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re-examined, 1994–99

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Whitland Abbey, Carmarthenshire: a Cistercian site re-examined, 1994–99

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SUMMARY: Despite its importance among the Cistercian abbeys of Wales, Whitland Abbey is one of the least known. Little fabric survives above ground and although some excavation was undertaken earlier this century, little was published. A series of projects in the 1990s was initiated by Dyfed Archaeological Trust and grant-aided by Cadw and the former Carmarthen District Council, with a view to consolidating the remains for public display. The projects eventually included evaluation excavation, topographic survey, geophysical survey and standing building recording within the precinct, which together have greatly improved our understanding of the remains of the abbey and its wider landscape. Excavation has confirmed that the abbey church, built in the mid twelfth century, was of simple 'Bernardine' form, without a tower, and the presence of a fully-developed conventual plan has been established. The boundaries of inner and outer enclosures can be partly defined, within which a building platform was subject to partial excavation. A complex of earthworks in the surrounding landscape has been surveyed and demonstrated to be partly associated with a monastic water system, which included a series of possible fishponds and the diversion of the river alongside the site. The ponds were partly reused by the nearby iron forge complex which was established in the seventeenth century, with an associated leat which was subject to archaeological trenching. The outline of the abbey church is now represented in turf walling, and is open to the public.

Around the middle of the twelfth century, a community of thirteen or more monks of the Cistercian order settled in the well-watered, fertile valley of the Afon Gronw in south-west Wales. Their house — which was dedicated, like all within their order, to St Mary the Virgin — was situated 2 kilometres north-east of the small town of Whitland (SN 208 182). The present remains of Whitland Abbey occupy fairly level ground, sloping very gently downhill to the west, averaging a height of 32m OD on the broad, north–south valley floor of the south-flowing Nant Colomendy, between it and its confluence with the Afon Gronw which also flows south as a major tributary of the Afon Tâf (Fig. 1). The ground rises fairly steeply away from the site to the east, where the west-facing slope is cloaked with mature oak woodland, Castle Hill Wood, and is cut by a loop of the Afon Gronw. Shallower slopes lead away to the west of the Nant Colomendy. The solid geology comprises Ordovician sandstones of the Arenig Series,² with glacially derived soils, or undifferentiated valley soils and alluvium in the valleys.

A post-medieval walled garden, belonging to the present Whitland Abbey Home Farm, now occupies most of the abbey site although parts of the garden wall may contain *in situ* medieval masonry, and some free-standing areas of weathered masonry may be derived from associated conventual buildings. The surrounding landscape is notable for the high degree of survival of earthwork features, including possible building platforms, and ponds, dams and leats taken from both the Afon Gronw and the Nant Colomendy. Most of these are probably monastic in origin although some were re-used, and possibly established, during the post-medieval period in order to supply the nearby iron forge.

This paper is an attempt to bring together the results from a number of projects undertaken both in recent years and earlier in the twentieth century, and the various other forms of information that exist — a synthesis of the results of limited excavation, geophysical, topographical and standing building survey,

and such diverse sources as antiquarian jottings and pictorial evidence, cropmark survey and air photograph mapping, as well as a considerable body of new documentary research.

SITE HISTORY

The abbey of St Mary, Whitland (normally called 'Alba Landa' or 'Blanchland' in medieval documents) was one of the earliest Cistercian communities in Wales. The initial foundation was made in 1140 and, along with Margam Abbey in Glamorgan, was colonised directly from Clairvaux.³ It began as an influential house, from which were founded seven houses in Wales and two in Ireland, but appears to have suffered economic decline in the later medieval period with little new building activity. A possible domestic re-use of the abbey site in the sixteenth century appears to have been short-lived, as the site was plundered for materials for the seventeenth- to eighteenth-century ironworks.

Earlier history

Some aspects of the earlier settlement within the area of the abbey may have had an influence on its choice of site and later development. A Roman road west of Carmarthen, long-suspected, has recently been identified running east-south-east to west-north-west over the Afon Gronw 1 kilometre south of the abbey site (Fig. 1).⁴ It appears to have been associated with a fort somewhere in the vicinity of

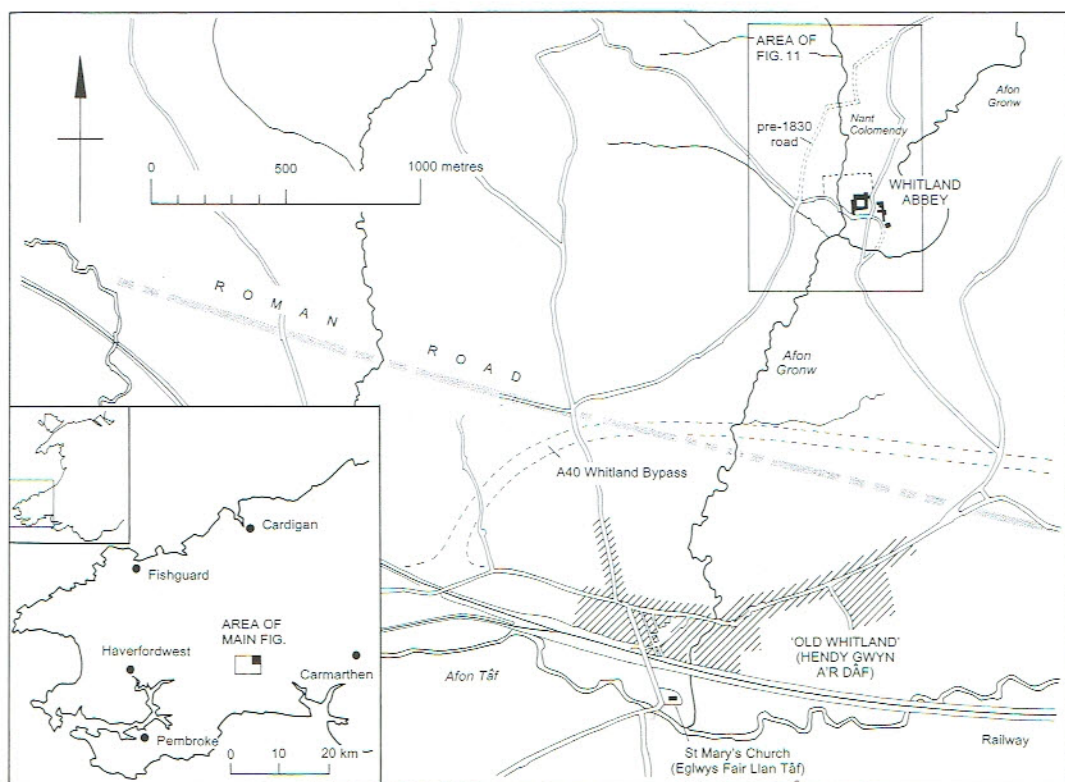


Fig. 1. Whitland Abbey: location map.

Whitland/St Clears from which one of the medieval abbey's earliest possessions, Caerdyth (or Gardiff) Forest, was named.⁵ Roman coins, which have been found on the abbey site,⁶ are of uncertain provenance; however, a pottery vessel from the site, depicted in an illustration of 1913, is of marked Romano-British appearance.⁷

The Roman road is likely to have been at least partly re-used during the early medieval period. A number of prestige centres, ecclesiastical and secular, developed along or near the line of the Roman road during the early medieval period,⁸ including the nearby churches of Llangan and Llanfallteg, and Castelldwyrn where the memorial stone to a sixth-century king of Dyfed, Voteporix, was uncovered in the nineteenth century. The road was almost certainly a factor behind Whitland's emergence, by the tenth century, as an area of considerable secular significance. The celebrated 'Laws' of Hywel Dda were drafted at 'Ty Gwyn ar Dâf', normally interpreted as a senate-house in the vicinity of Whitland. The debate is still current and a number of possible sites have been put forward, mainly in or around the present town of Whitland; the later post-Conquest secular manor of Whitland which appears to have occupied the site of the later town was, significantly, described as 'Old Whitland' in a document of 1314 when, as a possession of the Mortimer Lords of Narberth, it was granted a weekly market and a three-day annual fair.⁹ The present church of St Mary to the south of the town, moreover, lies within the former grange of *Hendy-gwyn* (Fig. 1).¹⁰ It possibly occupies the site of the post-Conquest *Eghwys Fair Llan Dâf*, a dependent chapelry of Whitland Abbey and the site of another fair, this time promoted by the abbey.¹¹ However, the popular tradition of a pre-Conquest ecclesiastical centre at Whitland, founded by St Paulinus, lacks any supporting evidence.¹² The choice of the final abbey site was undoubtedly influenced by the proximity of the Roman road as well as by the availability of a reliable water supply, but any early medieval associations, secular or ecclesiastical, were probably not a factor.

The foundation of the abbey

The exact date of the establishment of the abbey at its present location is not known with certainty. It represents the third site chosen by the Cistercian community originally sent from Clairvaux in 1140 at the invitation of Bishop Bernard of St David's.¹³ The location of their original settlement is unknown but it was already called *Alba Landa*.¹⁴ In 1144 the community moved to 'a place in Trefgarn in Deuglethef', in what is now Pembrokeshire;¹⁵ the exact site has yet to be clearly identified but its location within 'Deuglethef' (i.e. the medieval *cantref* of Daugleddau), would rule out the site south of Lampeter Velfrey favoured by the Royal Commission in 1917,¹⁶ and Little Trefgarn north of Haverfordwest is probably indicated.¹⁷

The date of 1151 for the third and final move to the present site, as suggested by Janauschek, has gained widespread acceptance.¹⁸ However, in a confirmation of the foundation charter, issued in 1214, the abbey and extensive surrounding lands are described as 'granted by [*de dono*] John of Torrington'.¹⁹ John of Torrington otherwise occurs in the sources as a Devon magnate, and as the constable of Pembroke and Carmarthen castles in 1199 and 1200.²⁰ Such a date is far too late for him to have been the original donor, and it may be that a father of the same name is indicated, or possibly even a retrospective grant of lands already occupied. Moreover, the lordship of St Clears, within which the site lay, was in 1151 held by one William FitzHait,²¹ and quite what the relationship could have been between the lord, and such a generous benefactor within his territory, is not clear. The structural evidence suggests a date nearer 1151 for the construction of the abbey church.

Patronage

In outlook, the abbey clearly belonged to the wider, pan-European Cistercian community, and was initially Anglo-Norman in constitution.²² However, a Welsh identity developed as the order acquired sympathetic patrons in the resurgent native royal houses. Even before he acquired the lordship of St

Clears in 1189, Rhys ap Gruffudd, 'the lord Rhys', was instrumental in the appointment of Cynan, the first of many Welsh abbots at Whitland,²³ and an indication of his regard is provided by his choice of the house as venue for his homage to Henry II in 1171.²⁴ The abbey continued to expand and a colony was sent, in 1164–65, to Strata Florida in Ceredigion,²⁵ which similarly moved site in c. 1184.

Rhys became the patron of both houses, endowing them with huge tracts of land, and his Whitland grants were soon followed by gifts from his sons Maelgwn, Maredudd and Hywel 'Sais', from his grandson Cynan, from the sons of Maredudd of Cilrhedyn, and from Iorwerth ap Iorwerth.²⁶ The two abbeys became pre-eminent seats of medieval Welsh culture and, it was claimed, of resistance.²⁷ They also became the mausoleums of their Welsh royal patrons, beginning with the interment of Rhys's son Cadwaladr at Whitland in 1186;²⁸ another son, Maredudd, was a monk there for nearly 80 years before his burial in 1239.²⁹ Many more monks were probably recruited from among the younger sons of leading Welsh families.

Not all donors were Welsh, however; Whitland also benefited from the generosity of the Roche lords of Llangwm,³⁰ the Chaworth lords of Kidwelly (see below), and the Wogans of Boulston. Other benefactors, recorded by their devices in later floor-tiles from the abbey, appear to have included Peter de Leia (bishop of St David's 1176–98), the FitzMartin lords of Cemaes, and the Bigod family whose connection with the abbey is obscure.³¹

Whitland's vibrant economy was a reflection of the twelfth-century monastic confidence and secular enthusiasm; a later document claimed that during this period 'it was so richly endowed that 100 monks and more used to reside in it'.³² The figure would include lay-brothers and if so, may not be much of an exaggeration. A community totalling over 100 was recorded, in 1384, at the Cistercian abbey of Margam in Glamorgan,³³ while Whitland was able to colonise a daughter house at Strata Marcella in Powys by 1170,³⁴ and a second daughter at Cwmhir, also in Powys, in 1176.³⁵ Whitland's daughter houses had themselves given rise to four further houses by the turn of the thirteenth century — Llantarnam in 1179, Aberconwy in 1186, Cymer in 1198 and finally Valle Crucis in 1201.³⁶ Two further foundations, in Ireland, were made directly from Whitland, Comber (Co. Down) in 1200,³⁷ and Tracton (Co. Cork), where Welsh was spoken, in 1224–25.³⁸

Ideally, the abbot of Whitland maintained responsibility for order in his daughter houses through regular visitations, but these were seldom recorded. He led the inquiry into the dispute over pasturage rights that arose between Cwmhir and Strata Marcella in 1225,³⁹ but lost in an appeal against the lord of Welshpool, in 1328, that the latter house should be brought under the supervision of Buildwas Abbey (Shropshire).⁴⁰

Economy

Gerald of Wales (Giraldus Cambrensis) describes how Whitland felt confident enough, by the end of the twelfth century, to attempt the acquisition of the smaller Premonstratensian house at Talley.⁴¹ Eventually, Whitland ended up with Talley's most profitable grange at Rhuddlan, in the Teifi Valley. This was not entirely unusual; Strata Florida, for example, was accused of annexing lands from the Cistercian nunnery at Llanllŷr (Ceredigion).⁴² By the end of the medieval period, Whitland possessed at least 18 granges, either formal or rented to lay tenants, 12 grist-mills, three fisheries, a dovecote, and 12 (possibly 15) appropriated churches.⁴³ The abbey also established a fair at Eglwys Fair, now in Whitland town, from which tolls and profits were received. All told, the temporal revenue recorded in Pope Nicholas's *Taxatio* in 1291 was over £43.⁴⁴ The holdings were mainly situated in modern Carmarthenshire and Ceredigion,⁴⁵ divided almost equally between lowland areas of fertile land, and upland areas suitable only for grazing.

The former areas may have remained under timber until a late date, possibly contributing to the abbey economy as formal woodland; as late as 1280 woods were cut down and the land brought into

cultivation,⁴⁶ while much of the surrounding countryside was still being recorded as heavily wooded in the early seventeenth century.⁴⁷ However, around 5,000 acres (2,250 hectares) of the abbey's estates were under arable cultivation in 1291.⁴⁸

As in Cistercian houses generally, Whitland's upland holdings came to form an important part of the economy; a total of 11,000 sheep is indicated by the *Taxatio* of 1291,⁴⁹ while the abbey operated five fulling mills by the end of the medieval period.⁵⁰ Most of Whitland's estates were held, at the Dissolution, under various leases, tenurial systems, rents and obligations belonging to Welsh law. However, it is far from clear whether or not these arrangements perpetuate long-standing arrangements of earlier origin. There was a decline in the number of lay-brothers in the later medieval period across Britain and the subsequent changes in agriculture and economy were general. Nevertheless, the survival of both *arian y mynydd* or 'mountain silver', a payment for grazing rights, and *comortha*, commuted from a 'hospitality' tax, along with a diversity of rents, in both cash, kind and service, suggests that they correspond with earlier villein obligations, when most of the tenants were also bound to do boon work for the monastery.⁵¹ It has therefore been suggested that the Welsh houses exploited the uplands from the first, along native lines, within which transhumance may have played a major part. In contrast, it is clear that the estates within the immediate confines of the abbey were, during the first century at least, farmed under the standard Cistercian arrangement — lay-brothers, and their accommodation in the abbey, were singled out for mention in a reference of 1257.⁵²

No tradition of pilgrimage surrounds Whitland, which appears to have possessed no relics. However, it lies close to the Roman road to west Wales and the pilgrimage site of St David's, and hospitality may have been a factor in the final choice of site. Among the high-profile guests of the abbey were Rhys ap Gruffudd himself, in 1171 (see above), and the entourage of Archbishop Baldwin of Canterbury who, accompanied by Gerald of Wales, stayed at Whitland during the preaching of the third crusade in 1188.⁵³ However, their hospitality did not always meet the demanding standards of Gerald, who was ever anti-Cistercian, and on another occasion he complained about being kept 'in the public hall among the common guests and noise'.⁵⁴ In 1257, 200 horses were said to have been stabled within the abbey precinct; if this is true, they can only have been associated with travellers.⁵⁵

The abbey site was noted for its early post medieval ironworks (see below). However, there is at present no evidence, documentary or otherwise, for medieval industry on the site, unlike the precincts at Buckfast (Devon),⁵⁶ and Tintern (Monmouthshire)⁵⁷ where small-scale ironworking and copper smelting respectively took place during the medieval period, and Bordesley (Worcestershire) where the operation was on a much larger scale, the precinct being partly occupied by a medieval industrial complex.⁵⁸ Neither do Whitland's outlying estates appear to have been exploited for minerals, unlike a number of Welsh Cistercian holdings in which this was an important component of the abbey economy, such as Cymer (Gwynedd), Margam and Neath (Glamorgan), and Strata Florida (Ceredigion).

Secular politics

Whitland, like other Welsh foundations, had difficulty in resolving its allegiances between an often remote king and his Anglo-Norman barons, and the Welsh aristocracy, as a result of which it became physically involved in the wars of the thirteenth century. During the campaign leading up to the English reverse of 1257, a band of knights under Patrick de Chaworth, lord of Kidwelly and Nicholas FitzMartin, lord of Cemaes 'entered the abbey, beat the monks and killed some of the servants in the cemetery';⁵⁹ Payne de Chaworth's donation, in 1270, of 19 acres of arable land, and the foundation of a chantry for the souls of his brother Patrick and other family,⁶⁰ appears to have been an act of penance for this deed, as no other links between them are known.

Despite the support given by Whitland, and its daughter houses, to Llywelyn ap Gruffudd when accusations were made against him by the bishop of St Asaph in 1274,⁶¹ allegiance in the main seems to have changed to support for the English crown during the later thirteenth century. The abbey stood for the king during the baronial unrests of the Henry III's reign and like a number of other Welsh houses was afforded royal protection in 1268.⁶² In addition, forces loyal to the English crown mustered at the abbey in 1277, and must have been in collusion with the convent.⁶³ By the late thirteenth century, moreover, the abbey had acquired rights of pasture within the royal forest of Cetheiniog, although the rent was always a matter of dispute.⁶⁴ The abbot was also one of the four Welsh Cistercian abbots summoned to Parliament in the late thirteenth century;⁶⁵ only the abbot of Basingwerk, however, was subsequently summoned.

Nevertheless, the abbey appears to have been consistently singled out by the crown. In 1280, the woods of Whitland and Strata Florida abbeys were, along with those belonging to Rhys ap Gruffudd's grandsons, accused of harbouring rebels and were forcibly cut down under crown supervision.⁶⁶ In the following year the abbots of Whitland and Strata Florida gave evidence, before a commission into the Welsh rising held at Aberystwyth, on the law and custom observed by the Welsh.⁶⁷ Whitland's valuation at £43 in 1291 is perhaps even more telling: Neath was assessed at £236, Margam £255 and Tintern £145.⁶⁸

The convent was still, fifty years later, seeking compensation for the 'divers injuries from the host of the king's father' (i.e. Edward I) that they had received, which was assessed at £260 12s 0d.⁶⁹ Previous authors have generally agreed that the damage relates to the rising of 1294–95 rather than the war of 1282–83,⁷⁰ but this seems unlikely for during this later period the abbot, Llywelyn, appears to have been regarded as a trusted servant of the crown. For instance, in 1290 he was part of a team sent to inspect the works at Aberystwyth, where the royal castle was under construction.⁷¹ Later still, moreover, the convent was supported in a grievance brought against the crown steward of Emlyn, in 1347,⁷² by Edward

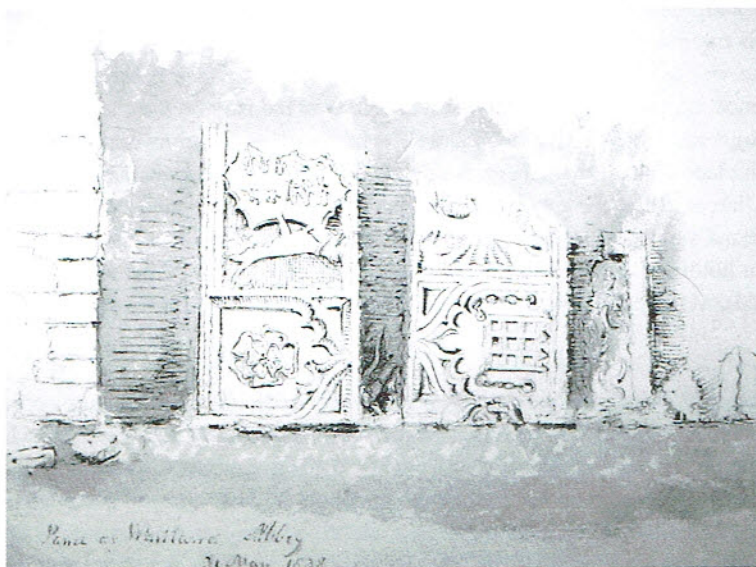


Fig. 2. Panels featuring the arms of Henry VII or VIII, now over the entrance of Whitland Abbey House. *Reproduced by courtesy of Cardiff City Library (Charles Norris Drawings vol. 17, fo. 573).*

the Black Prince himself, to whom the abbot, like the heads of all Carmarthenshire houses, had confirmed his fealty three years previously.⁷³

In 1320, the abbot of Whitland in fact chose to be governed by English rather than Welsh custom, as had been the norm;⁷⁴ however, he exercised his right by law, as the head of a religious house, to hold his lands 'in frank and perpetual alms', not bound by military service, and protested doing suit at the king's court at Cardigan.⁷⁵ Nevertheless, by the later medieval period this obligation, though often ignored, had extended to all monastic houses.⁷⁶

The later medieval period

The foundation charter was confirmed again on four subsequent occasions, in 1315, 1339 and 1447,⁷⁷ and in 1508.⁷⁸

Whitland did not escape the economic decline of the fourteenth century, exacerbated by the Black Death and culminating in the Glyndŵr rebellion. The Welsh houses were subject to both the overall desolation and to direct retribution, the abbot of Whitland being branded a rebel in 1403, as later were his colleagues at Aberconwy and Llantarnam; the latter, in fact, was killed in battle 'urging on the Welsh forces'.⁷⁹ The relationship with the crown cannot have been helped when a later abbot, David ap Rhys, became embroiled in British mainstream politics. He was indicted in 1433 for his alleged part in the treason of King Henry V's brother, Humphrey Plantagenet,⁸⁰ then pardoned after a brief period in which the abbey possessions were sequestered, but the reasons for the accusation are unclear.⁸¹ He also acted as guarantor for Welsh prisoners in the Tower.⁸²

The abbey possessions were recorded at this time as having been 'wasted by misrule'. The context of the accusation may have to be taken into account, and the effects of the Glyndŵr rising are probably to blame; seven years later Abbot David pleaded to king and pope that the revenues of his 'monastery, houses, buildings and barns' were 'so diminished by the ravages of sword and fire in those parts' that they were insufficient to support the abbot and eight monks;⁸³ eight monks were again recorded early in the reign of Henry VIII, but only five in 1539.⁸⁴ The abbey was furthermore exempt from the ecclesiastical subsidies of 1462 and 1478,⁸⁵ its temporalities being similarly exempt from the subsidies of 1513 and 1517, along with a number of other Welsh houses.⁸⁶ Whitland's net income was recorded as £135 3s 6d in the *Valor* of 1535,⁸⁷ less than the Welsh Cistercian houses at Margam, Tintern and Valle Crucis, but roughly the same as Aberconwy, Basingwerk, Neath and Strata Florida and more than the remainder.⁸⁸ The abbey site itself was valued for leasehold purposes at only 2s, compared with 5s at Strata Florida.⁸⁹ However, monies appear to have been procured, possibly from an unrecorded patron, for the erection of the arms of Henry VII or VIII (Fig. 2),⁹⁰ possibly as a statement of loyalty, while evidence exists in the form of further dressings, and possibly within the sources, for late building work.

The Dissolution

The abbey was dissolved in 1536 along with other houses with incomes of less than £200. However, its income and status were, along with Strata Florida, immediately restored 'by the will of the king', possibly in return for a payment of £400.⁹¹ In general the Welsh abbots had put their property on long leases, prior to 1536, to put it beyond the reach of the crown. Most of the Whitland leases, however, date from 1537–39 and may represent a conscious effort by the last abbot, William ap Thomas, to raise the necessary cash,⁹² but the respite was short-lived and the abbey was voluntarily surrendered in 1539. Nevertheless, Sir Richard Devereux, justiciar of South Wales and later earl of Essex, who had already been appointed steward of the houses at St Dogmaels, Strata Florida, Whitland, Talley and Llanllyr,⁹³ apparently complained he could not make a profit on the Whitland lands because 'the abbot had let them out on long leases, on the eve of Dissolution'.⁹⁴ The property had in fact been divided between over 200

tenants, both large and small, who paid a total of £177 8s 3d in cash but rendered many further rents in kind.⁹⁵

The abbey demesne itself may have been briefly granted, in 1544, to Sir Thomas Audley and John Cordel.⁹⁶ In the following year, it was leased, for £11 15s 0d, to Dr John Vaughan,⁹⁷ who had been part of the Welsh commission of inquiry of 1535; the late abbot, meanwhile, was granted a pension of £40,⁹⁸ whilst retaining possession of much land, mainly on the easiest of terms.⁹⁹ Vaughan appears to have settled at the abbey, which may be the 'manor house of Whitland' described in a detailed survey of 1582 (see Appendix),¹⁰⁰ and indeed parts of the abbey church clearly were re-used during the post-medieval period (see below),¹⁰¹ though this work cannot be closely dated. However, it is of interest that in the same year Vaughan, along with Sir John Perrot, also appeared in a complaint in which he was accused of pilfering the abbey buildings,¹⁰² apparently confirmed by the survey which also describes the ruinous condition of the inner 'gatehouse', hall and other buildings, with doors, windows, timbers and dressed stone removed. Perrot was guilty of repeated attempts to acquire abbey possessions and holdings, including the tolls of the fair at Eglwys Fair,¹⁰³ and some of the finer stone may have contributed to his refurbishments at Laugharne Castle.¹⁰⁴ Little more is heard of Whitland until the acquisition of the abbey estate by the Brett family, of London, in c. 1605,¹⁰⁵ and it is assumed, but not proven, that they maintained a residence at the abbey site.

