



Darganfod Hen Dai Cymreig

Discovering Old Welsh Houses

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Please note that these reports are being updated as part of an ongoing programme of revision. Older reports sometimes refer to the old names of the Group. Between 2005 and 2012 also known as The Snowdonia Dendrochronology Project, then the N W Wales Dendrochronology Project and then the Dating Old Welsh Houses Group.

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North West Wales Dendrochronology Project
DATING OLD WELSH HOUSES

Plas Coch

Llanedwen
Anglesey

Cl 6th and later mansion



In partnership with
RCAHMW



*David Longley
for North West Wales Dendrochronology Project
October 2011*

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Very many thanks to the staff of Plas Coch
for their help and interest in this project

Location

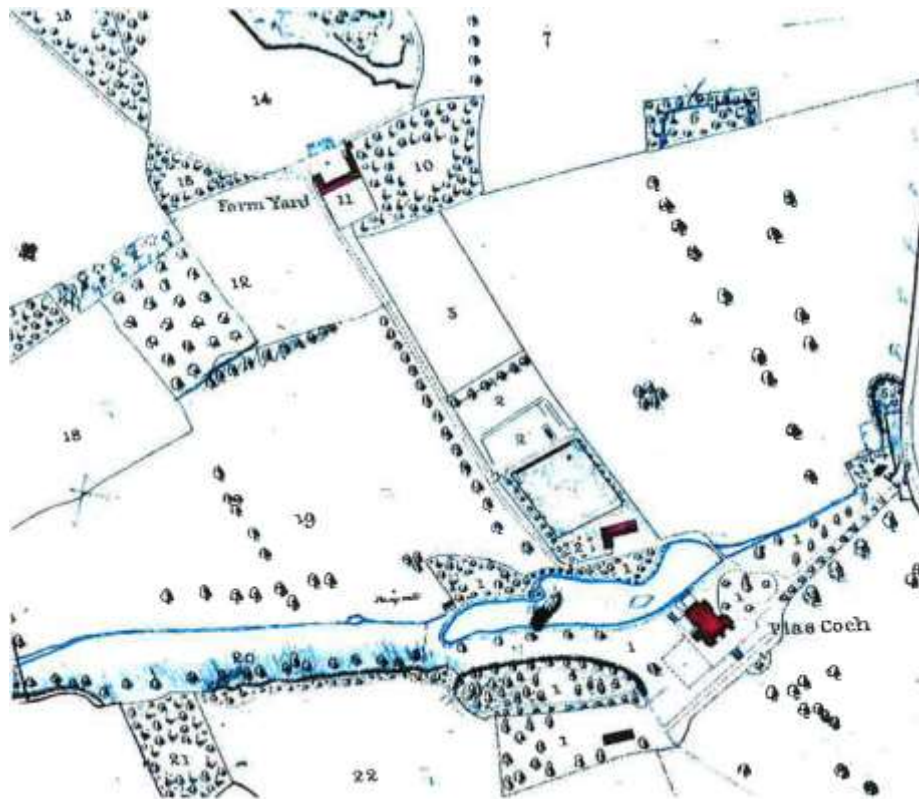
Plas Coch, Llanedwen, Anglesey

Grid Reference: ²51170 ³68440

HER PRN 2163

NPRN 15808





Introduction and background

The core of the ancient dynastic lordship of Porthamel is focussed on two houses - Porthamel Uchaf and Porthamel Isaf. In general the Isaf designation usually denotes the superior of the two. Porthamel Isaf came to be known as Plas Coch in the 16th century.

Plas Coch's expansion was derived through leases and other devices in the property market, including acquisition of leases in former bond townships after the conquest of Wales in 1283. Welsh law prohibited the alienation of freehold land but transfers were often made through devices such as perpetual mortgages. By the 16th century property law was relaxed and prosperous estates acquired more land to the detriment of smaller properties. Bond land was often leased for services rendered to the Crown, more so during the 16th century and by the early 17th century Crown land was sold outright.

The second half of the 16th century was a particularly prosperous period at Porthamel Isaf/Plas Coch. Major building took place during the tenure of David Hughes (Dafydd Llwyd ap Huw) and his son Hugh Hughes. Hugh became a lawyer at Lincoln's Inn, acquired the position of Queen's Attorney for North Wales, a member of Parliament and High Sheriff. His marriage into the Montagu family brought further influential connexions.

Not everything was plain sailing but additional properties continued to be added to the estate — some close to the demesne, others further afield, on Anglesey and on the mainland. The third Hugh Hughes died in 1764 with no issue and the estate passed to his nephew, William, son of Robert Hughes, Vicar of Llanidan. William Hughes married Anna, heiress of the estate of the Bulkeley of Brynddu (Llanfechell) and although William died before Anna, Brynddu passed to their son, Sir William Bulkeley Hughes, taking the name in recognition of the two families. This was a time of debt, litigation and circumstance which, by 1821, forced him to decamp to the continent.

William Bulkeley Hughes, the son of Sir William, took a pro-active stance that began to put financial affairs into order. It was during William Bulkeley Hughes' tenure of Plas Coch that ambitious building works were put in place. These included an extension of the Tudor house and a large north wing on three stories and a new cellar, a dining room, with rooms above and a billiard room — all in keeping with the

style of the renaissance innovations of the 1590s. A landscaped lake, new access roads, a coach house and two lodges were all part of the vision of William Bulkeley Hughes. He lived to 85 years, almost 40 as an MP representing Carnarvon Boroughs. He was involved himself in Mostyn developments in Llandudno and in the nascent Holyhead railway. He was the organiser of the banquet for Robert Stephenson in 1851.

