of Archaeology, University of Wales Lampeter.

The objective of this limited radiocarbon dating programme was to gauge the potential of this technique for establishing the date of the stake settings that have been identified in the lower bays of these three Montgomeryshire hallhouse-longhouses. It has been argued that the lower bays were built as cowhouses and that the patterns of stakes that were identified here (Fig. 11) represent animal stalls. In each instance the stake settings had clearly been replaced upon numerous occasions, probably over some period of time, though precise phasing has been difficult to establish.

It is assumed that the earliest settings were contemporary with the construction of the hallhouses but this has been difficult to prove. Apart from being rammed into the floor of the lower bay, the stake settings at TÛ-draw were otherwise not meaningfully stratified. The earliest stake settings at Tyddyn Llwydion pre-dated a later stone feeding passage, considered to have been inserted in the late seventeenth to early eighteenth century (Britnell and Suggett 2002, 155), though later settings may have continued to be constructed after that date and after the hallhouse had ceased to be used for habitation. The earliest stake settings at TÛ-mawr were perhaps contemporary with the construction of the hallhouse but had ceased to be maintained once a boarded wooden floor was inserted in the lower bay in about the late seventeenth to early eighteenth century. Although it is possible that the stake settings continued to be replaced long after the hallhouses had been first built it nonetheless appears to be significant that these stake settings were confined to the lower bays of the three hallhouses and did not appear for instance in the remodelled bays of the central halls at TÛ-draw or Tyddyn Llwydion that were later used for housing animals.

The stake settings at TÛ-draw, Tyddyn Llwydion and TÛ-mawr survived in different states—by voids left after stakes had either been removed or entirely rotted away, by slight traces of decomposed wood, and by reasonably well-preserved fragments of wood. The surviving tips of wooden stakes were mostly of relatively short-lived roundwood which potentially constitute suitable material for radiocarbon dating.

It was not possible to distinguish the phasing of individual stakes, however, which makes the selection of samples for dating largely a matter of hit or miss. On general grounds of preservation, however, it seems probable that the better-preserved stakes—most suited to radiocarbon dating—are likely to be later rather than earlier in the sequence.

The experimental radiocarbon determinations given below have proved to be of limited usefulness in dating the stake settings at Tŷ-draw, Tyddyn Llwydion and Tŷ-mawr. The most tightly dated sample is that from Tŷ-draw which has produced a calibrated date of cal. AD 1523–1660 at 68.2% probability and cal. AD 1498–1796 at 95.4% probability, though the range is too broad to tell whether this stake might belong to the earliest phase of the hallhouse. The ranges of the radiocarbon dates from Tyddyn Llwydion and Tŷ-mawr are also unfortunately too broad to be very meaningful, although it seems likely that both of these stakes date to the period between 1650–1800. As noted above there is other evidence to suggest that some of the stakes from both sites date to before about 1700. The broad span of all three calibrated dates is due to variations in the concentration of atmospheric radiocarbon which affects the period after about AD 1600 (see ‘Radiocarbon Web-Info’ available at <http://c14.arch.ox.ac.uk>).

Tŷ-draw

Laboratory number: SUERC-24511 (GU-18942)

Context: Tŷ-draw, tip of stake from stakehole setting in lower bay (context 308, sample no. 21, location shown on Fig. 11)

Material: *Fraxinus excelsior* (ash), probably roundwood with 10 growth rings, but uncertain whether it was a branch or sapling or whittled down from a larger piece of wood

Radiocarbon age: 280±30 BP

Calibrated date at 68.2% probability: cal. AD 1523–1660

Calibrated date at 95.4% probability: cal. AD 1498–1796

Tyddyn Llwydion

Laboratory number: SUERC-24512 (GU-18943)

Context: tip of stake from stakehole setting in lower bay (context 125, location not distinguished on Fig. 11)

