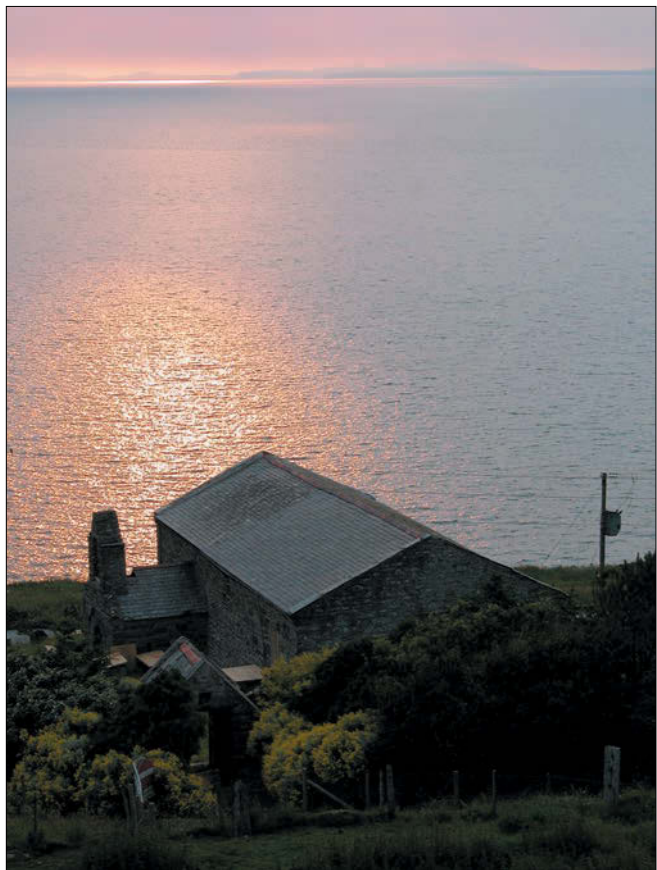


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# St Celynnin's Church Llangelynnin

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GAT Project No. 1730

Report No 518

November 2003

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*Ymddiriedolaeth Archaeolegol Gwynedd*  
Gwynedd Archaeological Trust  
*Craig Beuno, Ffordd y Garth, Bangor, Gwynedd LL57 2RT*



St Celynnin's Church  
Llangelynnin  
Archaeological Recording

February 2004

Prepared for Adam and Frances Voelcker, Architects

by

David Longley

Conservation work supported by the Heritage Lottery Fund was undertaken at Llangelynnin Old Church, Llangelynnin, Gwynedd, during the Summer of 2003. This report represents an account of the archaeological recording carried out during the course of that work and includes an appendix on tree ring analysis of timbers from the church by Nigel Nayling of the Dendrochronology Laboratory, Heritage and Archaeology Research Practice University of Wales Lampeter, Lampeter, Ceredigion, SA487ED. Celtic Conservation very kindly discussed the *momento mori* with me while the work was in progress.

Many thanks are due for kindnesses shown during the recording work including, in particular, Mrs Lloyd Jones of Trefor, Llangelynnin, and Mr. and Mrs France of Ty'n y Twll, Llangelynnin.



*Ymddiriedolaeth Archaeolegol Gwynedd*  
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## Historical background and associations

### The Legendary Past

Llangelynnin church sits on a sloping shelf of land about 100m from and 40m above the shoreline of southern Meirionydd, overlooking the wide expanse of Cardigan Bay. The Llyn peninsula stretches its long arm across the north-western horizon where, during the summer months, viewed from Llangelynnin, the sun sets over Ynys Enlli.

Llangelynnin takes its dedication from Celynnin, reputedly a saint of the Early Medieval centuries. He is considered, in tradition, to have been one of the sons of Helig ap Glannog along with his brothers Boda, Gwynninn, Brothen, Aelgyfarch, Rhychwyn and Lleuddad. Celynnin is also associated with Llangelynnin in the Conwy Valley and his brothers were similarly regarded as saints and the founders of churches. The geographical spread of this family extends from the mythological core of Helig's kingdom, the drowned lands of Llys Helig, in Conwy Bay, between Ynys Seiriol and the Great Orme, to the early church foundations which bear their names. Celynnin's grandfather, Glannog, gives his name to the alternative and more ancient name for Ynys Seiriol – Ynys Lannog. The brothers' eponymous foundations are to be found, naturally enough, on the coastline of Helig's drowned lands at Aber and Dwygyfylchi, at the Conwy estuary at Gyffin, further up the valley at Llanrychwyn and, of course, Llangelynnin, and on Bardsey.

There is another 'saintly kindred' whose ancestry lay in a tradition of drowned lands. These were the sons of Seithennin, King of Maes Gwydno in Cardigan Bay. It is interesting to find that two of these offspring, Sanan and Tudno have associations with the locale of the northern tradition just as we might expect Celynnin to be more appropriately related to the Cardigan Bay tradition. The Stanzas of the Graves place the grave of Sanan on Morfa Rhianedd, the shoreline between the Conwy estuary and the Great Orme, while Tudno's cult centre is the Orme itself.

It is tempting to see, in these relationships, a cross-fertilisation of associations, some with a local emphasis, referring back perhaps to a more general, less specific and more ancient tradition of drowned lands. An indication of the extent of the confusion may be gauged from the survival of a triad of 'The Kingdoms which the sea destroyed' in a late thirteenth-century manuscript of Cronica de Wallia. Here the Kingdom of Helig ap Glannog is placed between Ceredigion and Ynys Enlli (Bartrum 1993, 362). Whether this is so or not the situation of St. Celynnin's church provides an evocative and atmospheric context.

The Celynnin of Bonedd y Saint is a character of myth and tradition. We shall never know if a historical namesake ever existed. There is no doubt that certain early churchmen were influential and that their name became associated with churches which are genuinely early foundations. The association of a 'Celtic' dedication such as Celynnin, is a potentially useful chronological indicator but the process by which churches received their dedications is not well understood. It is known that dedications could change. It is also very possible that multiple dedications to the same named saint are likely to reflect the sphere of influence of a major church associated with the cult of that saint than it is the geographical range of the saint himself (Edwards 1996). It is also possible that such associations and consequent dedications could occur some centuries after the eponymous saint is supposed to have lived.



## Historical associations

No tradition associated with Celynnin is recorded until the mid-sixteenth century when Gruffudd Hiraethog adds his name (with others) to a list of sons of Helig ap Glannog in Bonedd y Saint, as discussed above. The church of Llangelynnin, however, is recorded in the ecclesiastical 'Valuation of Norwich' in 1254.

The coastal parish of Llangelynnin lies within the ancient commote of Talybont. It extends from the Mawddach estuary in the north, near Arthog, to the Dysynni in the south, flanked on its landward side by the slopes of Esgair Berfa a south-westerly spur of Cadair Idris.

Five townships, or communities are recorded within the parish in the Middle Ages, composed predominantly of individual agricultural holdings within hereditary kinship lands.

These Medieval rural townships or trefi, are, from north to south, Cregennan, Morfa Maenog, Llwyngwrl, Bodgadfan and Llanfendigaid. Llwyngwrl, the location of 'Llangelynnin New Church' lies 3km to the north of Llangelynnin. Bodgadfan township extended across the rising ground immediately behind Llangelynnin. The name is still preserved in a local farm 1km to the south east, up and over the steep ridge of Cefn Bod-Gadfan.

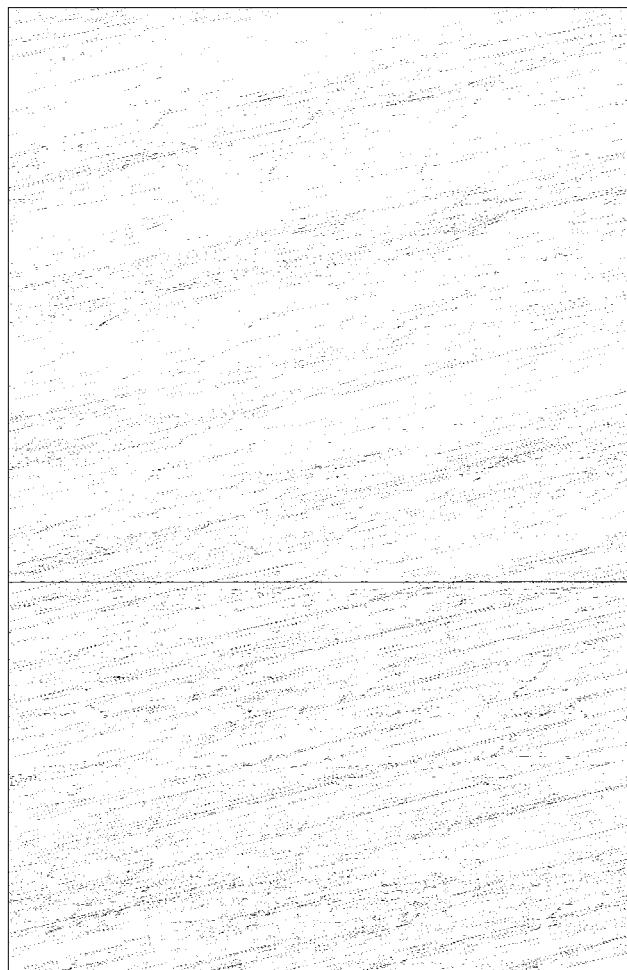
In 1292-3 there were twenty-one taxpayers across the hills of this township, representing perhaps as many as one hundred souls. In Llwyngwrl to the north, half as many again and to the south, at Llanfendigaid, twenty-three taxpayers represent a further one hundred and fifteen men, women and children. The thirteenth century was a period of population growth in North Wales.

In 1292 the highest taxpayer in the whole commote, Madin ap Adaf Hen, was a member of the local Bodgadfan community. Topographic and farm names appear to continue to record the memory of this important local family at Nant Madyn and Craig Fadyn. His two sons' possessions there were also considerable and Bodgadfan has the highest average tax assessment in the parish (K Williams-Jones 1976, 36-7, lxxxii, lxxxiii, cxliii).

In the period before the conquest, ten years earlier, the royal commotal centre, the llys with its attendant demesne lands lay to the south-east at Tal y Bont within the township of Rhyd-Cryw, now within the adjacent parish of Llanegryn. The Prince's tenants at Bodgadfan, Cregennan and Llwyngwrl, before and after the conquest, milled their corn at Llanegryn (Rec. Caern. 271-2). This is the social and economic context which gave rise to the first stone church at Llangelynnin of which surviving evidence remains.

The English wars of the 1280s and, during the fourteenth century, bad weather, pestilence and crop failure saw a downturn in population and local economic fortune. This can be measured in successive taxation records (K Williams-Jones 1976, Table E, cxliii). During the thirteenth century the population of the parish stood at around four to five hundred. By the earlier sixteenth century, at the time when the second church was being raised, the population had reduced to within the three hundreds. Llangelynnin had, by 1537, been appropriated to Clynog Fawr and may already have been so by 1504 (Pryce in J. and Ll. Beverley Smith, 260). This association with Clynog may have had some bearing on the context for rebuilding and the resources required to do so.

By the end of the century there would seem to have been a significant improvement and seventeenth-century figures suggest population totals in the low six hundreds. Figures for the mid-eighteenth century indicate a population of around seven hundred and the 1801 census records seven hundred and fifty-four inhabitants within the parish.