The iron forge and later

An ironworks appears to have first been established at Whitland Abbey in 1636, when the industrialist George Mynne was licensed to cut timber, for charcoal, within a 12-mile radius of Whitland and to erect 'two forges and one ffurnace'.¹⁰⁶ The abbey site was doubtless chosen for its plentiful supply of building stone, as well as running water and a lease on the site, and the surrounding woodland, was subsequently obtained from the Bretts.¹⁰⁷ The forge was operational by 1638, under Mynne's agent William Rutland, when protests were made against the wholesale deforestation of the surrounding countryside.¹⁰⁸ Mynne himself died in 1648 but local tradition plausibly has it that the forge supplied cannon shot for Cromwell's siege of Pembroke in the same year.

Brett bequeathed the abbey estate to his daughter who, in 1696, married Charles Bludworth. The forge appears to have continued operating under Rutland into the 1650s, but its later tenancy is unknown until 1722 when it was leased from the Bludworth family by Peter Chetle,¹⁰⁹ also of Kidwelly Forge and Ponthenri Furnace in Carmarthenshire, when its output has been estimated at 80 tons per year.¹¹⁰ In 1729 Chetle sold his interests in all three to Lewis Hughes of Carmarthen.

There follows a second hiatus in the lease documentation during which, it is said, the ironworks stood empty.¹¹¹ In the later eighteenth century a lease of Whitland Forge was obtained by John Morgan, son of the great Carmarthenshire ironmaster Robert Morgan, owner of the Carmarthen, Kidwelly, Cwmdwyfran and Blackpool forges.¹¹² A tradition, possibly plausible, has it that Morgan rebuilt the forge.¹¹³ In 1789 it was sublet for £80 annually, and Morgan subsequently purchased the freehold from the Bludworths.¹¹⁴ The forge was leased again in 1808, this time for £168 annually,¹¹⁵ but appears to have become disused soon afterwards.

In 1825, John Morgan's heiress married the Hon. William Yelverton,¹¹⁶ who eventually acquired the Whitland property in 1836. He built the present mansion, Whitland Abbey House, the Home Farm and the walled garden around the middle of the nineteenth century.

In 1898 Whitland Abbey passed by marriage to the Blake family but in the mid twentieth century was split up into three properties — Whitland Abbey House, the Home Farm and walled garden, and the Abbey Church site north of the garden which was given by Miss Blake to the Catholic Diocese of Menevia.¹¹⁷ It was the proposed sale of the Home Farm and walled garden in 1986 that led to local

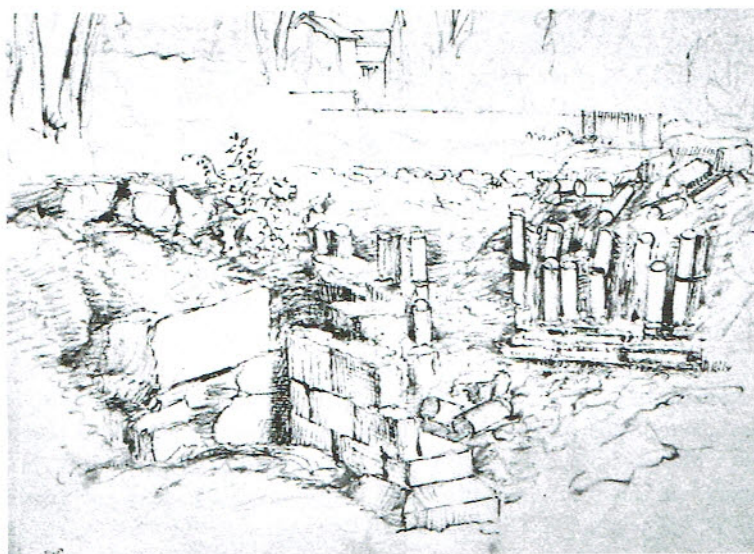


Fig. 3. A view of the excavations at Whitland Abbey in 1838, probably showing the area of the crossing looking east. *Reproduced by courtesy of Cardiff City Library (Charles Norris Drawings vol. 17, fo. 572).*

moves to secure the whole site, which had been scheduled in 1930,¹¹⁸ with a view to its public access and display.

SUMMARY OF ARCHAEOLOGICAL RECORDING

Earlier archaeological excavation and recording

The abbey buildings appear to have largely gone by the early nineteenth century at least, the 'mouldering relics of its walls' being described as 'trifling indeed' in 1805.¹¹⁹ The first excavations were in fact undertaken as early as 1837, and the sources indicate that they were much more extensive than previous authors have suggested.¹²⁰ The account in the *Gentleman's Magazine* of 1839 describes the uncovering of 'the bases of several clustered pillars of the church'. The excavations were pursued, 'with laudable zeal, westward of these remains' revealing 'foundations of extensive buildings, as of cloisters or monastic cells, a doorway and several architectural fragments . . . of the 12th century', and glazed floor-tiles.¹²¹ Charles Norris's drawing of 1838 (Fig. 3) appears to record these excavations from the west, and shows a stretch of walling three courses high, with a return and a cluster of cylindrical attached shafts.¹²² The excavation was said to have initially arisen from the digging of a pond, but may have formed part of clearance work preparatory to the construction of the present mansion house, home farm and walled garden. That they were extensive is suggested by the fact that the outline of the church was clearly marked by earthworks in the 1920s, when the overburden averaged a mere 0.15m.

An unpublished manuscript of 1868 by a local clergyman, the Revd William Thomas,¹²³ gives some insight into the state of contemporary knowledge. Thomas asserted that many of the walls of the abbey church 'are still to be seen' and gave dimensions that are fairly accurate. Tiles and lead pipes had been uncovered. He mentioned the abbey ponds, in passing, and regarded sections of ruined walling in the

vicinity to be the remains of a precinct wall.

Burials were disturbed within the walled garden in the 1890s,¹²⁴ and casual discoveries of pottery, tiles and other finds continued to be made. Many of these were donated to the local museum in Carmarthen, and some were published;¹²⁵ others remain in private hands.

The site was not subject to any themed study until two independent campaigns were undertaken in the 1920s, thirty years after the first main wave of excavations under Stephen Williams on Welsh Cistercian sites. In the first project, in 1921, the site was surveyed by Alfred (later Sir Alfred) Clapham, assisted by Mortimer Wheeler. Fragments of the nave north wall and the presbytery south wall were visible and the overall form and dimensions of the church were correctly ascertained with the exception of the presbytery which, in their depiction, is too long, while the south transept appears to have been entirely obscured by a clump of trees.¹²⁶ Their conclusions will be discussed along with the description of the remains below.

The second campaign, the excavation of the site in 1926, was a response to repeated demands published in the pages of *Archaeologia Cambrensis* and other journals. The work was directed by the Carmarthen-based architect Ernest Vale Collier, who had assisted Stephen Williams in excavations at Strata Florida Abbey, on behalf of the Carmarthenshire Antiquarian Society and assisted by students from Trinity College, Carmarthen.¹²⁷ The excavations were never fully published, and were subject to only the briefest of interim reports, accompanied by a plan, in the society's journal.¹²⁸ The excavations were limited to the church. Trenches were excavated across the nave and north transept and the



Fig. 4. The abbey church, after consolidation, looking west.

presbytery was 'cleared', exposing a number of areas of tiled flooring. No 'walls or foundations' were revealed in the nave, but the internal pier bases were uncovered. The south transept was left unexcavated. The church was regarded as of one main build and the probable absence of a tower was noted. Collier based his plan of the presumed conventual buildings on Clapham's survey.

It appears that the project was running short of funds before completion, and despite appeals to the Carmarthenshire Antiquarian Society and others for assistance,¹²⁹ only limited further excavation appears to have been undertaken.¹³⁰ The site seems to have been left at least partially open; local sources state that tile flooring could still be seen some years later and the fine soil revealed around the bases of the walls of the altar in 1994–95 suggest that the adjacent areas had been left open and allowed to infill naturally.

A paper published in 1978 recognised the significance of the earthwork complex north of the abbey site and identified it as relating to water features and platforms associated with the monastery and later forge.¹³¹ This paper will be reviewed below, alongside the results of the 1999 topographic survey.

Recent archaeological recording

Recent interest in the conservation of the site and its enhancement for public display was encouraged, in 1986, by the proposed sale of the Home Farm and walled garden. The then Dyfed Archaeological Trust (Cambria Archaeology), under its director Don Benson, was instrumental in promoting this interest, out of which emerged a feasibility study for its future management.¹³² In 1993 Carmarthen District Council secured a 21-year lease on the Abbey Church site with a view to enhancing its conservation and management, and to this end provided the funding for an evaluation excavation which was undertaken in 1994 by Cambria Archaeology, with the assistance of the Department of Archaeology, Trinity College, Carmarthen, continuing a historical association. From the evaluation arose a programme of archaeological clearance which was undertaken by the Trust in 1995, again assisted by Trinity College students, and subsequent consolidation and landscaping which concluded in 1996.

The project concentrated on the abbey church, which lay under a considerable burden of material mostly from the 1926 excavation; one spoil heap consisted almost entirely of architectural stonework, whilst another contained a large amount of tile fragments. The work was mainly superficial and confined to the re-excavation of Collier's trenches. The surviving wall-lines of the abbey church were recorded and the interior of the site was excavated down to levels suitable for display, without disturbance to the underlying monastic archaeology. Survey was also undertaken on some of the surrounding features, two of which were subject to partial excavation by Trinity College (Figs 24 and 28). The results of this project have been summarised by Pete Crane and Peter Webster.¹³³

The work, which was funded by both Carmarthen District Council and Cadw, resulted in the public access and display of the remains and the responsibility for their maintenance under the new Carmarthenshire County Council, following an official opening on 4 October 1996. In 1999 Cadw funded Cambria Archaeology to undertake a programme of geophysical survey¹³⁴ and standing building recording¹³⁵ within the abbey complex, and topographical survey over a wider landscape area.¹³⁶

DESCRIPTION OF THE ABBEY COMPLEX

Whitland Abbey possessed a fully-developed conventual plan represented by a large, aisled cruciform church lying in the favoured position north of the conventual buildings, which were arranged around a formal cloister (Figs 5 and 11).

The abbey church itself is marked out by low turf walling constructed in 1996 (Fig. 4). The remainder

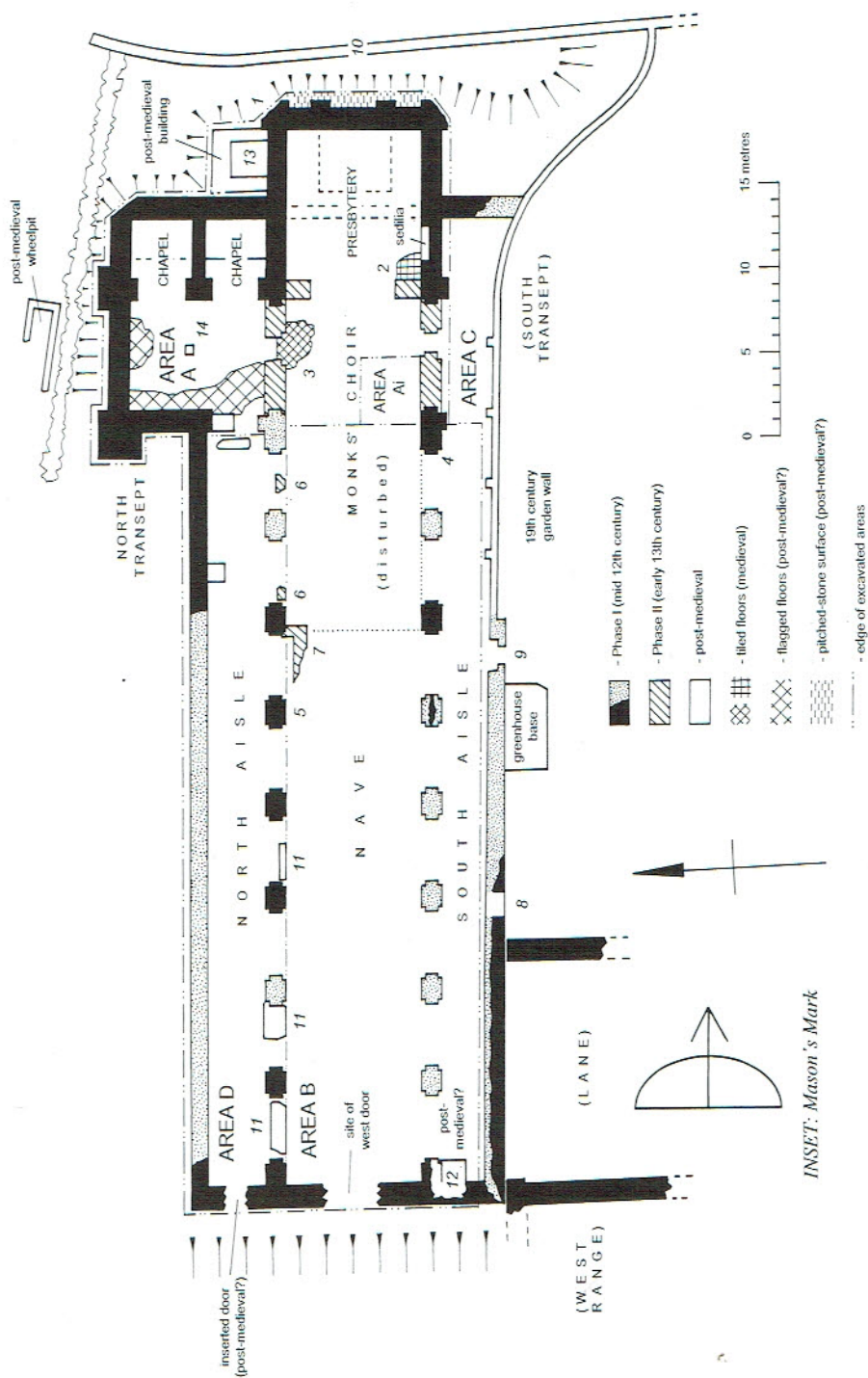


Fig. 5. Plan of Whitland Abbey church.

of the site is occupied by the mid nineteenth-century walled garden, which overlies the cloister and conventual buildings incorporating their remains, which are limited to small sections of masonry (Fig. 11). The north wall of the garden follows the line of the nave south wall and sections of the fabric, including the location, at least, of two possible doorways, may be medieval in origin. Similarly, the west garden wall appears to retain medieval masonry including a blocked doorway and the impression of two east-west vaults against its west face, while a low north-south wall to the east may contain medieval fabric. The low east-west wall running off to the west of a later garden greenhouse base may be derived from the medieval cloister, but the greenhouse itself is slightly off the cloister alignment; a second greenhouse base lies against the garden north wall. A low remnant of masonry lying to the east may also be medieval. The present stonework mainly comprises locally-quarried Ordovician sandstone rubble, with some very limited use or reuse of imported medieval oolite.

THE ABBEY CHURCH (Fig. 5)

The following account of the abbey church describes the results of the 1994-95 investigations, with reference to Collier's 1926 excavation.¹³⁷ The excavations have demonstrated that the church was a cruciform building measuring 67m east-west and 30m north-south across the transepts, of the so-called 'Bernardine' plan, discussed below, with a short presbytery of only two bays. The transepts were similarly short and each appears to have contained two chapels, while the long nave comprised eight bays with comparatively narrow aisles. However, apart from a section of the presbytery south wall, which survived to a height of 0.5m, the masonry was either truncated to ground level, or robbed, and no opening was preserved above sill level. Where facework survived, for instance at the east end, it comprised squared local sandstone, but a basal chamfer around all external walls was indicated. Most of the building appears to belong to a single, mid twelfth-century phase (Phase I); only one other medieval phase could be securely identified, from the earlier thirteenth century (Phase II).

Excavation in 1994-95 was generally superficial, being only taken down to pre-determined levels in order to consolidate the remains for display, whilst preserving medieval deposits. These consolidation levels were, in the area of the presbytery, crossing and north transept, set just above the level of the remains of *in situ* medieval tiled flooring (see below) that was revealed by the initial evaluation of 1994 (Fig. 5, Area A), but excavation in the nave and aisles did not fully penetrate the overlying garden soil (Fig. 5, Area B). The south transept was only partially excavated, but medieval horizons here appear to have been truncated by garden activity (Fig. 5, Area C), as they may have been towards the east of the nave. The evidence suggested that Collier's 1926 excavation, the extent of which was never published, was similarly superficial and most of the north aisle may have remained unexcavated (Fig. 5, Area D). The overlying garden soils were unstructured, apparently relating to the mid nineteenth-century gardens, and themselves had been subject to much later disturbance, not all of which could be clearly associated with the 1926 excavation. This nineteenth- to twentieth-century activity appears to have truncated any features or deposits that may have been present from the earlier post-medieval period, as well as an unknown percentage of earlier deposits: in a small test-pit, excavated within the crossing, the garden soil came down onto undisturbed subsoil (Fig. 5, Area Ai).

The church was constructed on gently sloping ground rising to the north and east, and was cut into the slope in the area of the north transept and east end where external surfaces were always higher than the interior. The west end of the nave, in contrast, was probably built on made up ground which slopes downhill, fairly steeply, to the west. The evidence suggested that the surviving interior levels were nowhere substantially higher than medieval floor levels, and changes in level suggest that steps formerly

led up from the nave and south transept into the crossing, and from the crossing into the presbytery and north transept; the exact (and final) location of these steps could however only be demonstrated at the east end and in the north transept.

The presbytery

It was possible to establish the plan and dimensions of the presbytery as a result of the survival of the lower courses of its walls. It had an internal width of 8m and was 10m in length from the east wall to the transept arches. It was divided equally into two bays, defined by the transeptal chapel east walls, and appears to have featured a full-width step up to the east reflecting the ground profile. Some facework survived, particularly at the east end where it comprised squared local sandstone. The presence of the clasping buttresses at the corners of the east end, observed in 1926, was confirmed, and the remains of two pilaster buttresses were revealed, lying equidistant between them; all probably represent Phase I work from the mid twelfth century and may indicate that both presbytery bays were vaulted. The north-east buttress exhibited a mason's mark, in the form of a bow-and-arrow (Fig. 5, 1, and inset), that is almost identical to another found on the south pier base of the first bay of the nave (Fig. 5, 4). Internally, there had been considerable disturbance at the east end, much of which may well have occurred prior to the 1926 excavation. This area was not thoroughly excavated as it lay below the intended consolidation levels. There were traces of an altar dais or footpace, and the difference in height between the base of this platform and the floor to the west probably indicates a fall of two steps to the presbytery. The south wall of the west bay contained the fragmentary base of a recess, 0.5m from ground level; it probably represents the same feature that was interpreted as a 'very fine' triple-sedilia in 1926, when a piscina was also inferred from the presence of a 'neatly formed dry drain' to the east, not observed in 1994–95. This has subsequently deteriorated and the steps that were recorded have now gone. The surround comprised dressed oolite and appeared to be original, but there were the suggestions of the post-medieval alteration into a fireplace that had been noted by Collier.

Little flooring survived *in situ* but a small area of tiles and tile fragments lay in the south-west corner of the presbytery, set at right-angles to the building (Fig. 5, 2). They included the 'Agnes Dei' form dateable to the fourteenth century, but no real pattern could be observed and their condition, and the manner of their laying, suggested that they had been re-used or relaid at a later period. A number of burials beneath the floor can be inferred and the chronicles provide a location for at least one, that of Maredudd ap Rhys Grug (d. 1271) who was 'honourably buried in the great church [at Whitland] on the steps in front of the altar'.¹³⁸ Some of these burials may be among the ones disturbed in the nineteenth century, while Maredudd may be the male burial that was apparently found 'during excavations', alongside that of a female 'in front of the high altar'.¹³⁹ No evidence for this burial was revealed in 1994–95.

The crossing and transepts

The crossing was ill-defined during Phase I; there were no piers to the east and it was open to the east and west, communicating with the transepts to the north and south via arches. The resulting internal space measured 8m by 8m across. Excavation in the north transept during 1994–95 was fairly complete but was more limited in the crossing, due to the vegetation that also prevented excavation in the area of the south transept. An undisturbed area of floor tiles survived at the entrance to the north transept, comprising buff and green glazed tiles in a chequer pattern set diagonally to the church (Fig. 5, 3); a similar area was recorded at the entrance to the south transept in 1926 but has now gone. The bases of the transept arch responds also survived, and were represented by plain square stops, with rebated corners and chamfered oolite bases, representing Phase I work of the mid twelfth century; the nave

arcade piers were of similar form.

Both the arches, and the open space into the presbytery, were subsequently altered. Short lengths of wall were built against and butting the presbytery side-walls which are now represented by footings also featuring a basal chamfer in imported oolite. The remains may represent the responds of a secondary arch into the presbytery, but in the absence of detail they cannot be dated. They may, however, belong to the same phase as the screen walls that were inserted into the transept arches. Both of the latter contained doorways, the *superiores introitus*, or upper choir entrances leading from the transepts. The dogtooth detail and nookshafts, rising from water-holding bases, in the north doorway were noted by Collier, and on this stylistic evidence a date-range within the first quarter of the thirteenth century may be suggested (Phase II). The southern door surround had been robbed of all dressed stone.

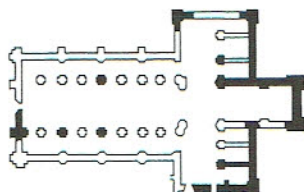
The interior of the north transept appeared to have been entirely excavated in 1926 but the lower courses of its walls enabled its plan to be established, with internal dimensions of 8m north-south and 11m east-west. No facework survived. In 1994-95 a clasping buttress at the north-west corner was revealed, which was not excavated in 1926, nor the pilaster buttress against the centre of the north wall. Both were probably Phase I work from the mid twelfth century and had substantial footings. The north-west buttress was of considerable size suggesting that it may have housed a spiral stair. A further buttress may be assumed at the north-east corner, in an area that was not fully investigated but appears to have been extensively robbed. The east half of the transept was occupied by two chapels, a frequent arrangement in twelfth-century Cistercian plans. The chapels were separated from each other by a solid wall, terminating at a pier which, like the responds against the main north and south walls, was a plain square in plan, with no suggestion of detail, and probably carried arches. This appears to have been Phase I work but the remains of the north chapel had been almost completely robbed out, either before or during the 1926 excavations. More survived within the south chapel which in 1926 was described as 'still retaining a portion of the altar step and about 15 square feet of tiling', while 'the site of the altar of this chapel is quite plain'. The tiles apparently bore the 'Agnes Dei' motif, from the second half of the thirteenth century (see Fig. 19), set diagonally to the church, but only fragments of this flooring, and the step, survived in 1994-95. The main body of the transept contained the remains of a late floor, composed of thick stone flags (probably of local origin) and re-used oolitic limestone, including a few moulded pieces. A square post-setting was set into this surface (Fig. 5, 14), continuing the line of the chapel division suggesting that the floor was laid down at a later, but still monastic period, and that the setting relates to an east-west timber screen which divided the transept in two. The south half communicated with the north aisle via an opening in its west wall, probably an archway, with plain square stops like those into the chapels and also from Phase I.

No evidence of a south transept emerged from the geophysical survey. However, the south wall of the crossing exhibited what appear to have been the responds of the north chapel arch, and the arch into the south aisle, suggesting that a transept was present and mirrored the north transept in plan. A small excavation within the area, taken down to the natural clay, demonstrated that the entire area had been disturbed by garden features.

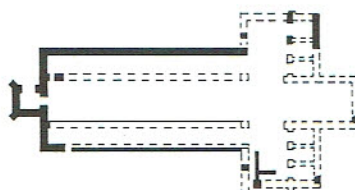
The nave

Enough remained of the north and south exterior walls of the long nave to enable its dimensions to be established as 47m east-west and 18m north-south across the aisles, but no facework survived.¹⁴⁰ The main vessel was 9m wide and was separated from each of the aisles by an arcade of eight bays, the piers of which survived better to the north than to the south where they had been largely robbed. A mason's mark on the south pier of the first bay (Fig. 5, 4 and inset) was almost identical to that on the presbytery buttress (Fig. 5, 1). The surviving bases were constructed from oolite dressings, chamfered in profile,

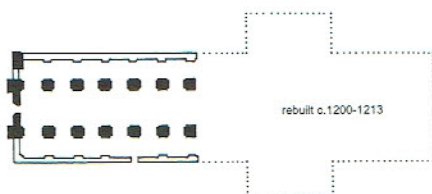
Bordesley Abbey (Worcestershire)
(mainly 1150s)



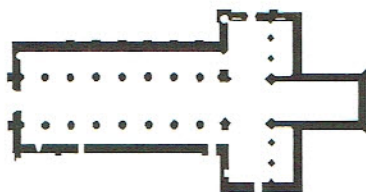
Boxley Abbey (Kent)
(mainly 1150s)



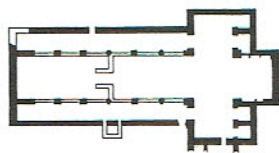
Margam Abbey (Glamorgan)
(c.1147-75)



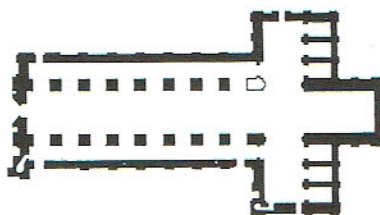
Dundrennan Abbey (Galloway)
(third quarter of 12th century)



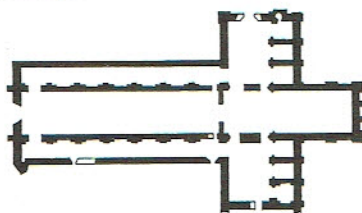
Jerpoint Abbey (Co. Kilkenny)
(mainly c.1160)



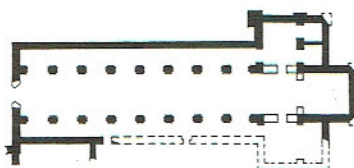
Kirkstall Abbey (Yorkshire)
(mainly 1150s-early 1160s)



Strata Florida Abbey (Ceredigion)
(c.1184-1201)



Whitland Abbey (Carmarthenshire)
(Mainly 1150s)



0 50 metres

Fig. 6. Comparative plans of Cistercian 'Bernardine' churches. The east end at Margam was probably Bernardine in its original form, but was rebuilt in c. 1200-13 (after Robinson 1998 and others).

which survived in five of the north aisle bases. Three of the five retained part of the course above (e.g. the pier between bays 3 and 4, see Fig. 5, 5 and Fig. 7), demonstrating that the piers themselves were rectangular in plan, with rebated corners like the transept arch responds, and there was no evidence to suggest that any variations to this plan occurred in other piers. Their dimensions, however, varied slightly, and whilst averaging 2m east-west by 1.20m north-south, the three east bases on each side of the nave were approximately 0.25m longer than the four to the west. The intervals between the piers within these two groups was affected by their differing dimensions and their spacing varied accordingly. All piers are regarded as belonging to Phase I, but a break in construction is suggested by the variation.

