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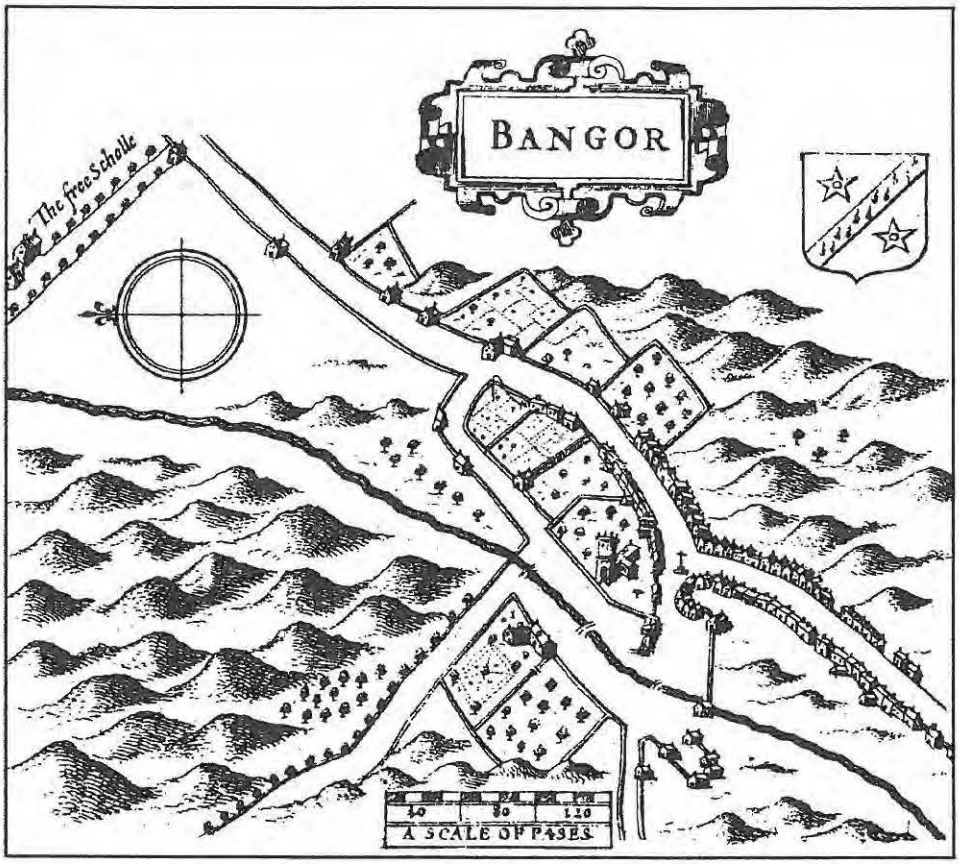
EXCAVATIONS AT THE BISHOP'S PALACE, BANGOR 1996

by
Neil Johnstone



REPORT 370

prepared for
Cyngor Gwynedd Council

Project G1376

Ymddiriedolaeth Archaeolegol Gwynedd
Gwynedd Archaeological Trust

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Excavations at the Bishop's Palace Bangor
By Neil Johnstone

In January 1996 Gwynedd Archaeological Trust were commissioned by Gwynedd County Council on behalf of the North Wales Magistrates Court to undertake an archaeological evaluation of the site of the former council works depot on the north-east side of Bangor Town Hall, formerly the palace of the Bishop of Bangor (Fig 1). The evaluation identified the remains of a number of structures below the outbuildings and as a result a fuller excavation was conducted in February and March. The results of both excavations are presented in this report.

Summary

Driven timber posts dating from 1121 AD have been identified on the former bank of the river Adda. The piles, which may have been structural elements of a wharf or possibly a timber bridge spanning the Adda, were subsequently superseded by a mortared stone abutment of uncertain, but probable medieval date.

A stone basin or tank was subsequently constructed against the east side of the abutment, which was filled by a culvert with an overflow outlet that discharged into the river. The purpose of the tank or basin is uncertain, it may have been used to store freshwater fish for the Bishops palace although this is by no means certain. Against the east side of the tank a number of drains discharged water and effluent from the palace. No dating evidence was available for this phase although the tank and drains were probably in use until the river was culverted and the outbuildings adjacent to the Bishop's palace were constructed, possibly in the early eighteenth century.

Introduction

The council works depot utilized some of the former outbuildings of the Bishop of Bangor's palace; the palace is located on the north bank of the river Adda, directly opposite the cathedral and now houses Bangor's Town Hall. The river has been culverted and now runs along the line of the Bishop's walk path.