## The Church

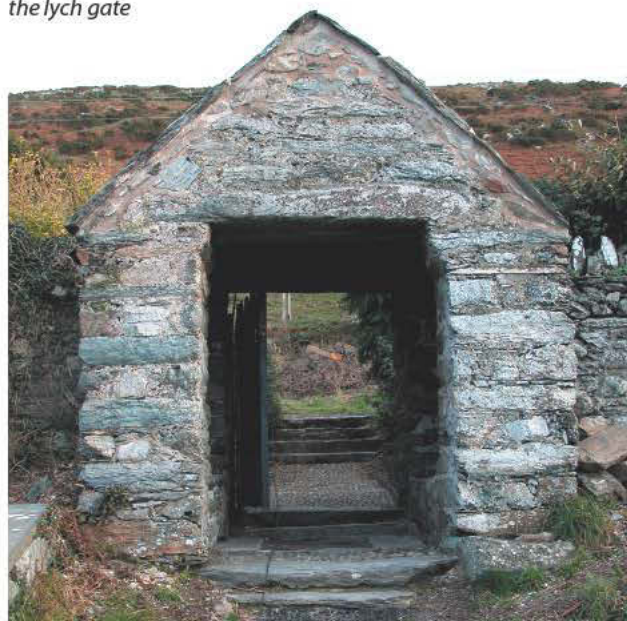
The terrace on which the church sits is some 150m wide between the steep rising slopes of Cefn Bod-Gadfan eastward and landward and a sharp drop down to the shoreline to the west. This shelf is not level. The local topography, at the site of the church, has a seven degree slope from east to west and the church is terraced into that slope. The orientation is east-south-east, perpendicular to the contour. The graveyard is a broadly rectangular stone-walled enclosure measuring 44m east to west, down slope and, at each corner, 28m north to south. The northern side is laid out with two straight sections joining obliquely at about the centre point of that side creating an apex 30m distant from the opposing south wall. The eastern wall also deviates from the rectangular plan near the south eastern corner where the wall turns out slightly at the lych gate entrance to the churchyard. The church is disposed centrally within the yard and both the graveyard and the church share the same alignment.

There is no indication of any earlier boundary. The adjacent fields are under grass but have been cleared and improved in the past.

An old track crosses the fields to the north and south and must once have served the small community clustering to the east of the church as a precursor to the present road from Llangwrl to ...  
The graveyard is entered through a lych gate on the

east side, near the south-east corner. This feature was present earlier in the century but was rebuilt in 1884 by public subscription. The gate is stone-walled and slate-roofed. An animal grid is set into the floor. There are benches recessed into the side walls on which a bier could be rested. The lych gate is visible through a squint in the east wall of the porch on the south doorway of the church.

*the lych gate*







*south-west  
view*



*north-west  
view*



*north-east  
view*



The church is rectangular in plan, though slightly skewed at the eastern end. The southern wall (19.25m externally) is therefore slightly shorter than the northern wall (19.44m). The internal centreline measurements are 17.38m by 6.42m.

The nave is continuous with the chancel, the division marked by a rood screen at 5.93m from the east wall (see below). The roof is a five bay king-post truss construction, now slated externally. A porch was added to the south door in the seventeenth century (see below).

The interior walls are plastered and lime washed. Outside, the masonry is visible although heavily pointed in places. A serious vertical crack is visible in the south wall at between 1.00m and 1.4m from the west wall, corresponding to the thickness of the west wall which appeared to be in danger of becoming detached from the main building. A similar crack in a corresponding position of the north side has been previously treated with heavy pointing.

A clear distinction is visible in the character of the external masonry on all four faces. In the south wall a horizon marks this distinction at a height of c.1.00m above the present external ground surface at the east end and at a height of c.3.00m at the west end. The stonework changes from generally small, sometimes rounded, predominantly elongated stone below this line to an admixture of predominantly larger, more square quarried stone. The horizon between the two builds is practically level. The upper build is carried to a height of a further 1.90m above the lower build at the east end and 1.70m at the west end. At this point a string course



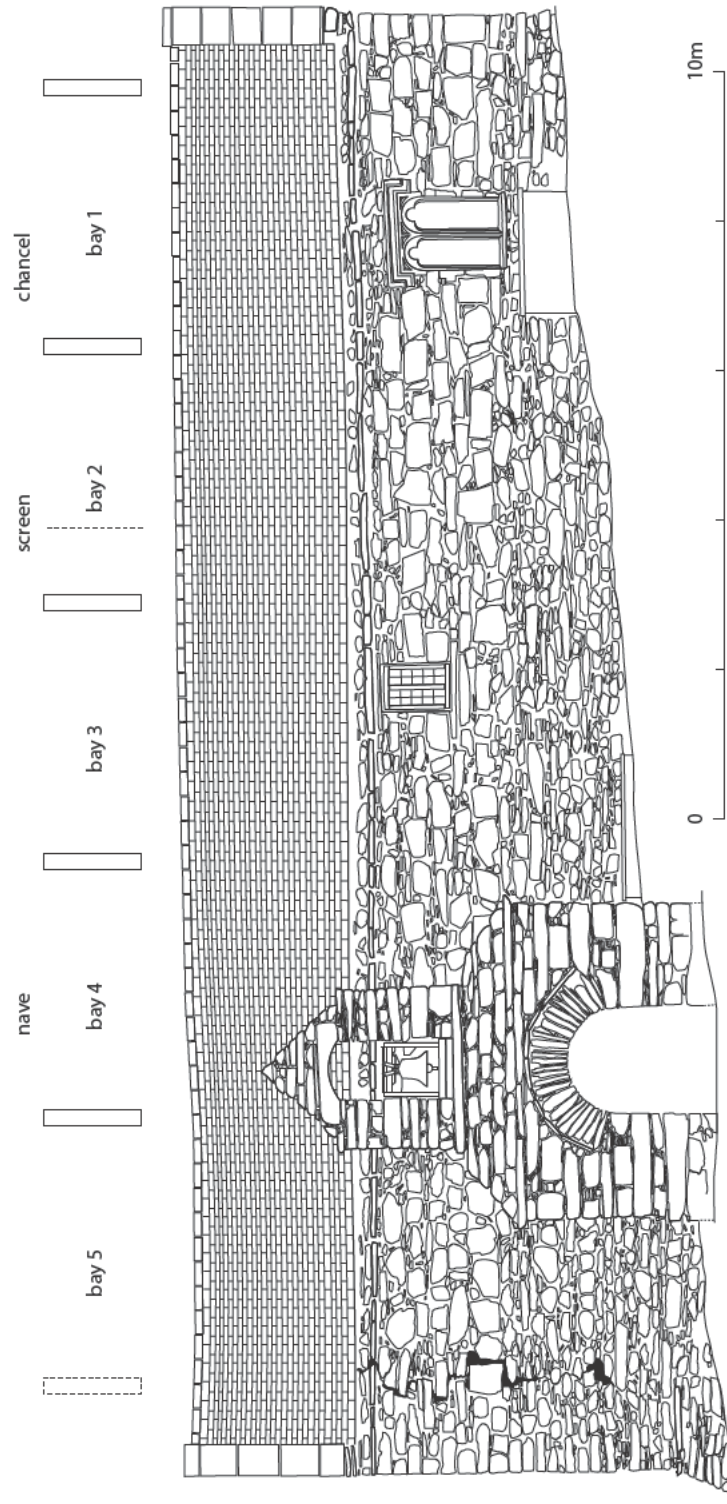
*south-west corner showing structural cracks*

of long thin schist slabs projects slightly from the wall face, carrying an offset a further 250-300mm to the roof line which slopes gently from east to west. The same features and sequence are met on the north wall. The corner stones above the change of build are noticeably more square and precise than those below it.



*south wall showing masonry phases*

St Celynnin's Church, south elevation



The west face is a tall wall, rising 7.5m above the external ground surface. A projecting schist slab string course marks the junction of the batter with the main wall. A narrow rectangular slit window pierces the wall centrally along its length. The majority of the wall is made of roughly coursed rounded and elongated stones. The upper parts of the northern and southern corners utilise the large squared blocks which characterise the upper parts of the north and south walls. An additional distinction can be drawn between the relatively neat masonry of the main part of the wall and roughly laid and coarsely pointed blocks below the eaves. It would appear that this differentiation defines the steeply pitched gable of the west wall of the original church, in-filled when the north and south walls were heightened creating a less steeply pitched roof. This is clearest on the north side of the west wall. A similar distinction is visible in the east gable. The projected line of the roofline of the original church would appear to spring from the horizon on the north and south walls where the masonry changes character. This suggests that a large part of the side walls and gable ends of the original church survived to be incorporated in the rebuild which created the present church. This leaves us with a putative early church of over 19m in external length and nearly 8.5m in external width. It is the scale that has led some commentators to suggest that the early church was widened on rebuilding.

Continuous nave and chancel churches of twelfth and thirteenth century date are, in general, smaller, with an average external span of around 6.5 to 7m. However, there are large exceptions, Llannor in Llyn is a thirteenth-century church (Llanfawr in 1254) of comparable scale. Llanelltud in Meirionydd has been restored several times but may retain its original footprint (Davidson 2002, 351-2, fig. 8.8). At Llangelynnin the evidence of the surviving masonry is a powerful argument in favour of a wide early church here.

The chronological sequence may therefore be suggested as follows.

There may have been a church on this site during the Early Middle Ages but on present evidence this cannot be conclusively demonstrated. The 'Celtic' dedication to Celynnin is circumstantial evidence, but no more than that. If there was an Early Medieval church, then it would have been built in timber. There is, as yet, no clear evidence for any masonry church in North Wales earlier than the twelfth century.

The phase 1 church, represented at Llangelynnin by the lower courses of stone work in the north and south walls, the steep pitch of the north and south gable ends incorporated in the later rebuild, the fine window in the western wall (see below), the originally comparable blocked slit window in the north wall, the sepulchral

niches in the chancel and the north and south doorways are medieval and are most probably thirteenth century. A church at Llangelynnin is attested in 1254 – and this may be it.

The phase 2 church saw the raising of the north and south walls and the heightening of the eaves but not the raising of the total roof height. The result was a shallower pitch. New windows were inserted in the south wall of the nave and chancel and in the north wall of the nave at the west end, and in the chancel, opposite the south window. All these windows were above the height of the phase 1 walls and incorporated into the new masonry. A new roof of king-post construction was made and a rood screen was inserted at the same time. The high window in the south wall would have helped to light a loft to the screen. The high window at the west end of the north wall would have lit a gallery. Neither loft nor gallery now survive.