Material: *Corylus avellana* (hazel), roundwood with 8 growth rings and bark

Radiocarbon age: 225±30 BP

Calibrated date at 68.2% probability: cal. AD 1646–1952

Calibrated date at 95.4% probability: cal. AD 1640–1954

Tŷ-mawr

Laboratory number: SUERC-24513 (GU-18944)

Context: tip of stake from stakehole setting in lower bay (context 114, sample no. 1, location shown on Fig. 11)

Material: *Fraxinus excelsior* (ash), with 14 growth rings

Radiocarbon age: 190±30 BP

Calibrated date at 68.2% probability: cal. AD 1664–1952

Calibrated date at 95.4% probability: cal. AD 1648–1954

OxCal v4.1.3 Bronk Ramsey (2009); r:5 IntCal04 atmospheric curve (Reimer et al 2004)

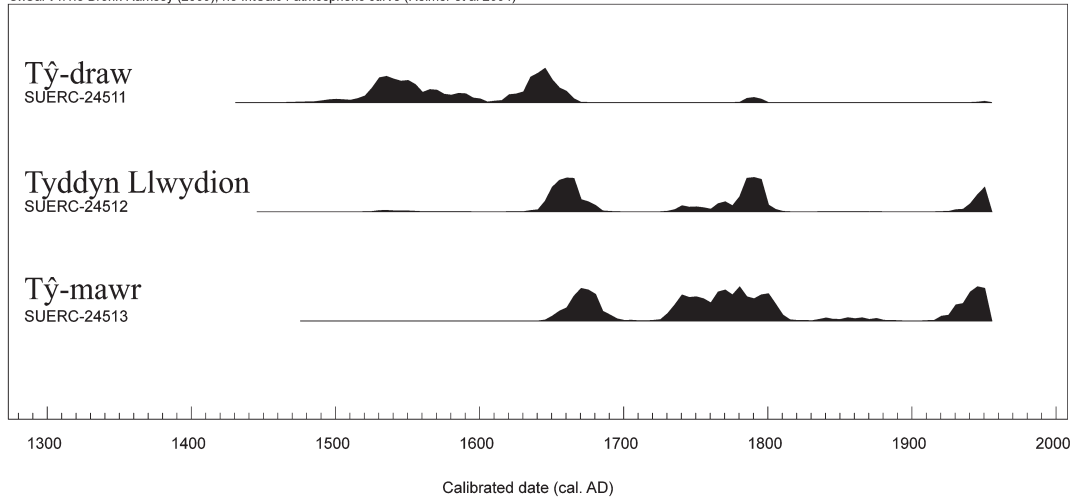


Fig. 22. Calibrated radiocarbon dates for the tips of wooden stakes from Tŷ-draw, Tyddyn Llwydion, and Tŷ-mawr hallhouse-longhouses.

NOTES

1. Clwyd-Powys Archaeological Trust (CPAT), 7a Church Street, Welshpool, Powys, SY21 7DL.
2. Royal Commission on the Ancient and Historical Monuments of Wales (RCAHMW), Plas Crug, Aberystwyth, Ceredigion, SY23 1NJ.
3. Amgueddfa Cymru – National Museum Wales, Cathays Park, Cardiff, CF10 3NP.
4. P. Smith and D. B Hague, 'Ty Draw: a fourteenth-century cruck-hall', *Archaeologia Cambrensis* 107 (1958), 109–20, esp. 115.
5. R. Suggett, 'Recent emergency building recording in Wales', *Ancient Monuments Society Transactions* 45 (2001), 81–108, esp. 87–8. Elizabeth Green monitored the deterioration of Tŷ-draw; see Elizabeth M. Green, 'The Mediaeval Hall Houses of North and East Wales' (University of Nottingham PhD thesis, 2000), 201–5, figs 91–4. The thesis is an important discussion of the social and economic contexts of late-medieval hallhouses.
6. D. Miles and R. Suggett, 'List 144. Welsh Dendrochronology Project – Phase Seven', *Vernacular Architecture* 34 (2003), 118–21.
7. Information from Peter Smith.
8. Letter (copy) in National Monuments Record of Wales, Denbighshire Domestic File SJ12NW.
9. W. J. Britnell and P. W. Dixon, 'Archaeological excavations at Tŷ-mawr, Castle Caereinion', *Montgomeryshire Collections* 89 (2001), 55–86; R. Suggett, 'Tŷ-mawr in context', *Montgomeryshire Collections* 89 (2001), 219–28.
10. W. J. Britnell and R. Suggett, 'A sixteenth-century peasant hallhouse in Powys: survey and excavation of Tyddyn Llwydion, Pennant Melangell, Montgomeryshire', *Archaeological Journal* 159 (2002), 142–169.
11. A. Caseldine, 'The pollen evidence from Tŷ Draw, Llanarmon Mynydd Mawr, Powys', unpublished report, Department of Archaeology, University of Wales, Lampeter, 2004.