The Bishops Palace

Bangor Town Hall is a grade II listed building consisting of a central block on an east-west axis with wings at each end projecting southwards. The earliest phase, an L-plan structure of *circa* 1500 was doubled in size around 1600. Additional alterations were made in the eighteenth and nineteenth centuries. The outbuildings, formerly the service buildings of the palace, consisted of two ranges. The southern range comprised a nineteenth century L- shaped cottage on the south-west and a two-storey coach house wing of circa 1800, which adjoined the cottage on the north-east. The northern range originally included an east and west wing, the latter was attached to the south-east end of the town hall (RCAHMW 1996). Listed building consent was obtained by Gwynedd County Council to demolish the outbuildings in advance of the construction of a new Magistrates court. Prior to their demolition the outbuildings were fully recorded by the Royal Commission of Ancient and Historical Monuments Wales (Fig 2).

The Excavations

Following the demolition of the outbuildings, two trial trenches each measuring 30m long by 2m wide were opened across the site from north to south and from east to west in order to investigate the archaeological potential of the site (Fig 2). As a result of the information gained from the initial assessment a larger excavation was undertaken and a 14m x 12m trench was excavated on the south west corner of the site. Recent demolition material and extensive deposits of made-up ground were removed by machine and the site subsequently cleaned by hand.

Timber Posts

The excavations identified the former course of the river Adda and proved that the river originally ran much closer to the Bishops palace. The riverbank was located on the north side of the excavation trench and was revealed in the main site section. Three large timber posts (Fig 3) were located near the riverbank, the northernmost post had been driven into the riverbank while the remaining two posts were 1.5m to the south, forward of the bank and within the river. The posts had been sunk approximately 0.5m into the natural clay. A dark brown/black soil with organic material had accumulated on the river's edge, below which were spreads of river gravel and silt, all of which had been buried below made-up ground.