Notes and references:

- T Richards and Emyr Gwynne Jones, introduction to Plas Coch Mss, Bangor University Mss
- Plas Coch Manuscripts, Mss 1 — 117
- Robin Grove-White, 2007, Plas Coch and Hugh Hughes, TAAS 2007, 95 — 112;
- M. C. Bridge and D. W. H. Miles: The Tree-ring Dating of Plas Coch, Llanedwen, Anglesey,
- Oxford Dendrochronology Laboratory, November, 2010/58
- Cadw Listed Building Survey: DA 19736
- Royal Commission on Ancient and Historical Monuments in Wales. 1937. Plas Coch, Llanedwen, Inventory of the Ancient Monuments in Anglesey. HMSOffice, 55-56.

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The house and context

Plas Coch is a significant mansion house. A legend over the door of the main porch tells us that the house was built by Dafydd Llwyd ap Hugh in 1569 . Plas Coch, the 'Red Mansion' took its name for the red gritstone with which it was built. The house was built on the site of, or close to, the more ancient establishment of Porthamel Isaf, one, if not the most important focus of the great maenol of Porthamel. We might take the wording on the porch as the house having been made on that site but not necessarily what was seen towards the end of the sixteenth century. It is far more likely that the building was very considerably remodelled by Dafydd's son, Hugh Hughes. Nevertheless, elements of David Hughes' building were identified during the course of the renovation and recording work and these are of particular significance. The structure was built in an innovative style which at once displays wide-ranging influences and marks the transition from the late medieval world to the modern, in terms of the disposition and use of space in a gentry house.



In the Yere of Lord God 1569 DH Mad Thys Hou

The most striking outward appearance of the house is the ubiquitous red sandstone and gritstone of its construction, the profusion of crow-step gables and the pinnacles which surmount them, and the large stone mullioned and transomed windows and the Renaissance pediments which cap them.



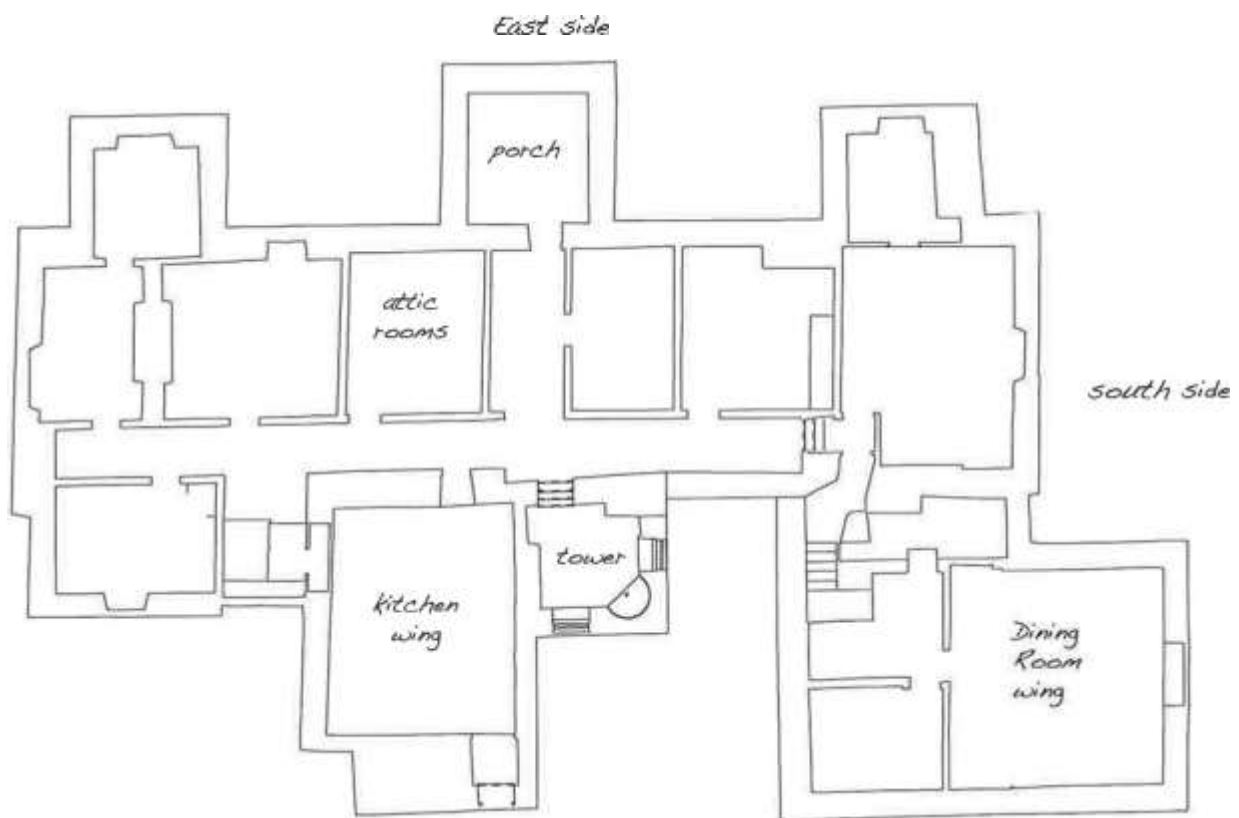
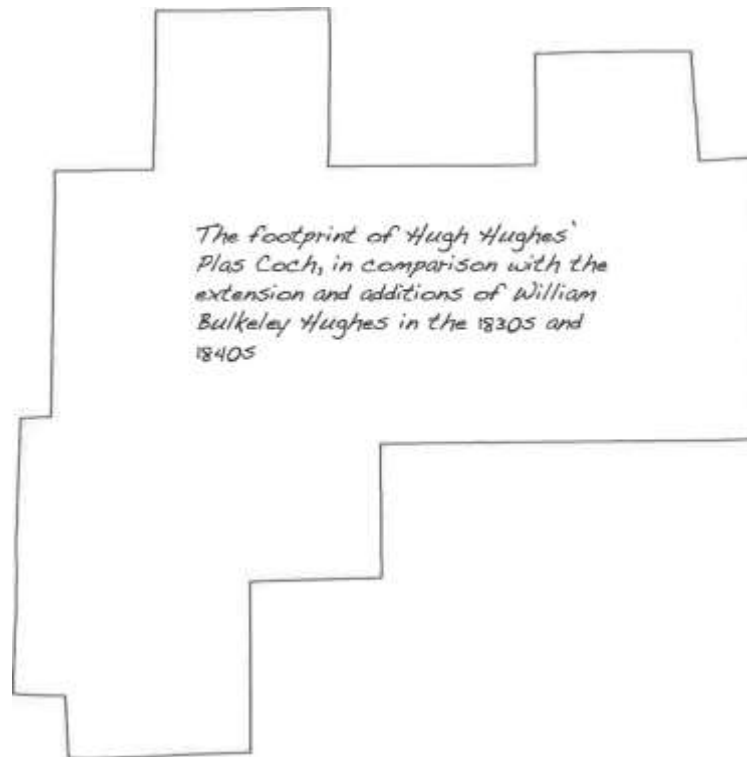
The mansion during the years between the late Tudor and Georgian periods would not have been seen to have changed very much over seven generations. The main building stood on a north-south axis, 19.4 m long by 7.3 m wide. There is a three storey wing projecting eastward at the south-eastward end of the house, 2.9m outward and 4.3m wide. There is a porch towards the north end, not symmetrically disposed against the facade, also on three storeys, projecting 4.25 m outward and 4.65 wide. There is a kitchen wing, equally massive, set against the western rear of the house projecting out 8.0 m and 6.2m wide. Tucked into the corner of the southern wall of the kitchen and the western wall of the main house, there is a square stair tower and chimney stack, rising above the roofline on three storeys and an attic.