12. Smith and Hague op. cit. (note 4), 118.
13. Cf. Tyddyn Llwydion: Britnell and Suggett op. cit. (note 10), illus. 3.
14. This hinted at in the reconstruction published by Smith and Hague op. cit. (note 4), fig. 23, Section CC.
15. Britnell and Suggett op. cit. (note 10), illus. 4, Truss 4.
16. Smith and Hague op. cit. (note 4), 112.
17. For Tŷ-mawr see Britnell and Dixon op. cit. (note 9), 58–62; for Tyddyn Llwydion see Britnell and Suggett op. cit. (note 10), 150–53, and Richard Suggett, *Houses & History in the March of Wales: Radnorshire 1400–1800* (Aberystwyth: RCAHMW, 2005), 92–3.
18. For Tŷ-mawr see Britnell and Dixon op. cit. (note 9), fig. 6, hearth 363; for Tyddyn Llwydion see Britnell and Suggett op. cit. (note 10), illus. 8, hearth 35.
19. A. Caseldine, ‘Tŷ Draw wood identifications’, unpublished report, Department of Archaeology, University of Wales, Lampeter, 2004.
20. Britnell and Dixon op. cit. (note 9), 67 and fig. 6. About 90 stakes or small posts were identified between 40–100mm in diameter in the relatively small undisturbed area of the floor. One of the stake points was identified by Astrid Caseldine and Catherine Griffiths (Department of Archaeology, University of Wales Lampeter) as ash (*Fraxinus excelsior* L.) with 15 growth rings, having been split from a reasonable substantial piece of wood.
21. Britnell and Suggett op. cit. (note 10), 155 and illus. 9. About 330 stakes were recorded of either of roundwood or radially-spril hardwood between 20–60mm across. Of samples identified by Dr Caroline Earwood (formerly of CPAT) 19 were of oak (*Quercus* sp.), 7 were of ash (*Fraxinus excelsior* L.) and 2 were of birch (*Betula* sp.)
22. There is a small Bernard Mason collection in the National Monuments Record of Wales.
23. Cyril Fox and Lord Raglan, *Monmouthshire Houses, Part 1: Medieval Houses* (Cardiff: National Museum of Wales, 1951), 11.
24. Smith and Hague op. cit. (note 4), 112.
25. The plan has been adjusted in P. Smith, *Houses of the Welsh Countryside* (1st edn, London: HMSO, 1975), fig. 23c, to show the cross-passage within the hall.
26. Smith and Hague op. cit. (note 4), 112.
27. Details in Suggett 2005 op. cit. (note 17), 276–9.
28. See the examples of passage partitions in Suggett 2005 op. cit. (note 17), fig. 275. In some cases, it should be noted, the partitioning is probably later than the truss.
29. Stanley Jones, ‘Cil-eos Isaf: a late medieval Montgomeryshire longhouse’, *Montgomeryshire Collections* 61 (1969–70), 115–31; Suggett 2001 op. cit. (note 9), 224–5.
30. Smith op. cit. (note 25), fig. 36.
31. *Ibid.*, Map 21, 420–1.
32. *Ibid.*, Map 37, p. 490, for the distribution of post-and-panel partitions.
33. Madge Moran, *Vernacular Buildings of Shropshire* (Little Logaston: Logaston Press, 2003), 345–6, 380–1. Great Binnall has been tree-ring dated to 1460. The coved canopy has a later depiction of the ‘nine worthies’.
34. Cf. P. S. Barnwell and A. T. Adams, *The House Within: Interpreting Medieval Houses in Kent* (London: HMSO, 1994), 116–18, fig. 135.
35. Suggett 2005 op. cit. (note 17), figs 48–9 (Bryndraenog), fig. 118 (Skynlais).
36. *Ibid.*, chapter 4.
37. R. R. Davies, *Lordship and Society in the March of Wales, 1282–1400* (Oxford: Oxford University Press, 1978), 357–9.