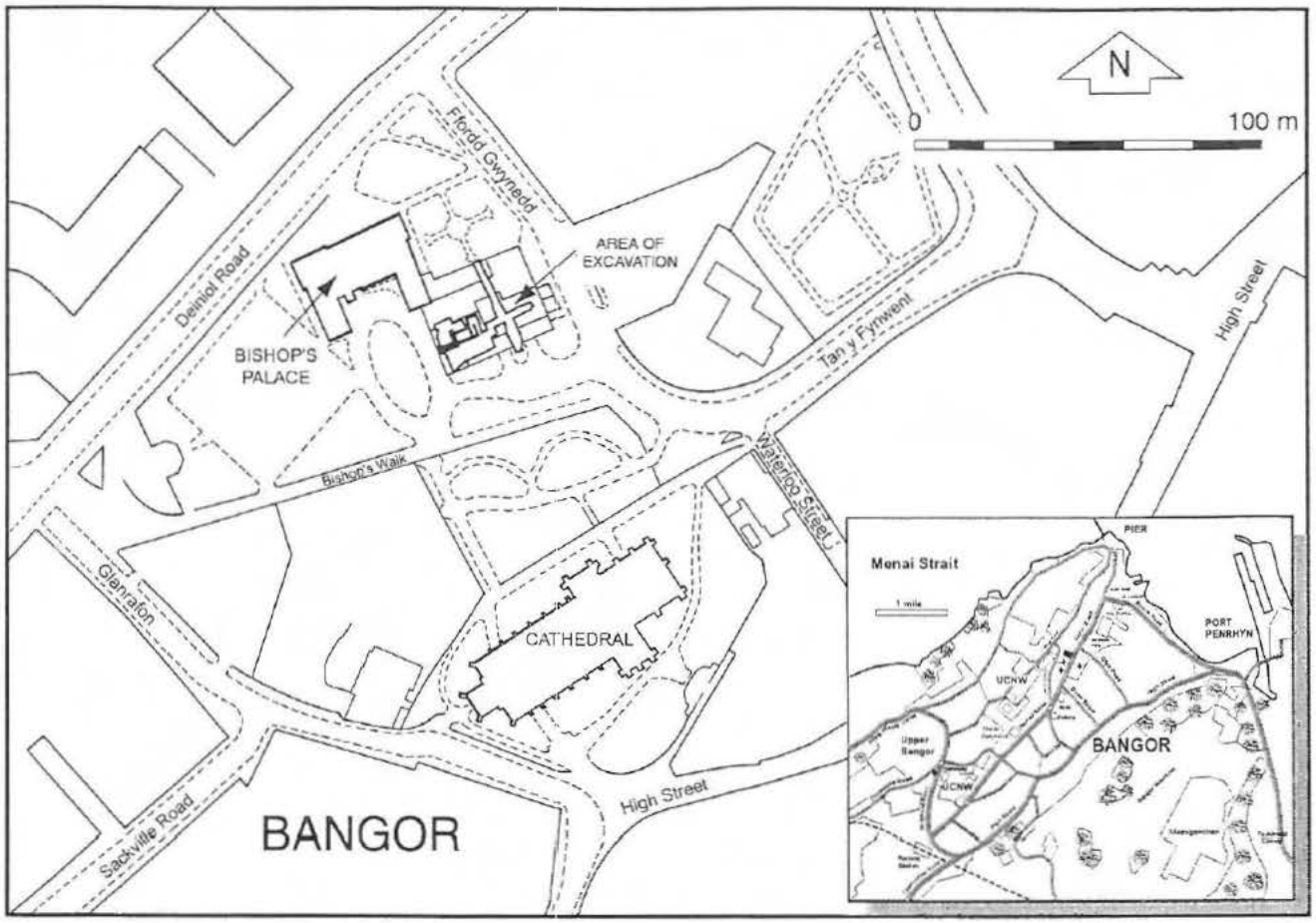

Fig. 1 : Bishop's Palace, Bangor - site location plan.

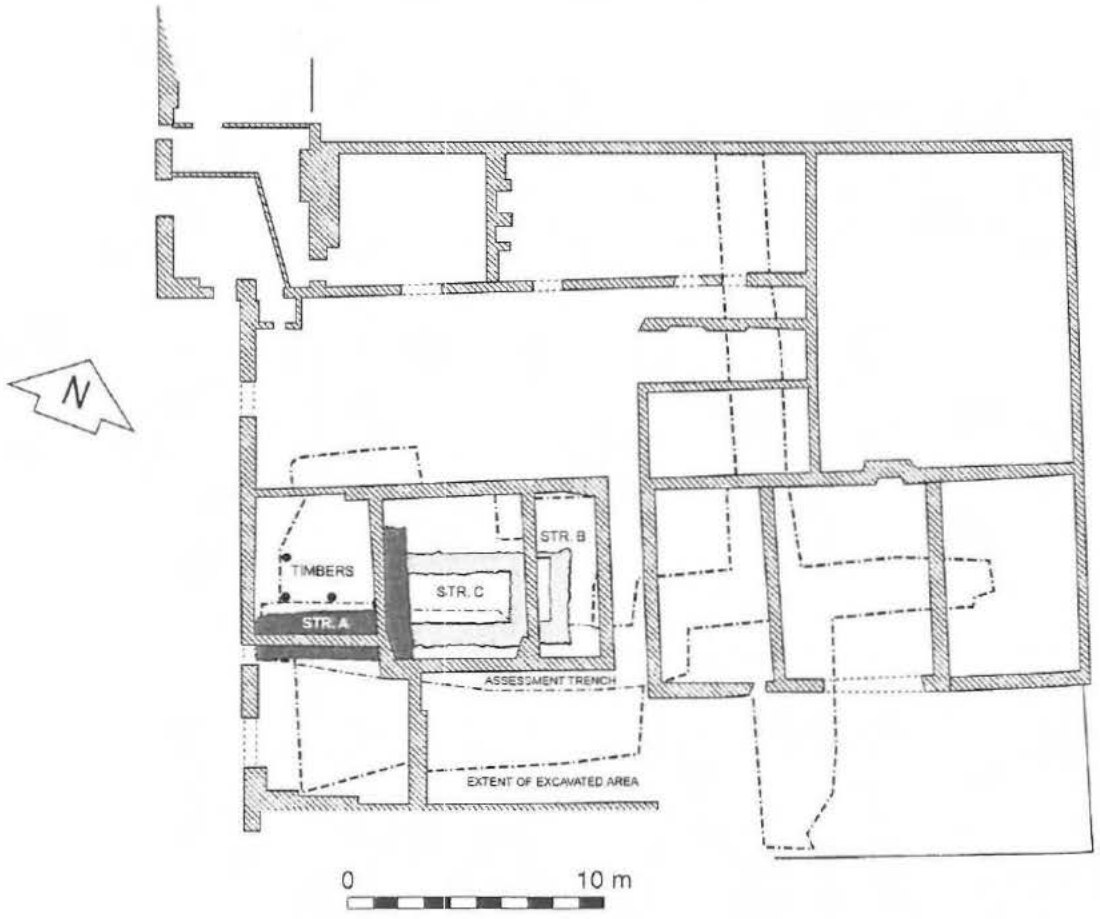

Fig. 2 : Bishop's Palace, Bangor - trench location plan showing outline of Council Depot buildings and excavation trenches