Plas Coch saw extensive construction work in the 1830s with the addition of a three-storey wing on the north side of the earlier house, a slightly smaller wing on the east facade and a dining room wing, again in three storeys, on the west side, projecting 3.8 m southward beyond the original south gable. The complete footprint of the dining room is 10.8 m by 7 m.

The total interior ground floor area of the mansion including the wings totalled 170 sqm. The works of the 1830s and 1840s including the dining room and billiard room totalled an additional 179 sqm, just slightly more than the original.

All of this work was in very similar style to the original house. The evidence of the 1841 Tithe Survey indicates that further construction had taken place to the west of the house, comprising north, south and western ranges around an open courtyard. The southern range, at its eastern end, abutted the dining room wing. It is not clear how much of this early western complex survived and how much is a replacement of the later nineteenth century. The southern range of the western complex, in particular, is not very well integrated with the north wing and dining room wing of the 1830s work.



Plas Coch main house

Scale: 1:200

7方5戸/ made. 刃z'巴乙匕/巴/

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 M

The decorative style is carried through to the western extension. In particular, the consistent use of red sandstone, crow-stepped gables with pinnacles and, occasionally, classical mouldings such as triangular pediments and cavetto lintels are present. However, while maintaining an appearance of consistency the attention to detail which was applied in the north wing and dining room is less rigorously applied in the western block. The mouldings which define the steps of the gables have a more rounded cross-section than those on the eastern facade and on the dining room. The eastern and dining room pediments are sandstone and the mullions and transoms are ovolo moulded sandstone. In further contrast, the pediment over the door (originally a window) of the later south-western wing is moulded in cement as are the lintels of the upper ground floor windows. It is possible, therefore, that the present southern range was modified later.



The western range between the mansion and the lake

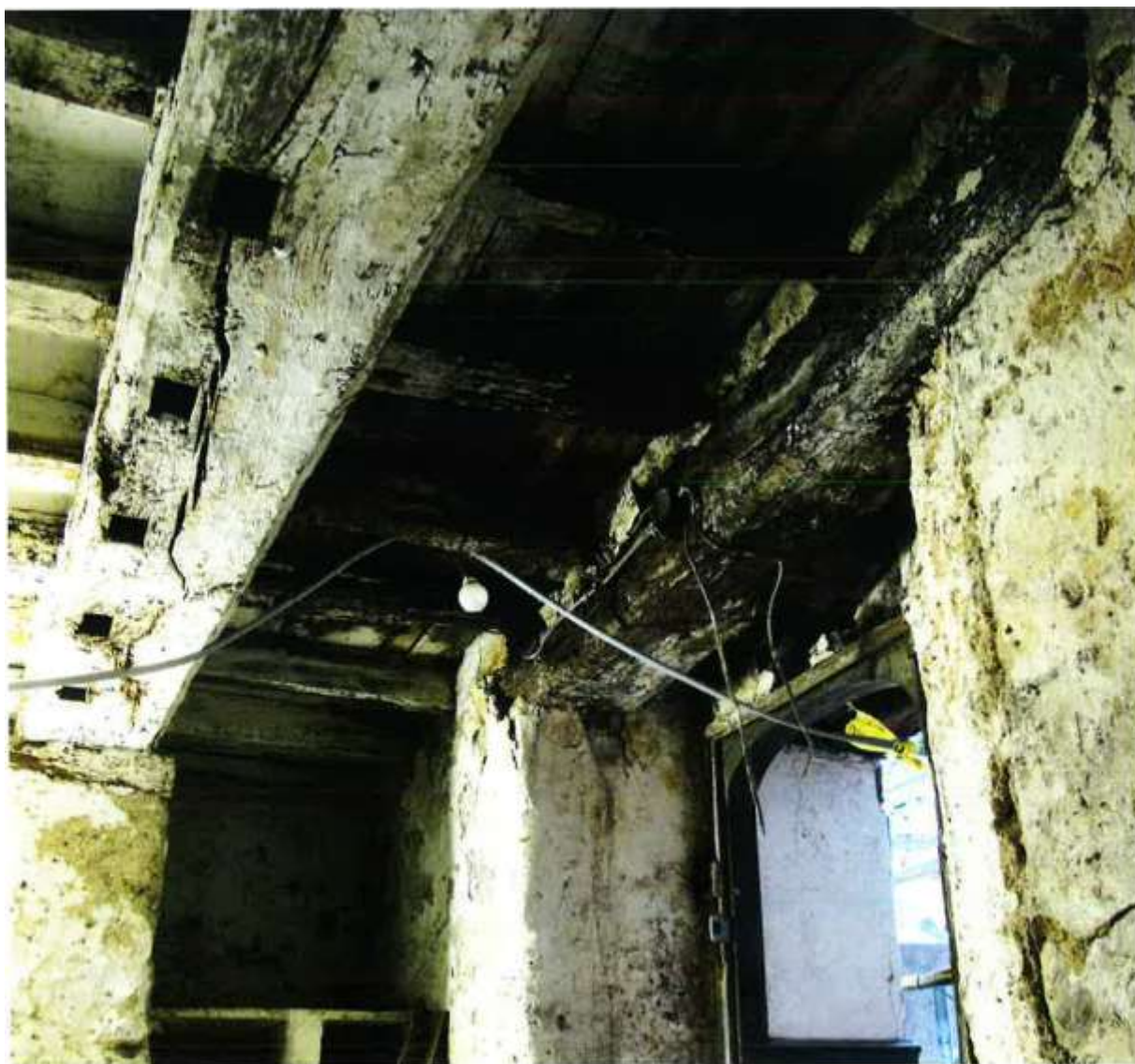
Two types of truss in the western range. The king-post truss in the area of the 'billiard room' of the 1840s and close in style to a truss on the north end of the roof in the area of the early Victorian extension. The collar-beam truss is a product of re-roofing of the rest of the range in the late 1890s.