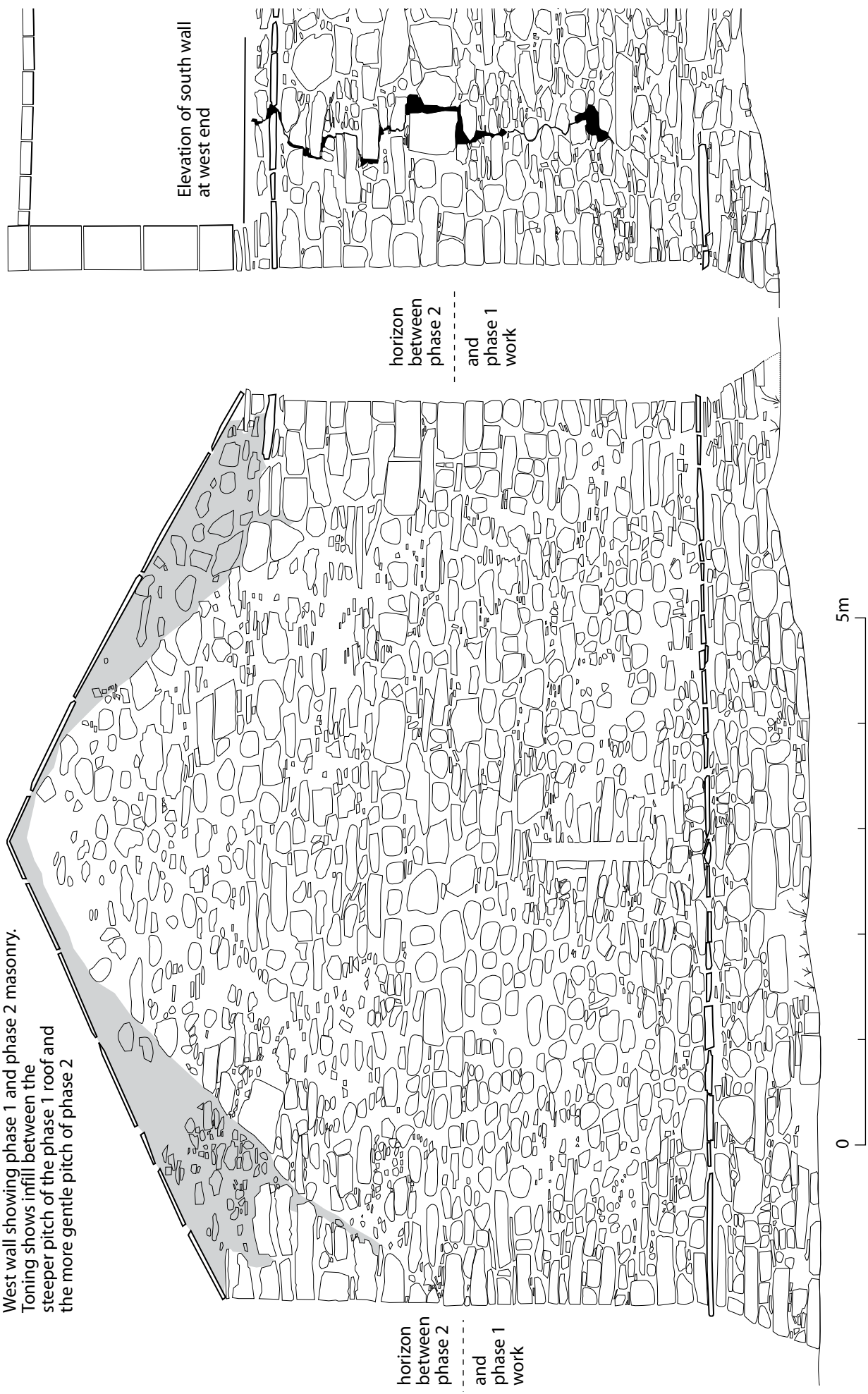
The style of the roof, the style of the south wall chancel window, and the dendrochronological dates from the screen and the roof timbers, suggest that these structural modifications to the church were made during the first half of the sixteenth century. By this time Llangelynnin had been appropriated to Clynnog Fawr.

The south porch was added in the mid-seventeenth century and a new east window was inserted then or, as has been suggested, during the eighteenth century. The slate slab floor was in place by, at least, the early eighteenth century.

In 1823 some further attention was paid to the church when the remnants of the sixteenth-century rood screen were incorporated in a new screen. At this time the benches which remain in the church were placed there (Arch. Camb. 1884, 305). However, a church at the more populous Llwyngwrl, styled Llangelynnin New Church, was built in 1842 and by the 1850s, the old church stood empty and neglected (Glynne 1850, 279).. So Llangelynnin remained until the sensitive restoration work of Harold Hughes in 1917.

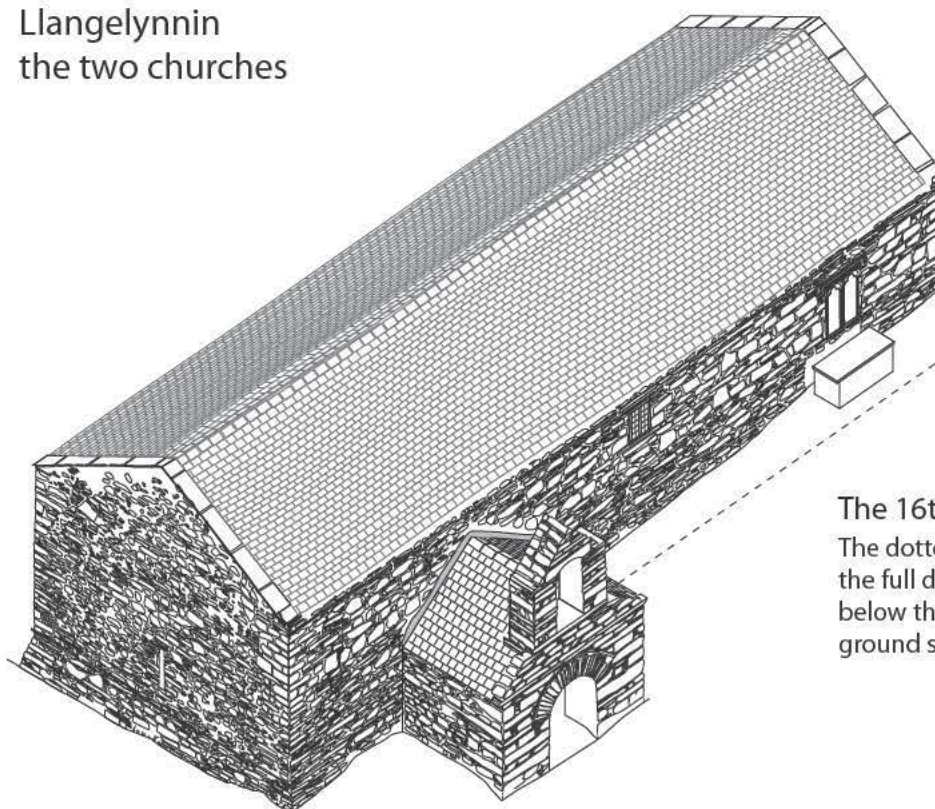


West wall showing phase 1 and phase 2 masonry.  
 Toning shows infill between the  
 steeper pitch of the phase 1 roof and  
 the more gentle pitch of phase 2

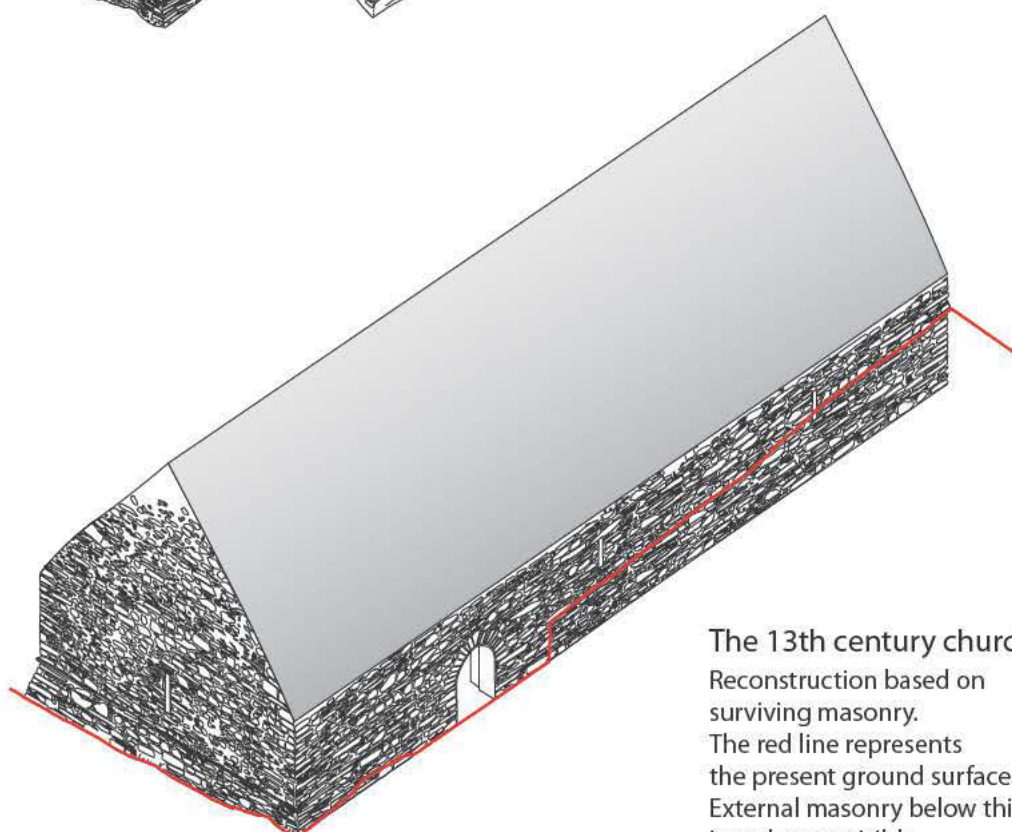




# Llangelynnin the two churches



**The 16th century church**  
The dotted line represents  
the full depth of the wall  
below the present  
ground surface



**The 13th century church**  
Reconstruction based on  
surviving masonry.  
The red line represents  
the present ground surface.  
External masonry below this line  
is no longer visible

## Features of the church

### Porch

A porch stands against the west end of the south wall to give protected access to the south door. The construction is of neatly coursed schist. The entrance is arched with 28 thin schist voussoirs, capped with a drip ledge of seven thin slabs, following the curve of the arch. The roof is slated. The porch supports a belfry, now housing a bell of 1842 from the church at Llwyngwril which superseded Llangelynnin old church at that date. The original bell, dated 1660 now rings at Llwyngwril. The porch is of seventeenth-century construction and is very possibly contemporary with the dated bell.

There is a small window or squint in the east wall of the porch. This shows as a narrow slit on the outside wall but is splayed widely on the inside face on its north side. A small hollowed beach boulder is set in the north wall, between the squint and the door, as a water stoup.

### The nave

The nave and chancel are on continuous construction, separated only by the lower half of a timber screen. The total internal length of the church is 17.38m, of which the nave occupies 11.45m and the chancel 5.93m.