Two of the posts were removed and retained for sampling and a report was prepared by Dr Caroline Earwood (Appendix A). The posts have also been dated by dendrochronological analysis; the samples submitted have produced a valuable new set of data for north Wales, and the tree ring chronology spans the period AD973-1120. The two trees represented by the samples were felled in the late summer/winter of AD1120/21 (Fig 5 and Appendix B).

Structure A

A substantial mortared structure had been constructed on the riverbank (Fig 3), enclosing the remains of the earlier timbers. The structure comprised a large wall which had been built forward of the riverbank; the wall continued beyond the edge of the excavation and its full plan was not recovered. Some care had been taken over the appearance of the external south face of the wall, flat and square stone slabs were used to create neat coursing. The wall became gradually wider from west to east, expanding from 1.2m wide on the west to 1.5m wide on the east. It stood to a height of 1.5m. The upper 0.8m of the external facing was missing exposing a mortared rubble core, and the mortar contained a high proportion of crushed shell. The wall was supported on a 0.3m high foundation plinth, which projected 0.50m beyond the wall coursing to the south. The structure was keyed into the riverbank by a short stretch of wall on the east, which was battered on the internal west face, whereas the external face was constructed on a foundation plinth that projected 0.20m beyond the wall coursing.

The interior of the structure had been in-filled with a succession of soil layers, commencing with a brown clay layer with inclusions of blue clay which sealed the original brown/black soil horizon (above). A modern brick lined sump had been cut through the in-fill material (Fig 4). Two sherds of pottery were recovered from the deposits in filling structure A (Appendix C).

Structure C

A rectangular stone tank or basin (Fig 3) had been built against the east side of structure A, and the west wall of structure C was therefore formed by the external east wall of structure A. The walls of the tank were of mortared rubble, The tank had a flagged slate floor and the interior walls were rendered; the interior dimensions of the tank were 4.0m long from east to west by 1.9m wide. A stone culvert which cut across the east wall of structure A fed into the tank. The culvert was continued through the south wall of the tank where it appeared to be built as part of the original design of the wall, it was therefore always intended that the contents of the tank could be discharged into the river. The function of the tank is difficult to determine with any certainty (however see below).

Structure B

On the east side of structure C a stone lined drain discharged into the river (Fig 3). The southern terminal of the drain had been provided with an elaborate stone structure built forward of the riverbank. The north and south ends of the structure had stone lintels and the roof of the drain passage was lined with slate slabs, which continued beyond the elaborate stone structure to the north. The south and north walls of structure C were keyed into the west side of structure B which forms one end of the tank. The two structures are therefore contemporary. The drain was probably designed as part of a drainage or sewage disposal system for the Bishop's palace. The silted fill of the drain consisted of an organic silty sediment.

Another open drain was located immediately to the east of structure B. Large granite blocks formed the east side of the drain, whilst the west side was built of smaller rubble. In this instance the outflow had not been carried forward of the riverbank and the drain discharged level with the north side of structure B. Given the nature of surviving accounts of the river it should come as no surprise that the palace drains were discharged into the river.

Other Deposits

The stone structures on the riverbank, and the riverbed, were buried below deposits of made up ground on which the outbuildings of the Bishops Palace had been built. Where the foundations of the outbuildings projected beyond the riverbank they had to be very substantial. The foundations of the L shaped cottage were established on a grey brown soil, which had been buried below over a metre of made-up ground. These in-fill deposits can be seen in the main site section (Fig 4). A line of timber stakes set into the grey brown soil and