Between 1886 and 1899 the projecting southern wing, mentioned above, was added midway along the southern range. The construction of the new southern wing may have provided the context and opportunity for considerable modifications, at least to the roof structure, integrating the south wing with the western and southern ranges and utilising the same style of collar-beam and purlin type trusses in both. The north range uses a different style of truss. Carpenters' marks and graffiti show work being done in 1897, 1898 and 1903. Significantly, however, a purlin from the south range has what appears to be a date mark of 1863, perhaps from earlier work.

The local topography slopes gently down towards what was the valley of a small stream and is now the location of an ornamental lake. Some considerable excavation into the slope must have been undertaken to secure the foundations of the westward projecting kitchen wing, so that the base of the west wall stood a full storey below the ground floor on the eastern side. An Elizabethan cellar had been incorporated into this lower level with a wide door in the north wall opening onto the reduced ground surface. A chamfered and stopped beam, stood in place as a lintel above the door and a long stretch of a roof—beam, chamfered and morticed for joists on its south side and mortices on its underside which once would have supported the studs of a timber partition.

Further extensive excavation was necessary for cellar space and vaulted, subterranean, basement rooms were inserted below the Victorian rooms above. A stairwell carried down from the attic to basement level.



E/2nd floor basement

The coach house and lodge

Travel in North Wales before the mid-18th century was often difficult on account of the poor state of the roads, particularly in bad weather. The important ferries which crossed the Menai Straits, including nearby Moel y Don, had operated for several hundred years. Nevertheless, no coaches crossed to Anglesey before the late 18th century. During the late 18th and early 19th century, however, major roads improved considerably. The Moel y Don ferry carried foot passengers and horses, not coaches. In fact, on account of the state of the roads in North Wales, no coaches crossed the Straits until the late 18th century.

A tree-lined avenue led from the south-east front of the mansion, linking with the road to Moel y Don and the Straits. The avenue is no longer used but the line of the trackway is visible in low light. It is clearly shown on the OS 2 inch draft map of c.1820S. A new drive was laid for Plas Coch in the 1840s and the present East Lodge (or more correctly north-east) was built in the 1850s.

An ornamental wall was built with raised pediment-style cross-section coping stones, interspersed with octagonal pillars topped with conical hats and, originally, fleur-de-lys finials. The entrance was set deep from the road in a rectilinear arrangement with the gate aligned on the skew, taking account of the turning curve of coaches coming down from the north.

In 1916, the layout was revamped (by Josiah Owen, Menai Bridge) for Lady Hughes-Hunter removing the original wall and re-modelling it in sweeping curves - The alignment of the gate emphasises the volume of traffic from an inland direction, even more than previously. The wall, copings and pillars are all re-used in the later design.

Landscaping, including the creation of an ornamental lake, required new works. Henry Kennedy, the Bangor architect, was busy rebuilding the nearby church of Llanedwen in the 1850s and at the same time was engaged to design a new coach-house.

The coach house reflects many architectural features of the house, including 'crow-stepped' gables and large elegant stone mullioned and transome windows. Nevertheless, these features are in a 'Victorian Gothic' style, and include introduced elements of Kennedy's imagination. The 19th century coach house with its large arched openings accommodated carriages and included stables, a loose box and saddle room.



Features relating to the mid-sixteenth century

Among the range of large and regular trusses in the roof space there are two trusses which stand out from the rest. One is a remnant of a cusped truss, truncated at the base of its principals but, nevertheless it has survived just under the roof pitch of the south-east wing.



A second truss, the second from the south wall stands out for several reasons. The raking struts, collar and principals are all cusped, not-so on any of the other trusses in the main roof space. The struts have slipped and, on the west side, re-pegged. The principals may have been manoeuvred into position to accommodate the width of pitch of the roof, suggesting re-use (No. 2 is, nevertheless, one foot shorter in span than the other trusses). A further indicator of probable reuse is that the original purlin rebates on the principals of No. 2 were not aligned with the purlins of the other trusses and had to be re-cut.



A broken portion of a stone cusped window was identified in the south wall of the tower. The window is fragmentary and is very unlikely to be in situ. Nevertheless, it is most likely to have been on discarded on site.