Short lengths of walling, averaging 1m thick, were revealed between the northern piers of the first and second bays of the nave (Fig. 5, 6). They were not excavated to construction level, which was not established, but they may represent the screen walls dividing the lower monks' choir from the aisles, but appeared to be clay-bonded. A third section of thicker walling, with the possible remains of plaster, led off of the west face of the second pier with a right-angled turn, as if to define a narrower area which possibly represents the west limit of the choir (Fig. 5, 7).

The west door had been entirely robbed out before 1926, but Collier regarded an oolite, annuletted nookshaft, recovered during his excavations, to be derived from its surround. A large moulding found in the nave north aisle in 1994–95 possibly represents a doorway capital (Fig. 18). An opening in the west wall of the north aisle, 1.2m wide, may have been a further doorway crudely inserted at an unknown date, removing the footings, and now with no surround. There was no evidence either for a west porch or buttressing on the west front, but this may be due to site constraints where the edge of the excavation followed the approximate line of the external wall-face.

The jamb of a possible blocked doorway, visible in the rebuilt south wall 19m from its west end, may be medieval and possibly represents the site of the doorway into the west cloister alley, but again no surround has survived (Fig. 5, 8). The entry in the rebuilt section of garden wall 13m to the east may furthermore occupy the site of a further medieval doorway (Fig. 5, 9).

All flooring in the nave and aisles had been removed in the areas that were investigated, and none is mentioned in the account of the 1926 excavations. Neither was there any trace of mortar bedding, but it is possible that this area was floored with stone flags.¹⁴¹

Later work

The archaeological record suggests the continuing use or later re-use of the church site, but gives little clue as to its character or extent. The possible conversion of the sedilia into a fireplace has been noted above, and the pitched stone/cobble surface outside the east end (Fig. 5, 10), which lay above a thick layer of make-up, was assigned on stratigraphical grounds to the post-medieval period. Lengths of thin walling between the three west bays of the north nave arcade were shown to post-date the robbing of the nave floor (Fig. 5, 11),¹⁴² and is shown on the Ordnance Survey 25-inch map of 1908 (Fig. 10).¹⁴³ Several further stretches of walling occupied the same horizon, including the blocking of the opening from the north aisle into the north transept (and a drain just inside the east end of the aisle) and a footing against the internal face of the nave north wall. In addition, the west respond in the south arcade was altered with the addition of a large block of masonry (Fig. 5, 12). This cannot be dated; it may belong to this same general period, but there is a possibility that it might even be medieval.¹⁴⁴

From the limited surviving evidence, it appears that the later post-medieval period was in the main characterised by the robbing of the church for both its dressings and building stone. Eight of the fourteen piers in the nave arcades were robbed-out to below floor level, as was much of the north wall. The latter appears to have been fairly recent activity as the open robber-trench was noted by Clapham in 1921.¹⁴⁵ A building against the presbytery north wall (Fig. 5, 13) will be discussed below. The remains of some

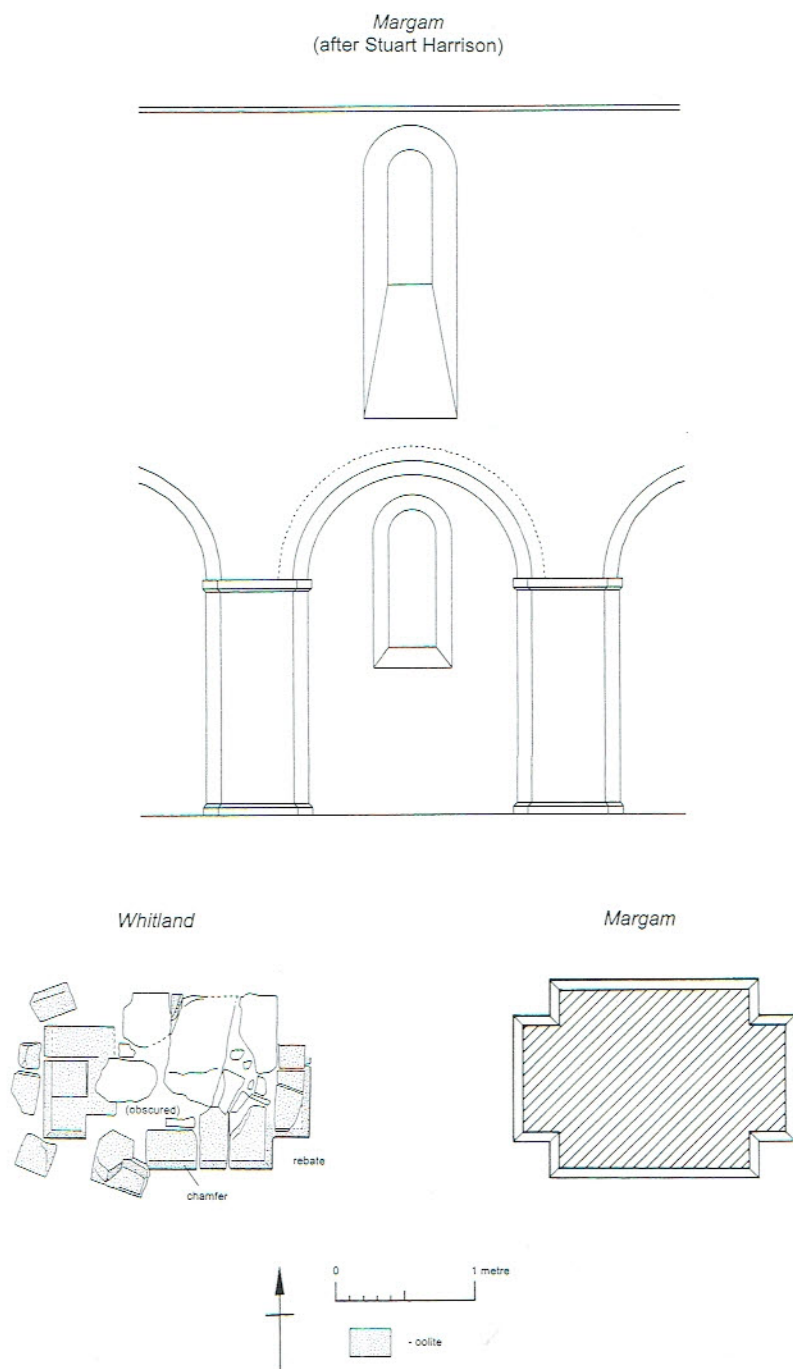


Fig. 7. Elevation of one bay of the nave at Margam Abbey, and comparative plans of piers at Margam and between bays 3 and 4 of the north arcade at Whitland.

slight clay-bonded walls, not shown in Figure 5, may however post-date the 1926 excavations.

Discussion

The physical evidence demonstrates that the design of the church at Whitland was based on the so-called 'Bernardine' plan, which was derived from the Cistercian heartlands in Burgundy and neighbouring Champagne and ultimately modelled on the second church at St Bernard's own house at Clairvaux, from 1135–45.¹⁴⁶ In France, the plan was notably employed at Fontenay (Burgundy) and Noirlac (Berry), and in Britain and Ireland at, for example, Boxley (Kent), Bordesley (Worcestershire), Cleeve (Somerset), Dundrennan (Galloway), Kirkstall, Rievaulx and Roche (Yorkshire),¹⁴⁷ at Boyle (Co. Roscommon), Graiguenamanagh and Jerpoint (both Co. Kilkenny) in Ireland,¹⁴⁸ and at Whitland's own daughter-house at Strata Florida in Ceredigion (Fig. 6). Its defining features were a short, projecting rectangular presbytery, an unsegregated crossing, transepts with square-ended chapels, and a monks' quire extending into the second or third bay of a long, aisled nave.¹⁴⁹ The plan was to be adopted by most of Clairvaux's daughter-houses, in Britain and Europe, and persisted through to the late thirteenth century, but was subject to later alteration at a large number of sites.

Whitland was a first-generation daughter of Clairvaux itself, like the first houses at Boxley (Kent), Fountains and Rievaulx (both Yorkshire),¹⁵⁰ and Mellifont (Co. Louth) in Ireland.¹⁵¹ Their churches share varying degrees of similarity, but it with is the other Welsh daughter-house, Margam Abbey (Glamorgan), built between c. 1147 and c. 1175, that Whitland has the closest parallels.¹⁵² Margam's nave, now the parish church, is a remarkable survival from this early period of British Cistercian building. It too originally comprised the eight bays commonly occurring within Bernardine churches,¹⁵³



Fig. 8. The east end at Fontenay Abbey (Burgundy), before recent alteration of the lean-to chapel roofs into gables. *Photograph: David Robinson, English Heritage.*

and has similar dimensions and proportions to the nave at Whitland, while it has been suggested that the east ends and transepts at the two churches were also very similar.¹⁵⁴ Moreover, the Whitland arcade piers, with their simple chamfered plinths and rebated corners, are very similar in plan to the surviving piers at Margam where they carry full-centred semicircular arches, also rebated, on equally simple chamfered imposts, all of great austerity (Fig. 7).¹⁵⁵ A similar arcade, from 1152–70, survives at one of Clairvaux's French daughter-houses, Clairmont (Mayenne), which although slightly pointed, is otherwise like Margam's, even in the detail of the imposts.¹⁵⁶ Although we cannot be sure of the exact nature of the arcades at Whitland, the stylistic evidence suggests that the church was similarly built during the third quarter of the twelfth century, confirming the suggested foundation date of 1151. From the late 1150s onwards a more closely Burgundian style, with pointed arches, began to be adopted in British Cistercian churches, and particularly in Ireland where a number of churches are strikingly similar to Clairmont.¹⁵⁷

The surviving Bernardine church at Fontenay (Burgundy), which was the second daughter of Clairvaux, had until very recently undergone little alteration since its construction in the 1140s. Here, the east end was stepped, the transept chapels carrying lean-to roofs up to presbytery eaves-level, while the nave oversailed the presbytery (Fig. 8). This so-called 'Fontenay' east end is also seen at Fontfroide (Languedoc) and Noirlac (Berry).¹⁵⁸ While no example of the style now survives in Britain or Ireland, the lack of a regular, segregated crossing at Whitland is distinctive and there is growing evidence that the 'Fontenay' east end was not uncommon in twelfth-century Britain. The unsegregated crossing is characteristic of a group of Cistercian churches in Wales, including Margam and Strata Florida (where the presbyteries were subsequently rebuilt), and possibly Neath and Tintern,¹⁵⁹ and at Baltinglass (Co. Wicklow), Boyle (Co. Roscommon) and Jerpoint (Co. Kilkenny) in Ireland (Fig. 6).¹⁶⁰ Meanwhile, new evidence is emerging that stepped east ends were initially present at Fountains and Rievaulx in Yorkshire.¹⁶¹ However, while Whitland's east end may have been similarly ordered, this cannot be demonstrated conclusively.¹⁶² Different 'Bernardine' elevations existed in other parts of Britain and Europe, but all achieve the primary objective of having the same disposition of liturgical space in plan.¹⁶³ The unsegregated crossing certainly suggests that no tower was present at Whitland (Fig. 17), and although an eastern crossing arch was inserted along with screen walls between the choir and transepts, in the early thirteenth century, they appear to be insufficient to carry the weight of a tower, unlike the walling inserted into the crossing at Strata Florida before c. 1201 (see below). However, a mid sixteenth-century account of the disposal of bells from the dissolved monasteries of Cwmhir, Strata Florida and Whitland, among others, mentions 'Whitlande – also received there three bells . . . sold to the towne of Whitland for the sum of £13 6s 8d'.¹⁶⁴ The church may therefore have carried a *flèche*, while other bells may have been situated within the conventual buildings as at Fontenay where there is a bellcote over the north end of the east range.¹⁶⁵

The church at Whitland's daughter-house of Strata Florida, probably begun in the 1170s, was initially of similar Bernardine plan with a short presbytery, but with a six-bay nave and three chapels in each transept (Fig. 6).¹⁶⁶ An austere style in the manner of Margam and Whitland gave way, during construction, to a style betraying more Burgundian influence, with early Gothic elements and dressings echoing those found in Irish houses such as Baltinglass (Co. Wicklow),¹⁶⁷ while the presbytery was lengthened and the crossing modified, perhaps for a low tower, before 1201.¹⁶⁸ There are no close parallels between Whitland and any of its other first generation daughter-houses, of which Cwmhir and Strata Marcella (both in Powys) may be at least partly contemporary. The site of Strata Marcella, founded in 1170, is somewhat enigmatic. It is possible that the east end was Bernardine in form, but the long nave, interpreted as comprising ten bays,¹⁶⁹ is unusual and has been subject to recent doubts.¹⁷⁰ Some stylistic elements, and five mason's marks, are shared with Strata Florida, and the style is early

Gothic.¹⁷¹ The east end at Cwmhir, founded in 1176, may similarly have been Bernardine in form,¹⁷² but the original form of the nave is unknown, having been rebuilt to the extraordinary length of fourteen bays in the early thirteenth century.¹⁷³ Too little survives from the two first generation Irish daughter-houses, Comber (Co. Down) and Tracton (Co. Cork), to make any comparisons possible.¹⁷⁴

Whitland Abbey church underwent no such extensive alteration. Although the presbytery may have



Fig. 9. The annuletted surround of the west door at Margam Abbey. It has been suggested that the annulets may be a spurious feature from the restoration of 1805–10, but the west door at Whitland may have had a similar annuletted surround.

within and outside the Clairvaux family.¹⁸¹ At Whitland, the remains of the screen walls that separated the monks' choir from the nave aisles appear to be represented by short lengths of walling in the eastern three bays of the nave, according with Bernardine planning, but the secondary screen walls between this choir and the transepts are unusual, normally forming part of the primary arrangements.¹⁸² No evidence of either the *pulpitum* or the rood screen has yet been encountered.¹⁸³ Neither is there structural evidence for the lay-brothers choir (*chorus conversorum*), which in normal Cistercian plans occupied the remainder of the main vessel of the nave, and which is still separated from the side aisles by the remains of masonry walling at Strata Florida in Wales, Fountains in England and at Baltinglass and Jerpoint in Ireland (Fig. 6). Lay-brothers are assumed to have been present at Whitland (see below), where the screen-walls in the church may have been of timber.

The west door may have had an annuletted surround,¹⁸⁴ like the Clairvaux daughter-houses at Fontenay, Margam and Strata Florida, but it has been suggested that the annulets at Margam may be a spurious feature from the restoration of 1805–10 (Fig. 9).¹⁸⁵ The break in construction suggested by differences between Whitland's third and fourth nave piers is a familiar feature of monastic churches but in Whitland's case was probably not very long, both ends of the nave being stylistically similar.¹⁸⁶ The presence of similar mason's marks at the east end and the first bay of the nave¹⁸⁷ — not paralleled by any of the seventeen mason's marks recorded in the church at Margam — suggests that there was similarly no great break in their construction. The edge of the 1990s excavation was flush with the west wall-face and no evidence for either west end buttresses, or a west porch, was revealed. If Fontenay is taken as a benchmark, then a west porch was part of the Bernardine plan and one may be assumed to have been present, as at Margam.

There is evidence that the church was at least partly vaulted. The extended presbytery at Strata Florida, from c. 1200, was given a rib-vault decorated with a domino-motif identical to that on a piece of dressed stone recovered from Whitland in 1994–95.¹⁸⁸ However, the substantial buttressing on the east end of Whitland's presbytery suggests that a primary barrel vault may have been replaced, and there are similar buttresses on the north transept. It is also possible that the chapels, at least, were vaulted as at many houses including Strata Florida.¹⁸⁹ Finds made earlier at Whitland have also included stonework regarded as identical to diagonal ribs at Buildwas (Shropshire),¹⁹⁰ but the evidence is inconclusive. However, it has been suggested that the comparatively narrow width of the aisles at both Whitland and Margam may suggest that vaulting was intended.¹⁹¹ The aisles at the slightly later Strata Marcella may have carried vaulting on clustered shafts. The aisle vaulting at Cwmhir was later still, from c. 1230.¹⁹² The debris indicates that Whitland's church was roofed with slate, with glazed ridge tiles.

The archaeological evidence for the post-medieval period was, in general, poor. The church site was overlain by unstructured soils which apparently relate to the mid nineteenth-century-gardens, while an area of disturbance towards the east of the nave appeared to belong to a larger, earlier feature — possibly the pond said to have been excavated on the site in 1837.¹⁹³ It may be that earlier post-medieval features, including any evidence for possible Dissolution activity such as the smelting-down of the abbey metalwork, were truncated by this later garden activity. Nor could any of the post-medieval alterations for which there was evidence, or the masonry robbing, be accurately characterised or dated.

The context of the fireplace conversion from the sedilia, and the external pitched-stone surface (Fig. 5, 10), is therefore unknown. The fireplace must belong to the early post-medieval period as all traces had gone by the early nineteenth century, while the nature of the work does suggest an early attempt to convert the church into a dwelling. The survey of 'the manor house of Whitland' (see Appendix),¹⁹⁴ made in 1582 during the tenure of John Vaughan (which begun in 1545), lists 22 chambers which, with the exception of a buttery and stable, appear to be lodgings including a hall and dining chamber, occupying two storeys. If the survey does relate to the abbey buildings, then they were still clearly

summary, the description, taken along with the mention of a 'ceiling' and the documentary evidence for later medieval decline, indicates either an unrecorded, late patronage, or a major refurbishment under John Vaughan — itself at odds with the complaint against Vaughan in 1582.¹⁹⁸

Although the conventual buildings were normally chosen as more suitable for post-medieval domestic adaptation,¹⁹⁹ there are a number of parallels for the re-use of monastic churches during the sixteenth century, including the well-known Cistercian abbeys at Buckland (Devon), Medmenham (Buckinghamshire), Netley (Hampshire) and Stoneleigh (Warwickshire),²⁰⁰ and in Ireland at Dunbrody and Tintern Minor (both Co. Wexford).²⁰¹ Such conversions could range from the extreme, like the high-visibility house established at Buckland, to the lower-status farmhouse established at Dieulacres Abbey (Staffordshire). The dimensions of Whitland's church as given by Revd Thomas — 226 feet long by 216 feet wide — were nearly correct;²⁰² His description of a crypt, however, is more dubious; an undercroft in some other part of the complex may be meant or, more likely, an entirely spurious tradition, no cellars being indicated by the geophysical survey.

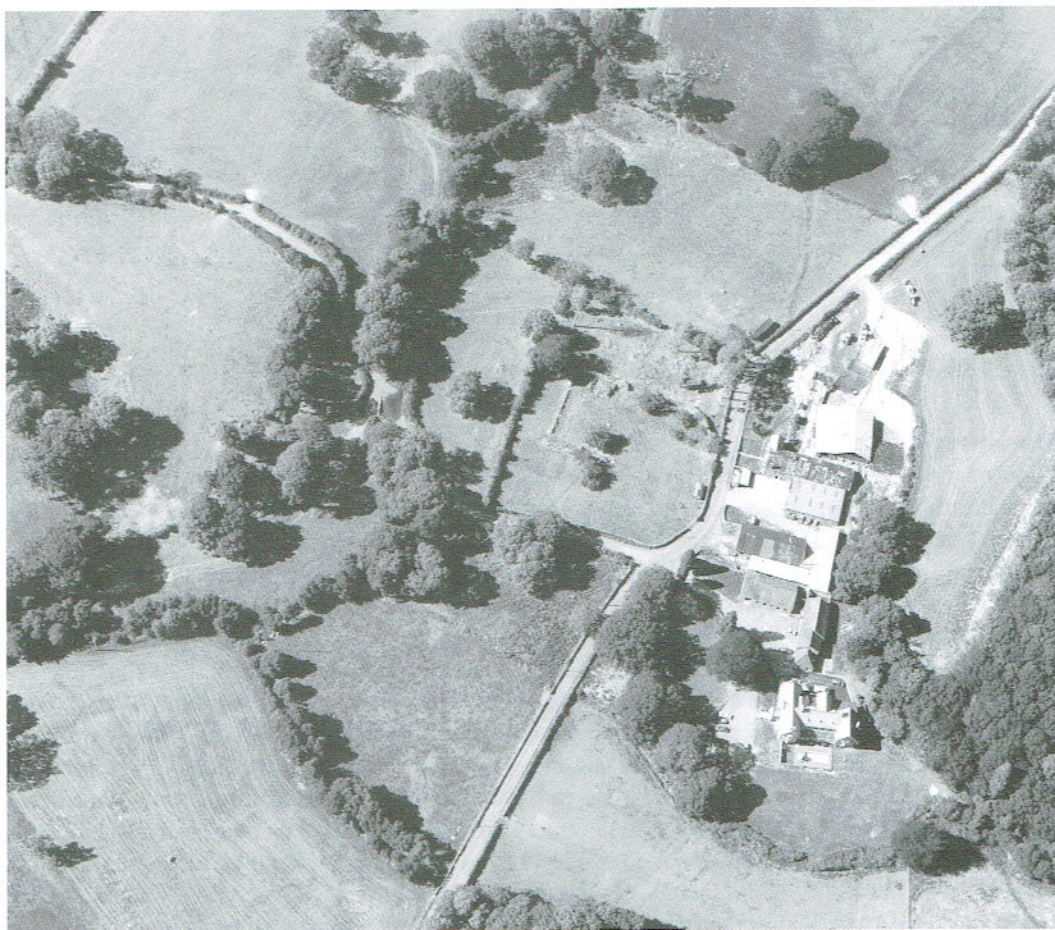


Fig. 12. Aerial photograph of the Whitland Abbey site from south.

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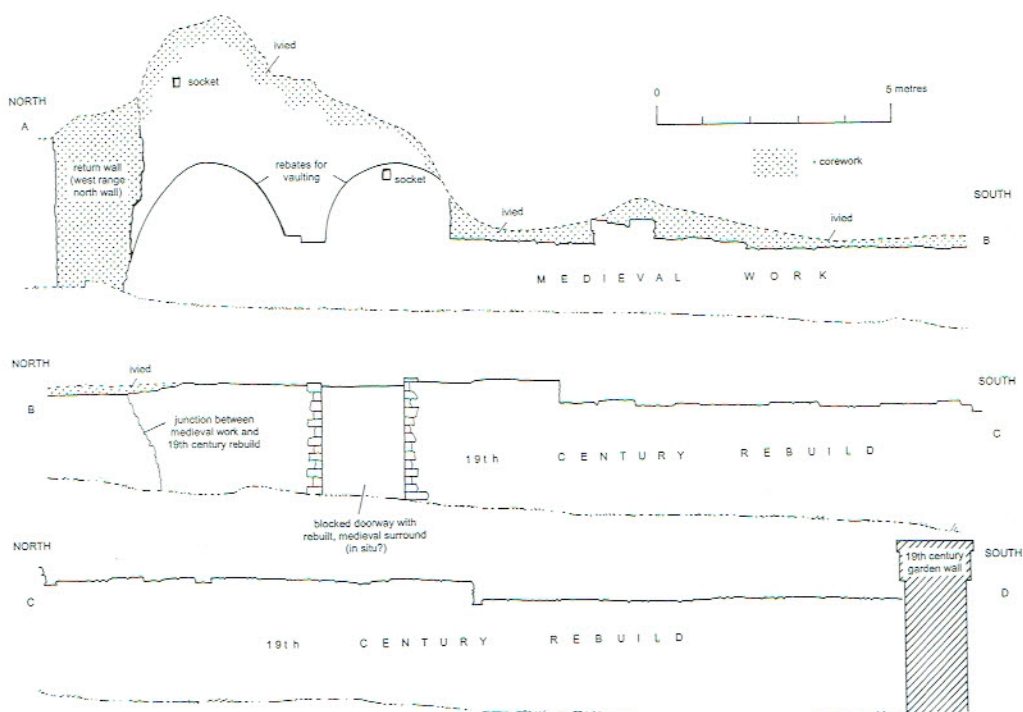


Fig. 13. West elevation of west range vaults.

The west range

Butting against the footings of the nave south wall are two stretches of walling, running north–south but not quite parallel. The westernmost of the two (Fig. 11, 1), which is slightly acute to the axis of the church, extends for a distance of 60m and survives to an average height of 3m. The north half appears to be largely medieval; at its north end it survives to a height of 6m and its west face exhibits an area of corework which appears to represent the scar of an east–west return wall more-or-less continuing the line of the nave south wall, and immediately to the south are the scars of two parallel, east–west aligned vaults with semicircular profiles, their heads lying 3.5m above present ground level (Fig. 11, 2; Figs 13 and 14). The southern half of the wall appears to have been rebuilt during the post-medieval period with regular coursing, stepping down from north to south to reflect the shallow slope, and with an alcove in its eastern face which lies at the junction and therefore may occupy the site of an earlier opening. However, it also contains the lower part of an entry, now blocked, with a plain surround of medieval dressings; this door was described as ‘twelfth century’ in 1921, suggesting that the head may have still been present (Fig. 11, 3; Fig. 13).²⁰⁹ The ground level is, on average, 0.5m lower on the west side of this wall. At the far south end, the wall terminates at a nineteenth-century decorative ‘turret’ which Clapham saw as a refaced clasping corner buttress (Fig. 11, 4; Fig. 13). A wall leading westwards from its southern end, seen in 1921, has now gone, but the possible west wall of this block shows up as both geophysical anomalies and as intermittent areas of masonry, 11m to the west.