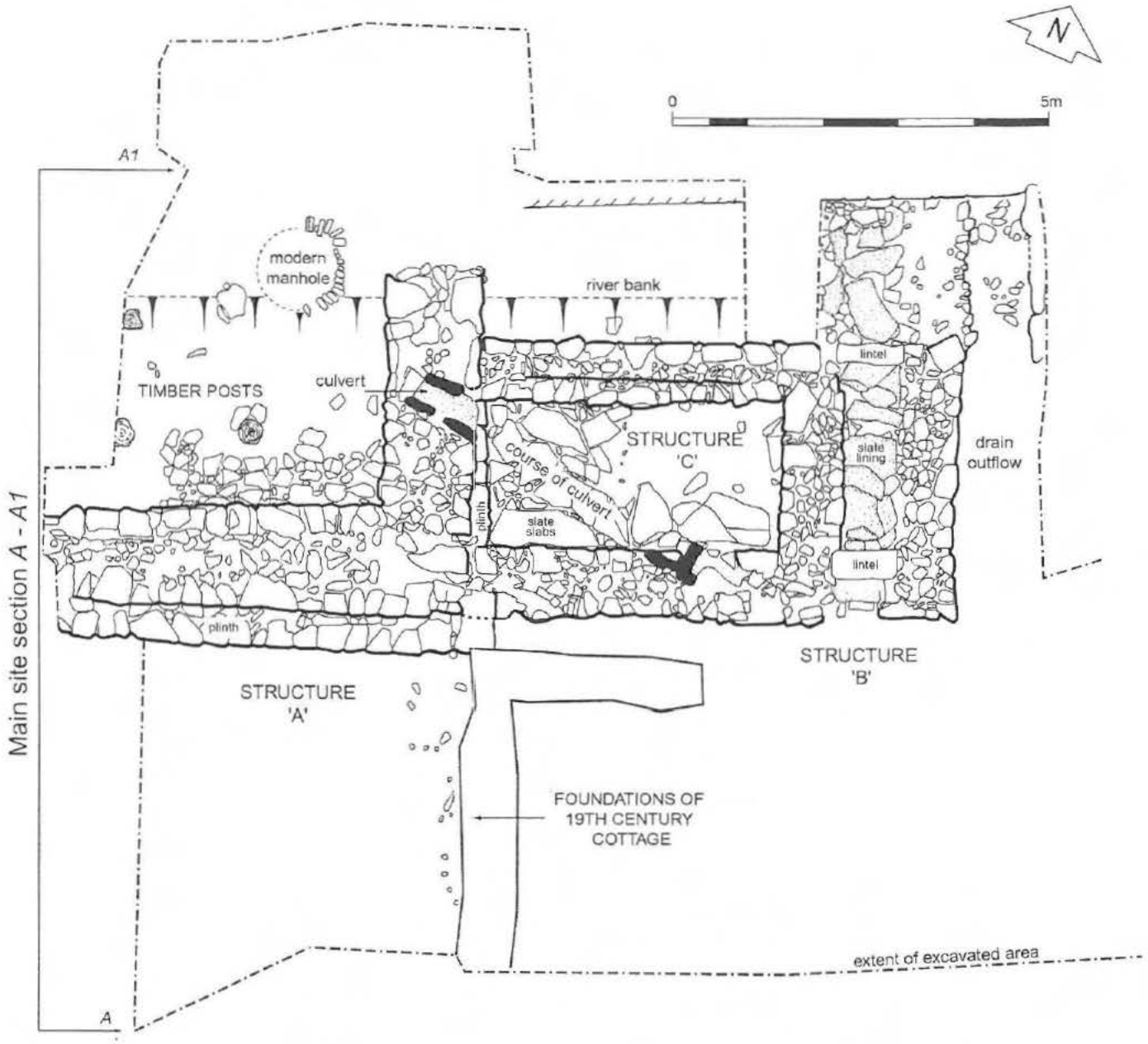

Fig. 3 : Bishop's Palace, Bangor - plan of structures A,B & C and associated features.