*the south porch*

*The east end of the church*



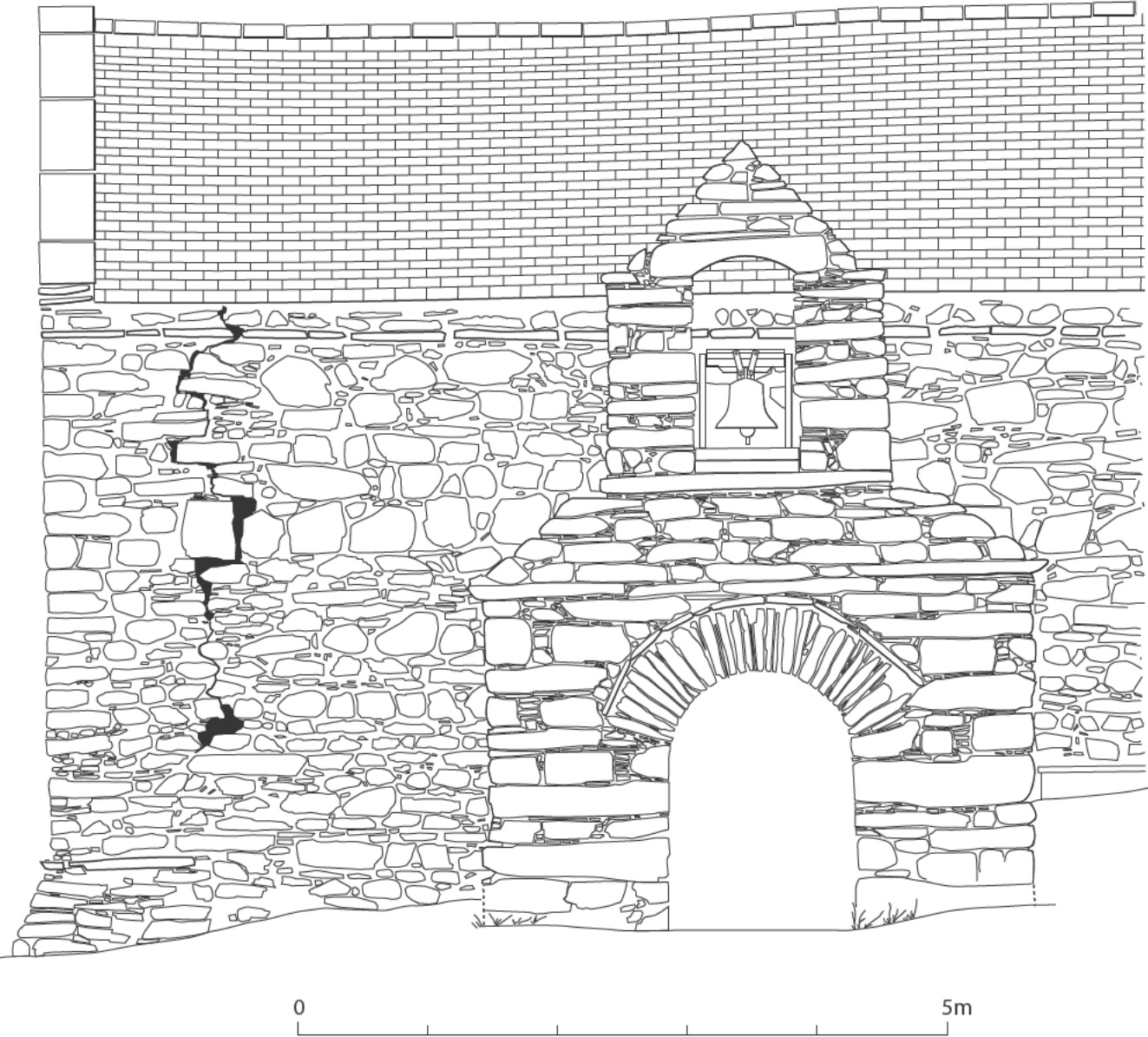




*External and internal views of Llangelynnin after conservation*

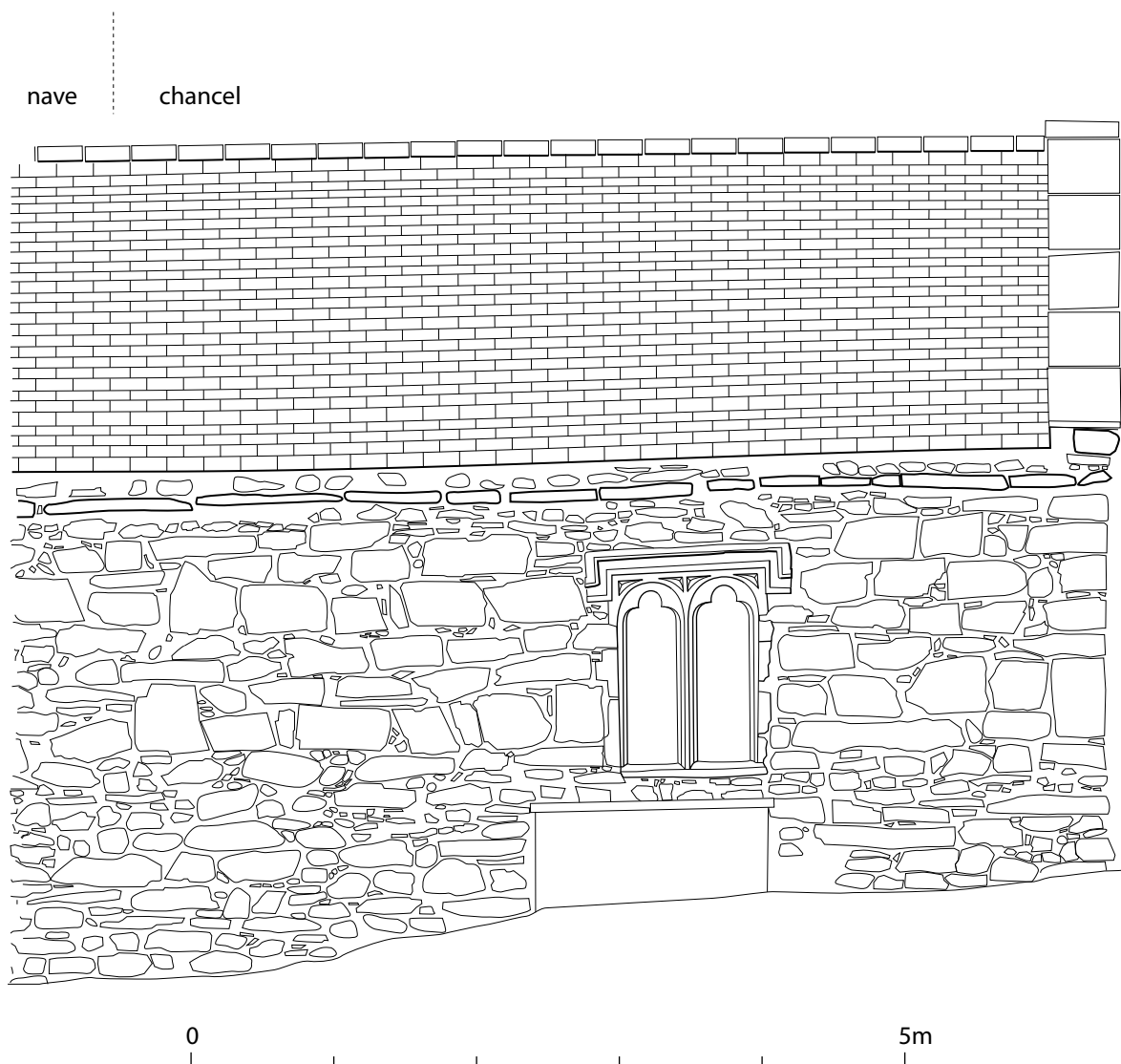


West end of south wall showing porch and cracks in wall

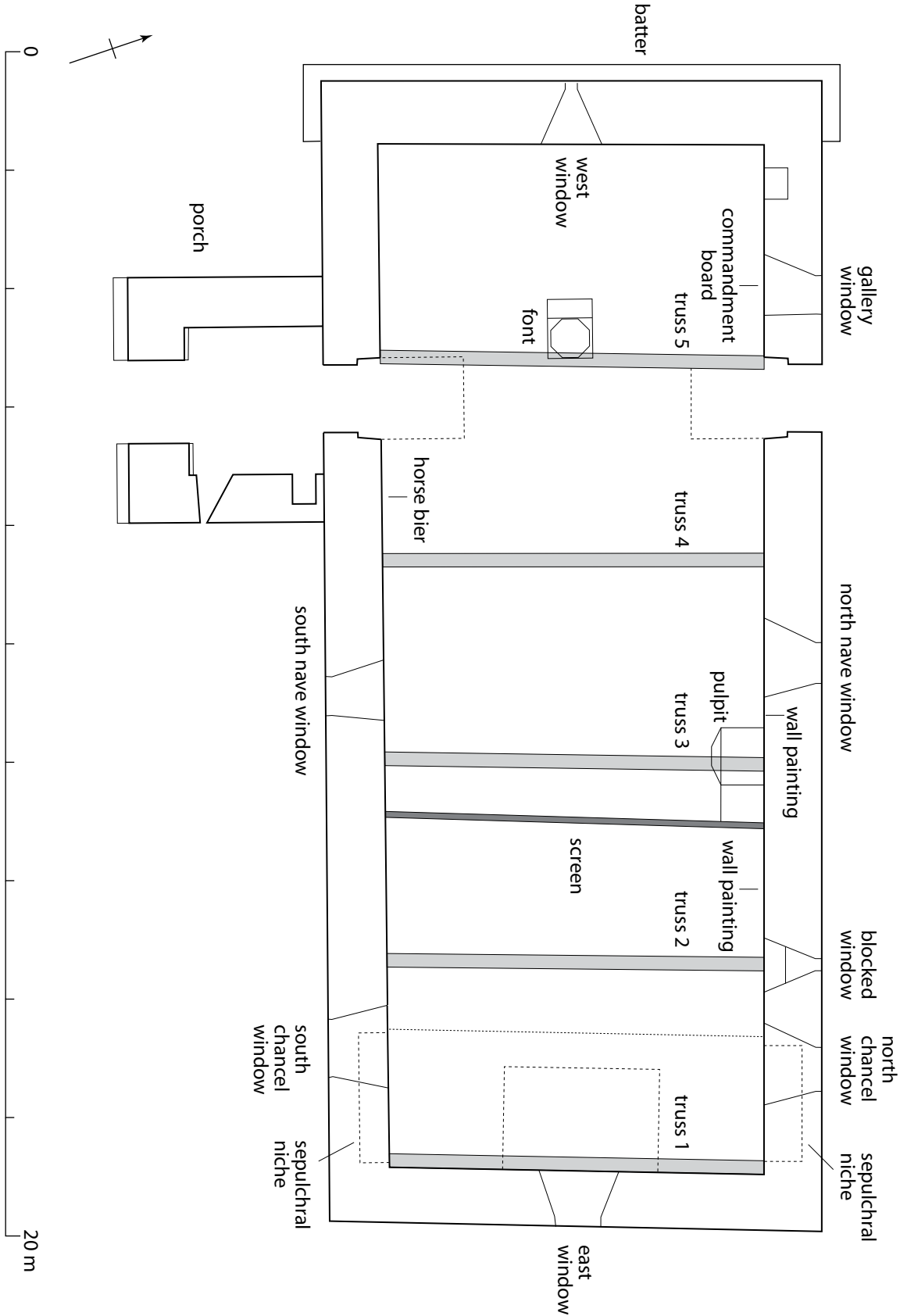




South wall of chancel showing 16th century window set on top of phase 1 wall



Plan for location of principal features





*The west end of the church  
before conservation*

## Doors

There are now two opposing entrances to the nave, one on the north and one on the south side. The doors appear to be original and Medieval.

The northern door has a pointed arched head formed of local stone voussoirs and has no other architectural elaboration. The southern door has a similar pointed arched head but any detail which may be present is obscured by plaster work. Both doors have horizontal lintels on the inside walls.

The interior of the church is approached by means of two stone steps up from the external ground surface on the northern side and one step up from the porch on the southern side. The interior floor surface is recessed on the inside of both doors. It is likely that this floor was raised when it was resurfaced with the present slate slabs. This resurfacing was done before 1726. The recesses are necessary to allow the doors to open.

*The north door and  
high 'gallery' window*



*The south door*





## Windows

There are four windows which light the nave, two more or less directly opposite each other within the central bay of the church, one high on the north wall, towards the west end and one low and central to the west wall.

The high window at the west end of the north wall lit a musicians' gallery at the west end. The window in the south wall lit the nave or, possibly, a rood screen loft (Arch.Camb. 1917, 428-9). Both are much modified but their openings are likely to date to the sixteenth-century reconstruction.

The window in the central bay on the north wall is a late insertion. It is rectangular and has a relatively modern wooden frame. In this respect it is comparable to the window in the south wall and that in the west end of the north wall which are of similar dimensions and both have modern frames. All are splayed internally. However, this window has clearly been cut through the lower, less regular, masonry of the phase 1 church. The infill around the frame stands out against the earlier work. Each of the other windows in the north and south walls of the chancel are placed at or above the level of the junction of the early sixteenth-century masonry and the phase 1 work and would appear to have been originally set when that wall was built.