So, when was the abbey, and in particular the church, destroyed? In 1805 Donovan recorded that only vestiges of the abbey could be traced,²⁰³ but neither he nor other early sources necessarily noted any re-use of standing abbey buildings that may have been incorporated in either the seventeenth-century Brett residence, the forge (see below), or the cottages that were mentioned by Donovan. Any one of the complex of buildings shown on the abbey site on the earliest map of the area, from 1819 (see Fig. 25),²⁰⁴ may represent part of the conventual buildings. Demolition may not, moreover, have been piecemeal. A major change in the site occurred between 1819 and 1839 when the tithe map recorded a nearly empty site (see Fig. 20).²⁰⁵ However, a row of cottages depicted in 1839 appears to occupy the nave and south aisle, the same site as the walled enclosure or paddock marked on both editions of the Ordnance Survey 25-inch (Fig. 10),²⁰⁶ and clearly representing the excavated walling in the north arcade (Fig. 5, 9), suggesting that the piers were still standing to some height as late as 1908. They had gone by 1921.²⁰⁷



Fig. 14. West range vaults from west.

THE CONVENTUAL BUILDINGS (Figs 11 and 12)

The area of the walled garden overlying the cloister and conventual buildings has not been excavated. Collier's 1926 plan was taken entirely from Clapham's²⁰⁸ and subsequent work has all been superficial, limited to the topographical and geophysical surveys carried out alongside the standing building recording in 1994–95. The geophysical survey, in particular, has been highly successful in confirming the layout of the conventual complex suspected from aerial photographs (Fig. 12).

The second wall lies 13m to the east, and right-angles to the church, but is very fragmentary and confined to a 5m-length against the church south wall (Fig. 11, 5); it is assumed for a further 25m, not quite parallel to the west wall, and appears to feature an original entry towards its south end, offset from that in the west wall, and a right-angled turn to the east. It too is secondary to the nave but is assumed to be medieval. It stands to a height of 7m with an offset at 3.2m on the east face (Fig. 15).

Clapham saw the two walls as relating to a double west range plan, the westernmost of the two walls representing the division between a cellarer's range above a vaulted undercroft to the west, which was

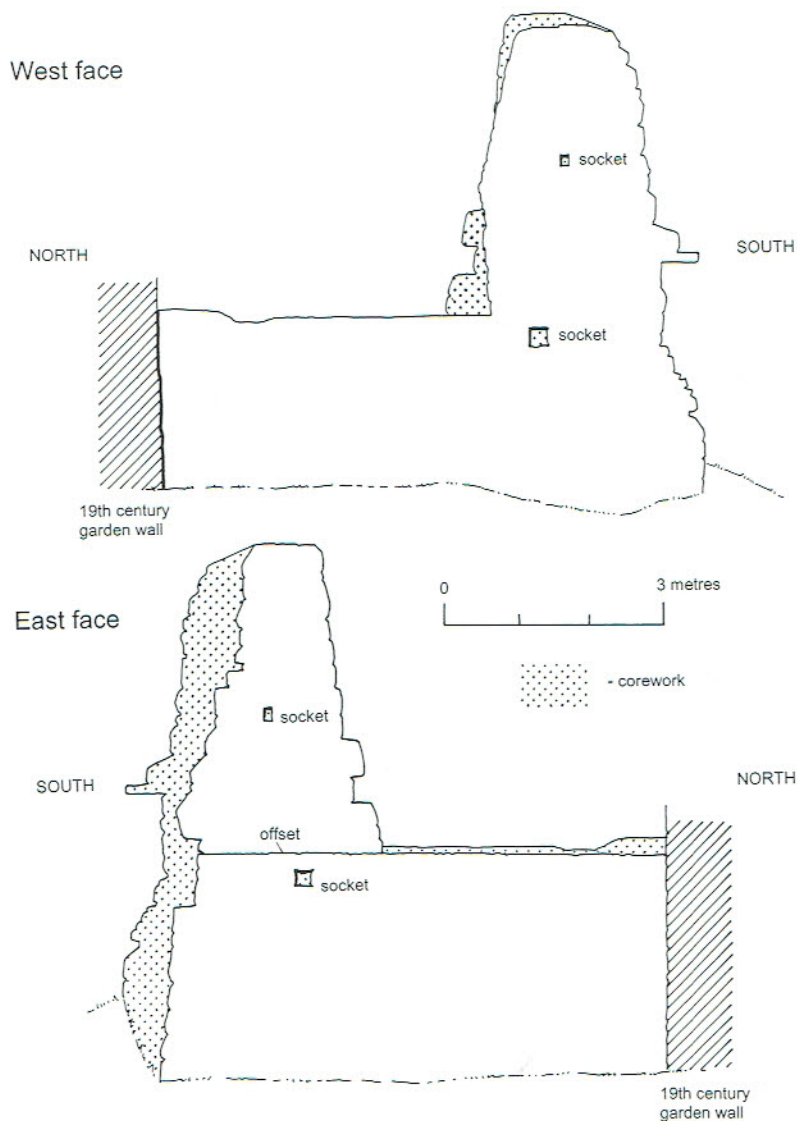


Fig. 15. Elevations of north end of the west cloister wall.

60m long but of unknown width, flanked to the east by a 'lane'.²¹⁰ The west cloister alley was interpreted as lying to the east of this 'lane', the offset on the east wall representing its roof-plate (Fig. 15).

A detached section of standing masonry, forming part of a former east–west wall, lies 10m to the west of the walled garden (Fig. 11) but is now very ruinous and featureless. It is usually interpreted as having formed part of an outer parlour porch against the west range.²¹¹

Recent work has not modified this interpretation substantially. No resistivity survey was undertaken within the area west of the main wall, and the presence of a range here could not be resolved from the magnetometry alone. However, one new feature was identified in the north end of the proposed 'lane', where a rectangular, very low resistance anomaly was thought to represent a tank or cistern associated with the monastic water-supply, and a possible culvert (Fig. 11).

The south range

There is little upstanding evidence for the south range, but it is defined on the ground as a low, linear earthwork, 15m wide, its south edge defined by a sharp break of slope. A length of low walling (Fig. 11, 6), lying at right-angles to the long west wall described above (Fig. 11, 1), appears to represent the line of the north wall of the range and may contain some medieval fabric. It marks the north edge of a complex of very strong geophysical anomalies, also showing as parchmarks on aerial photographs (Fig. 12), which appear to represent the south wall of the range, and several internal, north–south dividing walls, lying at an angle of approximately 80° to the north wall, the church and cloister alley west wall.²¹² Taken together, the evidence suggests that the south range measured at least 50m east–west, with a north–south width of 13m, divided into nine discrete areas — the western area(s) possibly containing an *in situ* flagged floor observed both as an anomaly and on aerial photographs — and that two wings projected from the south wall at right-angles, in association with a possible watercourse or drain (Fig. 11).

The cloister

A formal cloister is suggested by the standing remains of its western alley wall described above, the surviving greenhouse base to the south which occupies the southern alley (but probably does not incorporate any medieval fabric), and the geophysical evidence. They indicate a regular, square enclosure measuring approximately 30m square. The anomalies are aligned on the church, which gives the cloister an irregular plan while, with an approximate width of 2m, they are very wide indeed.

The burials that were disturbed by digging within the walled garden in the 1890s presumably relate to the cloister and there are suggestions within a near-contemporary account that they were of high status.²¹³

The east range

Much of the eastern side of the cloister appears, like the south transept, to lie beneath thick overburden. However, the southern end of an east range is defined on the ground as a low, linear earthwork, 13m wide, its overall form having been revealed by the geophysical survey which also suggested that much of the area had been robbed or otherwise disturbed. In addition, an east–west wall was inferred in the area conventionally occupied by the chapter house. A low, detached remnant of masonry which survives 10m further east (Fig. 11, 7) is usually regarded as medieval and may represent the same building; another possible east–west wall to the south may give dimensions of 15m east–west by 10m north–south. A third east–west anomaly, 10m further south, may indicate another wall (Fig. 11, 8).

Discussion (Figs 16–17)

The buildings appear to represent a formal conventual arrangement but cannot be closely dated. The

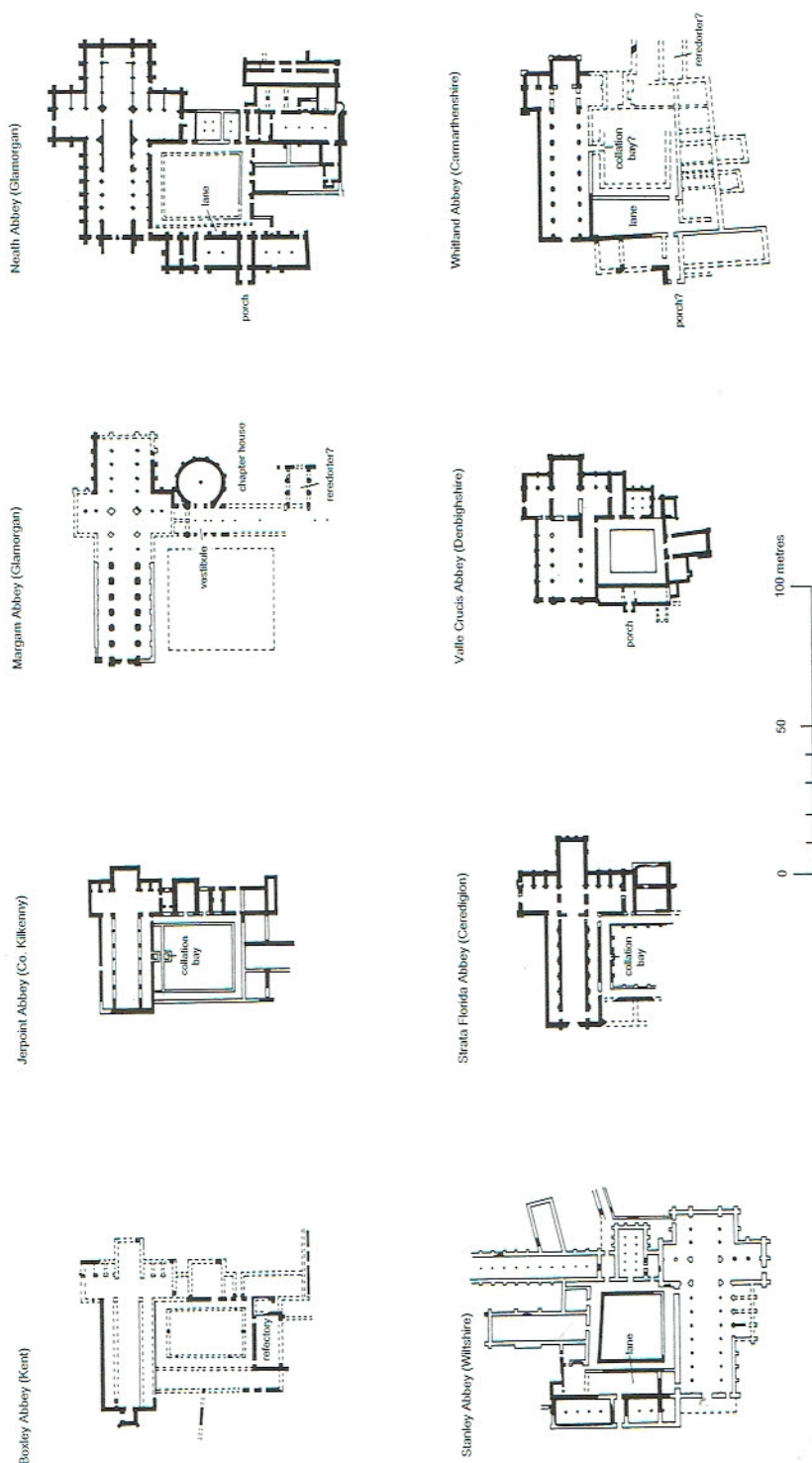


Fig. 16. Comparative plans of Cistercian conventual ranges (after Robinson 1998 and others).

extent of any post-medieval alteration is moreover unknown (see below). The west range butted against the footings of the nave south wall so this element, at least, is later than the church, but the duration of the break in construction is not known. The presence of two alignments within the conventual buildings (of which more below) is unusual and suggests a primary phase, in which the broad outline of the cloister, 'lane', south range and east range was established, and a secondary phase in which the west range was constructed and the south range was partially rebuilt. Despite some of these unusual characteristics, the overall layout of the buildings can be related to known Cistercian plans in Britain, Ireland and beyond, although the evidence from other Welsh houses is limited. For example, at the daughter houses of Cwmhir (Powys), Cymer (Gwynedd), Strata Florida (Ceredigion) and Strata Marcella (Powys), the form of the conventual buildings is still little-known.²¹⁴

While Clapham's interpretation of the west range as being medieval in origin, and representing a vaulted north-south block lying alongside, and west of a wide 'lane',²¹⁵ is adhered to here, it is not without its problems. The form of the block, for instance, has yet to be determined; the geophysical survey of this area was confined to magnetometry and produced few results.²¹⁶ The Cistercian 'lane' has been interpreted as a device to separate the lay from the religious elements of the community and the west range is therefore here interpreted as a continuous lay-brothers block (and guesthouse?).

In addition, the dividing wall between the two elements is on a different alignment from the east wall of the lane, being shared by the south range (and possibly the east range), while the alignment of the latter is followed by the church and cloister (Fig. 11). It may be that superimposition over two phases, at least, may be implied, rather than any topographic constraint. The lane is very wide, as at Buildwas (Shropshire), the first phase of Kirkstall (Yorkshire), Sibton (Suffolk) and Stanley (Wiltshire),²¹⁷ and the possibility exists that the lane at Whitland merely represents the remains of a primary phase west range that survived the construction of a new west range further west, an interpretation that has recently been put forth for the equally wide lane at Dore (Herefordshire).²¹⁸

The narrower lane at Neath Abbey (Glamorgan) was entered via a passage leading through the west range from an outer parlour porch,²¹⁹ similar to the situation suggested at Whitland, and a similar passage was present at Stanley for example (Fig. 16). The location of the presumed porch at Whitland, just inside one of the two main entrances into the precinct (discussed below), is also significant and it, rather than either of the precinct gatehouses suggested below, may be the gate with chambers above described in the 1582 survey.²²⁰ It may also be one candidate for the gateway depicted by Charles Norris in a drawing, now missing, from 1838, discussed below.²²¹ The geophysical anomaly running south from the porch may be derived from the wall of a pentice alley.²²²

The south range lies at a right-angle to the west range proper. The lane may initially have been intended as the site of the west range, the block further west possibly being secondary and contemporary with a south range which was possibly built on a different alignment due to the line of the suggested drain; if so, however, the initial arrangement would have to be very early. The south range normally contained the monks' refectory which, in early Cistercian arrangements, generally followed the standard Benedictine east-west alignment within the width of the range, as in the first generation Clairvaux daughter-houses at Boxley in Kent (Fig. 16) and Fountains and Rievaulx (Yorkshire).²²³ The refectories at Fountains and Rievaulx were rebuilt, between 1160 and 1180, on a north-south alignment to project beyond the range, following a trend that was initiated in France and, though not universal, was picked up throughout Britain and Ireland. The eastern of the two 'wings' which project at right-angles from Whitland's south range on Figure 11 may relate to a similar, later twelfth-century rebuild of the refectory, either side of an east-west division which possibly represents its earlier south wall (Fig. 11, 9). However, the staggered north-south walls suggested by the geophysics are distinctly odd. The flagged area suggested by the geophysics in the west of the range may represent the kitchen, being supplied by

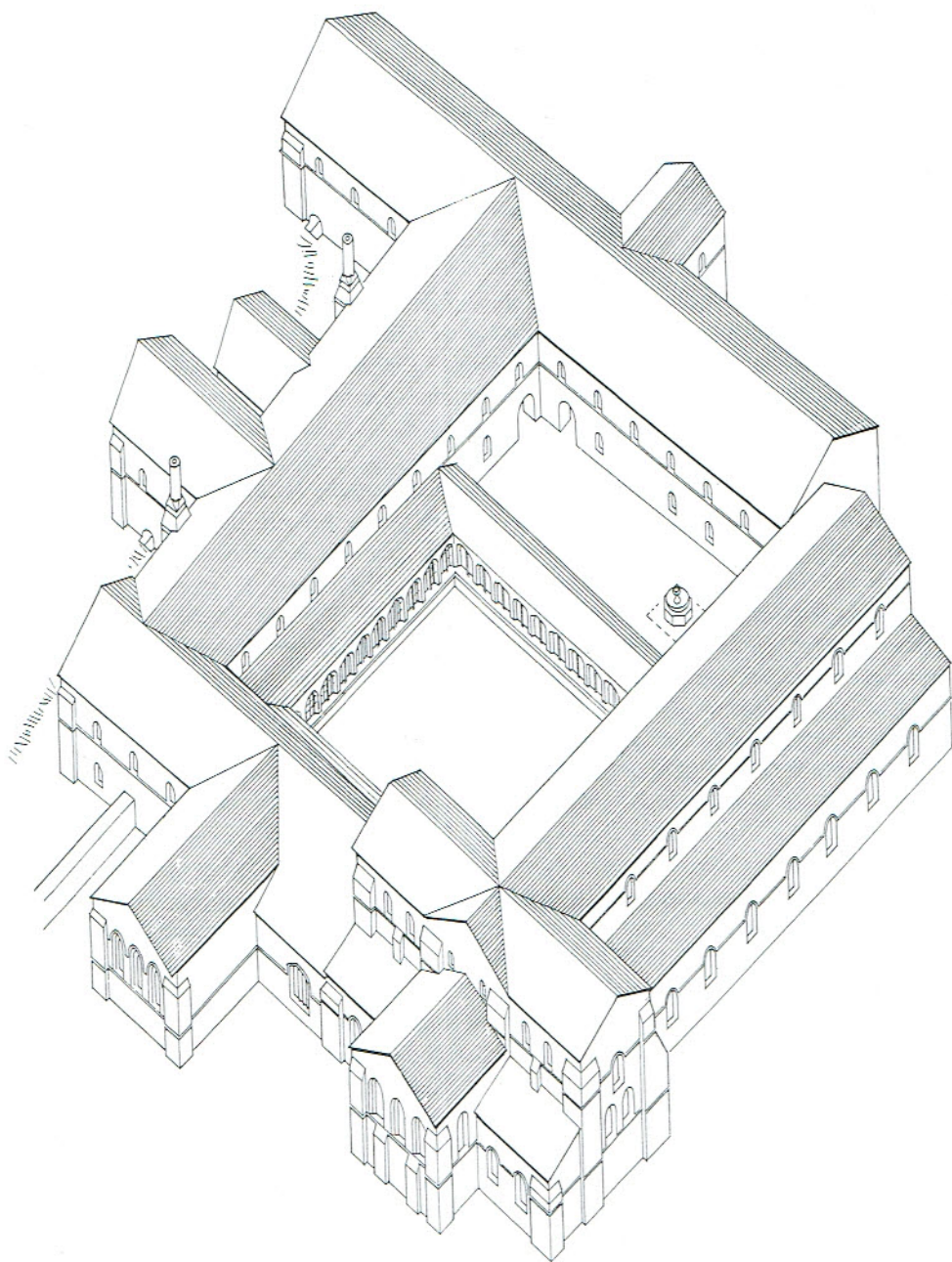


Fig. 17. A speculative reconstruction drawing of Whitland Abbey from north-east. The form of the church is based on the excavated evidence, on the dressed stone (which suggests that it remained a Romanesque structure), and on comparison with other sites. Its 'Bernardine' form can be appreciated. The conventual buildings are more speculative. Their position and layout are known from the geophysics but their elevations, and any indication of function, are entirely conjectural.

drainage and lying between the refectory and the proposed accommodation for the lay brothers (who would have had a refectory of their own)²²⁴ and the west of the two projecting 'wings' may be associated with this kitchen. The eastern third of the south range presumably contained the warming house. The tithe map of 1839 shows a row of cottages in the area of the south range,²²⁵ which may perhaps be significant, suggesting a conversion of part of the medieval range? (Fig. 20).

The geophysical evidence suggests the presence of a cloister occupying a primary alignment parallel to the church. Cistercian cloisters were frequently rebuilt, from the fourteenth century onwards, with glazed arcades as at Strata Florida (Ceredigion) from the fifteenth century, Bordesley (Worcestershire) from c. 1400, Hailes (Gloucestershire) from the late fifteenth century,²²⁶ and at a large number of Irish houses including Jerpoint in Kilkenny (Fig. 16) and Holycross and Kilcooly (both Co. Tipperary).²²⁷ The unusual width of the anomalies defining the arcades at Whitland may result from a similar late rebuild on wide, masonry footings. The return towards the church suggested in the centre of the northern alley (Fig. 11, 10) may be associated with a collation seat or bay, from which an evening reading took place between vespers and compline, evidence for which survives at nine British Cistercian houses, at Strata Florida (Ceredigion) and Tintern (Monmouthshire) in Wales, at Grey Abbey (Co. Down), Graiguenamanagh and Jerpoint (both Co. Kilkenny), and Tintern Minor (Co. Wexford) in Ireland, at Byland (Yorkshire), Cleeve (Somerset) in England, at Melrose (Borders) in Scotland, but at only two Continental houses.²²⁸ The collation features at Strata Florida and Jerpoint, for example, are also part of the late rebuilding of the cloister (Fig. 11, 8). At Whitland, the geophysical anomaly lies opposite an entry in the nineteenth-century garden wall (Fig. 5, 9) which would suggest that it occupies the site of a medieval opening. However, there are no parallels for such an arrangement, or a doorway in this position;²²⁹ a more convincing entry lies further west (Fig. 5, 8) and the anomaly may relate to post-medieval alteration.

The geophysical evidence suggests the presence of a formal east range. The detached section of walling east of the range (Fig. 11, 7) may be derived from the north wall of a projecting chapter house, on the same alignment as the church, rather than being derived from a detached Abbot's Lodging or infirmary as was suggested by Clapham.²³⁰ Chapter houses from the mid twelfth century (i.e. Phase I of Whitland's church) still tended, in Britain and Ireland, to occupy a north-south axis within the width of the east range continuing the trend seen in the earlier phases of Fountains and Rievaulx, from the 1140s, and probably in the original arrangements at Basingwerk (Flintshire), Margam and Neath (Glamorgan) and Strata Florida (Ceredigion).²³¹ The widespread rebuild of Cistercian chapter houses, during the thirteenth century, as projecting, east-west buildings may be assumed on this evidence to have occurred at Whitland where it was possibly contemporary with the early thirteenth-century Phase II in the church. The strong geophysical anomalies immediately south of the south transept, which appear to resolve into buttresses, may represent the north wall of a vaulted vestibule (Fig. 6), perhaps representing the remodelling of a Phase I chapter house, as at Margam which was rebuilt c. 1200-13 (Fig. 16).²³² According to conventional Cistercian arrangements, there is space at Whitland for a sacristy/library between the chapter house/vestibule and the south transept. The east range appears not to have projected beyond the south range, an unusual arrangement but one that is paralleled at Dundrennan (Galloway)²³³ and possibly — again — at Margam (Fig. 16). It can be assumed, therefore, that the east-west wall indicated by geophysics to the south of the suggested chapter house (Fig. 11, 8) may have belonged to a reredorter as at Dundrennan and Margam.²³⁴ It appears to be associated with the probable drain running south of the south range. A large, rectangular anomaly, which appeared to be superimposed at an entirely different angle (Fig. 11, 11), was felt by the investigators to have belonged to a later building,²³⁵ but it may represent another watercourse or drain.

Recent excavations at Haverfordwest Priory have revealed evidence for garden beds in the area

immediately east of the cloister, and medieval gardens are known from other monastic sites within Wales,²³⁶ whilst early post-Dissolution garden development on monastic sites is well known. However, the absence of evidence for the earlier post-medieval period at Whitland has been noted above, and there is no evidence for a garden until the mid nineteenth century. The present assemblage of garden features was complete by 1887 (Fig. 10), along with the mansion but excluding both greenhouses and the wall alongside the east-west byway at the far southern end of the site; these were added before 1908.²³⁷

STYLE AND DATING OF THE ABBEY COMPLEX

A comprehensive examination of the dressed stone from Whitland would undoubtedly tell us a great deal more than we presently know about the dating and stylistic affinities of the monastic complex.²³⁸ Work at such places as Bordesley, Croxden, Keynsham, Rievaulx and York, not to mention Tintern and Strata Florida, has shown what can be achieved. This work not only provides a fuller architectural reconstruction, but enables the architecture to be placed within a regional and stylistic context.

Comparison of the *ex situ* mouldings that have been recovered during the last two centuries, and the material excavated during 1994–95 (which was all from unstratified contexts) with that at Margam and other sites would appear to confirm that the main building phase in the church (Phase I) did not commence before 1151. Collier described most of the mouldings retrieved from his excavations as Romanesque in form.²³⁹ The moulding within the west end of the church has been mentioned above, and chevron-moulded dressings were also present.²⁴⁰ He regarded these mouldings as dateable to the late twelfth to early thirteenth centuries and assigned 'the bulk of the stonework' to the earlier part of the date-range, noting that 'typically Norman work' had been discovered. However, he also noted that dressings 'of a later period' were present.

Indeed, much of the dressed stonework appears to have been demonstrably later. Collier regarded some of the mouldings as being similar to Bishop Peter de Leia's late twelfth-century work at St David's Cathedral,²⁴¹ and the identification of possible vault-ribs comparable with late twelfth-century detail from Buildwas, further afield in Shropshire, have also been noted above. In addition, some of the moulded voussoirs recovered from the site are similar to those at Strata Florida where they similarly belong to the late twelfth century.²⁴² Perhaps the possible building work between Phases I and II, which may have been represented by the insertion of a secondary vault in the presbytery, as noted above, was in fact more extensive.

Moreover, very little Romanesque detail was recovered during 1994–95, it being instead mostly of early Gothic form. Some of it possibly belongs to the late twelfth century, but much of it is demonstrably later, being from the early thirteenth century like the *in situ* Phase II work in the church. Some of this detail was, moreover, of high quality. The Norris drawing of 1839 (Fig. 3) shows a fine Early English shaft cluster, probably within the church, while a large foliate moulding was recovered from an unstratified context, in the north aisle, in 1994–95 (Fig. 18). It is similar to a capital from the daughter-house at Cwmhir (Powys),²⁴³ which can be dated to *c.* 1230, and has been suggested as originating from the same workshop as mouldings at Pershore Abbey (Worcestershire) and St Frideswide's Priory, Oxford,²⁴⁴ and similar dressings have been recovered from Strata Florida.²⁴⁵ However, it is impossible to determine how much, if any of this stonework originally came from the church, and some of this early thirteenth-century detail may be derived from the conventual buildings, where the possible rebuild of the chapter house during Phase II has been discussed above.