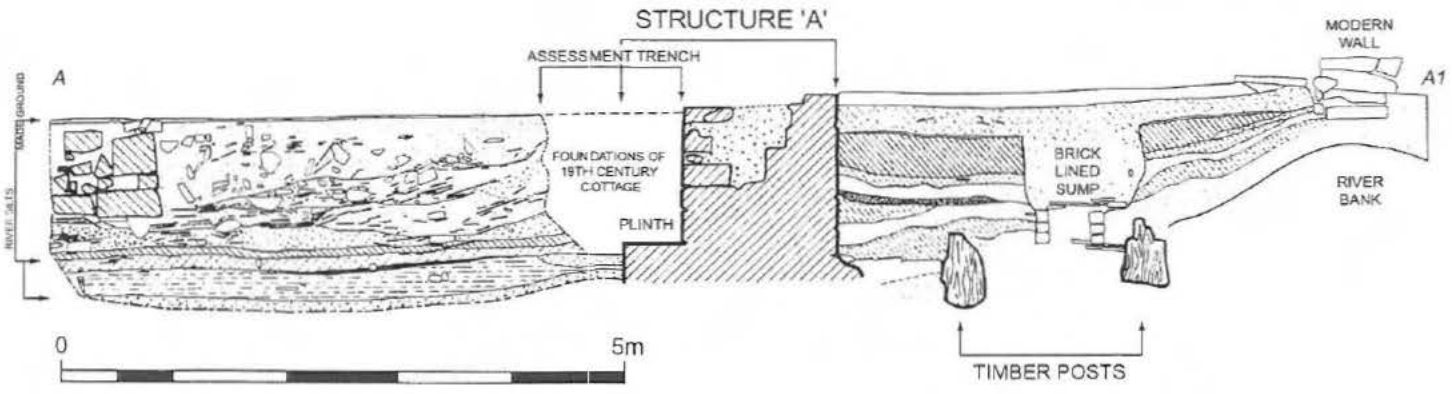

Fig. 4 : Bishop's Palace, Bangor - main section, west facing.

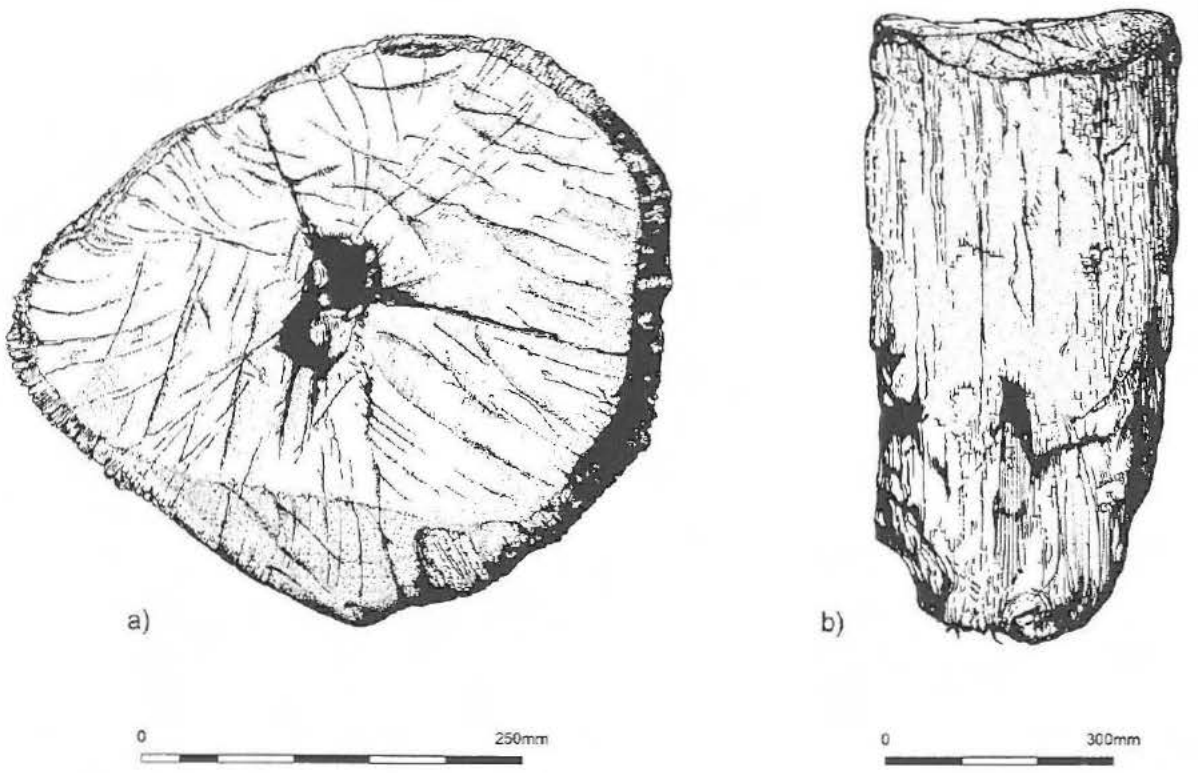

Fig. 5 : Bishop's Palace, Bangor - oak pile : a. uppersurface showing tool marks, scale 1:4. and b) elevation of same scale 1:8.

parallel with the foundations of the cottage may have been the remains of scaffolding used in the construction of the foundations.