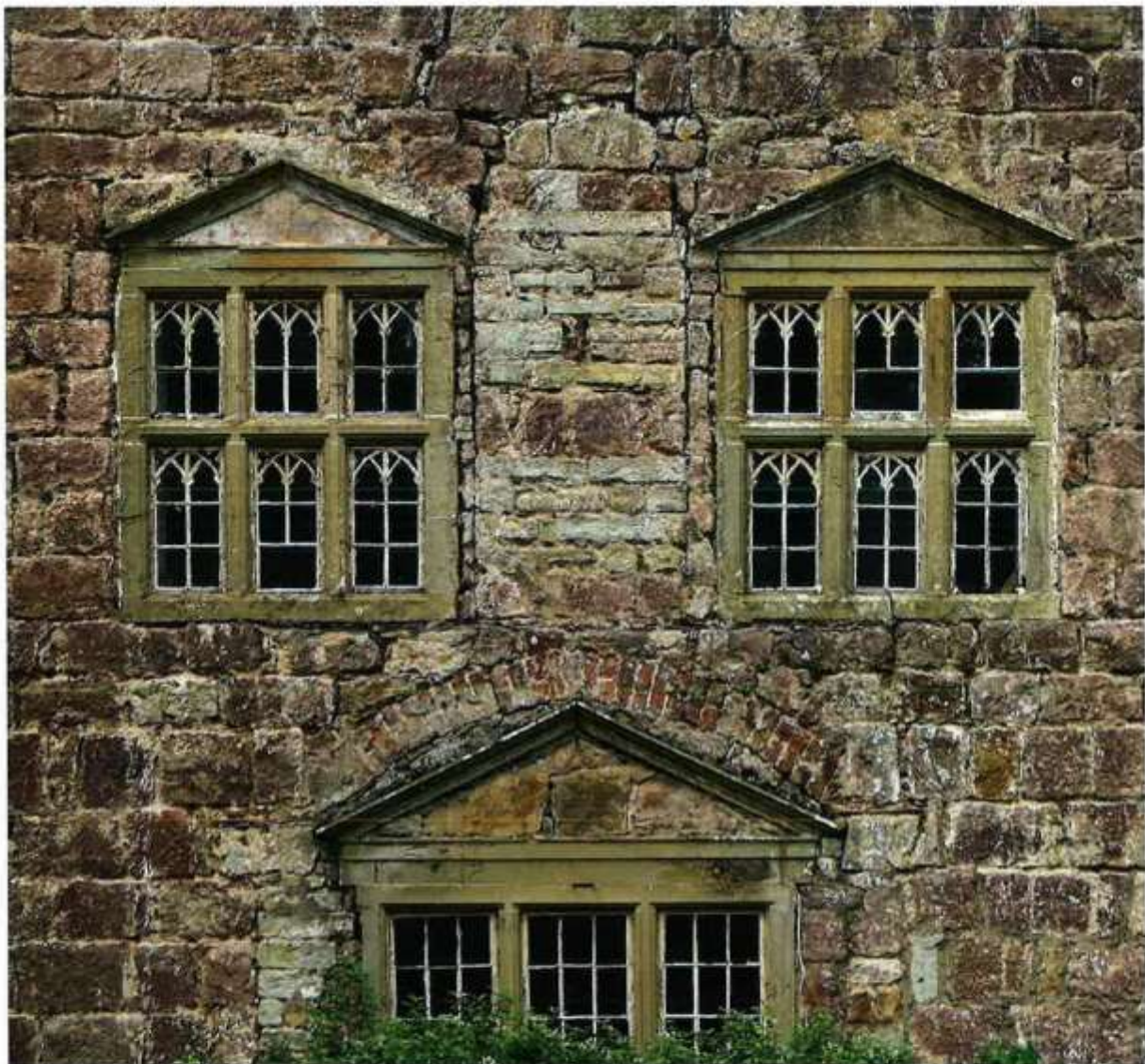


The south-east wing is somewhat anomalous. Its south wall is slightly skewed and the lower courses of the wing are noticeably irregular in comparison with the majority of the external walls.

There are also architectural fragments embedded in masonry filling in the south gable of the main house. There have been several modifications in that gable and the windows are Victorian copies. There cannot, therefore, be certainty as to whether the architectural fragments are residual from the David Hughes house or from the Hugh Hughes' mansion.

There are several blocked openings on the eastern facade, particularly on the south wing. Again, it is not certain that the openings which were subsequently blocked were part of the David Hughes house or a later phase after the mansion had been completed. It is a possibility that the somewhat irregular openings were blocked in the 1590s in the cause of the regularity and symmetry of the Renaissance house.

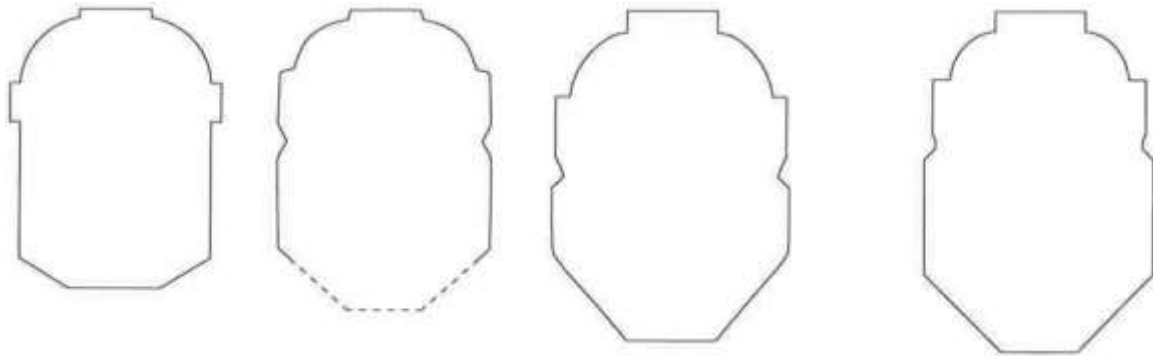




blocked openings, infill and architectural fragments (south gable)

Features relating to the 1590s

The principal features of the Hugh Hughes' era are the regularity of the openings on the facade, ovolo moulded mullion and transome windows, the distinctive stepped gables and Renaissance embellishments such as cavetto and cyma mouldings on pediments.