The fourteenth and fifteenth centuries were under-represented in the stonework assemblage. This may be significant given the documentary evidence for Whitland's various vicissitudes, and relative poverty,

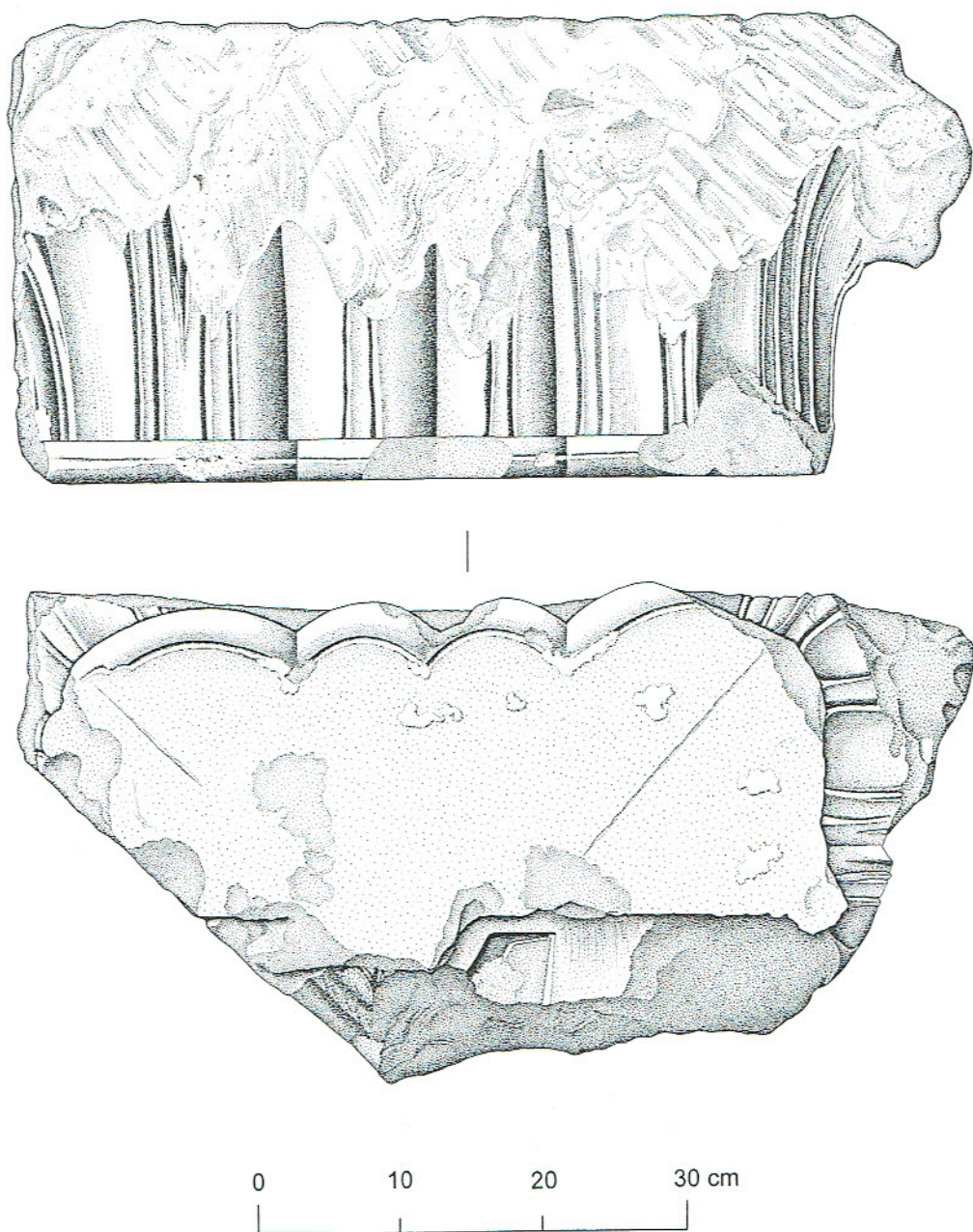


Fig. 18. The large, early thirteenth-century moulding found in the nave north aisle in 1994–95, possibly a doorway capital.

during the period. A contrast may be made with Strata Florida, where two fifteenth-century abbots were attributed, by contemporary writers, with building work that appears to have gone beyond the merely superficial,²⁴⁶ and similar building work continued in other Welsh houses right up to the Dissolution.

Indeed, Whitland may itself have recovered for it appears that the next largest sample of dressed stone is late Perpendicular in style. This probably relates to an early sixteenth century refenestration of the conventual buildings, and possibly to a rebuild of the cloister as occurred at a number of other sites (see above). While a post-monastic context for some of it cannot be ruled out in the light of the evidence of the 1582 survey (see above, and Appendix), a late burst of monastic patronage may be suggested by the Royal Arms of Henry VIII (or Henry VII) which are now inserted above the main doorway into Whitland Abbey House, and are of unusually high quality. They are, however, of unknown provenance, and may have been brought from another site. They were described as being situated 'in the village' in 1805,²⁴⁷ and Charles Norris's drawing of 1838 shows them lying loose against the farmhouse wall (Fig. 2).²⁴⁸

Stylistic comparisons for the earlier work would appear to be cosmopolitan rather than local, and the overall impression is of stark, Cistercian simplicity, described by Fergusson as the architecture of 'stripped austerity'.²⁴⁹ It has been noted by Robinson that Welsh Cistercian houses have traditionally been analysed from a purely local perspective, rather than alongside their other British and Continental counterparts, and the international nature of Cistercian styles must be stressed.²⁵⁰ However, the annulets in the celebrated west door surround at Strata Florida, which may have been shared by Whitland, terminate as triskele spirals which appear to reflect a native artistic tradition, perhaps as a result of direct influence from its royal Welsh patrons.

The bulk of the building stone is local Ordovician sandstone and possibly came from the nearby Castle Hill, or Forge Wood to the north, where a number of disused quarries are situated (Fig. 21). Recent examination of the *ex situ* stonework by John Davies, of the Welsh Stone Forum, in 2002, has revealed that most of the fine oolitic limestone for the dressings is from the quarries at Dundry, south of Bristol, although some stone from Sutton in Glamorgan was also identified. The chamfered oolite quoins now built into the piers along the south front of Whitland Home Farm, which were clearly derived from the Phase I work in the abbey, are worth noting (see Fig. 30).²⁵¹

The floor-tiles similarly all appear to have been imported (Fig. 19), and neither physical nor geophysical evidence for a tileworks on the abbey site has yet been forthcoming. Casual finds of many types have been made since the 1830s, most of them decorated with a number of different types and patterns, many of which feature zoomorphic and heraldic designs.²⁵² These tiles, along those from the 1926 excavation, have recently been published by John Lewis, who lists some 15 designs, and elements of a 16-tile design (Table 1).²⁵³

An initial appraisal identified no new designs in the 1994–95 sample.²⁵⁴ The *in situ* flooring observed at the entrance to the north transept comprised plain buff and green glazed tiles in a chequer pattern, which clearly post-date the insertion of the screen wall in the early thirteenth century. The 'Agnes Dei' pattern — the so-called 'Whitland tile' showing a lamb and flag in relief with heraldic shields and beasts — is now also known from the Augustinian priory at Haverfordwest,²⁵⁵ although slight differences in keying and glazing techniques suggest that the tiles were not manufactured by the same tilers. This design, like many of the others, is dateable to the fourteenth century and may represent the only substantial building activity during this period. Its occurrence in the south-west corner of the presbytery is part of a later, poor-quality reflooring. Other patterns for the inlaid or slip tiles were similar to examples from both Haverfordwest Priory²⁵⁶ and Carmarthen Greyfriars,²⁵⁷ as well as other sites in south Wales. Some apparently include the devices of Peter de Leia (bishop of St David's 1176–98), the FitzMartin lords of Cemaes, and the Bigod earls of Norfolk.²⁵⁸ The variety of motifs is of interest as are the seven likely sources denoted by the group numbers, and the date-range which extends from the late

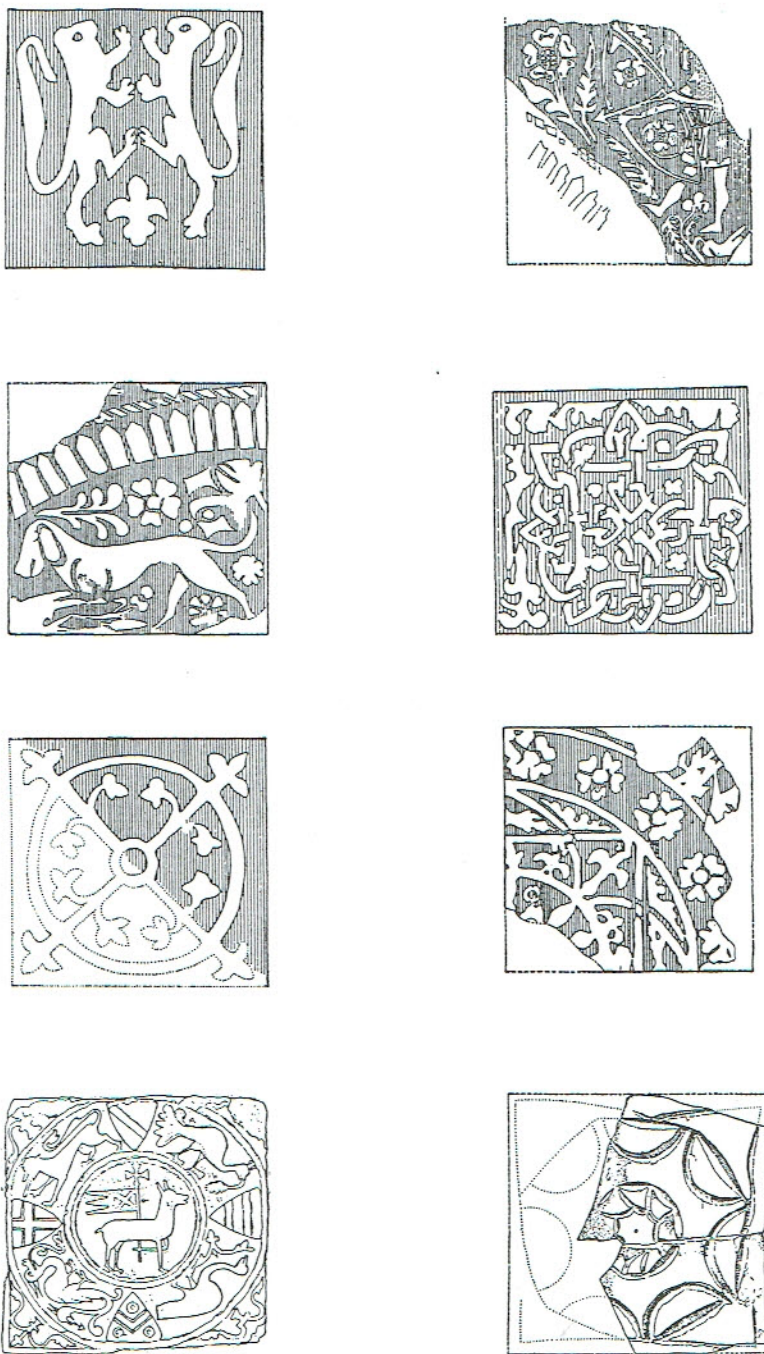


Fig. 19. Floor tiles from Whitland Abbey, including the 'Agnes Dei' motif (reproduced from Lloyd 1935).

twelfth century to the fifteenth- to sixteenth century, with major episodes in the later thirteenth century and in c. 1340. Plain tiles were also noted. All indicate a complex flooring history, like that at Carmarthen Greyfriars where it was demonstrated that the choir had been refloored at least twice — once in the mid fifteenth century and again in the 1490s, both episodes arguably being associated with disturbance caused by tomb excavation.²⁵⁹

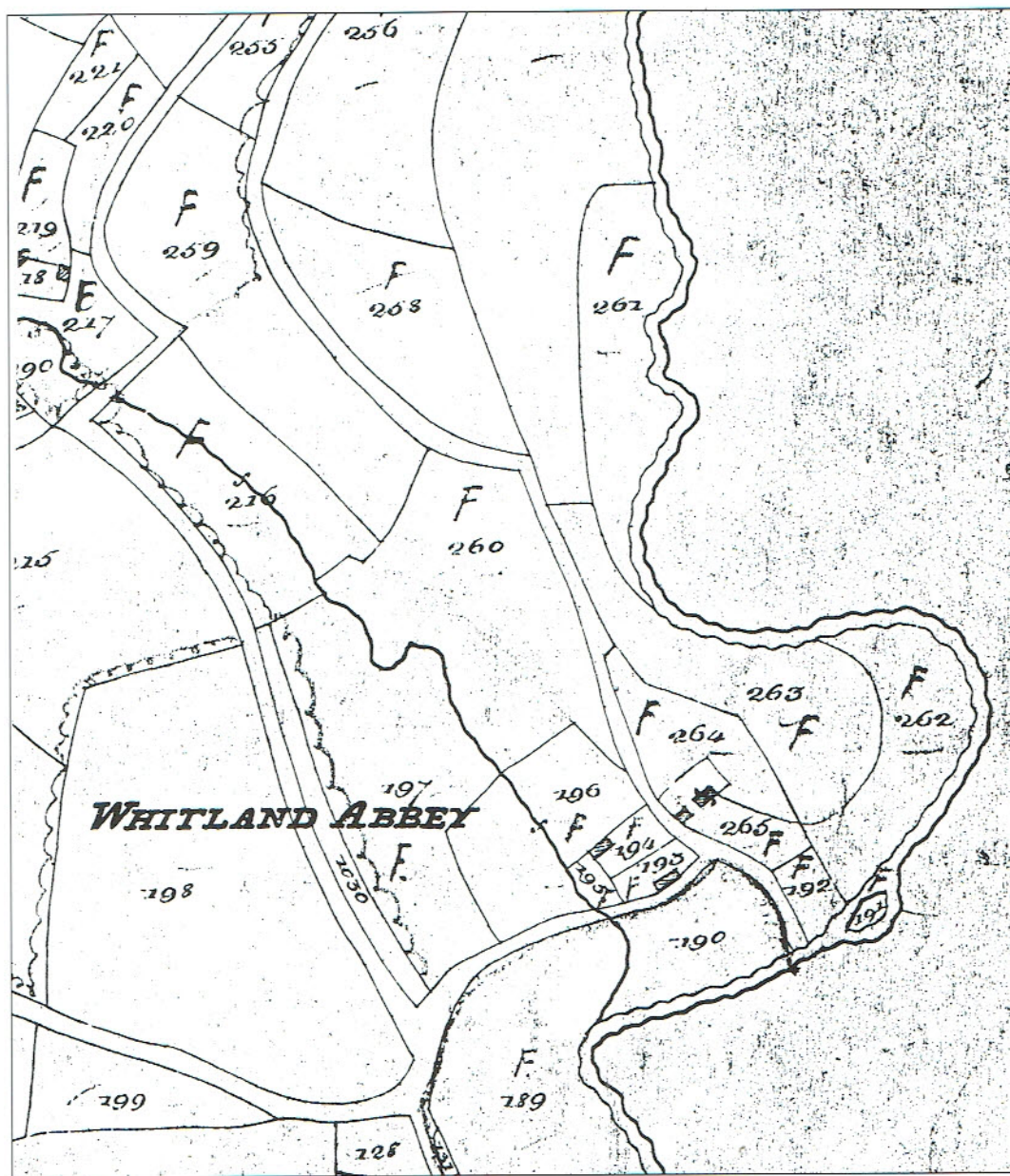


Fig. 20. Part of the Llangan parish tithe map, 1839.

Table 1: Medieval tiles from Whitland (after Lewis 1999; categories from Eames 1985)

No.	Group No.	Eames No.	Date
4–7	2	–	late 12th-/early 13th-century
22	5	349	c. 1250–1300
23	5	2363–6	c. 1250–1300
59	10	–	late 13th-century
60	10	–	late 13th-century
107	16	1654 & 3065	c. 1340
123	16	2753	c. 1340
133	16	–	c. 1340
349	21	1326	c. 1455–1480
356–9	23	–	15th-century
361–2	23	–	15th-century
491–2	28	–	15th/16th-century

THE POSSIBLE PRECINCT BOUNDARIES (Figs 21 and 22)

Physical evidence, in conjunction with documentary and antiquarian sources, suggests that the church and conventual buildings occupied a smaller enclosure or inner precinct, inside a larger outer precinct within and beyond which lay the main fishponds (and later millponds). In addition, the cartographic evidence suggests that both the Afon Gronw and Nant Colomendy have been diverted during the historic period, probably by the monks.

The inner precinct

A symmetrical system of boundaries is depicted to the north of the abbey site on the tithe map of 1839 (Fig. 20), forming the north, west and east sides of a large rectilinear enclosure (Fig. 21, 1).²⁶⁰ The boundaries terminated at the present east–west byway through the site, but may formerly have extended further south. The northern and eastern boundaries are now represented by channels discussed below with other water features. There is now no physical evidence for the western boundary but the main entry into the site appears to have been from this side, possibly following the line of the present byway and apparently commemorated in the name of a property, Golden Gate Cottage, which formerly lay 100m west of the abbey site (Fig. 21, 2).²⁶¹ The southern side of the byway here features the truncated north and west walls of a building which, however, appears to have been a post-medieval cottage (Fig. 21, 3).

A crucial factor in the development of the site, apparently unnoticed in previous studies, was the alteration of the course of the Afon Gronw. The river is depicted on the tithe map of 1839 as running 100m south of the abbey site, 60m north of its present course (Fig. 20). It ran due east–west, in a markedly straight line, before turning south through 90 degrees, at its then confluence with the Nant Colomendy, 110m west of the abbey.²⁶² The former course can still be seen east of the present causeway as two very slight banks and a linear depression which marks the southern boundary of Whitland Abbey House (Fig. 21, 4).²⁶³ The course is better-defined west of the causeway as a slight, linear depression, approximately 8m wide, bounded by regular parchmarks, the southern of which becomes a distinct bank towards the west. On either bank can be seen two distinct platforms (Fig. 21, 5),²⁶⁴ the larger southern platform forming a regular rectangle measuring approximately 13m north–south by 10m east–west,

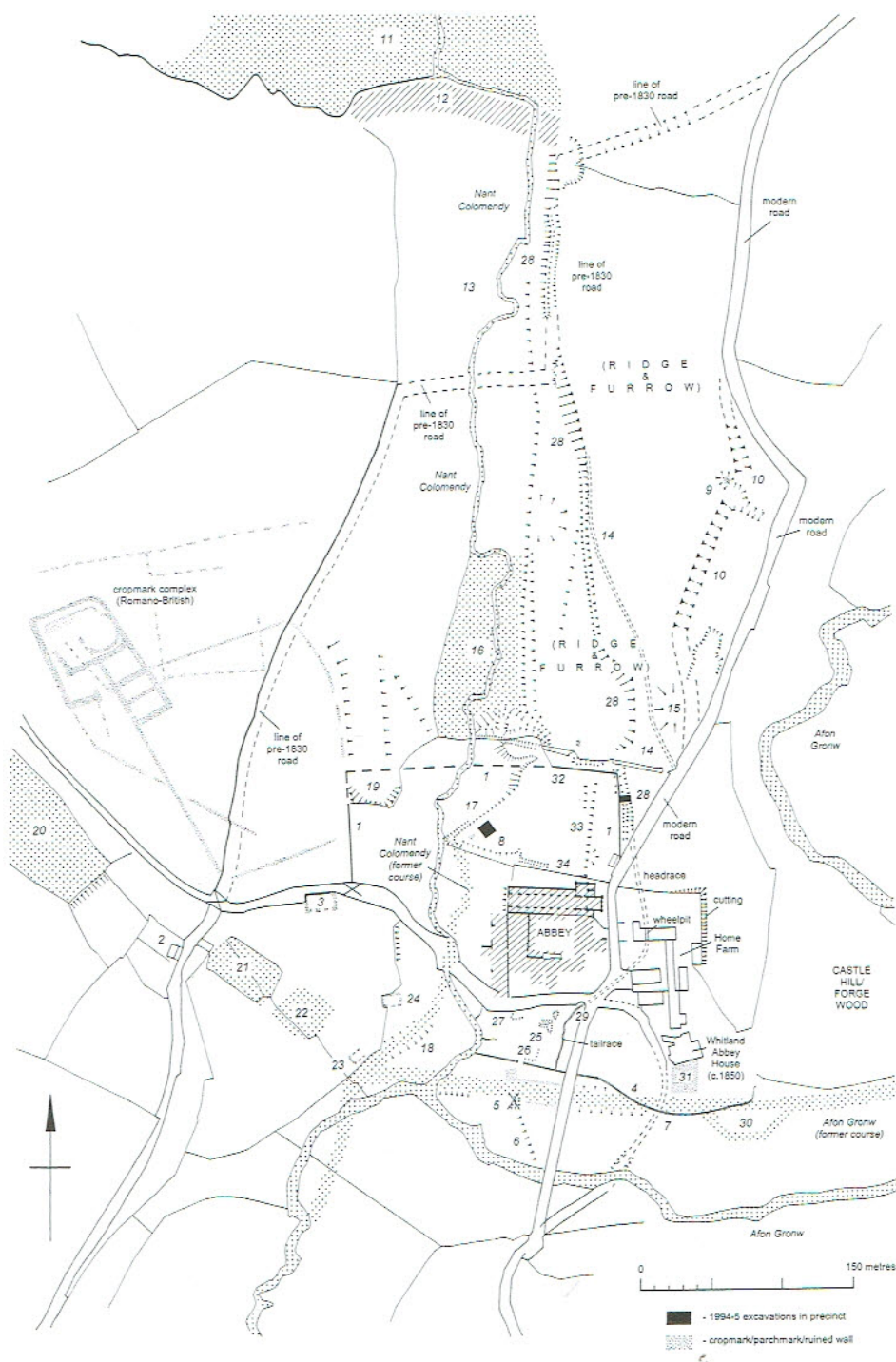


Fig. 21. Plan of wider abbey landscape showing possible precinct boundaries and other features.

towards, towards which a linear depression, clearly representing a former trackway, leads from the present bridge to the south-east (Fig. 21, 6). On the opposite north bank is a second, slighter platform and the two features were probably bridge abutments. On the assumption that the river course represented the south precinct boundary, the size and location of the south platform suggests that it may also have been the site of a gatehouse — possibly the ‘Silver Gate’ which was mentioned by Revd Thomas in 1868 and was apparently also commemorated in the name of a former cottage nearby.²⁶⁵ This suggested crossing had become disused by the early nineteenth century, when the Afon Gronw was crossed 70m east of the present bridge via a lane with a curving line which is still preserved in present boundaries (Fig. 21, 7).²⁶⁶

It is suggested by the present author that the former river course was far too straight to be natural and may have been a deliberate canalisation of the river, possibly associated with the ironworks but more probably medieval, as it clearly reflects the alignment of the boundaries described above to form a regular square enclosure measuring 200m², the size and shape of which is significant and possibly represents a monastic inner precinct (a formal ‘Inner’ or ‘Outer Court’?). Engineering works on a similar, or greater scale were undertaken at many Cistercian sites, of which the best known include Rievaulx (Yorkshire) and Bordesley (Worcestershire). The Afon Gronw had assumed its present course by 1887, possibly due to instability, or deliberately recut as part of the construction or reconstruction of Whitland Abbey House and Home Farm, when the third crossing (the present causeway and bridge) were constructed, probably in order to improve the prospect of the house.²⁶⁷

The precinct as defined occupies 4 hectares (see Fig. 22 for comparisons with other Cistercian houses).²⁶⁸ Among Welsh rural houses of other orders, 4 hectares is suggested at the Tironian St Dogmaels (Pembrokeshire), and 2.5 hectares at the Premonstratensian Talley Abbey (Carmarthenshire). The Whitland buildings are confined to the eastern half, but if the enclosure was organised as a formal outer court then they will have followed a more-or-less standard arrangement. The sources are normally of little help in identifying such structures, but stabling ‘for 200 horses’ was mentioned in 1257.²⁶⁹ This figure is doubtless an exaggeration but stables clearly existed within the complex: Rhys ap Gruffudd appears to have stabled a large number of horses at the abbey on the eve of his meeting with Henry II in 1171.²⁷⁰ Furthermore a stable, with a loft, was specifically mentioned in the survey of 1582 (see Appendix), along with a buttery (which may however have been situated within the claustral complex).²⁷¹ An infirmary can be assumed, and a guesthouse in an abbey which was located near the main route to St David’s, as noted above. In addition, the existence of a dovecote (Welsh *colomendy*) is also suggested by the name Nant Colomendy, while the possibility that the 1582 survey relates to an otherwise unrecorded late medieval abbot’s hall has been noted above.