38. E. W. Ardener, 'Documentary and linguistic evidence for the rise of the trading polities between Rio del Roy and Camerons 1500–1650', in I. M. Lewis (ed.), *History and Social Anthropology* (London: Tavistock Publications, 1968), 113.
39. Of several freemen noted by Graham Thomas as witnesses to charters of Strata Marcella, only a few can now be identified in the pedigrees; see G. C. G. Thomas, *The Charters of the Abbey of Ystrad Marchell* (Aberystwyth: National Library of Wales, 1997).
40. G. P. Jones, *The Extent of Chirkland (1391–1393)* (Liverpool: University Press of Liverpool, 1933).
41. *Ibid.*, 80.
42. Llinos Smith, 'The Lordships of Chirk and Oswestry, 1282–1415' (University of London PhD thesis, 1970), *passim* (copy in NLW, Minor Deposit 1070B); NLW, Chirk F 13615; NLW, Chirk F 14002.
43. J. Beverley Smith, 'Crown and community in the principality of north Wales in the reign of Henry Tudor', *Welsh History Review* 3 (1966–67), 169.
44. This is a complicated subject. Cf. NLW, E. Francis Davies Collection 96 for an example.
45. David W. Williams, 'The Maurices of Lloran and their Ruthin connections', *Denbighshire Historical Society Transactions* 42 (1993), 49.
46. Glyn Parry, Introduction to the Schedule of Peniarth Estate Papers (NLW, 1997), v.
47. NLW, Peniarth NB 101. See the pedigree in NLW, Wynnstay MSS 143–4B, pp. 242, 1133.
48. Peter. C. Bartrum, *Welsh Genealogies, AD 300–1400* (Cardiff: University of Wales Press, 1974), vol. 1, Bleddyn ap Cynfyn 9–10; *idem.*, *Welsh Genealogies, AD 1400–1500* (Aberystwyth: National Library of Wales, 1983), vol. 1, 78–9, Bleddyn ap Cynfyn 10 (B1–2); Llinos Smith *op. cit.* (note 42), esp. Appendix 18.
49. NLW, Peniarth MS 144B, p. 226.
50. The purchase in 1686 of Tyddyn Howell alias Plas-yn-glyn is recorded in NLW, Chirk F 9462. Unfortunately there are no earlier deeds.
51. Sir John Wynn, *The History of the Gwydir Family*, ed. J. Gwynfor Jones (Llandysul: Gomer Press, 1990), 39.
52. Llinos Smith *op. cit.* (note 42).
53. See the discussion by Llinos Smith in *ibid.*, esp., 366–7, 390–1, 406, 419–20.
54. The pedigree roll descended to the Revd Thomas Maurice (d. 1824), deputy librarian at the British Museum and author of *Indian Antiquities*, who records that 'in more festive moments, this roll was triumphantly produced, and the armorial bearings of his ancestors ostentatiously displayed'. Thomas Maurice, *Memoirs of the Author of Indian Antiquities* (2nd edn, London, 1821), 5, 11–13; NLW, Peniarth PA 1–2 seems to be a paper version of this parchment roll, *c.* 1670s.
55. Britnell and Dixon *op. cit.* (note 9), 58.
56. Britnell and Suggett *op. cit.* (note 10), 142
57. Cf. Suggett 2005 *op. cit.* (note 17), 88–92.
58. NLW, Roller Map, RM C36. The map is in the style of William Pain and has been dated to around 1790, though it could be ten to twenty years earlier. For Pain see S. Bendall, *Dictionary of Land Surveyors and Local Map-makers of Great Britain and Ireland 1530–1850* (2nd edn, London: British Library, 1997), 392.
59. NLW, Chirk F 5538. R. J. Silvester notes the following: The map was drawn by Edward Matthews, a little-known surveyor from Mold, Flintshire, whose only dated survey is of 1747; see Bendall *op. cit.* (note 58), 346. It is evident from the title cartouche that Matthews was commissioned by Thomas Slaughter and Richard Richardson to survey the open hill land of Mynydd Mawr and