At the east of the excavation a section of a wall was recorded in the initial assessment excavation. The wall butted against the external south face of structure A and may have provided the necessary revetments for the in fill/made up ground on which some of the outbuildings had been set.

Artefact

Wooden Bowl

To the south of the river bank extensive deposits of river gravel's were overlaid by deposits of grey brown clayey soil containing inclusions of stone and slate. A wooden bowl was recovered from this layer, (Appendix A). The bowl is of a typical medieval shape with a flat base and slightly sloping sides.

Discussion

Date and Function

There are a number of possible interpretations for the function of the timber posts and structure A, although at present there is insufficient evidence to establish with any certainty which, if any, are correct. There is little evidence for the character of the Adda which might inform any theories although it was apparently tidal as far as Dean street, some 350 metres to the east of the palace, until fairly recently. The timber posts may have been part of a wharf or may even have supported the superstructure of a small bridge. The mortared walls of structure A may have had a similar function or they may have been river walls designed to protect the area to the north from periodic flooding. The size of the foundation plinth suggests something more elaborate than a river wall although there is no evidence for the form of any superstructure if it was a bridge abutment. It is known, however, that a bridge did link the Bishops Palace with the Cathedral in the post medieval period. Several bridges are shown on Speed's plan of 1610 and a bridge adjacent to the palace is also shown on eighteenth century maps and drawings (Fig 6).

The dating evidence for the timber posts are based on the dendrochronological dates of the timbers (AD973-1120). The evidence for structure A is based on two stratified pottery sherds. The pottery sherds recovered from the in-fill of the structure have been tentatively dated to the fourteenth century (report by J Edwards). These deposits may not however provide an accurate date for the structure itself as they may have come from redeposited soils which originated elsewhere. It seems reasonable to suggest that structure A replaced an earlier timber structure, which was constructed in the first half of the twelfth century and that it is therefore of medieval date. One cannot, however, rule-out the possibility that structure A and the other structures were all relatively modern and built shortly before the outbuildings were constructed.

The RCAHMW survey suggests that the recently demolished outbuildings were built in *circa* 1800. However, they may have been buildings there at an earlier date. A view of the palace in Sandby's painting of 1776 shows a number of buildings on the south side of the palace; outbuildings are also referred to in 1721 (Browne Willis, 1721

The function of the tank or basin (structure C) has not been satisfactorily explained and the date of its construction is also problematic. The tank may have been used to hold freshwater fish for the palace or alternatively if the tank was filled from a culvert serving the palace toilets then some small-scale leather tanning may have been undertaken. There is no direct dating evidence for the remaining stone structures B and C. They must, however, have been abandoned when the river was culverted and the outbuildings were then built on the reclaimed land.