A lay cemetery may have been situated immediately beyond the east side of the inner precinct, where ‘half a dozen human remains’ were apparently found within the rickyard of the Home Farm during the nineteenth century.²⁷² However, it may have been more extensive, 25 skeletons apparently being discovered when a quarry was opened up somewhere to the east of the site, possibly on the west flank of Castle Hill, in the late nineteenth century.²⁷³

The excavated platform within the precinct

A large, square earthwork platform, which had been identified during the 1990s within the proposed precinct 40m north-west of the church, was investigated by Trinity College, Carmarthen, in 1995 (Fig. 21, 8). A large area measuring 14m², was topsoil-stripped and partially excavated, revealing a multiphase structure. A rubble platform, averaging 8m square, was enclosed within a substantial ditch, averaging 2m wide and 0.7m deep, on its north-west and north-east sides, which was in turn encircled by a fairly large bank (Figs 23 and 24). The east end of the ditch had been truncated, but may have turned to run along

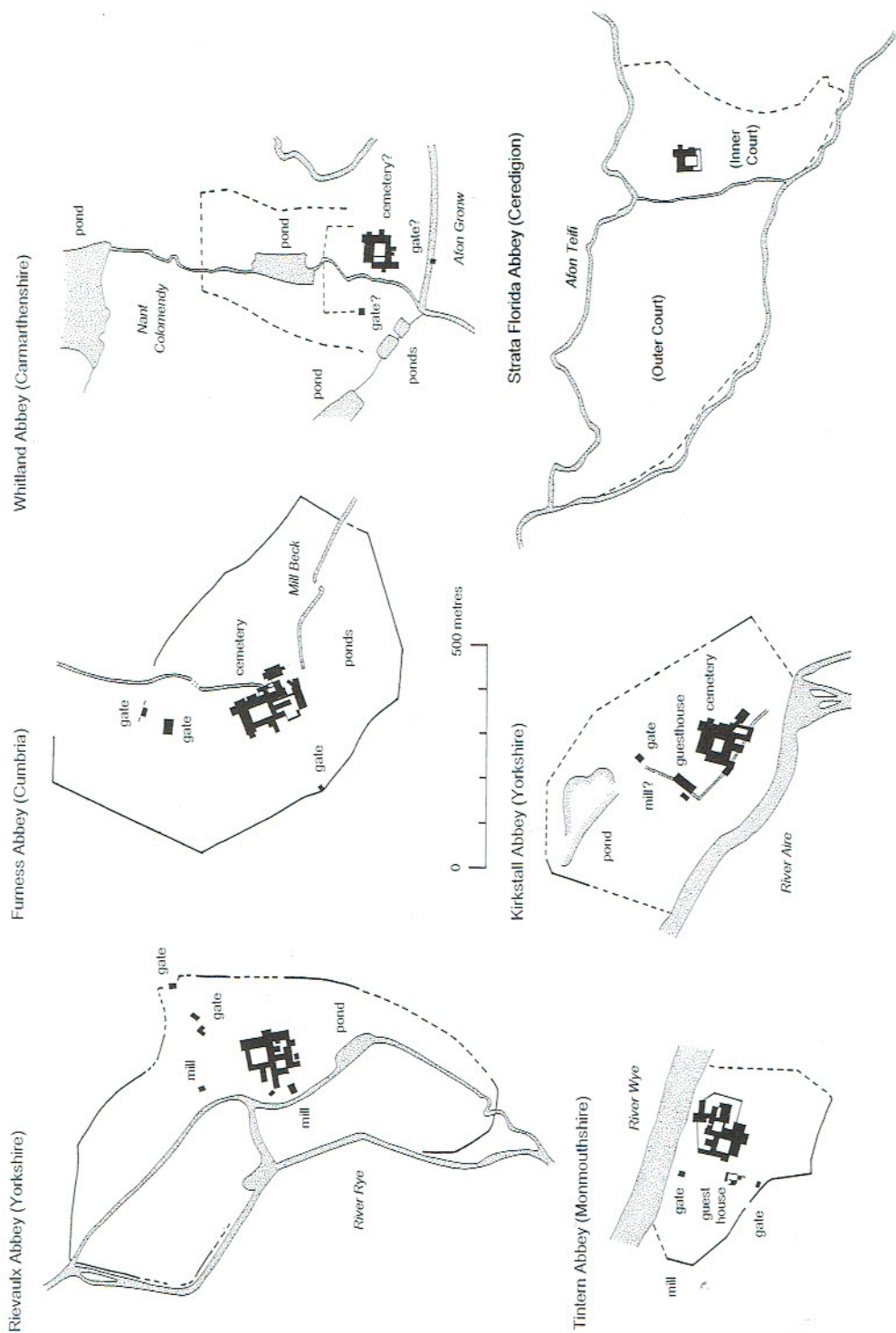


Fig. 22. Comparative plans of Cistercian precincts (adapted from Aston 2000; Strata Florida from D. Austin, unpublished).

the south-east side of the platform. The south-west side of the platform lay beyond the edge of the excavation, and it is not known whether the ditch continued along this side. A linear depression may, in fact, represent a continuation of the ditch south-west towards the Nant Colomendy.

The rubble platform averaged 0.3m in depth. It overlay two lengths of conjoined walling, 0.4m wide and 0.3m high, constructed from sandstone rubble in an earth-lime mortar. The walls appeared to form the north-east and south-east sides of a building, the latter side extending beyond the excavated area, the north-east side measuring 4m. Within and beyond the building were a number of areas of rubble surfacing, which may represent flooring or be the base for an unknown superstructure. The same horizon was occupied by an area of charcoal.

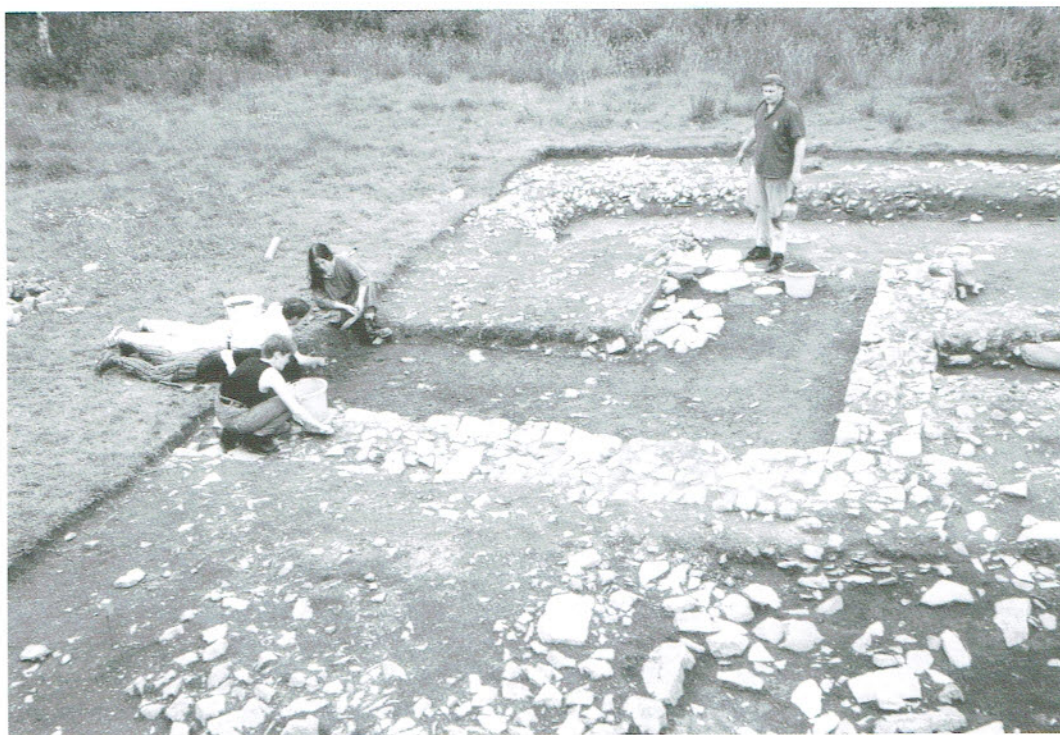


Fig. 23. Structure 8 during excavation, from the east.
Photograph: John Howells, Trinity College, Carmarthen.

The excavation was not completed to natural soil level, and the results are not easily interpreted. The platform appears to have been deliberately established over the truncated remains of the building, possibly as a base for a further structure. The ditch may have then been excavated, and the bank constructed. On its eastern side, the platform was damaged by later activity including disturbance from field drainage, and the excavation of a modern pit. No secure dating evidence was recovered from the site, but it is not shown on any nineteenth-century maps. Its function and date must therefore remain a mystery, but both phases may be post-medieval. Its location suggests several possible interpretations including the processing of fish from the ponds, a mill, an ironworking feature or an agricultural barn.²⁷⁴

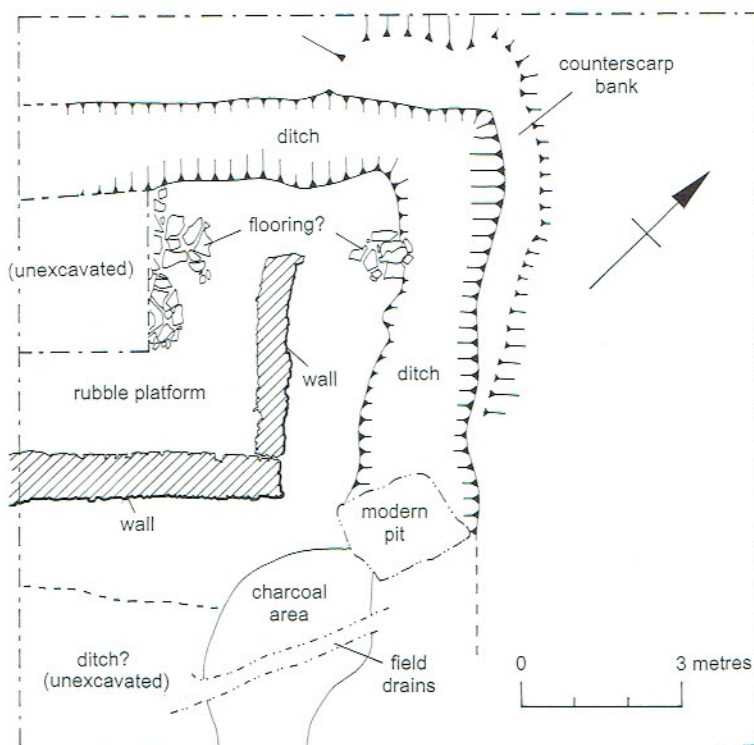


Fig. 24. Composite plan of structure 8 during excavation.

The outer precinct

The presence of a large outer precinct is suggested both by tradition and elements of the topography, but the course of its boundary can only be suggested. The long field boundary which runs northwards from the Whitland byway, from a point 200m west of the site, follows the line of a former routeway which was the main Whitland–Llanboidy road prior to the establishment of the present road along the east side of the site in 1819–30 (Figs 21 and 25).²⁷⁵ The road-line may have been dictated by a standing boundary associated with the abbey, and continues the line of the lane alongside which lay Golden Gate Cottage, and so the adjacent junction may be a better identification of the site of the medieval ‘Golden Gate’.

The northern boundary of the outer precinct may be at least partly represented by this early road where it turned east through 90 degrees, 350m north of the abbey, before turning northwards again to run between two well-defined upstanding banks. There is no evidence for any boundary east of the latter turn. A slight earthwork 200m to the south-east (Fig. 21, 9), marked and labelled as an antiquity, ‘Wall’, on all editions of the Ordnance Survey 25-inch map (Fig. 10), has traditionally been viewed as belonging to the abbey boundary, but derives in fact from the cottage (or its yard) that occupied this area until the later nineteenth century (Fig. 25). However, it is possible that a boundary turned south somewhere near this point, to run just inside and to the west of a linear depression which appears to represent an earlier course of the present Llanboidy road (Fig. 21, 10) whose development it may have influenced.²⁷⁶ If the same line continued southwards, the construction of the site of the present Home Farm and mansion would have removed any evidence, but the boundary may instead have joined the north-east corner of

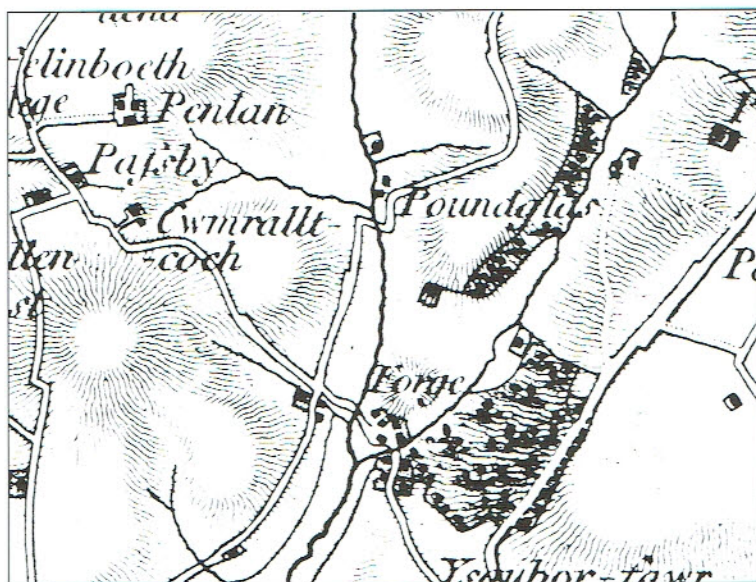


Fig. 25. Part of the Ordnance Survey, 1-inch Old Series, first edition, no. XLII, 1819.

the proposed inner precinct. The area thus defined approximates to a rough rectangle averaging 500m north–south by 300m east–west, enclosing 15 hectares, and bisected by the Nant Colomendy (see Fig. 22).

The steep slope between Nant Colomendy and the present Llanboidy road features the remains of ridge-and-furrow, with a broad rig of convincingly medieval character, which runs down the slope from east to west, and is particularly pronounced in the southern half. It suggests either that the proposed outer precinct contained arable plots, or was established over pre-existing ploughland. The precinct also partly overlies a cropmark site to the west, which is discussed below.

WATER SUPPLY AND OTHER FEATURES (Figs 21 and 26)

As important a factor in the choice of the abbey site, along with communications, was the supply of running water. Like all Cistercian houses, Whitland depended on at least two water-supplies — fresh water for the kitchen and *lavatorium*, and a separate supply for the reredorter. Both of these supplies appear to be represented by geophysical evidence. An anomaly probably representing a fresh-water supply leads south from the tank or cistern in the lane (see Fig. 11) — which may represent a fountain accessible from both the lay-brothers block and the cloister, rather than a ritual laver — and runs through the west chamber of the south range (the kitchen?).²⁷⁷ It may have emptied into the second watercourse which appears to be represented by the east–west anomaly leading from the area of the east range through the two south range ‘wings’, and beneath the south end of the west range (the lay-brothers’ reredorter?) before turning south–west, presumably to empty into the Afon Gronw (Fig. 11).²⁷⁸ It may be the same feature as a culvert which, in an account from 1935, was suggested as leading from a reredorter.²⁷⁹ In addition, water was required for the fishponds upon which the monks’ diet depended, and for milling. It is probable that one of the abbey’s grist mills will have stood within the precinct, but no site has been firmly identified.



Fig. 26. Aerial photograph of the abbey site, from south-west, showing earthworks relating to water-features. © *Cambria Archaeology*, AP84-90.30.



Fig. 27. Leat 28 as excavated, from south-east.
Photograph: John Howells, Trinity College, Carmarthen.

The evidence for the possible canalisation of the Afon Gronw has been noted above. The course of the Nant Colomendy has similarly been subject to change, some of which may be natural but much of which is clearly associated with the complex of water features that characterise the wider abbey landscape (Fig. 26). The features, which are now dry but survive as earthworks, comprise ponds and a leat, but cannot be closely dated. The former may well have medieval origins but it is possible that the leat, at least, relates to the post-medieval industrial use of the site. It appears to overlie the ridge-and-furrow described above. The features were subject to EDM survey in 1999.²⁸⁰ The reader is referred to Terry James's 1978 study,²⁸¹ in which the earthworks are described in some detail but which differs from the interpretation below in some important respects. For instance, the diversion of the Afon Gronw is not mentioned, while more features were considered to be ponds than within the present account.

Ponds

The features are dominated by an extensive pond to the north of the site (Fig. 21, 11), the full extent of which has not been determined but was at least 400m wide east-west. It was retained by a massive dam, 12m wide and 3m high, running east-west for 60m across the Nant Colomendy some 200m north of the proposed outer precinct (Fig. 21, 12). This pond was in use by the post-medieval period at least, when it supplied the forge, and its origins may be monastic as a fishpond or millpond.

A low rectangular area measuring 200m north-south and 100m east-west, lying either side of the Colomendy immediately south of pond 11 (Fig. 21, 13), had been suggested as a possible second pond on the basis of the pre-1830 roadway which formed its south side.²⁸² However, there is no evidence that the roadway crossed a dam here and the entire area is level and marshy. A very faint earthwork running southwards from this area for some 400m (Fig. 21, 14) has been interpreted as a millrace,²⁸³ terminating at a slight earthwork platform, regarded as a possible mill site, measuring approximately 25m north-south and 10m east-west (Fig. 21, 15). However, earthwork 14 is clearly marked as a footpath on the Ordnance Survey 25-inch map of 1887 (Fig. 10).²⁸⁴

A further pond site does, however, lie 120m north of the abbey church, and was retained by a large earthen dam of irregular plan, 2m high and up to 20m wide. The pond survives as a slight, subrectangular depression measuring 130m north-south by 50m east-west (Fig. 21, 16).²⁸⁵ Its eastern edge is well-defined by a slight scarp slope, up to which runs the ridge-and-furrow noted above, and which continues northwards towards pond 11 possibly defining an earlier course of the Colomendy between the two ponds. No leat appears to emerge, and it may be interpreted as a medieval fishpond.

A channel, leading south-east from the dam, is defined by a break of slope and clearly represents the canalised main channel of the Nant Colomendy as it exited through the dam (Fig. 21, 17). It is contiguous with the line of a former watercourse, revealed through geophysical survey running centrally through the proposed inner precinct, at the bottom of the slope between the present course and the abbey church (Fig. 11). The confluence of the Colomendy with the Afon Gronw is shown on the tithe map, of 1839, as lying 50m west of its present position, having moved when the present course of the Gronw was established in the mid nineteenth century (Fig. 20).²⁸⁶ A section of the earlier course can still be seen as two low banks south-west of the abbey site (Fig. 21, 18).²⁸⁷

A hollow, cut into a north facing hillslope 100m north-west of the abbey (Fig. 21, 19) was suggested by James as the site of a further pond. However, the feature cuts across the corner of the suggested inner precinct enclosure and is open to the north, apparently representing a disused quarry. It has a flat bottom, level with a pronounced north-south terrace to the north (see Fig. 26) which appears to represent the quarry access.²⁸⁸

However, a stream flowing into the Afon Gronw, from the north-west, appears to have supplied three further ponds. The westernmost was noted by James, on his amended plan of 1990,²⁸⁹ as a hollow

stretching for more than 200m north-west from the site of Golden Gate Cottage, and retained by a low dam (Fig. 11, 20). Two more earthen banks lie further downstream, south-east of the abbey site (Fig. 21, 21 and 22); the ponds are dry but still well-defined, both measuring approximately 30m² and both apparently representing former fishponds.

The remains of two masonry structures lie south-west of the two latter ponds.²⁹⁰ A low spread of overgrown rubble lying adjacent to their outflow channel, measuring approximately 7m by 10m (Fig. 21, 23), may represent a building (see below) but it is impossible to speculate on any relationship between them. Another building lies 40m to the north (Fig. 21, 24), partly built into a field boundary and retaining 11m of mortared stone wall; oolitic limestone dressings lie in the surrounding rubble spread and a system of low banks lie to the south-east. Neither building can be dated and both may belong to informal settlement from the post-medieval period, with re-use of medieval dressings; however, neither is shown on the 1839 tithe map (Fig. 20). Further east, an irregular earthwork platform within which lie areas of rubble walling,²⁹¹ measuring approximately 6m north-south by 8m east-west, lies within an area which is now very marshy (Fig. 21, 25); it was surveyed by Trinity College, Carmarthen, in 1998 and appears to represent a third building. Platforms from at least another two structures can be discerned within this area (Fig. 21, 26), and a number of more amorphous earthworks. They all appear to lie too far north to be derived from the cottages depicted on the Ordnance Survey 1-inch map of 1819 (Fig. 25).²⁹²

Industrial features

The monastic requirement for running water, and the presence of a source of building stone, made Cistercian houses a favoured target for post-medieval industrialists. It has already been noted that industrial development in fact begun under the Cistercians themselves at a number of sites, but in the absence of any evidence to the contrary, industry at Whitland Abbey has to be interpreted as entirely post-medieval. The widespread industrial re-use of monastic precincts included the wire works which was established at Tintern (Monmouthshire) as early as 1566,²⁹³ succeeding small-scale lead and copper smelting under the monks,²⁹⁴ and the eighteenth-century ironworks, of international renown, established at Neath (Glamorgan).²⁹⁵ Both of these utilised existing monastic watercourses, like the agricultural mills which could also be established on monastic sites; that at the daughter-house of Llantarnam was unusual in employing an entirely new water-management system in the late sixteenth century.²⁹⁶

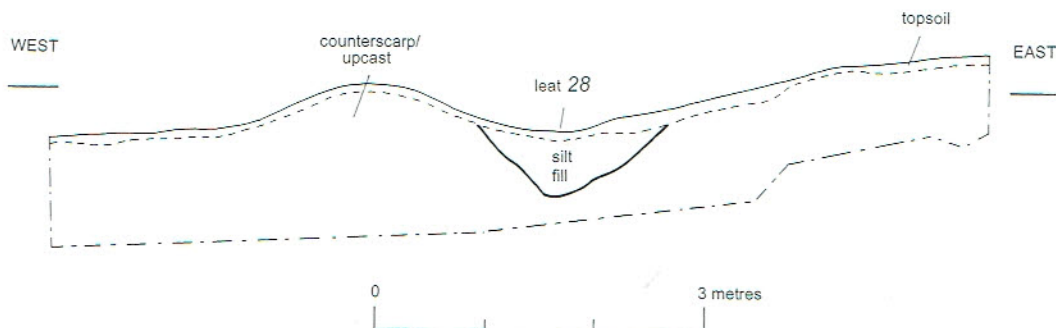


Fig. 28. North section of leat 28 as excavated.

The floodgates of pond 11 (Fig. 21) were still in working order until the mid nineteenth century when breached by a storm.²⁹⁷ A leat (Fig. 21, 28), now dry, leads from this breach, in the south-west corner of the pond, to run southwards, parallel with the pre-1830 roadway bank, towards the post-medieval wheelpit in the Home Farm which is described below. To the north, its profile is variable but a slight depression, lying within a 3m-wide terrace with a counterscarp, is discernible throughout.

Leat 28 is very well defined to the south, where it runs alongside the former, presumably pre-existing boundary (Fig. 21, 1) as a vertical-sided channel within low banks. A trench, 8m long, 1m deep and 1m wide, was excavated across this section of the leat by Trinity College in 1994 (Figs 27 and 28). The leat, which had almost entirely silted, was 1.25m wide and 0.8m deep, with a shallow, V-shaped profile. It occupied a slight, east to west downhill slope and its upcast formed a counterscarp bank on the west side, 2m wide and 0.4m high. Beneath the cut of the leat was an area of clay-rich material that appeared to have leached from the leat.

A channel (Fig. 21, 32) leads eastwards from pond 16 towards leat 28 though the junction has been lost. The channel has a slate lining and respects the northern boundary of the proposed inner precinct, which may still have been standing when it was excavated. A sharp break of slope runs southwards from the channel towards the abbey church and may represent an overflow (Fig. 21, 33).

Contemporary references to 'two forges and one fffurnace',²⁹⁸ and 'various . . . forges . . . in or near Whitland Abbey'²⁹⁹ suggest that two waterwheels were employed, with the possible implications that a second pond was used, in addition to pond 11 (Fig. 21). However, only one waterwheel pit can be located with certainty. The Home Farm, which is under private ownership, contains the evidence for a wheelpit formerly supplied by leat 28 (Fig. 21), which may have been contemporary, and was evidently converted from an earlier forge building. The wheelpit runs north-south through the entire width of the present building, its floor lying 1.8m below present ground level and continuing beneath the south wall as a subterranean tailrace which empties into the Afon Gronw, within an area of ironworking debris, to the south-west (Fig. 21, 29). However, the truncated springers of the head of its sluice are still fossilised in the north wall of the building, 2m above present ground level (Fig. 29), suggesting that the wheel was shot at high breastshot level, with a maximum diameter of 4m and a maximum width of 1.5m. The Home Farm building has been subject to considerable alteration but it is apparent from a cursory examination of its fabric that a number of building phases are represented, including an early single-storeyed phase which may relate to the forge (Fig. 30). The use of the singular in the lease of 1808 suggests that one of the possible two forges, and its waterwheel, had become disused before that date,³⁰⁰ possibly when acquired by John Morgan in the 1780s; during the nineteenth century an inscribed stone was apparently observed, recording the rebuilding of the forge under Morgan 'in the year 1788'.³⁰¹

The site of the second waterwheel — if it existed — is unknown. However, the tithe map of 1839 depicts the Afon Gronw, south of the Home Farm site, with a division into two channels, strongly suggestive of a mill race in an area where a building, marked in 1819, had gone by 1839 when the forge had become disused (Fig. 21, 30 and 31; Figs 20 and 25). Indeed the canalisation of the river, described above, may possibly not be medieval but instead be associated with the forge.

In a third area, a slate-lined channel was established between the former course of the Colomendy and leat 28, running along the north side of the abbey church (Fig. 21, 34). It features a rectangular, stone-lined pit measuring 6m east-west by 2m north-south, with a possible small platform on its northern side, in the west-flowing, southernmost channel immediately north of the north transept (Fig. 11). It may represent a wheel-pit, possibly associated the same activity that was represented by the rectilinear arrangement of three conjoining walls which butted against the north side of the presbytery, 15m to the south-east (Fig. 5, 13; Fig. 11). The primary cutting for the east end of the church was extended in order to receive them, but they are clearly secondary and suggest that the presbytery north wall remained



Fig. 29. North wall of Home Farm showing blocked sluice.



Fig. 30. The south wall of the Home Farm (the re-used medieval oolite quoins can be clearly seen).

standing for some time after the destruction of the other walls, as a result of being incorporated within this post-medieval building, which measures 3m by 3m. Both the building and the wheel-pit appear to have been associated with ironworking; geophysical anomalies from ironworking debris were distributed throughout the site, but this area produced the strongest magnetic signals.³⁰²

It is assumed that the Bretts maintained a residence on the site during the seventeenth century but its location is unknown. They may have occupied John Vaughan's house (i.e. possibly within the abbey buildings), but a local tradition that a mansion at Whitland was 'altered and restored' in the seventeenth century may refer to a change of site.³⁰³ Moreover, the possibility that the survey of 1582 relates to an otherwise unrecorded late medieval abbot's hall or guesthouse — which may have been re-used by any of these post-medieval structures, domestic or industrial — has been noted above. Nor is the practical relationship between the house and the forge or forges very clear. The geophysical anomaly running through (and possibly over) the chapter house site (Fig. 11, 11) may represent a drain, but it might be from a building relating to the post-medieval period. The limitations of the map evidence have been discussed above, and the complex of buildings shown on the earliest, from 1819 (Fig. 25), cannot all be interpreted. The tithe map of 1839 (Fig. 20),³⁰⁴ drawn after the forge had become disused, shows fewer structures and none apparently relate to the forge. It does, however, include two detached buildings on the site of the present Home Farm, one of which appears on the Charles Norris 1838 drawing as a 'villa' of medium size (Fig. 3).³⁰⁵

A possible clue to the seventeenth-century history of the site came in October 2001 when the author visited the farmhouse at Ysgubor-fawr (SN 208 175), 0.8 kilometre south of the abbey.³⁰⁶ The building, which is an early nineteenth-century conversion of an earlier house, was undergoing renovation and a partial rebuild, and was found to contain a large quantity of dressed oolitic limestone featuring early thirteenth-century and later mouldings. Both phases of the building utilised these dressings, which had been reversed to form plain voussoirs, quoins and surrounds. The earlier phase of the farmhouse, which could not be closely dated, probably represents ad hoc robbing from the standing abbey remains. The early nineteenth-century wing, however, is broadly contemporary with both the 1830s abbey excavation, and the construction of the present mansion, Whitland Abbey House, with which it was under the common ownership of the Yelvertons.³⁰⁷ Within the fabric was a date-stone, with the legend '1692 BH DR', and a narrow floral frieze, also in oolite, of possible early seventeenth-century date and therefore post-Dissolution. It may be that the dressings were retrieved from the excavations. However, it is more likely that they derive from the predecessor of Whitland Abbey House, which had itself contained this possibly re-used medieval detail, and was possibly rebuilt or extended in 1692 — a date consistent with the local tradition.³⁰⁸ If so, then the earlier mansion would appear to have occupied the site of the present house.