The window in the west wall shows on the outer face as a rectangular slot, 1.4m in length and 0.2m wide. Outside it has no embellishment whatsoever. However, on the inside wall, the window has a wide splay in each direction, 1.04m wide and 2.4m tall. The window has a rounded arched head and, with evidence to suggest that a large part of the west wall retains the gable profile of the original church, this is likely to be a surviving thirteenth-century window.

A small rectangular niche was revealed a few centimetres below the 'gallery' window on the inside of the north wall when the 'commandment panel' was removed for conservation. This feature may have been intended to house a lamp.

A low rectangular niche, 533mm long, 400mm deep and 470mm high is set at the base of the north wall, 390mm from the north-west corner of the nave.

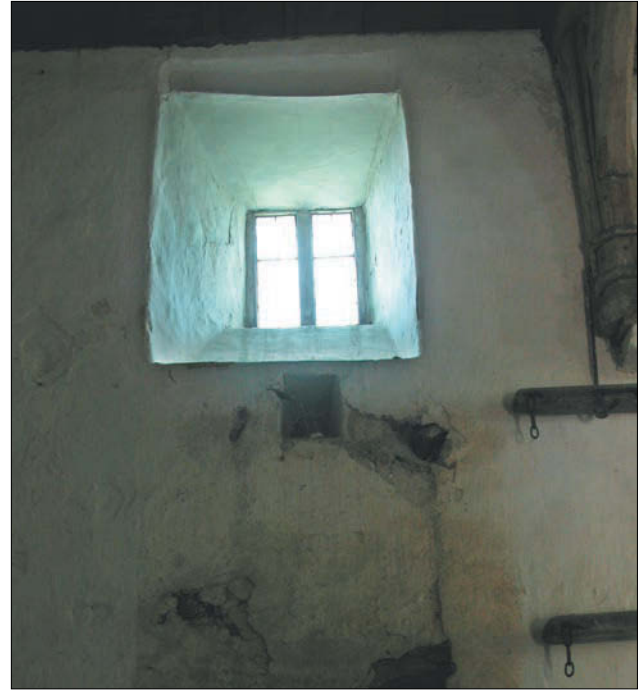
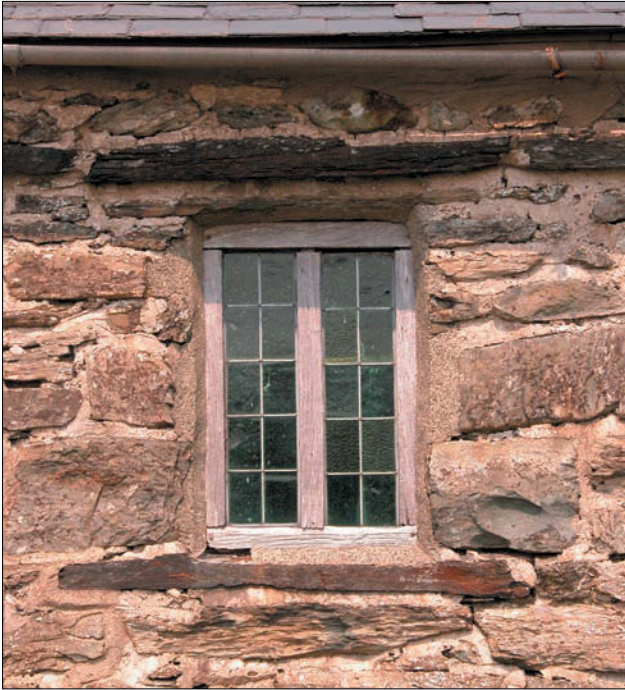
*Late window in north wall*



*The position of the inserted northern nave window and the 16th century chancel window. The wall texts lie between*

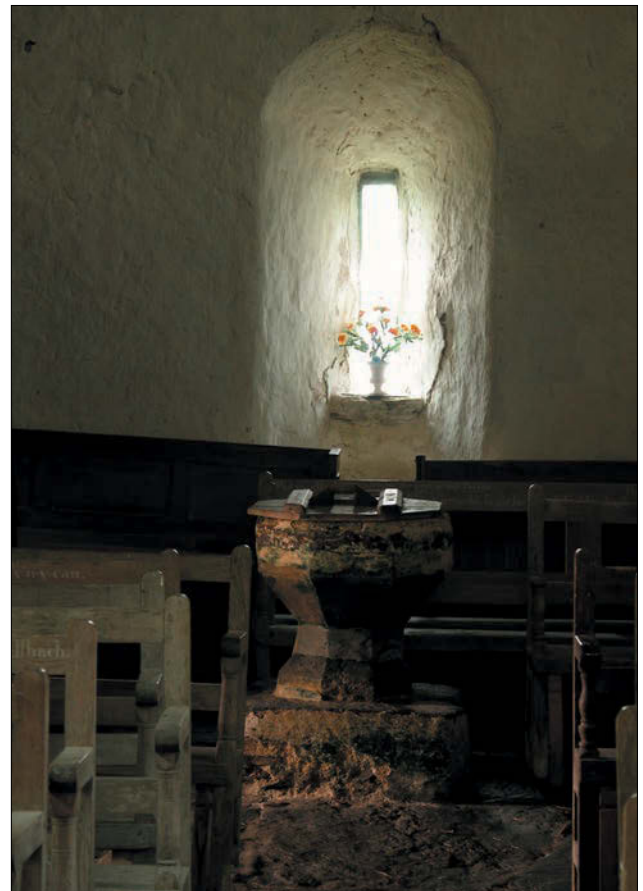






*The 'gallery' window, inside and outside*

*The south window, outside and inside*





## Fittings

### Font

An octagonal bowl and stem of probable late Medieval date is set on a rectangular stepped plinth (Davidson 2002, 361). It has been damaged and repaired near the base of the stem.

### Commandment board

A large wooden frame divided lengthways into two parts hangs on the north wall immediately below the 'gallery' window. On the frame at the top is painted, in Welsh, the legend: Exodus XX Bennod (Exodus, 20th Chapter). The frame at the bottom carries the name of the churchwardens and the date, 1796. Within the two panels are painted extracts, in Welsh, from the text of Exodus II, 2-17 with the ten commandments identified by Roman numerals in red.

The illustrations shows the panels after conservation



font

commandment board







*Exodus 20.6: ...yn gwneuthur...*



*Psalms 26*

*The illustrations above show the wall painted texts before and after conservation*

#### Wall paintings

There are two fragments of black letter text painted on the north wall, mid-way up either side of the wooden screen separating the nave and the chancel. For location of the texts on the nave wall, see the image showing the north side nave and chancel windows. These texts appear to conform to a directive of Canon 82, of the year 1603 (Archaeol. Cambr. 1919, 587; A J Parkinson Ms notes NMR. 26/2/1974).

The smaller fragment, in the nave, above the present position of the pulpit, reads, in Welsh:

*... yn gwneuth[ur tri]gared[d] i filoedd ... (and showing mercy unto thousands of them that love me and keep my commandments, Ex.20.6).*

A fragment of text is now visible above this which may be part of the previous verse, Exodus 20.5, which reads:

*'Canys myfi yr Arglwydd dy Duw ydwyf Dduw eiddigus, yn ymweld a phecodau y tadau ar y plant, hyd y drydedd a'r bedwaredd genhedlaeth o'r rhai a'm cashant.*

*For I the Lord thy God am a jealous God, visiting the iniquity of the fathers upon the children unto the third and fourth generation of them that hate me.'*

This text is, of course, carried on the commandment board.

The larger fragment is in the chancel and reads, in English

*Psal. 26 ve..8*

*...Lord I have loved the habitation [of thine] house: and the place where [thine honour dwelleth]*



There is a third area of wall painting which was not previously known to living memory but which came to light during the conservation work of 2003. This was revealed and conserved during January 2004 by Celtic Conservation (illustr. right).

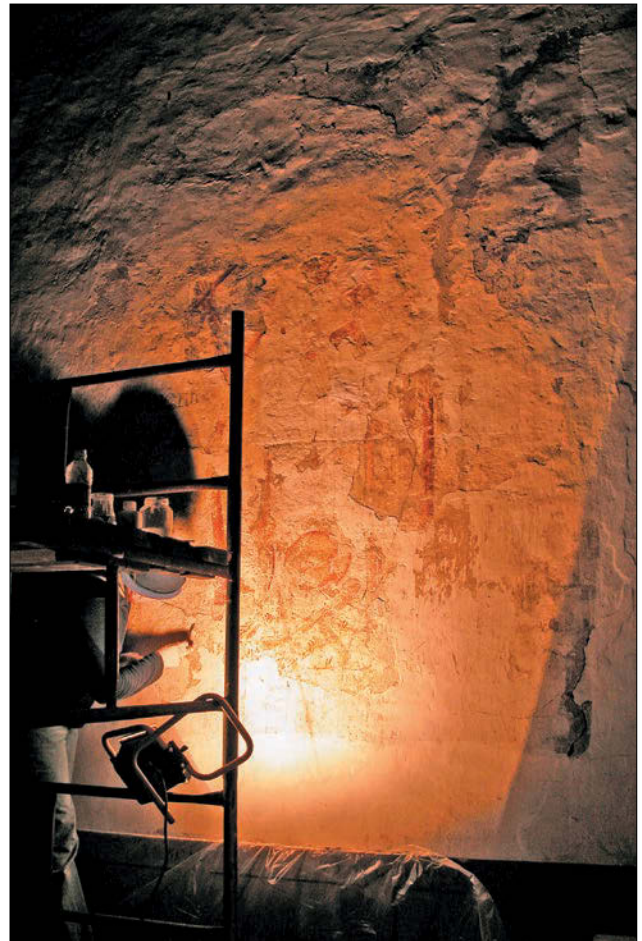
The painting depicts a large *memento mori* in the form of a skeleton, standing upright, holding a scythe in its right hand and what appears to be a flaming torch in its left hand. A skull and cross bones lie between its widely spaced feet. The skeleton's own head has not survived successive replastering of the wall. The painting is likely to be post-Reformation in date.

The legend: *memento mori* is inscribed across the representation below the skeleton's right elbow. A small part of a further legend can be made out below the skeleton's left arm. One word may be *ut*, the second, possibly *mor...*, perhaps for a verse such as:

*'ut mortui sepeliant mortuos suos.. Let the dead bury their dead: but go thou and preach the kingdom of God'* (Luke,9.60)

or

*ut morte intercedente in redemptionem earum praevaricationum..., that by means of death, for the redemption of ... transgressions... they which are called might receive the promise of eternal inheritance.'* (Hebrews, 9.15)







*The memento mori on the west wall*





#### Horse bier

A rare example of a stretcher with very long projecting struts for attachment to straps slung over the backs of horses. Two horses, front and back, would be harnessed to carry the bier, bearing the coffin of the deceased from remote locations, difficult of access, to the church for burial. Before conservation, the horse bier lately hung on the north wall between the commandment board and the inserted north window. It has now been re-instated in its traditional position, above the south door.

#### Pews

There are eighteen wooden benches, with back rails, set in two rows, within the nave. They are of early nineteenth-century date. The back rails are inscribed, in white paint, with the names of the owners and donors, for example: Robert Williams Henddol Gent. Lewis Evans Esq. Friog. Rev. d John Nanney Ty-Newydd, and Llan-celynin, and Tyddyn-mawr, etc.



## The Chancel

### Rood screen

A rood screen once separated the nave from the chancel at 5.9m west of the east wall of the church. Only a small part of the original screen survives in this position.