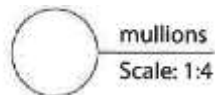


Plas Coch 19th century

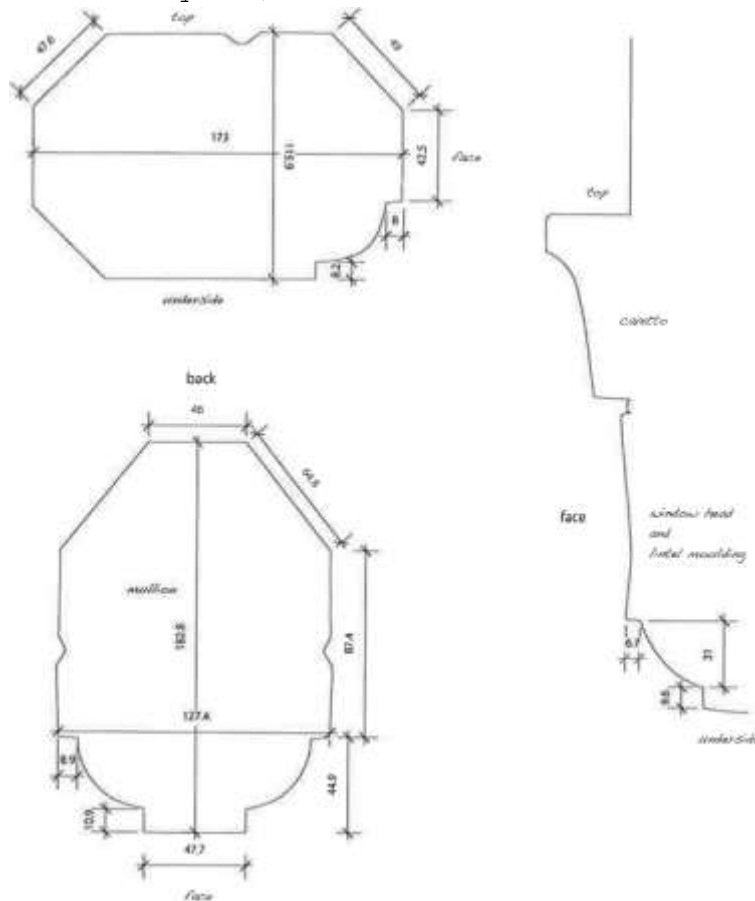
Plas Coch dormer 1

Plas Coch south-east wing

Castle Street Beaumaris



P/C Coch ovo/o mou/dbyS u-) ZÅ7 comparisons



0 10 20 30 40 50 60 70 80 90 100 mm

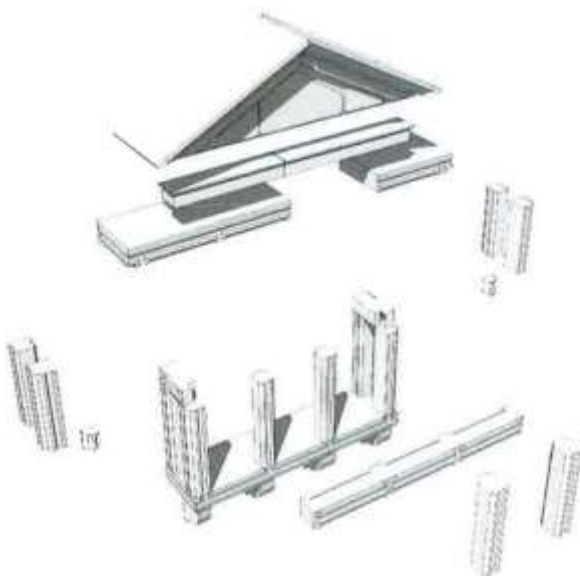
Plas Coch, 18th/19th floor
Garden Street, Ayr, 18th/19th