The present Whitland Abbey House was constructed by William Yelverton. It was begun around 1840 and was added to or rebuilt in c. 1860; the walled garden appears to have been contemporary. The present Home Farm building was remodelled from the former forge, and preserves a series of wide loading entries in its south wall, with piers constructed from chamfered oolite blocks derived from the abbey. Preliminary work for their construction appears to have begun in 1837,³⁰⁹ but they may not have been completed until some years later; the mansion house was described as 'of recent erection, scarcely yet finished' in 1875.³¹⁰ The assemblage was more-or-less complete by 1887,³¹¹ and the platform excavated in the hillslope to the east, to receive them, probably removed any further evidence for either forges or the abbey here.

Cropmark enclosures

A complex of cropmarks lying on the shallow south-facing slope beyond the outer precinct and 300m

west-north-west of the abbey site,³¹² resolves itself into a core of superimposed enclosures, most of which are rectilinear, occupying a large area measuring 100m by 60m and aligned north-west to south-east (Figs 21 and 31). The site is of a type being increasingly recognised in western Carmarthenshire and eastern Pembrokeshire through aerial photography, chiefly by Terry James.³¹³ Very similar sites have been recorded near Henllan Amgoed (Carmarthenshire) and Llys-y-fran and Wiston (Pembrokeshire), where they were suggested, on morphological grounds, to be farmsteads of possible Romano-British date.³¹⁴ Indeed, the central and possibly earliest cropmark at Whitland appears to be a circular enclosure, similar in area to the univallate enclosures of Iron Age date that characterise this part of West Wales. The



Fig. 31. The cropmark site from south. © *Cambria Archaeology* AP84-91.31.

site appears to be associated with fainter, outlying enclosures, also rectilinear, with a total area of approximately 6 hectares and a general agricultural character.

However, not all these enclosures can be closely dated and one of the Whitland features continues the line of the west boundary of the proposed medieval inner precinct, while objects retrieved by a metal detectorist from within the site, in 1998, included a medieval brooch and seal, a silver groat of King John, and two Roman coins which may be residual.³¹⁵ It is interesting to note that the scale and plan of the cropmarks has similarities with some moated grange sites, for instance the grange of Cwmhir at

Mynachty (Powys) which has exactly the same dimensions,³¹⁶ while the Whitland features can be interpreted as belonging to a dry-ditched enclosure of more than one phase. Moated or ditched enclosures, while not widespread in this part of Carmarthenshire, have been recognised at several nearby locations.³¹⁷

A number of cropmarks representing banks and drainage ditches were revealed through geophysical survey of the abbey site in 1999. They form an irregular pattern of enclosures, clearly underlying the medieval remains, and presumably relate to earlier agricultural activity.

CONCLUSIONS

It can be seen from the above account that whilst much new information has been retrieved during the 1990s, much still remains to be resolved. Large-scale, recent investigation of similar sites in Wales has been limited — work at Cwmhir, for example, has been much more restricted in its scope³¹⁸ — and the Whitland projects may be fundamental in informing such work in the future. As Peter Webster has noted, Whitland is ‘clearly a site which would repay long-term research of the type pursued at Bordesley Abbey’, a site which is similar in both its medieval and industrial aspects.³¹⁹ Many of the interpretations contained within this report are, at best, interim.

Several areas for future research can be identified. The plan and layout of the conventual buildings are only known from the geophysics. The site is a scheduled ancient monument but opportunities for some targeted investigation may be rewarded. In particular, the relative chronology of the conventual buildings and their two alignments may be clarified, while the site of the west range, the chapter house/south transept area, the tank in the lane, the north cloister alley with its return anomalies, and the south range ‘refectory’ and ‘kitchen’ areas, are crucial areas for the proper understanding of the site.

The extent and nature of the precinct and enclosures can only, at this stage, be postulated. Topographical and geophysical survey may be extended to take in the inner precinct, in particular to test for the stables and abbot’s house/guesthouse which are suggested by the sources, and to positively identify the features associated with the former courses of the Afon Gronw and Nant Colomendy, south of the abbey. Some limited investigation of the proposed boundary of the inner precinct may provide results. Proper survey and analysis of the ridge-and-furrow system within the outer precinct, which was not feasible within the present project, may establish the date of the system relative to the leats, which it appears to underlie. It may be noted, however, that recent survey within the surviving boundary of the Trinitarian priory at Moatenden (Kent) has revealed a ditched field system in the south-east quadrant that appears to be contemporary with the precinct.³²⁰ The relationship between the outer precinct and the boundaries leading from the possibly Romano-British cropmark require clarification, as does the nature of the cropmark itself.

Of greater importance, perhaps, are the gaps in our current knowledge of the post-medieval history of the site, in particular, of any secular re-use of the church or conventual buildings during the sixteenth to early seventeenth centuries. Neither is the exact location of the early forge or forges known. Was the demolition of the abbey piecemeal? Is the geophysical anomaly overlying the chapter house significant? Did any of the buildings survive, for example, to be shown on the early maps? The water management system, too, requires further investigation.

Finally, a question mark hangs over the future analysis of the large assemblage of finds from the site, including the *ex situ* building material, floor tiles and other finds. The tile, along with all of the small finds from the 1990s work, and many of the 1920s finds, is held in Carmarthen Museum where it is at least accessioned, catalogued and available for study. However, the dressed stone recovered during

1994–95 is held, at the time of writing, in loose storage at the museum (c. 100 items) and at Trinity College, Carmarthen (c. 150 items). In addition, there is a loose store of stonework at Home Farm. The chronological constructional framework presented within this paper may be adapted or amended pending a full study of the dressed stone and mouldings from the site, which form an important resource in their own right and may resolve the building phases within the church, and the question of post-medieval re-use. In addition, the dressings from the 1920s excavations have all to be yet located. Similarly, the 1994–95 floor tiles have as yet received no expert analysis but in this case, the earlier material has been published.³²¹

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APPENDIX

TRANSCRIPT FROM THE SURVEY OF 1582³²⁸

Probably a description of Whitland Abbey, but with a number of discrepancies. James has suggested that the compass points may be incorrect and that if 'north' is substituted for 'west' throughout, the description would fit the conventual arrangement at Whitland, taking the 'gate' in the account to mean the west range porch.³²⁹ The problems posed by the description of the fenestration have been discussed above and it is possible that an otherwise unknown building is being described, such as, for instance, a late medieval abbot's hall.

A view taken the first day of April in the four and twentieth year of the reign of our most gracious Sovereign Lady Elizabeth by the grace of God of England, France and Ireland, Queen, Defender of the Faith, in and upon Her Majesty's manor house of Whitland by Gruffudd Rhys, Owen Dun'e [sic], Thomas Lloyd, Philip Williams esquires, and David ap Rees ap William, Gent., by virtue of Her Majesty's most honourable companion out of Her Majesty's High Court or Exchequer unto them five four or three of them addressed, of all the waste and spoil done on and upon the freestone, windows, bars of iron, lead, glass and boards of the said manor house as thereafter followeth –

Imprimis – the east chamber over the gate, having two windows of freestone, being of 3 lights apiece, wants all the glass and iron, saving one bar in either window of 3 feet apiece, and wants a door.

Item – the second chamber over the gate having 2 windows of freestone of 3 lights apiece, wants all the glass and iron, saving one bar in either window of 3 feet long, and wants a door.

Item – the third chamber, west side of the gate having 2 windows of freestone of 8 lights apiece, wants all the glass and iron and wants a door.

Item – the fourth chamber, west side of the gate having one window of freestone of 8 lights, wants all the glass and iron and wants 2 doors.

Item – the fifth chamber, west side of the gate having one window of freestone of 3 lights, having no glass nor iron saving about 4 feet of old coloured [?] glass, and 3 bars and a half of iron, and wants one door.

Item – 2 by-chambers, west side of the gate having 2 small windows of timber having neither glass nor iron, and the loft and seats all spoiled for the most part, and wants 23 doors.

Item – one other chamber, west side of the gate, with a window of freestone of 3 lights, all the glass and iron wasted and spoiled, with part of the boards of the flooring.

Item – the Hall, with one window of freestone, having 3 lights without any iron or glass, saving one bar of 4 feet in the roof [?] of the window, and all the boards in the flooring quite taken away, and wants 2 doors.

Item – the Dining Room west unto the Hall, having 2 windows of freestone, the one of 3 lights, the other of 8 lights, without any glass or iron, but all spoiled away and wanting 3 doors.

Item – one chamber on the north part of the house, having 3 windows of freestone [of] 4 lights in the one window and 3 lights in the other, having one bar of iron across in either of the 2 windows wanting all the rest of the iron and all the glass. The third window being by estimation of 4 lights lacks all the freestone, glass and iron, and wants 2 doors, and all the timber under the foot gone, saving 8 beams, and the ceiling broken and spoiled.

Item – a lower chamber on the north part of the house having 3 windows of freestone, the one of 4 lights having no glass nor iron, saving 4 feet of iron on the upper part of the window, the other of 3 lights wants all the iron and glass in the windows, saving 3 feet of iron in the upper part of the window; the third window having neither stone, iron nor glass, being of 3 lights by estimation, and wants a door.

Item – one other chamber directly under the Hall having one window of freestone of 4 lights, without either iron or glass, saving one bar of 4 feet in roof, and wants 3 doors.

Item – one other room, after a Dining Chamber, with a window of freestone having 10 lights without any iron or glass, and wants 3 doors.

Item – one other chamber on the west side of the gate having a window of freestone of 8 lights, having neither glass nor iron left, and part of the boards under the floor spoiled.

Item – one other chamber, adjoining the aforesaid chamber, having one window of freestone of 4 lights, having 4 feet of glass and all the iron lacking, in one light both glass and iron, and in the other glass, and part of the flooring spoiled.

Item – one other room next unto the buttry, with one freestone window of 3 lights wanting all the glass and iron, and wants 2 doors.

Item – one room over the stable wants all the planks and timber saving the beams.

Item – one window of 2 lights in the porter's lodge of freestone, wants all the glass and iron, and wants a door.

Item – one other chamber west side of the gate, with one window of freestone of 2 lights; all the iron and glass taken away, and wants a door.

Item – one other chamber west side of the gate, having 2 windows of freestone of 8 lights apiece; the iron and glass all spoiled away.

Item – all the gutters of lead that were on the roof of the house are taken away and spoiled.

Signed by the commissioners

NOTES

1. Cambria Archaeology, The Shire Hall, 8 Carmarthen Street, Llandeilo, Carmarthenshire SA19 6AF. The author acknowledges the assistance of Pete Crane and Duncan Schlee, of Cambria Archaeology, and Gareth Longden, of Trinity College Carmarthen, who undertook much of the fieldwork at the abbey site.
2. *The Rocks of Wales: Geological Map of Wales*, 1:25,000 (British Geological Survey, 1994).
3. Claivaux's other first generation daughter-houses in Britain and Ireland were Boxley (Kent), Fountains and Rievaulx (both Yorkshire), and Mellifont (Co. Louth) in Ireland: D. Robinson (ed.), *The Cistercian Abbeys of Britain: Far from the Concourse of Men* (London, 1998), 23; R. Stalley, *The Cistercian Monasteries of Ireland* (London and New Haven, 1987), 239.
4. T. James, 'The Carmarthenshire Place-name Survey – recent progress', *Carmarthenshire Antiquary* 34 (1998), 128–9; N.A. Page *et al.* forthcoming, *A Roman Road West of Carmarthen*.
5. H. Owen (ed.), *The Description of Pembrokeshire by George Owen of Henllys*, 4 (London, 1936), 369 n. 3; *Rotuli Chartarum* (London, 1837), 206.
6. RCAHM Inventory, *Carmarthenshire* (London, 1917), 151.
7. 'Whitland Abbey finds, sketched by J. Milner', *Trans. Carmarthenshire Antiq. Soc.* 8 (1912–13), 38.
8. Discussed in Page *et al.* forthcoming, *op. cit.* (note 4).
9. *Cal. Charter Rolls*, 3, *Edward I–Edward II AD 1300–1326* (London, 1908), 235.
10. D. H. Williams, *Atlas of Cistercian Lands in Wales* (Cardiff, 1990), 66–8.
11. *Ibid.*
12. The reverse philological error of 'Whitland' for 'Llantwit', from whence Paulinus is said to have come, may have contributed to the confusion. The Cistercian community, moreover, was already called *Alba Landa* before it moved to Whitland.
13. L. Janauschek, *Originum Cisterciensium* 1 (Vienna, 1877), 62; D. Knowles and R. N. Hadcock, *Medieval Religious Houses in England and Wales*, 2nd edn (London, 1971), 128.
14. J. B. Williams ab Ithel (ed.), *Annales Cambriae* (London, 1860), 43.
15. *Ibid.*
16. RCAHM *op. cit.* (note 6), 152–3.

17. Revd David Williams has, however, pointed out that while the Little Trefgarn interpretation is supported by an early grant of land in Haverfordwest, the monks do not appear to have retained any land in Daugleddau so 'it is just possible that the *Annales* is mistaken' and the Lampeter Velfrey site, adjacent to a major grange, is indicated: D. H. Williams, *The Welsh Cistercians* 1 (Caldey, 1984), 7.
18. Janauschek op. cit. (note 13), 62. However, note the arguments for a rather later date for Cistercian foundations generally in C. H. Berman, *The Cistercian Evolution* (Pennsylvania, 2000).
19. *Rotuli Chartarum* (London, 1837), 206; see also A. J. Richard, 'Castles, boroughs and religious houses', in J. E. Lloyd (ed.), *A History of Carmarthenshire* 1 (London, 1935), 351–2.
20. *Pipe Roll 1 John*, 182; *Pipe Roll 2 John*, 226, 230; I. W. Rowlands, 'The making of the March: Aspects of the Norman settlement in Dyfed', *Proceedings of the Battle Conference on Anglo-Norman Studies* 3 (1980), 150.
21. T. Jones (ed.), *Brut y Tywysogyon, Peniarth MS20* (Cardiff, 1952), 54, 176.
22. These initial, purely Anglo-Norman Cistercian credentials were stressed by Giraldus Cambrensis in the *Speculum Ecclesiae* (Rolls Edition), 129 (reproduced in E. Owen, 'A contribution to the history of the Premonstratensian Abbey of Talley, Part 1', *Archaeol. Cambrensis* 5th ser., 10 (1893), 121–4), and suggested in the confirmation charter of 1214. Meanwhile, certain of its granges (e.g. Maenor Forion at Llangeler) are associated with earthwork castles which may have been constructed under the abbey's jurisdiction.
23. Appointed in c. 1165. A reference in the *Brut*, of 1147, to an Abbot Morvran 'of Whitland' relate to Tywyn, now in Gwynedd: Jones op. cit. (note 21), 176–7. The abbey provided a bishop in 1215 when Abbot Cadwgan was made bishop of Bangor (*ibid.*, 205).
24. *Ibid.*, 67.
25. Janauschek op. cit. (note 13), 151; Jones op. cit. (note 21), 64.
26. Whitland's grants are listed in the confirmation charter of 1214: *Rotuli Chartarum* (London, 1837). An abstract is reproduced in Richard op. cit. (note 19), 351–2.
27. Whitland's bardic associations were never celebrated, however, unlike those of Strata Florida and the Premonstratensian Talley Abbey, Carmarthenshire.
28. Jones op. cit. (note 21), 73.
29. *Ibid.*, 105.
30. J. Hunter, 'Copies of original charters of the family of de la Roche, of Pembrokeshire', *Archaeol. Cambrensis* 2nd ser., 3 (1852), 264.
31. E. V. Collier, 'Whitland Abbey excavations: Interim report', *Trans. Carmarthenshire. Antiq. Soc.* 19 (1925–26), 64.
32. *Cal. Pat. Rolls, Henry VI, 3, 1436–1441* (London, 1907), 380.
33. D. H. Williams op. cit. (note 10), 11.
34. Knowles and Hadcock op. cit. (note 13), 128.
35. Janauschek op. cit. (note 13), 74–5.
36. *Ibid.*, 74–5.
37. A. Gwynn and R. N. Hadcock, *Medieval Religious Houses Ireland* (Dublin, 1988), 130.
38. *Ibid.*, 143; Jones op. cit. (note 21), 100.
39. R. W. Banks, 'Notes to the Account of Cwmhir Abbey, Radnorshire', *Archaeologia Cambrensis* 5th ser., 5 (1888), 208–9.
40. W. Rees (ed.), *Calendar of Ancient Petitions concerning Wales, Thirteenth to Sixteenth Century* (Cardiff, 1975), 489–90. Strata Marcella was said to have formerly comprised 60 monks but by 1328 had just eight.

41. See Owen op. cit. (note 22), 129.
42. D. H. Williams op. cit. (note 10), 16.
43. Whitland's grants are listed in the confirmation charter of 1214 (see note 26). See also G. D. Owen, 'The Agrarian Conditions and Changes in West Wales in the Sixteenth Century', unpublished Ph.D thesis, University of Wales, Aberystwyth (1935), copy in National Library of Wales (NLW); E. T. Lewis, *Local Heritage from Efailwen to Whitland*, 1 (Carmarthen, 1975), 65–73, 282–7; Williams op. cit. (note 10), 66–8, citing Whitland 'Books of Holdings' (The National Archives: Public Record Office (PRO) E315/103 fo. 82d); PRO 'Special Collection'; PRO, Minister's Accounts, Lists and Indexes vol. 2, 4868 and 4903. The *Taxatio* of 1291 only lists three grist mills (*Taxatio ecclesiastica Angliae et Walliae auctoritate P. Nicolai circa AD 1291*, vol. 2 (London, 1802), 276–7).
44. *Taxatio*, 276–7.
45. But also included land in Bristol and north-east England (Richard op. cit. (note 19), 357).
46. *Cal. Chancery Rolls, AD 1277–1326* (London, 1912), 184–5.
47. M. S. C. Evans, 'The pioneers of the Carmarthenshire iron industry', *Carmarthenshire Historian*, 4 (1967), 24, citing *Cal. State Papers, Domestic, 1637–8*, 452.
48. F. G. Cowley, *The Monastic Order in South Wales 1066–1349* (Cardiff, 1977), 82–3.
49. *Taxatio*, 276–7.
50. Williams op. cit. (note 10), 68.
51. A. Jones, 'The estates of the Welsh abbeys at the Dissolution', *Archaeol. Cambrensis* 92 (1937), 278–9, citing PRO, Minister's Accounts, Lists and Indexes vol. II, 4868 and 4903.
52. Williams ab Ithel op. cit. (note 14), 92.
53. Although Gerald does not say so: L. Thorpe (ed.), *Gerald of Wales: The Journey through Wales and the Description of Wales* (Harmondsworth, 1978), 34, 178. Abbot John of Whitland was one of the speakers on the tour.
54. H. E. Butler, *The Autobiography of Giraldus Cambrensis* (London, 1937), 226. The reference may be to Strata Florida.
55. Williams ab Ithel op. cit. (note 14), 92.
56. S. W. Brown, 'Excavation and building recording at Buckfast Abbey, Devon', *Devon Archaeological Society Proceedings* 46 (1988), 19, 23.
57. P. Courtney et al., 'Excavations in the outer precinct of Tintern Abbey', *Medieval Archaeology* 33 (1989), 99–143.
58. G. G. Astill, *A Medieval Industrial Complex and its Landscape: The Metalworking Watermills and Workshops of Bordesley Abbey*, Council for British Archaeology Research Report 92 (London, 1993).
59. Williams ab Ithel op. cit. (note 14), 92.
60. Dugdale's *Monasticon*, reproduced in R. W. Banks, 'On the early charters to towns in South Wales', *Archaeol. Cambrensis* 4th ser., 9 (1878), 86; G. T. Clark, 'Kidwelly Castle', *Archaeol. Cambrensis* 2nd ser., 3 (1852), 17. The presence of the FitzMartin device on later floor tiles suggests that a similar penance was exacted from Nicholas and his successors.
61. Richard op. cit. (note 19), 337.
62. *Cal. Patent Rolls, Henry III, AD 1266–1272* (London, 1913), 241.
63. J. G. Edwards (ed.), *Calendar of Ancient Correspondence concerning Wales* (Cardiff, 1935), 71.
64. *Cal. Inq. Misc. 2, 1307–1349* (London, 1916), 11.
65. D. H. Williams op. cit. (note 10), 15.
66. *Cal. Chancery Rolls, AD 1277–1326* (London, 1912), 184–5.

67. Ibid., 207.
68. Cowley op. cit. (note 48), 274.
69. Rees op. cit. (note 40), 42.
70. Ibid., 17.
71. *Cal. Chancery Rolls, AD 1277-1326* (London, 1912), 324.
72. *Register of Edward the Black Prince, 1, 1346-48* (London, 1930), 44.
73. R. W. Banks, 'On the Welsh records in the time of the Black Prince', *Archaeol. Cambrensis* 4th ser., 4 (1873), cxlviii-clxxv; 175.
74. Rees op. cit. (note 40), 27.
75. Ibid., 117-8.
76. R. A. Griffiths, *The Principality of Wales in the Later Middle Ages: the Structure and Personnel of Government*, 1 (Cardiff, 1972), 13-14.
77. *Cal. Pat. Rolls, Henry VI, 5, 1446-1452* (London, 1909), 55.
78. *Cal. Pat. Rolls, Henry VIII, 2, 1494-1509* (London, 1916), 568.
79. D. H. Williams op. cit. (note 17, 69-70).
80. *Cal. Pat. Rolls, Henry VI, 2, 1429-1436* (London, 1907), 295.
81. But a canon of Talley, Matthew ap Llywelyn Ddu, was said to be travelling through Wales, possibly with a Cistercian monk, inciting unrest among the people: Rees op. cit. (note 40), 220.
82. *Cal. Close Rolls, Henry VI, 2, 1429-1435* (London, 1933), 271-2.
83. *Cal. Pat. Rolls, Henry VI, 3, 1436-1441* (London, 1907), 380.
84. Knowles and Hadcock op. cit. (note 13), 128.
85. *Cal. Fine Rolls, 20, Edward IV and Henry VI, 1461-1471* (London, 1949), 88; *Cal. Fine Rolls, 20, Edward IV, Edward V and Richard III, 1471-1485* (London, 1961), 166-9.
86. R. A. Roberts (ed.), *The Episcopal Registers of the Diocese of St Davids, 1397 to 1518*, 1-2 (London, 1917), 797, 823.
87. Knowles and Hadcock op. cit. (note 13), 115, citing J. Caley and J. Hunter (eds), *Valor Ecclesiasticus (1535)*, 6 vols, (London, 1810-34).
88. Robinson op. cit. (note 3), 33.
89. Jones op. cit. (note 51), 270.
90. Cardiff City Library, Charles Norris Drawings vol. 17, fo. 573. Their original provenance is however unknown.
91. Jones op. cit. (note 51), 270, citing PRO, Minister's Accounts, Lists and Indexes vol. II, 4868 and 4903.
92. Williams op. cit. (note 17), 104-5. Jones, however, claimed that most of the Whitland leases date from 1539 and were granted by the Court of Augmentations, but for once did not cite his sources (A. Jones op. cit. (note 51), 273). The last abbot is also recorded as William 'Spragen' (T. Tanner, *Notitia Monastica*, 1744 edn) and William 'Vayne' (Richard op. cit. (note 19), 363).
93. Griffiths op. cit. (note 76), 165. He was paid £23 18s 4d a year.
94. Owen op. cit. (note 43).
95. Jones op. cit. (note 51), 280.
96. Along with Monkton Priory in Pembrokeshire: F. Jones op. cit. (note 9), citing Tanner's *Notitia*, 701.
97. *Letters and Papers, Foreign and Domestic, Henry VIII* (Rolls Series), 19 Part 2, 59.
98. Richard op. cit. (note 19), 363.
99. Jones op. cit. (note 51), 280. The Court of Augmentations recorded that payments were still being made to priests of Whitland, Llanllyr and Carmarthen Priory in 1555-56, during the reign of Queen Mary: 'Carmarthenshire Abbeys', *Trans. Carmarthenshire Antiq. Soc.* 26 (1936), 50.