The present screen extends across the full width of the church. It comprises two paired elements separated by a low double gate, 1.35m wide. Each element, north and south of the gate, comprises a lower panelled component, c.0.9m high surmounted by a row of turned balusters, topped by a horizontal rectangular timber rail at a height of 1.4m. The double gate, the baluster railing and the solid lower panelling on the south side are all a restoration of 1823. The lower panelled component on the north side, however, is original work, in situ. This is a solid vernacular screen comprising five panels (c.270mm wide) between wide posts (200-220mm wide) surmounted by a wooden rail 189mm by 98mm. Four of the five panels are pierced in their upper part with open-work geometrical designs. The framing of the panels is moulded on the west face of the screen, facing the nave. This portion of the original rood screen sat on a substantial sill beam.

Dendrochronological dating techniques were applied to a sample from one of the posts of the screen. The results indicated a felling date for the timber from which the post was made in the range AD 1497-1533.

During the conservation work it was necessary to remove the slate slabs from the floor of the chancel and the nave immediately adjacent to the original part of the screen in order to assess the condition of the sill beam. The beam was found to be bedded in soil. The original sill had been substantial but had rotted so badly that its lower portion was recognisable only as a brown stain. The sill was accordingly replaced with good new timber. During the course of this investigation several fragments of human bone were uncovered in more or less disturbed contexts in the soil in which the sill beam was bedded and on which the slate slabs had been laid. During the Middle Ages it was common practice to bury the dead within churches. As late as 1605, for example, John Wynn of Gwydir was complaining to the Bishop of St. Asaph that 'the parish church of Llanrwst ... is so pestered with continual burials (for who is he, be he never so mean that he must not lie within the doors) that the air within is become pestilential and ... noisome. ... Neither the carriage of fresh earth, flowers, or ought else sweetens it. (NLW, Calendar of Wynn papers, 374).



*the screen from the chancel side*



*The original screen fragment from the nave*

*The original screen fragment from the chancel side*





It is possible that the raising of the floor level was a consequence or response to similar circumstances at Llangelynnin. The present level of the slate floor slabs would appear to be above that of the original surface as indicated by the relationship of the south door to the present floor.

#### Memorials

Two floor slabs within the chancel carry inscriptions. One, beneath the north window, has the initials ED 1726 DL 1787. The second is more clearly a funerary memorial. It reads 'Here Lyeth the body of Lewis William of Pwllarthog Decd March 27th 1737. These, at least, indicate that the present floor was in place by the early eighteenth century.



*Rotten cill beam at base of screen*

#### Sepulchral recesses

There are two low niches at floor level at the east end of the chancel. One is in the north wall, the other is in the south wall. Both have slightly pointed arched heads. The northern recess is 1.96m long and 0.64m deep. The southern recess is 2.12m long and 0.5m deep. They are likely to represent features of the church in place before the early sixteenth-century rebuilding.

The northern recess now houses a small collection of memorials. One, broken at the top right-hand corner, is the oldest within the church, although not now in situ. It has raised lettering of which a part is now missing. A full transcription, made in 1917, reads, HIC IACET RICEUS LLOYD OBIT 9o DIE 8IS ANNO DOM. 1680 (Here lies Richard Lloyd, he died 9th October 1680) (Arch. Camb. 1917, 429).



*Northern sepulchral recess before conservation*

#### East window

Externally the east window of the chancel appears as a plain rounded arch window with the arch defined by eighteen schist slab voussoirs, above which runs a horizontal schist slab drip ledge. It is reminiscent of the style of the porch doorway, although the porch is mid-seventeenth-century and the east window has been considered to be an eighteenth-century insertion (Arch. Camb. 1917, 428). Internally the east window is splayed on each side but most prominently at the base. The rounded arch of the exterior face is carried through to the interior.

#### Blocked north window

In the north wall of the chancel, beneath the second truss is a small rectangular niche 900mm across, 360mm deep. On the exterior this shows as a blocked narrow slit window in the masonry of the phase 1 wall, comparable to the western window but smaller. On the interior wall the original side splay is visible but the height has been truncated, top and bottom to serve as a cupboard.



*East window before conservation*





*North wall at west end showing re-framed and set chancel window and, immediately to the left of the right hand gravestone, the blocked, early slit window*

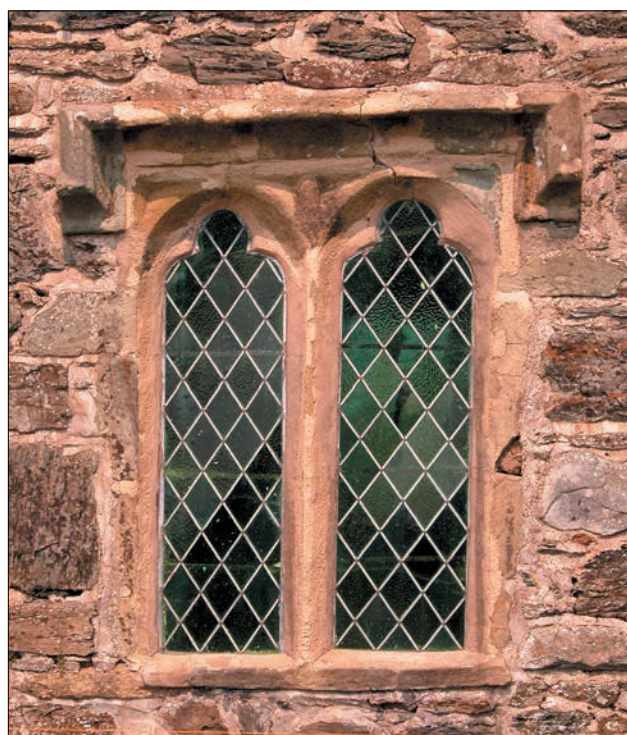
#### North window

There is a second window in the north wall of the chancel. This is set between the first and second trusses. It now has a modern wooden frame set inside what appears to be an original and in situ dressed stone frame comparable to the window in the south wall. The window is set with its base on the horizon between the phase 1 and phase 2 masonry. However, the lintel is missing and masonry between the top of the frame and the string course below the eaves shows signs of disturbance and the space blocked has been blocked. This almost certainly represents a response to the partial collapse of the wall here with the deterioration or removal of the lintel of an original sixteenth-century window, comparable to that on the south side, which required replacement.

#### South window

The window in the south wall of the chancel is the most elaborate of the surviving windows. Like its counterpart in the north wall it is set at the interface of the early and later masonry. On the outside wall the window shows as two trefoiled lights within a rectangular frame surmounted by a moulded label with truncated out-turned stops. The stone is dressed sandstone. Both this window and its northern partner are splayed internally.

*South chancel window, 16th century*



## The roof

The roof is of five bays of which five similar trusses survive. The first truss is against the wall at the east and but no truss survives at the western end. The space between trusses, measured along the centre line is consistently within the range 3.15 – 3.17m. Each truss is approximately 230mm wide. The space between the west wall and the fifth truss, however, is 3.53m (measured low on the wall to minimise any shearing effect of the structural movement of the west wall). This suggests the former presence of a sixth truss against the west wall.

The trusses are all of king-post construction with tie-beams supported by arch-braces springing from stone corbels set in the wall. The purlins rest on recessed

slots in the blade. In the first three bays, where original purlins survive, these are recessed to take rafters which would lie in the same plane as the blades. It is possible, therefore that the blades were designed to operate as principal rafters. However, this arrangement was modified at a later date as additional thin beams were laid over the mortised purlins raising the rafters clear of the blades. Three vertical posts are set either side of the king-post between the tie-beam and the blade or principal rafter. In the case of the first and second truss, within the chancel, there are only two such posts. These posts and the blades/principals are slotted to take decorative boards such as those that survive against the east wall.



*The first three bays of the roof, looking east*

The chancel roof is clad with pine boards. A decorative moulded frieze of Tudor roses runs along the ridge line and down the king-post of the first and second trusses. The first three trusses have decorative moulding on all the major timbers. The fourth truss is plainer and there has been some modern repair, in pine, to the top of the king-post. The fifth truss has been substantially replaced in pine, leaving only the arch-brace components intact. The purlins of the fourth and fifth bays have also been replaced in pine in modern times as have several rafters, particularly at the western end.

The conservation works of 2003 introduced further repair and renovation of the roof, including the