first floor window, south wing



dormers in attic space



exploded *diagram of ariel assembly*



one on first floor porch

A note on the Plas Coch trusses

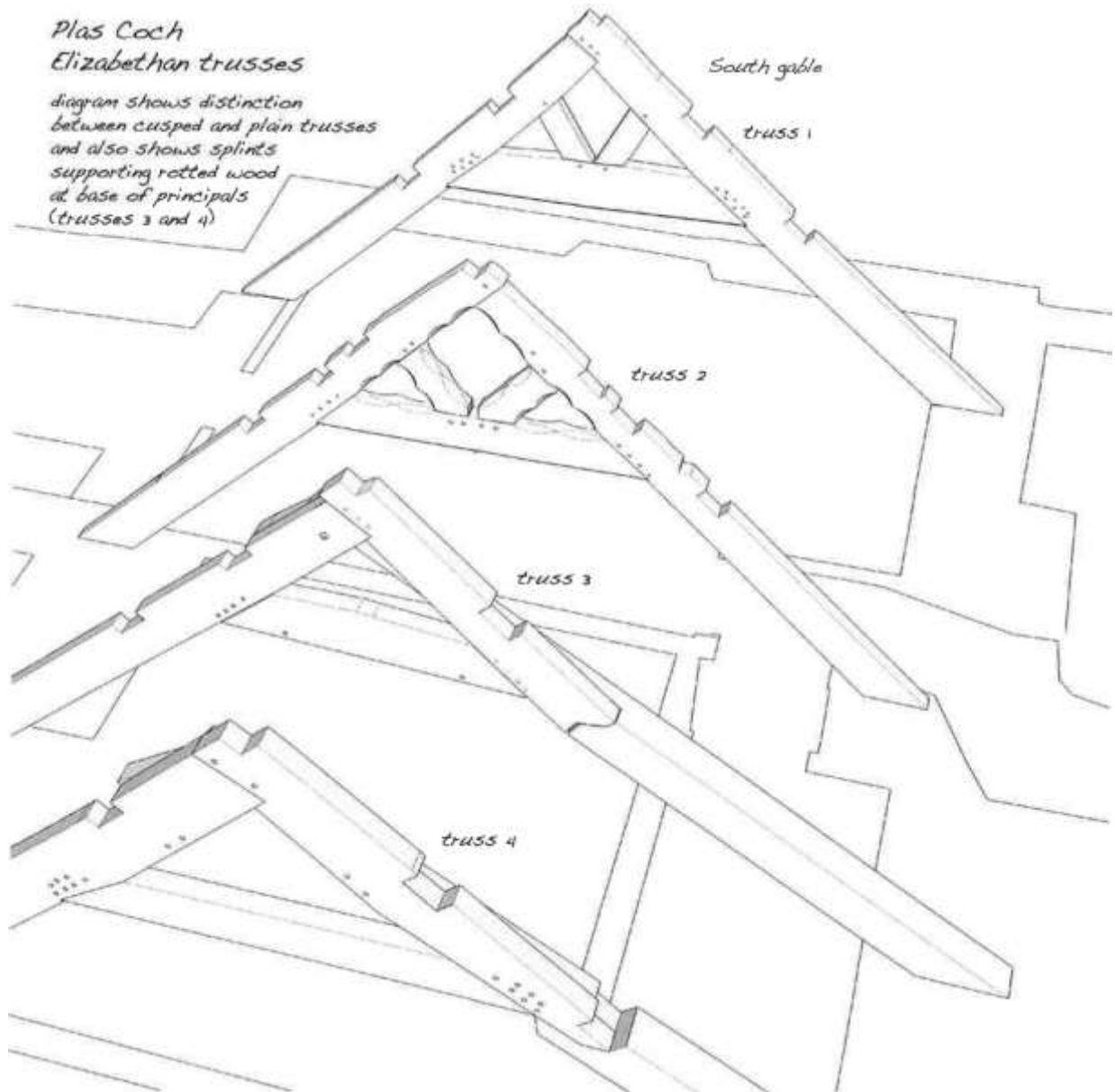
The main axis of Plas Coch runs north-south. A continuous ridge extends 27 m from the north gable to the south gable, interrupted only by a chimney stack at 3-5 m from the north gable. The northern end of the roof space, extending 8.5 m, is an addition of the early 19th century. The remaining extent, 18.5 m, is supported by 16th century oak trusses, spanning 6.85 m. The principals are, on average, 115 mm thick.

- The roof over the northern rooms are supported by rafters and purlins. The western kitchen wing roof is supported by two large 19th century trusses. A truss undoubtedly supported the roof of the porch (central wing on east side) but has been replaced by 19th century rafters. A part of an original purlin has survived.

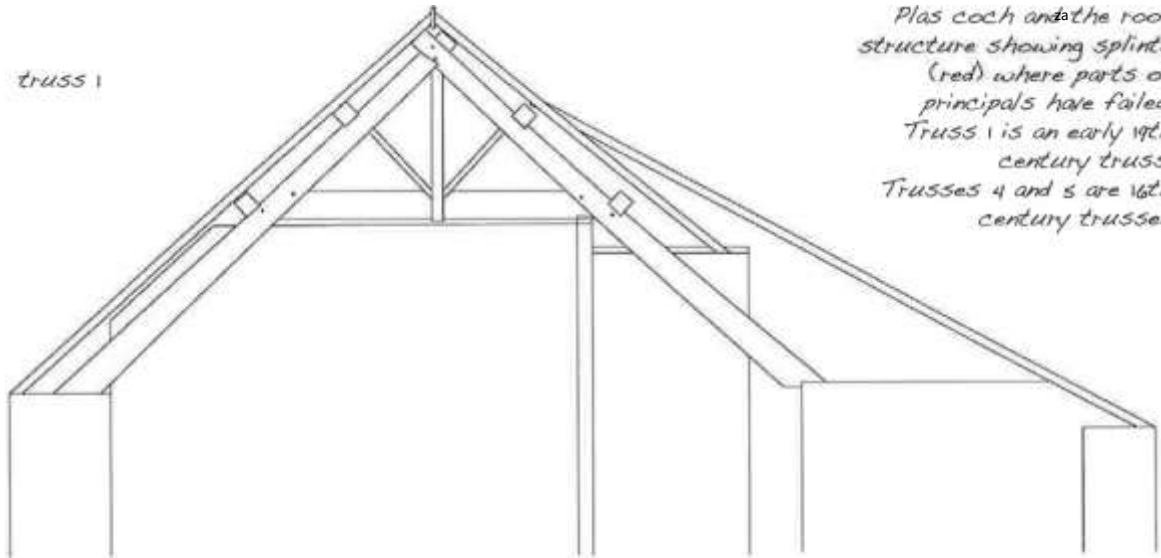
- The remaining, and larger, portion of the roof space is occupied by eight trusses, numbered here, 1-8, south - north. Each of the trusses extend 3-5 from the ridge plate to the wall plates on both sides.
- No. 8 is a 19th century king-post truss and marks the division between the 19th century north extension and the original hall. The remaining seven trusses are all 16th century collar-beam trusses. Nevertheless, the details are not uniform and although most are very similar they may not all be exactly contemporary.
- All have collar-beams with raking struts with the exception of numbers 4 and 6 which have raised collars and no struts. Instead, numbers 4 and 6 display peg-holes and grooves between the collar and the apex, for wattle and plaster infill. No. 4 has mortices and peg-holes below the collar, indicating a partition. This might also be true of No. 6 but the detail is not accessible.
- Nos. 1, 4 and 7 have cranked profiles on the upper part of the collars.
- The pegging of the joints are variable. In particular Nos. 1, 5 and 7 have double rows of peg-holes where the collars meet the principals. The peg-holes of No.1 truss have been re-bored.
- No. 2 and part of a truss in the south wing stand out for the reasons argued above ('features relating to the mid-sixteenth century')
- Four trusses (3, 4, 5 and 6) have been provided with modern collars and additional support for the principals on the west side, used as extended splints.