some of the adjacent enclosed ground. The context for the map is provided by a lease of 1753 (NLW, Chirk F 4494) whereby Slaughter and Richardson acquired the rights for all mines of ‘lead, tin, copper etc.’ from Richard Myddelton, lord of the manor of Chirk, who within a short time had probably commissioned Matthews to produce a plan of their newly leased holding, the signatures of Slaughter, Richardson and Myddelton also appearing on the foot of Matthews’ map. Matthews’ map shows several slate quarries around the summit of Mynydd Mawr as well as symbols in two locations indicating where there had been lead-mining trials. The map also names a ‘miners bridge’, no longer extant, crossing the Afon Iwrch to the west of Blaen-y-glyn. There is an earlier reference to mining on Mynydd Mawr in 1706/07 when Thomas Copper wrote to Myddelton’s agent of the lead mine on the mountain (NLW, Chirk F 11557). Trials for the extraction of lead ore were being actively promoted locally this date by both the Herberts of Powis Castle and the Myddeltons of Chirk Castle: see R. A. Williams, *The Old Mines of the Llangynog District*, British Mining 26 (Sheffield: Northern Mine Research Society, 1985), 77. The reason why the adjacent farm holdings and their ownerships were mapped is unexplained, but this might indicate an acquisitive interest on the part of Richard Myddelton. Lawrence Butler (pers. com.) has suggested that ‘presumably one of the reasons for including the holdings on the lower slopes of Voel Fawr would be that mineral extraction would raise questions of access, interruption of grazing, and the disturbance to watercourses (either less or too much water draining downhill)’.

In addition to field names and acreages, ownership of the enclosed land in the lower portion of the map is denoted by colouring and by letters identified in the lower left-hand corner as follows: A (pale green), Richard Myddelton Esq.; B (yellow), Price Maurice Esq.; C (red), Mr Thomas Maurice; D (dark green), Mr Morris Roberts. These can be equated with Plas-yn-glyn, Tŷ-draw, Blaen-y-glyn, and Tŷ-canol respectively. Also represented is a small strip field towards the extreme right labelled BA, representing land formerly owned by Price Maurice now owned by Richard Myddelton.

60. NLW, Chirk F 9462.
61. Parry op. cit. (note 46).
62. NLW, Peniarth NB 370, dated 1740; NLW, Sale Catalogue Denbs 392, dated 1827.
63. Cf. R. Silvester, ‘Deserted rural settlements in central and north-east Wales’, in K. Roberts (ed.), *Lost Farmsteads. Deserted Rural Settlements in Wales*, Council for British Archaeology Research Report 148 (York: Council for British Archaeology, 2006), 13–39.
64. A message in Llanarmon in 1577 included forty acres of heath, part of a waste called *Y Voylen* (NLW, E. Francis Davies 96). In 1827 when Plas-yn-glyn was offered for sale (NLW, Chirk F 5407), it had the exclusive use of three sheepwalks on the hill totalling 177 acres, and neighbouring farms had similar tracts, although these appear not to have been defined on the ground. Indeed, physical manifestations of grazing practices were limited to the sheepfolds on the hill into the twentieth century.
65. Cf. C. Thomas, ‘Place-name studies and agrarian colonization in North Wales’, *Welsh History Review* 10 (1980), 161.
66. The field is described a garden plot in NLW, Sale Catalogue Denbs 392, dated 1827, and as a ‘yard &c.’ on the title schedule of 1839.
67. NLW, Chirk F 13,219.
68. NLW, Peniarth NB 101 and 240; genealogy based on NLW, Wynnstay MS 144B, pp. 56, 226.
69. Britnell and Suggett op. cit. (note 10), 142–69
70. T. G. Holden, *The Blackhouses of Arnol* (Edinburgh: Historic Scotland, 2004).
71. Britnell and Dixon op. cit. (note 9), 55–86.