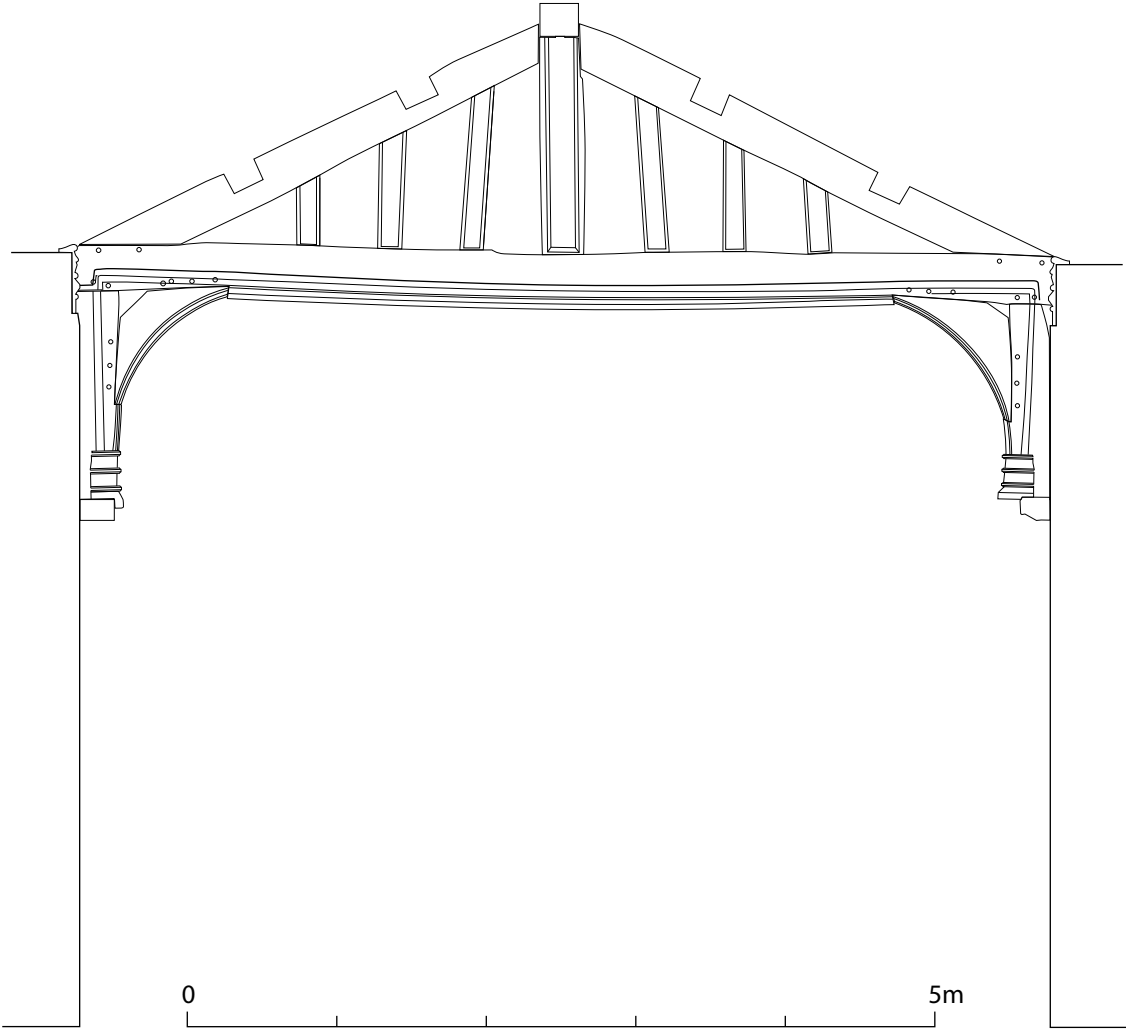
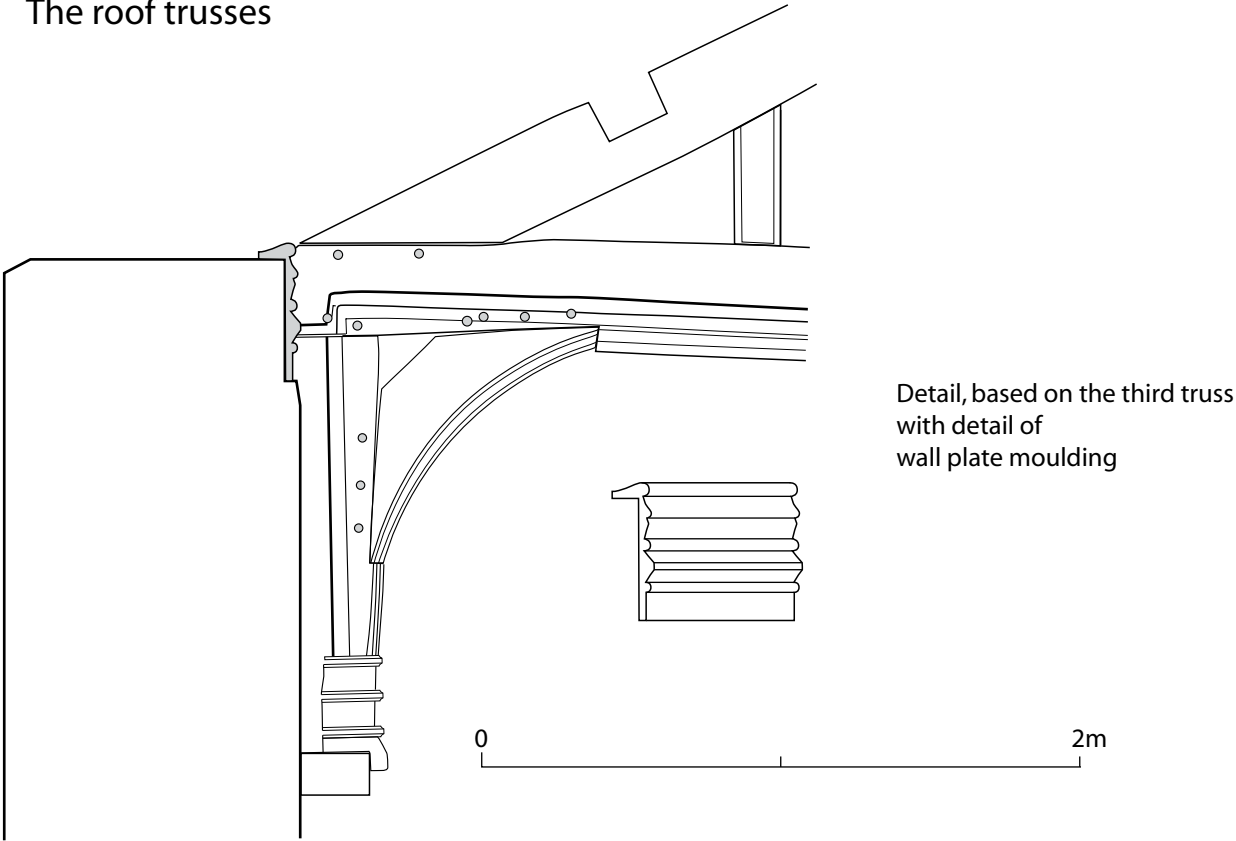
replacement of timber ceiling boards and re-slatting. As described above, the sixth truss no longer survives.

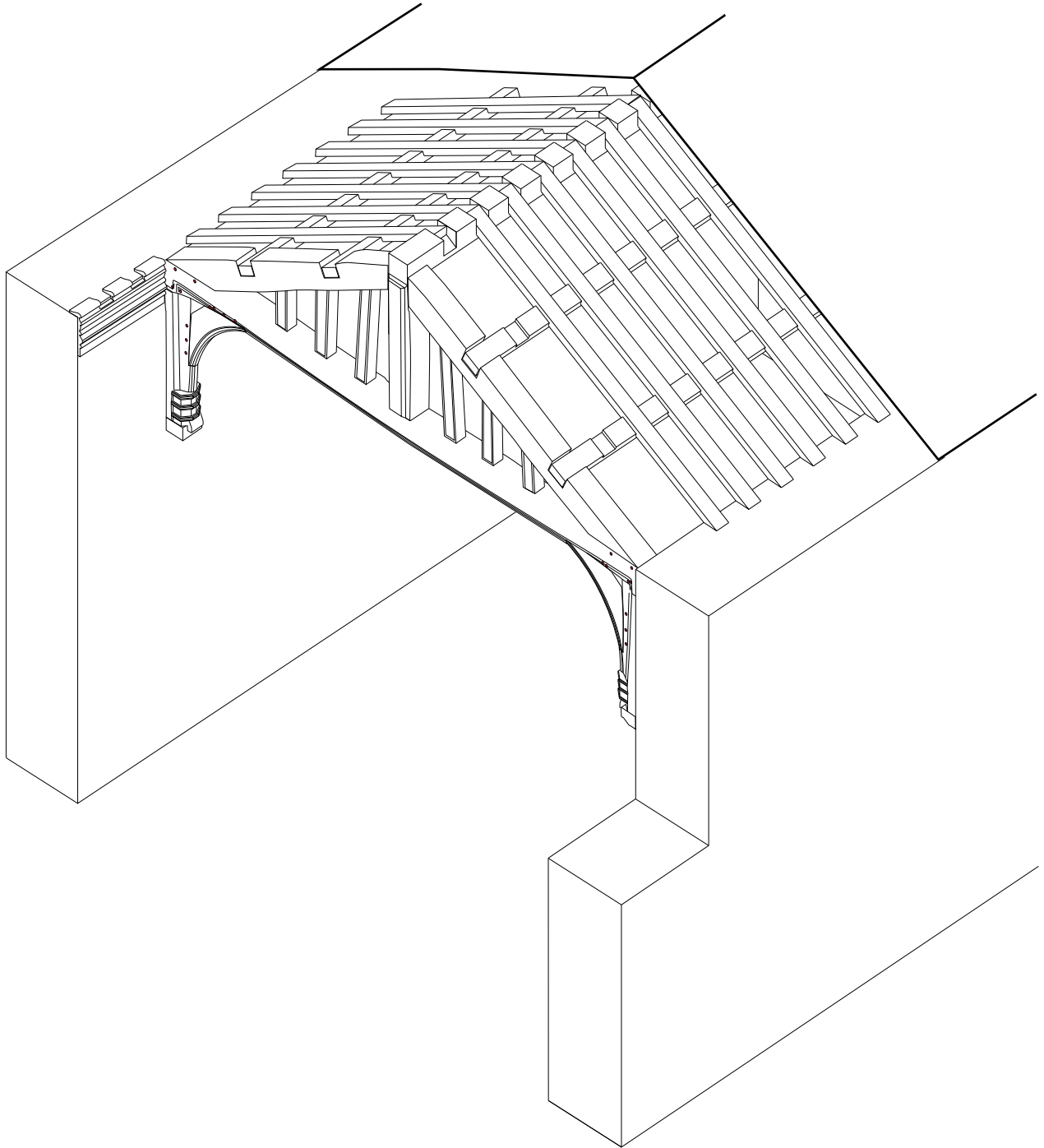
The wall plate carries a decorative moulding.

Dendrochronological dating techniques were applied to seven samples from the roof timbers. Three samples were capable of providing an estimate of date. One was from the wall plate on the south side, one from the wall plate on the north side and one from the tie-beam of truss two. Correlation of these results indicates a felling date for the timbers used in the construction within the range AD1502-1530.



The roof trusses





Diagrammatic reconstruction of roof truss and decorative wall plate moulding.



*Details of the roof structure, second bay, above; second and third bay, below*







1

*Decorative and structural features in the roof.*

*1. wallpost on corbel and arch-brace supporting tie beam; decorative moulding on wall plate.*

*2. panelled roof in chancel,*

*3. tudor rose decoration on panelling*

*4. morticed purlins; the vertical posts on the tie beam are slotted for decorative boards*

4



2



3



## Appendix

HERITAGE AND ARCHAEOLOGY RESEARCH PRACTICE  
THE UNIVERSITY OF WALES, LAMPETER

### Tree Ring Analysis of Timbers from Llangelynnin Church, Llangelynnin, Gwynedd

HARP Dendrochronology Report 2003/03 October 2003  
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#### Summary

This report describes a dendrochronological survey of the church of Llangelynnin undertaken on behalf of Gwynedd Archaeological Trust. The survey was carried out to inform a more general survey of the church as part of a Heritage Lottery Fund programme of repairs and recording.

Oak timbers from the roof and the remnants of a rood screen were sampled. The tree-ring sequences, from four samples were successfully cross-matched, against a range of British dated chronologies. A post from the rood screen was dated indicating felling of the parent tree in the date range AD 1497-1533. Three samples from the roof were dated indicating a felling date range for the timbers of AD 1502-1530.

#### Introduction

This document is a technical archive report on tree-ring analysis of oak timbers from the church of Llangelynnin, Gwynedd (SH 57120720). The church comprises a single undivided space forming the nave and chancel with five surviving roof trusses. The base of a rood screen also survives. Samples were sought to clarify the dates of these structural elements whilst access was enhanced by repairs funded by the Heritage Lottery Fund. Elements of this report may be combined with detailed descriptions, drawings, and other technical reports at some point in the future to form either a comprehensive publication or an archive deposition on the building. The conclusions may therefore have to be modified in the light of subsequent work.

#### Methodology

Methods employed at the Lampeter Dendrochronology Laboratory in general follow those described in English Heritage (EH 1998). Details of the methods used for the dating of this structure are described below.

The building was visited during repair work being undertaken as part of a programme funded by the Heritage Lottery Fund. During a brief period, of a matter of hours, when roof timbers were accessible during replacement of the roof slates, samples were taken from above. On the following day, additional samples were taken from within the church. Cores were taken from a variety of roof elements including wall plates, wall posts, arch braces, and a tiebeam (Table 1). No instances of suitable timbers with surviving bark edge were identified during sampling. This is perhaps unsurprising given the chequered history of the church, which is known to have been in a dilapidated condition in the late nineteenth century. Several of the timbers sampled did however retain the heartwood/ sapwood boundary permitting the possibility of obtaining felling date ranges for samples. For the purpose of locating the samples, the roof trusses were numbered 1-5 starting with the easternmost truss. Samples were also taken from the remnants of the rood screen

The complete sequences of growth rings in the samples that were selected for dating purposes were measured to an accuracy of 0.01 mm using a micro-computer based travelling stage (Tyers 1999a). Cross correlation algorithms (Baillie and Pilcher 1973; Munro 1984) were employed to search for positions where the ring sequences were highly correlated. The ring sequences were plotted electronically and exported to a computer graphics software package (Coreldraw v.8) to enable visual comparisons to be made between sequences at the positions indicated and, where these were satisfactory, new mean sequences were constructed from the synchronised sequences. The t-values reported below are derived from the original CROS algorithm (Baillie and Pilcher 1973). A t-value of 3.5 or over is usually indicative of a good match, although this is with the proviso that high t-values at the same relative or absolute position must be obtained from a range of independent sequences, and that satisfactory visual matching supports these positions.