*Plas Coch
Elizabethan trusses*

*diagram shows distinction
between cusped and plain trusses
and also shows splints
supporting rotted wood
at base of principals
(trusses 3 and 4)*

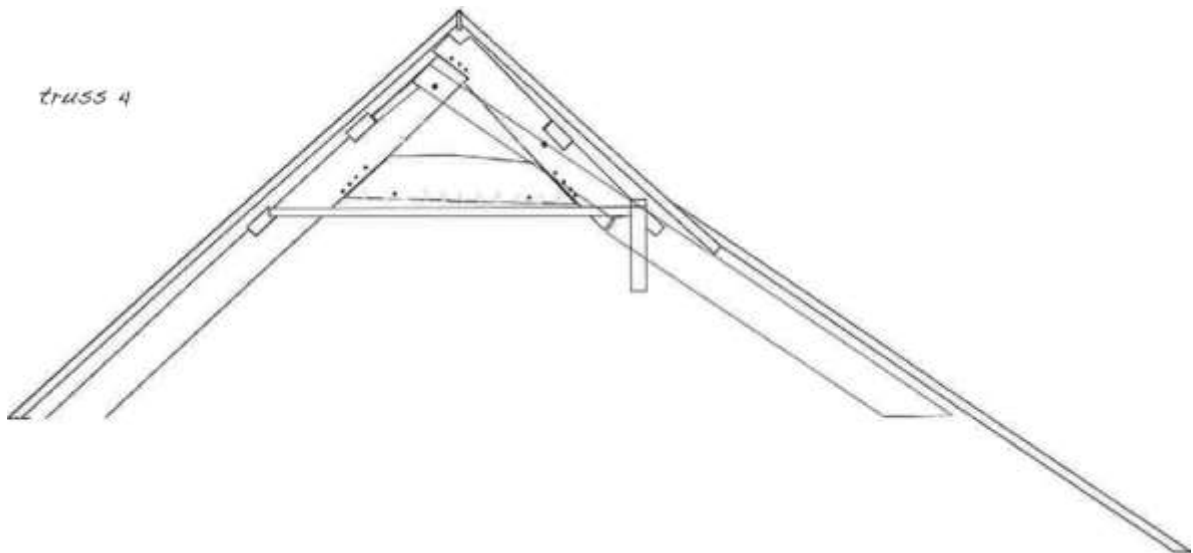


truss 1

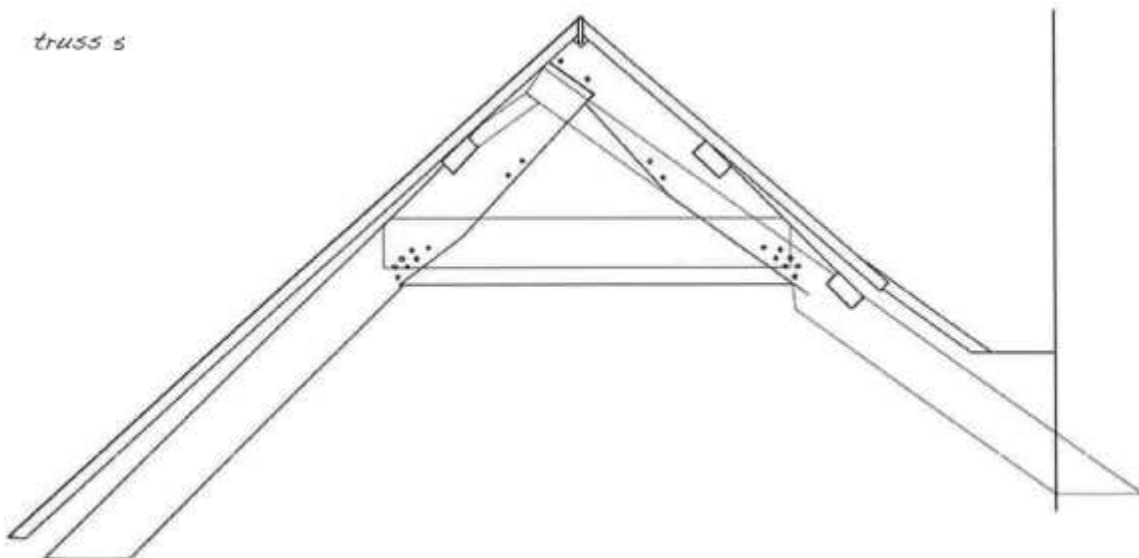


Plas Coch and the roof structure showing splints (red) where parts of principals have failed. Truss 1 is an early 19th century truss. Trusses 4 and 5 are 16th century trusses

truss 4



truss 5



- This summary account primarily relates the results of dendrochronology sampling at Plas Coch. There is a important phase of development in the late Georgian and Victorian period which will require a more detailed report and which is outside the remit of the sampling programme.

Dendrochronology

Summary by Martin Bridge and Dan Miles

A total of 14 timbers were sampled from the roof of this building, including two from the principal rafters of a cusped truss thought to be of earlier origin. One of these principal rafters was found to be from a tree felled in summer 1534. The remaining roof timbers probably represent a single group of trees felled at about the same time, though the narrow-ringed sequences were found to contain more sapwood rings than usually encountered in Wales. A single series was from a tree felled in spring 1592, with others having estimated felling date ranges either incorporating this date, or slightly earlier. Since it appears the rest of the roof, other than the cusped truss, is likely to have been constructed in a single campaign, this is most likely to have taken place in 1592, or within a few years after this date.

The single reused cusped truss of 1534 suggests that this might be the date of the original build. The house was previously thought to have been constructed in 1569, however, it is more likely that it might have been constructed as early as the 1530s assuming the reused cusped truss did originate from the site. Nevertheless, some of the dated samples with incomplete sapwood might have originated from a phase of building represented by the 1569 carved over the porch door.