72. S. Piggott, *Ancient Europe from the Beginnings of Agriculture to Classical Antiquity* (Edinburgh University Press: Edinburgh, 1965), 89; R. L. S. Bruce-Mitford, *Recent Archaeological Excavations in Britain* (London: Routledge and Kegan Paul, 1956), fig. 57, 178; J. Chapelot and R. Fossier, *The Village and House in the Middle Ages* (London: Batsford, 1985), fig. 79, 242; S. R. Jones, 'Devonshire farmhouses, part III: moorland and non-moorland long-houses', *Transactions of the Devonshire Association* 103 (1971), 35–75; Holden op. cit. (note 21), 27–35; G. I. Meirion-Jones, *The Vernacular Architecture of Brittany* (Edinburgh: Donald, 1982), 241–9.
73. I. C. Peate, *The Welsh House* (Brythan Press: Liverpool, 1946), 79.
74. Chapelot and Fossier op. cit. (note 72), fig. 79, 242.
75. W. Weston Young, *Guide to the Scenery &c. of Glyn-Neath* (Bristol, 1835), 77.
76. M. W. Beresford and J. G. Hurst, *Deserted Medieval Villages* (London: Lutterworth Press, 1971), figs 19 and 20, 108–9.
77. P. Beacham (ed.), *Devon Building. An Introduction to Local Traditions* (Devon Books: Exeter, 1990), 46–59; Jones op. cit. (note 72), 35–75.
78. Chapelot and Fossier op. cit. (note 72), 234.
79. I am grateful to my friend Professor Gwyn I. Meirion-Jones for sending me a collection of photographs reproduced by the Ecomusée des Monts d'Arrée.
80. E. Wiliam, *Traditional Farm Buildings in North-East Wales, 1550–1900* (Cardiff: National Museum of Wales, Welsh Folk Museum, 1982), 186.
81. Cyril Fox and Lord Raglan, *Monmouthshire Houses, Part II: Sub-Medieval Houses, c. 1550–1610* (Cardiff: National Museum of Wales, 1953), fig. 35, 67.
82. Wiliam op. cit. (note 80), 190.
83. J. E. C. Peters, *The Development of Farm Buildings in Western Lowland Staffordshire up to 1880* (Manchester: Manchester University Press, 1969), 144.
84. Wiliam op. cit. (note 80), 190.
85. *Ibid.*, 33.
86. Fox and Raglan op. cit. (note 81), fig. 6, 27–8.
87. Royal Commission on Land in Wales and Monmouthshire, *Report* (1896), 696.
88. Wiliam op. cit. (note 80), 190–2.
89. Peate op. cit. (note 73), 63, 67.
90. *Ibid.*, 61, 64.
91. E. Wiliam, *The Historical Farm Buildings of Wales* (Edinburgh: John Donald, 1986), fig. 82, 100.
92. Fox and Raglan op. cit. (note 78), fig. 41, 78.
93. Wiliam 1986 op. cit. (note 91), 101.
94. E. D. Rowlands, *Dyffryn Conwy a'r Creuddyn* (Liverpool: Gwasg y Brython, 1947), 226.
95. J. Edwards, n.d., Museum of Welsh Life MS 1537.
96. Royal Commission on Land in Wales and Monmouthshire op. cit. (note 87), 696.
97. Wiliam 1986 op. cit. (note 91), 102.
98. *Ibid.*, 102.