All the measured sequences from this assemblage were compared with each other and any found to crossmatch were combined to form a site master curve. These and any remaining unmatched ring sequences were tested against a range of reference chronologies, using the same matching criteria: high t-values, replicated values against a range of chronologies at the same position,



and satisfactory visual matching. Where such positions are found these provide calendar dates for the ring-sequence.

The tree-ring dates produced by this process initially only date the rings present in the timber. The interpretation of these dates relies upon the nature of the final rings in the sequence. If the sample ends in the heartwood of the original tree, a terminus post quem (tpq) for the felling of the tree is indicated by the date of the last ring plus the addition of the minimum expected number of sapwood rings which are missing. This tpq may be many decades prior to the real felling date. Where some of the outer sapwood or the heartwood/sapwood boundary survives on the sample, a felling date range can be calculated using the maximum and minimum number of sapwood rings likely to have been present. The sapwood estimates applied throughout this report are a minimum of 10 and maximum of 46 annual rings, where these figures indicate the 95% confidence limits of the range. These figures are applicable to oaks from the British Isles (Tyers 1998). Alternatively, if bark-edge survives, then a felling date can be directly utilised from the date of the last surviving ring. The dates obtained by the technique do not by themselves necessarily indicate the date of the structure from which they are derived. It is necessary to incorporate other specialist evidence concerning the re-use of timbers and the repairs of structures before the dendrochronological dates given here can be reliably interpreted as reflecting the construction date of phases within the structure.

## Results

A total of ten samples were taken, and assigned codes LLG01-LLG10. The details of individual samples are

given in Table 1. The samples included cores from three different trusses plus two samples from wall plates. Three samples were attempted from posts in the rood screen but only two cores were successful. All nine successful samples had sufficient rings (>50) to merit measurement. The resultant ring sequences were compared with each other and significant cross matches were identified between samples LLG02 and LLG10, and between a group of four samples (LLG01, LLG05, LLG08 and LLG09). Mean sequences (LLG0210 and LLG T4 respectively) were calculated for these cross matched groups.

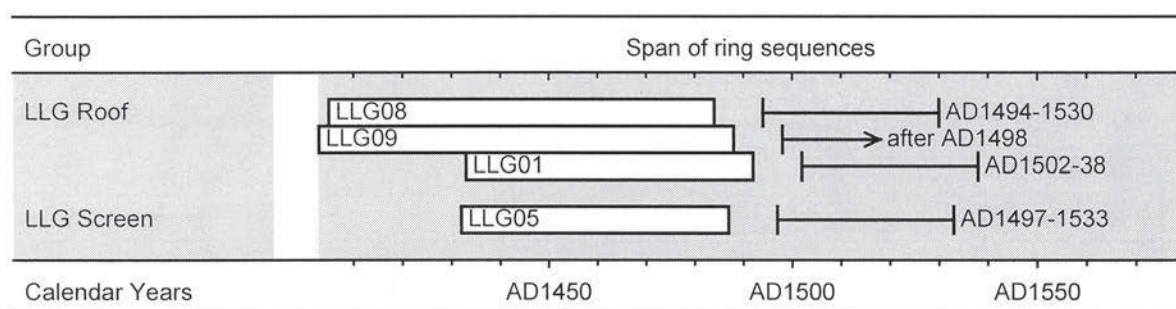
The mean sequences and any remaining, unmatched individual tree-ring width sequences were then compared with dated reference chronologies from throughout the British Isles and northern Europe. Table 2 shows the correlation of the sequence LLG T4 with dated series at the dating position identified of AD1403-1492. The relationships between the dated timbers are indicated graphically in Figure 1

Assuming that the three, dated structural timbers (samples LLG01, LLG08 and LLG09) were felled contemporaneously, a felling date range of AD1502-1530 is indicated for the timber employed in construction of the roof. The single dated sample from the rood screen (LLG05) indicates felling of the parent tree in the range AD 1497-1533. It seems probable therefore that the roof trusses and screen are contemporary.

## Acknowledgements

I am grateful to David Longley and Andrew Davidson of Gwynedd Archaeological Trust for information provided in advance of the site visit.

*Figure 1 Bar diagram showing the chronological positions of the dated timbers. Estimated felling ranges for individual timbers are based on most recent British sapwood estimates (Tyers. 1998)*



**Table 1**

List of samples

Sample No	Origin of sample	Cross-section size (mm)	Cross-section of tree	Total rings	Sapwood rings	ARW mm/year	Date of sequence	Felling period
LLG01	Upper wall plate on south wall immediately east of truss 3	220 x 140	Half	60	+HS	1.91	AD1433-AD1492	AD1502-38
LLG02	Southern arch brace, truss 3	280 x 130	Half	53	-	2.23	Undated	Cross-matches with sample 10
LLG03	Lower wall plate on south wall west of truss 3	280 x 270	Whole	88	-	2.01	Undated	
LLG04	Northernmost post in screen	135 x 125	Half	50	-	2.59	Undated	
LLG05	Post in screen, east of sample 6	200 x 85	Half	56	+HS	1.68	AD1432-AD1487	AD1497-1533
LLG06	Post in screen, east of sample 4	200 x 85	Half	-	-	-	Unmeasured	Core abandoned
LLG07	Northern wall post, truss 5	220 x 210	Quarter	89	-	2.16	Undated	
LLG08	Tiebeam, truss 2	330 x 300	Half	80	+HS	2.61	AD1405-AD1484	AD1494-1530
LLG09	Wall plate on north wall, immediately west of truss 2	250 x 100	Quarter	86	-	2.04	AD1403-AD1488	after AD1498
LLG10	Northern arch brace, truss 2	350 x 150	Half	56	+HS	2.36	Undated	Cross-matches with sample 2

Total rings - all measured rings. Sapwood rings: +HS = heartwood/sapwood boundary. ARW = average ring width of the measured rings. All timbers are oak (*Quercus* spp.).



Table 2

*t*-value matrix for correlations between cross-matched samples. overlap < 15 years, - = *t*-values less than 3.00, \* = empty triangle

Table 3 Dating the mean sequence LLG-T4 to AD1403-1492 inclusive. *t*-values with previously dated site masters.

Area	Reference chronology	<i>t</i> -values
Shropshire	St. Marys Church Bromfield (Nayling 2000b)	7.36
Herefordshire	Widemarsh St Hereford Farmers Club (Tyers 1996)	7.27
Cumbria	Sizergh Castle near Kendal (Tyers 1999)	7.18
Greater Manchester	Stayley Hall, Stalybridge (Nayling 2000a)	6.54
Ireland	Dublin (Baillie 1977)	5.36
Welsh Border	Welsh Border (Siebenlist-Kerner 1978)	7.23
Cardiff	Cefn Mably (Nayling 2001)	5.36
Gwynedd	Llyn Peris Boat (Nayling 1999)	7.33
Newport	Newport Ship substructure (Nayling unpubl)	5.56
Gwynedd	Penrhyn fish weir, Gwynedd (Nayling 2000c)	6.19

Table 4 Ring-width data for the mean sequence LLG-T4 dated to AD1403-1492 inclusive

Date	Ring widths (0.01mm)												No of samples					
AD1403	749	559	519	479	429	378	385	310			1	1	2	2	2	2	2	2
-	220	228	234	209	310	271	331	297	202	293	2	2	2	2	2	2	2	2
-	299	237	325	325	265	235	227	265	360	284	2	2	2	2	2	2	2	2
-	301	308	290	285	260	231	224	228	172	199	2	3	4	4	4	4	4	4
-	227	189	261	223	207	153	186	165	180	163	4	4	4	4	4	4	4	4
AD1451	186	209	207	181	161	151	116	142	124	194	4	4	4	4	4	4	4	4
-	182	188	221	135	145	174	248	219	149	121	4	4	4	4	4	4	4	4
-	140	131	158	176	222	194	129	120	127	141	4	4	4	4	4	4	4	4
-	163	101	150	187	202	219	190	144	162	207	4	4	4	3	3	3	2	1
-	180	115									1	1						

## Bibliography

- Baillie, M G L, 1977 Dublin Medieval Dendrochronology, *Tree Ring Bulletin*, 37, 13-20
- Baillie, M G L, and Pilcher, J R, 1973 A simple crossdating program for tree-ring research, *Tree Ring Bulletin*, 33, 7-14
- Bartrum, P.C. (ed.) 1966. Early Welsh genealogical tracts, Cardiff.
- Bartrum, P.C. 1993. A Welsh Classical Dictionary, NLW Aberystwyth
- Davidson, A., 2001 'The parish churches', in Smith and Smith, 326-85.
- Edwards, N., 1996 'Identifying the archaeology of the early church in Wales and Cornwall', in J. Blair and C Pyrah (eds) *Church Archaeology: Research Directions for the Future*, Council for British Archaeology, Research Report 104: York, 49-62.
- EH, 1998 *Dendrochronology: guidelines on producing and interpreting dendrochronological dates*, London
- Miller, M. (1979) *The Saints of Gwynedd* Woodbridge: Boydell Press.
- Munro, M A R, 1984 An improved algorithm for crossdating tree-ring series, *Tree Ring Bulletin*, 44, 1727
- Nayling, N, 1999a Tree-ring analysis of timbers from the Llyn Peris Boat, HARP Dendrochronology Report 99/04
- Nayling, N, 2000a Tree-ring analysis of timbers from Stayley Hall, Greater Manchester, *Anc Mon Lab Rep*, 6/2000
- Nayling, N, 2000b Tree-ring analysis of timbers from the nave roof of the church of St Mary the Virgin, Bromfield, Shropshire, *Anc Mon Lab Rep*, 69/2000
- Nayling, N, 2000c Tree-ring analysis of timbers from the Penrhyn Weir, Bangor, HARP Dendrochronology Report 2000/01
- Nayling, N, 2001 Tree-ring analysis of timbers from Cefn Mably, Glamorgan, Wales. Harp Dendrochronology Report 2001/03
- Pryce, H., 2001 'The Medieval Church', in Smith and Smith, 254-298.
- Siebenlist-Kerner, V, 1978. The chronology, 1341-1636, for certain hillside oaks from Western England and Wales. in *Dendrochronology in Europe* (ed J M Fletcher), *BAR Int Ser*, 51, 157-61
- Smith, J. B., and Smith, L. B., 2001 *History of Merioneth Volume II: The Middle Ages*. University of Wales Press: Cardiff.
- Tyers, I, 1996 Tree-ring analysis of six secular buildings., from the City of Hereford, *Anc Mon Lab Rep*, 17/96
- Tyers, I, 1998 Tree-ring analysis and wood identification of timbers excavated on the Magistrates Court Site, Kingston upon Hull, East Yorkshire, *ARCUS Rep*, 410
- Tyers, I, 1999a *Dendro for Windows* program guide 2nd edn, *ARCUS Rep*, 500
- Tyers, I, 1999b Tree-ring analysis of timbers in Sizergh Castle, near Kendal, Cumbria, *ARCUS Rep*, 479b
- Valuation of Norwich: Lunt, W.E. (ed) 1926. *The Valuation of Norwich*, Oxford.
- Rec. Caern: *Registrum Vulgariter Nuncupatum 'The Record of Caernarvon'*, Ellis H. (ed) 1838, London
- Williams-Jones K. 1976, *The Merioneth Lay Subsidy Roll, 1292-3*, Cardiff.