100. NLW 16061E , Edward Owen Collection. My thanks to Muriel Bowen-Evans for providing me with a transcript of this document. The possibility that the survey relates the site of 'Whitland House' (or 'Tynwydd'), though unlikely, cannot however be ruled out. This lay a quarter of a mile south-east of Whitland, and was first recorded in the late seventeenth century when it was the residence of the Adams family: F. Jones, *Historic Carmarthenshire Homes and their Families* (Carmarthen, 1987), 192.
101. Collier op. cit. (note 31), 64.
102. E. G. Jones (ed.), *Exchequer Proceedings (Equity) concerning Wales* (Cardiff, 1939), 105.
103. Ibid., 120.
104. Williams op. cit. (note 17), 125–6. A statue or picture of the late abbot was also removed.
105. Evans op. cit. (note 47), 23, citing Bodleian Library, Banks 41/28.
106. Ibid.
107. Ibid. The lack of evidence for monastic industry has been mentioned above and the requirement for running water is merely coincidental, as at Morgan's Carmarthen Ironworks which occupied the site of the Augustinian Priory utilising its water supply: T. James, 'Carmarthen Tinplate Works 1800–1821', *Carmarthenshire Antiquary* 12 (1976), 31–2.
108. Evans op. cit. (note 47), 24, citing *Cal. State Papers, Domestic, 1637–8*, 452.
109. Ibid., 26, citing Carmarthenshire Record Office (CRO), Trant MSS.
110. Ibid., 10, citing E. W. Hulme, 'Statistical history of the iron trade of England and Wales, 1717–1750', *Trans. Newcomen Soc.* 9 (1928–9), 30.
111. W. Thomas, 'The History of Whitland, 1868', unpublished translation by Ivor Griffiths, 35.
112. F. Green, 'Carmarthen Tinworks and its founder', *West Wales Historical Records*, 5 (1915), 255.
113. Thomas op. cit. (note 111), 35.
114. Green op. cit. (note 112), 259.
115. Ibid.
116. Ibid., 258–61.
117. Which continues to be under the ownership of the Trustees of the Diocese (T. James, 'Whitland Abbey: a draft feasibility study', unpublished study for Dyfed Archaeological Trust, 1986).
118. Scheduled Ancient Monument, Carmarthenshire 14.
119. E. Donovan, *Descriptive Excursions through South Wales and Monmouthshire*, 2 (London, 1805), 253.
120. For example, T. James, 'A Survey of the fishponds, watercourses and other earthworks at the site of Whitland Abbey and Iron Forge', *Carmarthenshire Antiquary* 16 (1978), 71–7, and Anon., 'Kemp on Laugharne and Whitland Abbey', *Trans. Carmarthenshire Antiq. Soc.* 20 (1926–7), 63.
121. Anon. op. cit. (note 120), 63.
122. Cardiff City Library, Charles Norris Drawings vol. 17, fo. 572. I am grateful to Rick Turner of Cadw for providing me with photographs of the Norris drawings.
123. Thomas op. cit. (note 111), 27–9.
124. Anon., 'Notes on Whitland Abbey', *Trans. Carmarthenshire Antiq. Soc.* 14 (1919–21), 58.
125. e.g. Milner op. cit. (note 7), 38; 'Carmarthenshire Antiquarian Society – gifts and long loans', *Trans. Carmarthenshire Antiq. Soc.* 11 (1916–17), 61–3; 'Whitland Abbey relics', *Trans. Carmarthenshire. Antiq. Soc.* 15 (1921–22), 48. The provenance and location of other finds is unknown, such as, for example, the 'small circular gold vessel', which was apparently dug up from the walled garden in 1887 (Carmarthen Meeting – Excursions', *Archaeol. Cambrensis* 6th ser., 7 (1907), 241–3).
126. A. W. Clapham, 'Three monastic houses of South Wales', *Archaeol. Cambrensis* 1 (1921), 205–38.

127. Noted by H. W. Gagg in the college magazine *The Carmarthen* 18, 3 (1928), 69.
128. Collier op. cit. (note 31), 63–5, 79–80.
129. Ibid., 80.
130. Gagg op. cit. (note 127), 69.
131. James op. cit. (note 120), 71–7.
132. James op. cit. (note 117).
133. P. Crane and P. Webster, 'Archaeological work at Whitland Abbey: an interim statement', in M. Gray and P. Webster (eds), *The Cistercians in Wales and the West* (forthcoming).
134. Undertaken by Archaeophysica Ltd for Cambria Archaeology. Both magnetometry and resistivity surveys were carried out, but only the former was undertaken in the area west of the walled garden.
135. Undertaken by Cambria Archaeology.
136. Undertaken by Landmark Surveys for Cambria Archaeology.
137. See Collier op. cit. (note 31), 63–5, 79–80.
138. Jones op. cit. (note 21), 116.
139. This is nowhere recorded by Collier, but is mentioned by Richard op. cit. (note 19), 358.
140. The geophysical survey suggested a dog-leg in the nave N. wall with an accompanying offset in the north arcade (Archaeophysica Ltd) but, seen alongside the excavated evidence, this has to be discounted as a technical error.
141. The anomaly suggested by the geophysics within the first bay of the main nave vessel, interpreted by Archaeophysica Ltd as flooring, may have been derived from the lining of a pond.
142. This walling, accompanied by the 'noise' in the west bay, led the geophysical survey team to propose – without foundation – the presence of internal west towers (Archaeophysica Ltd).
143. Ordnance Survey, 1:2,500 2nd edn, Carmarthenshire Sheet XXXVII.10, 1908.
144. The excavator thought that it may represent the base of a lay-brothers' night stair, but there are no close parallels.
145. Clapham op. cit. (note 126), 206–7.
146. Robinson op. cit. (note 3), 40.
147. Ibid., 41. The earliest British 'Bernardine' east end may have belonged to the second church at Rievaulx (Yorkshire), from c. 1135–45, upon which its daughter house at Melrose (Borders) was modelled in 1136–46; both were later rebuilt. The first stone church at Fountains (Yorkshire), from the later 1130s and also later rebuilt, may have followed the same plan (D. M. Robinson, *The Cistercians in Wales: Architecture and Archaeology 1130–1540* (London, Society of Antiquaries, forthcoming). My thanks to Stuart Harrison for discussions on the development of these sites.
148. Stalley op. cit. (note 3), 55–8. See also Ebersbach in Germany, and Alvastra in Sweden.
149. Robinson op. cit. (note 147).
150. Robinson op. cit. (note 3), 23.
151. Stalley op. cit. (note 3), 239.
152. D. M. Robinson, 'Margam Abbey', in N. J. G. Pounds (ed.) *The Cardiff Area: Proceedings of the 139th Summer Meeting of the Royal Archaeological Institute, Supplement to the Archaeological Journal* 150 (1993), 57.
153. The eight bays at Whitland and Margam may be compared with, for example, Bordesley (Worcestershire), Dundrennan (Galloway), Kirkstall and Roche (Yorkshire), Baltinglass (Co. Wicklow), Boyle (Co. Roscommon) and Jerpoint (Co. Kilkenny) in Ireland, Fontenay and Noirlac in France, and Chiaravalle Milanese in Italy: D. Robinson, 'The Cistercian buildings of Wales', in M. Gray and P. Webster, *The Cistercians in Wales and the West*, forthcoming. See Fig. 6.
154. Robinson op. cit. (note 147); Stuart Harrison pers. com.

155. Robinson op. cit. (note 152), 54–60.
156. Ibid., 57.
157. Stalley op. cit. (note 3), 78–81, 83.
158. Robinson op. cit. (note 153).
159. Robinson op. cit. (note 152), 57.
160. Stalley op. cit. (note 3), 55–8.
161. Robinson op. cit. (note 153).
162. The east walls of the transeptal chapels did not show up as geophysical anomalies, leading the team to assume that the presbytery was also aisled (Archaeophysica Ltd); however, the excavated evidence is contradictory, and appears to be conclusive. All indications are that a south transept was present, but was variously robbed and obscured.
163. Robinson op. cit. (note 3), 41.
164. E. Owen, 'The bells of the dissolved Welsh monasteries', *Archaeol. Cambrensis* 5th ser., 8 (1896), 265.
165. Three bells were also recorded at Basingwerk in Flintshire, another church within which the evidence for a tower is equivocal: D. Robinson op. cit. (note 3), 67.
166. D. M. Robinson and C. Platt, *Strata Florida Abbey/Talley Abbey*, 2nd edn (Cadw, 1998).
167. Stalley op. cit. (note 3), 180–3.
168. Robinson and Platt, op. cit. (note 166), 50.
169. S. W. Williams, 'The Cistercian abbey of Strata Marcella', *Archaeol. Cambrensis* 5th ser., 9 (1892), 1–17.
170. Robinson op. cit. (note 153).
171. The masons' marks are illustrated in S. W. Williams, *The Cistercian Abbey of Strata Florida: Its History and an Account of the Recent Excavation Made on the Site* (London 1889), 218–9.
172. Robinson op. cit. (note 153).
173. Ibid. See also N. W. Jones, 'Abbeycwmhir: resurvey of the ruins', unpublished report, Clwyd-Powys Archaeological Trust (2000).
174. Stalley op. cit. (note 3), 243, 249–50.
175. The sedilia has lost its dressings and its original form is uncertain. If it was a triple sedilia, as suggested by Collier, then it was almost certainly a secondary insertion.
176. e.g. Strata Florida, Valle Crucis and Tracton.
177. The internal arrangements of the transepts at Cwmhir and Strata Marcella are unknown.
178. The transepts and east end at Margam were rebuilt c. 1200–13 where the cramped space within the rebuilt south transept, impinging on the chapter house, allows room for only two original chapels: Robinson op. cit. (note 147).
179. Robinson op. cit. (note 3), 105–6.
180. Ibid. Other Cistercian churches with stairs in this location include Byland and Roche, both in Yorkshire (ibid.), and Dunbrody (Co. Wexford) and Inch (Co. Down), both in Ireland: Stalley, op. cit. (note 3), 62, 94.
181. Robinson op. cit. (note 153).
182. G. H. Cook, *English Monasteries in the Middle Ages* (London, 1961), 165. The screen walls at the small Cistercian church at Hulton (Staffordshire), however also appear to be secondary: 'Medieval Britain and Ireland in 1991', *Medieval Archaeol.* 36 (1992), 261–2.
183. Evidence for *pulpitum* screens exists at only a handful of British Cistercian sites, of which Tintern has been recently published: S. A. Harrison, R. K. Morris and D. M. Robinson, 'A fourteenth-century *pulpitum* screen at Tintern Abbey, Monmouthshire', *Antiq. J.* 78 (1998), 248–50. Also see

- the recent work at Furness Abbey, Cumbria: 'Medieval Britain and Ireland in 1989', *Medieval Archaeol.* 34 (1990), 171–2.
184. As described by Collier op. cit. (note 31).
185. Robinson op. cit. (note 152), 57.
186. The west door surround, as proposed by Collier, is also fully Romanesque. There is no evidence at Strata Florida for the west porch which was almost a diagnostic feature of Cistercian plans (Cook op. cit. (note 182), 65), and none appears to have come to light during excavation at Whitland; such a porch may however have been of timber as at Margam.
187. The Margam mason's marks are illustrated in A. L. Evans, n.d. *Margam Abbey* (church guidebook).
188. Robinson and Platt op. cit. (note 166), 54.
189. Ibid., 28.
190. Richard op. cit. (note 19), 346.
191. Robinson, who has drawn comparisons between their arcades and those fossilised in the nave walls at the former Benedictine priory of St Mary, Chepstow, suggesting that all three may have been groin-vaulted: Robinson op. cit. (note 153).
192. Robinson op. cit. (note 3), 96.
193. Anon., op. cit. (note 120), 63. The lining of this pond may account for the high-resistivity recorded in 1999 and thought to represent flooring (Archaeophysics Ltd).
194. NLW, 16061E, Edward Owen Collection.
195. The few doubts that the survey represents Whitland Abbey may be raised here. The secular manor of 'Old Whitland' was a member of the lordship of Narberth from at least 1314 and may have been the site of an early gentry-house – the 'manor house of Whitland' of the survey. The description of the windows, moreover, is difficult to fit in with a standard range of Cistercian conventual buildings without allowing for a major refenestration in the sixteenth century, either before or after the Dissolution. However, 22 chambers represent a sizeable dwelling, and there is no tradition of any lost gentry-house site in the area. The possibility that the survey relates to a house on the site of the later 'Tynwydd', a quarter of a mile southeast of Whitland, cannot however be ruled out (see notes 9 and 100).
196. It is difficult to relate the evidence for the abbey buildings with the arrangement of chambers described in the survey, but Terry James has suggested that the compass points given in the text are incorrect, and that 'north' should be substituted for 'west': T. James, 'Carmarthenshire's religious houses: a review of recent archaeological work', *Carmarthenshire Antiquary* 36 (2000), 59.
197. Thomas op. cit. (note 111), 27–9. Coincidentally, or otherwise, the south claustral range appears to have been divided into nine discrete areas.
198. Jones op. cit. (note 102), 105.
199. As they were at e.g. Neath Abbey (RCAHMW, *Glamorgan Inventory IV: Domestic Architecture from the Reformation to the Industrial Revolution Part I: The Greater Houses* (Cardiff, HMSO, 1981), 78–89), and the Irish daughter-house of Tracton (D. Power (ed.), *Archaeological Inventory of Co. Cork, 2: East and South Cork* (Dublin, 1994), 240–41; Stalley op. cit. (note 3), 249–50).
200. Robinson op. cit. (note 3), 77, 143–4, 153, 167–8.
201. Stalley op. cit. (note 3), 135–7.
202. Thomas op. cit. (note 111), 27–9.
203. Donovan op. cit. (note 119), 253.
204. Ordnance Survey 1-inch Old Series, no. XLII, 1819.

205. NLW, Llangan parish tithe map and apportionment, 1839, on which a second row of cottages to the south lie convincingly near the site of the conventual south range (see below).
206. Ordnance Survey, 1:2,500 1st and 2nd edns, Carmarthenshire Sheet XXXVII.10, 1887 and 1908.
207. Clapham op. cit. (note 126), 205–8.
208. Ibid.
209. Ibid., 207.
210. Ibid.
211. Clapham, Collier and others. The suggestion from the geophysical team that it formed part of the south wall of a free-standing domestic structure is unlikely and derived in part from the absence of resistivity data from the west range.
212. These are particularly apparent in an aerial photograph in the possession of Terry James.
213. Anon., op. cit. (note 124), 58.
214. Recent work at Cwmhir by the Clwyd-Powys Archaeological Trust, for example, was limited to a resurvey of the standing remains of the church: Jones op. cit. (note 173), 4.
215. Clapham op. cit. (note 126), 207.
216. The investigators were in fact inclined to see the vaulting at the north end as relating to an east–west ‘wing’ rather than the north cells of a range, while Clapham’s east–west wall at the south end was interpreted as being an extension from the south range (Archaeophysica Ltd).
217. Narrower lanes were present at e.g. Basingwerk (Flintshire), Beaulieu (Hampshire), and at Byland in Yorkshire: Robinson op. cit. (note 3), 66–8, 81–3, 149–51.
218. Stuart Harrison pers. com.
219. Robinson op. cit. (note 3), 149–51. Porches were also present at Beaulieu and Netley (both Hampshire), Dunbrody (Co. Wexford), Tintern (Monmouthshire) and Valle Crucis (Denbighshire).
220. NLW, 16061E, Edward Owen Collection.
221. Cardiff City Library, Charles Norris Drawings vol. 13, missing fo. 449.
222. Stuart Harrison pers. com.
223. And possibly at Margam (Glamorgan). Similar arrangements existed at Tintern (Monmouthshire), and possibly Basingwerk (Flintshire) and Neath in Glamorgan: Robinson op. cit. (note 153).
224. Thanks to Dr D. M. Robinson and Revd D. H. Williams for assistance in interpreting the two wings.
225. NLW, Llangan parish tithe map and apportionment, 1839.
226. J. G. Coad, *Hailes Abbey* (London, HMSO, 1970), 17.
227. Stalley op. cit. (note 3), 153.
228. A. Hamlin, ‘Collation seats in Irish Cistercian Houses: Grey Abbey, County Down and Graiguenamanagh, County Kilkenny’, *Medieval Archaeol.* 27 (1983), 156–7. Documentary sources suggest that a collation feature may formerly have been present at Boxley Abbey, Kent: R. Gilyard-Beer, ‘Boxley Abbey and the *Pulpitum Collationis*’, in A. Detsicas (ed.), *Collectanea Historica: Essays in Memory of Stuart Rigold* (Maidstone 1981), 123–31. Many thanks to Ann Lynch of Dúchas for the information on Tintern Minor.
229. But there are three doors in south wall at Byland (Yorkshire).
230. Clapham op. cit. (note 126), 207.
231. Robinson op. cit. (note 133).
232. Robinson op. cit. (note 152), 58. The vestibule may have been used by the lay-brothers while the chapter house proper was reserved for the choir monks. The spirit of a vestibule is also seen at Dore (Herefordshire), Furness (Cumbria) and at Tintern (Monmouthshire).
233. Robinson op. cit. (note 3), 105–6.

234. The Margam building may alternatively represent a bridge leading to a reredorter formerly lying further east: Robinson op. cit. (note 152), 59. A reredorter also projects from a number of east ranges which did project southwards, as at Fountains (Yorkshire), Hailes (Gloucestershire), Netley (Hampshire) for example.
235. Archaeophysica Ltd. They do not discuss their evidence for this assumption, which may be just comparative.
236. C. S. Briggs, 'A new field of Welsh cultural heritage: inference and evidence in gardens and landscapes since c1450', in P. Pattison (ed.), *There by Design: Field Archaeology in Parks and Gardens*, 66–7, British Archaeological Reports, British Series 267 (1998).
237. Ordnance Survey, 1:2,500 1st and 2nd edns, Carmarthenshire Sheet XXXVII.10, 1887 and 1908.
238. This section of the text is provisional and awaits a full study of the ex situ dressed stone recovered in 1994–95, and the floor tile from the same excavations. A considerable body of the tile recovered prior to 1994 is held and accessioned at Carmarthen Museum, and is part of the assemblage that has been published by John Lewis: J. M. Lewis, *Census of Medieval Tiles in Britain: the Medieval Tiles of Wales* (Cardiff, 1999). The museum also holds about 16 boxes of unaccessioned tile from the 1994–95 excavations. No provenanced stonework from the pre-1994 work is held at the museum, but there is some unprovenanced material which may relate to the abbey. Dressings recovered during 1994–95 are held, at the time of writing, in loose storage at the museum (about 100 items) and at Trinity College, Carmarthen (about 150 items). In addition, there is a loose store of stonework at the Home Farm.
239. Collier op. cit. (note 31), 79–80.
240. Richard op. cit. in note 19, 346.
241. Collier op. cit. (note 31), 64.
242. Robinson op. cit. (note 153).
243. Stuart Harrison pers. com.
244. Robinson op. cit. (note 153). However, further evidence linking Whitland with the West Country School of masons, as defined by Harold Brakspear *et al.*, is less unequivocal.
245. Robinson and Platt op. cit. (note 166), 25.
246. Robinson op. cit. (note 153).
247. Donovan op. cit. (note 119), 254.
248. Cardiff City Library, Charles Norris Drawings vol. 17, fo. 573.
249. P. Fergusson, *Architecture of Solitude: Cistercian Abbeys in Twelfth-Century England* (Princeton, 1984).
250. In Robinson op. cit. (note 153), in which he notes the exception of L. A. S. Butler, 'Saint Bernard of Clairvaux and the Cistercian Abbeys in Wales', *Arte Medievale* 2nd ser., 8, part 1, vol. 2 (1994), 1–11.
251. And possibly provide further evidence of the extent of the 1830s excavations.
252. 'Supplementary note: the tiles of Whitland and Talley abbeys', in J. E. Lloyd (ed.), *A History of Carmarthenshire* 1 (London, 1935), 364–7.
253. Lewis op. cit. (note 238); E. S. Eames, *English Medieval Tiles* (London, 1985).
254. Louise Lane, pers. com.
255. Louise Lane pers. com., from her analysis of the tiles recovered from the recent excavations at Haverfordwest.
256. Ibid.
257. T. James and D. Brennan, '13th–16th century Earthenware and Oolitic Limestone Floortiles (Excavations at Carmarthen Greyfriars 1983–1990)', unpublished report, Dyfed Archaeological Trust Topic Report I (Carmarthen, 1998).

258. Collier *op. cit.* (note 31), 64.
259. T. James, 'Excavations at Carmarthen Greyfriars, 1983–1990', *Medieval Archaeol.* 41 (1997), 173.
260. NLW, Llangan parish tithe map and apportionment, 1839.
261. The 'Golden Gate' which was sketched by Charles Norris in 1838 appears to have been the erroneous appellation for a building – possibly the west range gateway – much closer to the church site: Cardiff City Library, Charles Norris Drawings vol. 13, fo. 449.
262. NLW, Llangan parish tithe map and apportionment, 1839. The Ordnance Survey, 1-inch Old Series 1st edn, no. XLII, 1819, appears to depict a similar course but which differs from the present course even more dramatically (Fig. 25).
263. James thought the depression to be a ha-ha: James *op. cit.* (note 120), 75–6.
264. Area F on James's plan (*ibid.*, 73).
265. Thomas *op. cit.* (note 111), 27. The names Golden and Silver Gates, or their Welsh equivalents *Porth-yr-aur* and *Porth-yr-arian*, are frequently found in an ecclesiastical context, e.g. Talley Abbey and St David's Cathedral Close, where they possibly relate to alms giving.
266. NLW, Llangan parish tithe map and apportionment, 1839.
267. Ordnance Survey, 1:2,500 1st edn, Carmarthenshire Sheet XXXVII.10, 1887. Whitland Abbey House is aligned on the old lane suggesting that work began before any realignment took place.
268. Adapted from M. Aston, *Monasteries in the Landscape* (Stroud 2000), 97, 100.
269. Williams *ab Ithel op. cit.* (note 14), 92.
270. The different versions of the *Brut* agree on a figure of 86 horses: T. Jones *op. cit.* (note 21), 185. A large, thirteenth-century stable measuring 28m by 13m, for a comparable number of horses, has been excavated at Kirkstall, Yorkshire: 'Medieval Britain in 1982', *Medieval Archaeol.* 27 (1983), 211–14.
271. NLW, 16061E, Edward Owen Collection.
272. Thomas *op. cit.* (note 111), 28.
273. 'Carmarthen Meeting – Excursions', *Archaeol. Cambrensis* 6th ser., 7 (1907), 241–3.
274. Information from Gareth Longden, from the archive of Chris Fenton-Thomas.
275. Ordnance Survey, 1-inch Old Series 1st edn, no. XLII, 1819.
276. James *op. cit.* (note 120), 76. Either this or the present road line is depicted in 1830 (*ibid.*).
277. But note the large, detached circular or polygonal lavers projecting into the cloisters of Mellifont, Co. Louth in Ireland, and Melrose, Borders in Scotland.
278. It may be, moreover, that the two linear anomalies in the south range that have been interpreted as later disturbance on Figure 3, may also represent robbed-out medieval watercourses (T. A. James *pers. com.*).
279. A. J. Richard, 'Castles, boroughs and religious houses', in J. E. Lloyd *op. cit.* (note 19), 346.
280. Undertaken by Landmark Surveys for Cambria Archaeology.
281. James *op. cit.* (note 120), 71–7.
282. *Ibid.*, 74–5.
283. *Ibid.*
284. Ordnance Survey, 1:2,500 1st edn, Carmarthenshire Sheet XXXVII.10, 1887.
285. Slightly narrower than as plotted by James *op. cit.* (note 120), 73.
286. NLW, Llangan parish tithe map and apportionment, 1839.
287. However, these were interpreted as the remains of enclosure walls by James *op. cit.* (note 120), 74. In addition, aerial photographs suggest a third course further east (Fig. 21). All may have existed at one time or another.
288. James himself admitted that his evidence was slight (*ibid.*).

289. T. James in D. H. Williams op. cit. (note 10), 90.
290. See James op. cit. (note 120), 74.
291. Noted by James: *ibid.*, 76.
292. Ordnance Survey, 1-inch Old Series 1st edn, no. XLII, 1819.
293. W. Llewellyn, 'The iron and wire works of Tintern', in E. H. Brooke (ed.), *Monograph of Tinplate Works in Great Britain* (London, 1932), 106–111.
294. Courtney *et al.*, op. cit. (note 57), 99–143.
295. Llewellyn op. cit. (note 293), 106–111.
296. N. A. Page, 'Excavations at Llantarnam Village, Gwent', unpublished report, Glamorgan-Gwent Archaeological Trust (1993).
297. James op. cit. (note 120), 74.
298. Evans op. cit. (note 47), 23, citing Bodleian Library, Bankes 41/28.
299. *Ibid.*, 24, citing PRO C7/419/8. Two wheels were also remembered in 1868: Thomas op. cit. (note 111), 35.
300. The lease of 1808 refers to 'the iron forge or mill for making iron, and the pool thereunto belonging, commonly called . . . Whitland Forge': F. Green op. cit. (note 112), 259, (source not cited).
301. Thomas op. cit. (note 111), 35.
302. Archaeophytica Ltd.
303. E. T. Lewis op. cit. (note 43), 80.
304. NLW, Llangan parish tithe map and apportionment, 1839.
305. Cardiff City Library, Charles Norris Drawings vol. 17, fo. 572.
306. In response to a telephone call from Thomas Lloyd, Chairman of the Carmarthenshire Antiquarian Society.
307. NLW, Llanboidy parish tithe map and apportionment, 1839.
308. The individuals commemorated in the date-stone cannot be identified, however, unless 'DR' indicates Rutland, the lessees of the forge in the mid seventeenth century.
309. Anon. op. cit. (note 120), 63.
310. F. Jones op. cit. (note 96), 198. The western extension was added to the mansion in 1890: Lewis op. cit. (note 43), 80.
311. Ordnance Survey, 1:2,500 1st and 2nd edns, Carmarthenshire Sheet XXXVII.10, 1887 and 1908.
312. First noted on aerial photographs by J. K. St Joseph in 1977.
313. T. James, 'Air photography and the archaeology of Carmarthenshire', *Carmarthenshire Antiquary* 36 (2000), 17–18. See also T. James, 'Air photography by the Dyfed Archaeological Trust 1989', *Archaeology in Wales* 29 (1989), 31–4, and T. James, 'Concentric antenna enclosures – a new defended enclosure type in west Wales', *Proc. Prehist. Soc.* 56 (1990), 295–8.
314. *Ibid.*
315. Carmarthen Museum Acc. No. EF 1624. The complex may also be the same site as that described by the traveller Edward Donovan in the early nineteenth century who noted that ploughing 'on the high ground above Whitland abbey' had revealed 'substantial foundations' and 'lead pipes', which he regarded as belonging to Hywel Dda's senate-house: Donovan op. cit. (note 119), 254–5.
316. Williams op. cit. (note 10), 31.
317. James 2000 op. cit. (note 313), 17–18.
318. Jones op. cit. (note 173), 4.
319. Crane and Webster op. cit. (note 133).
320. 'Medieval Britain and Ireland in 1992', *Medieval Archaeol.* 37 (1993), 269–70.

- 321. J. M. Lewis op. cit. (note 238).
- 322. All of Cambria Archaeology.
- 323. Carmarthen Museum, The Old Palace, Abergwili, Carmarthen SA31 2JG.
- 324. Ryedale Archaeology Services, Mill Lane, Pickering, North Yorkshire YO18 8DJ.
- 325. English Heritage, Savile Row, London.
- 326. Department of Humanities and Science, UWCN Caerleon Campus, PO Box 179, Newport NP18 3YG.
- 327. School of History and Archaeology, Cardiff University, PO Box 909, Cardiff CF1 3XU.
- 328. NLW 16061E , Edward Owen Collection.
- 329. James op. cit. (note 196), 58–9

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