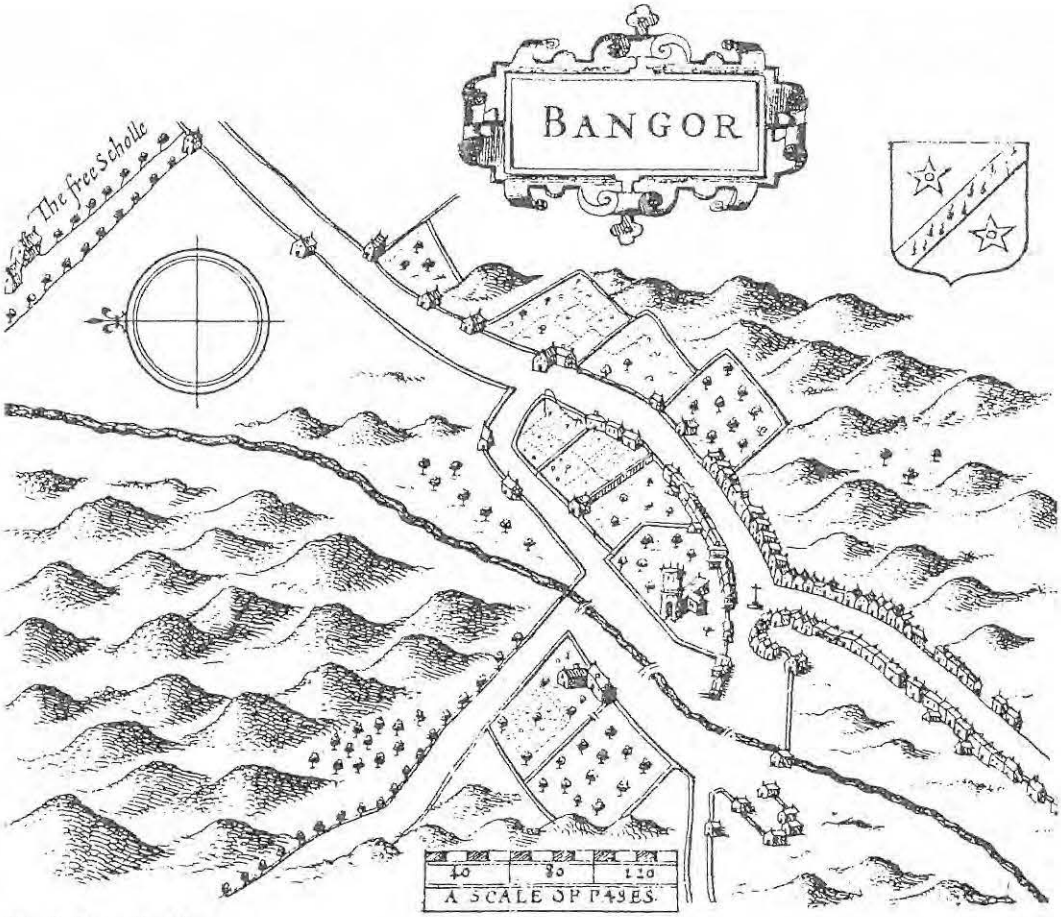

Fig 6. Speed's Map

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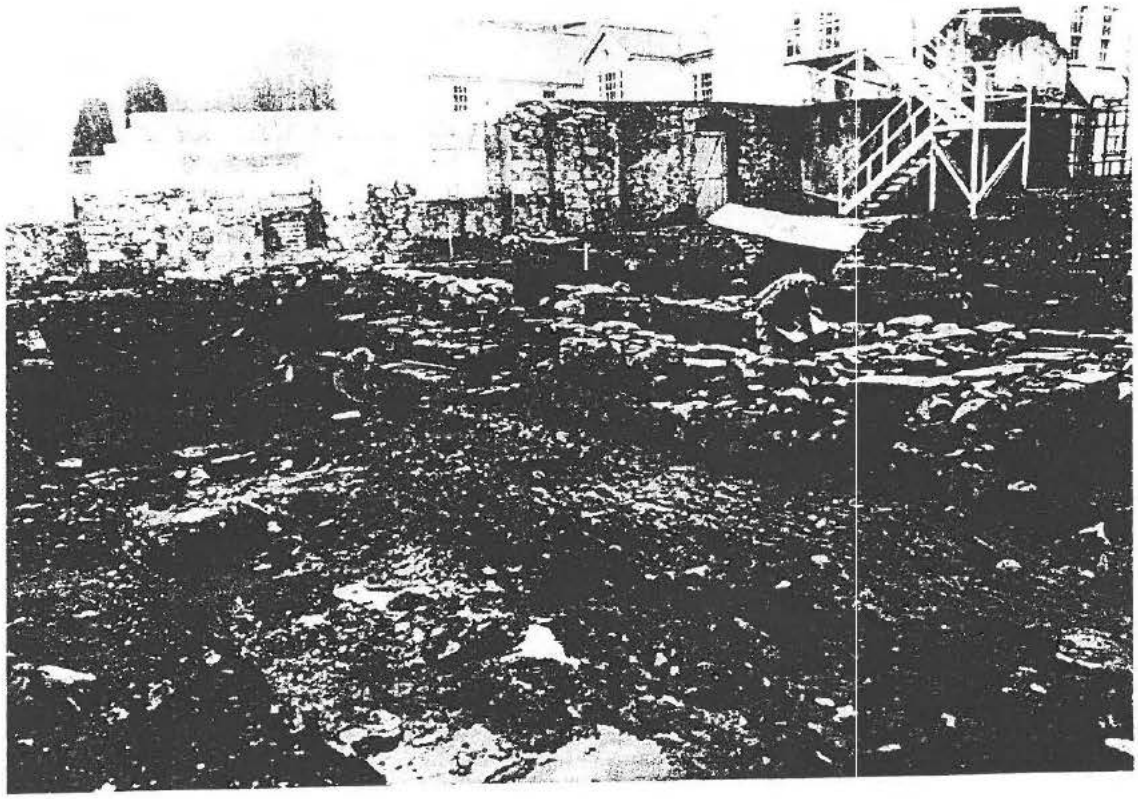
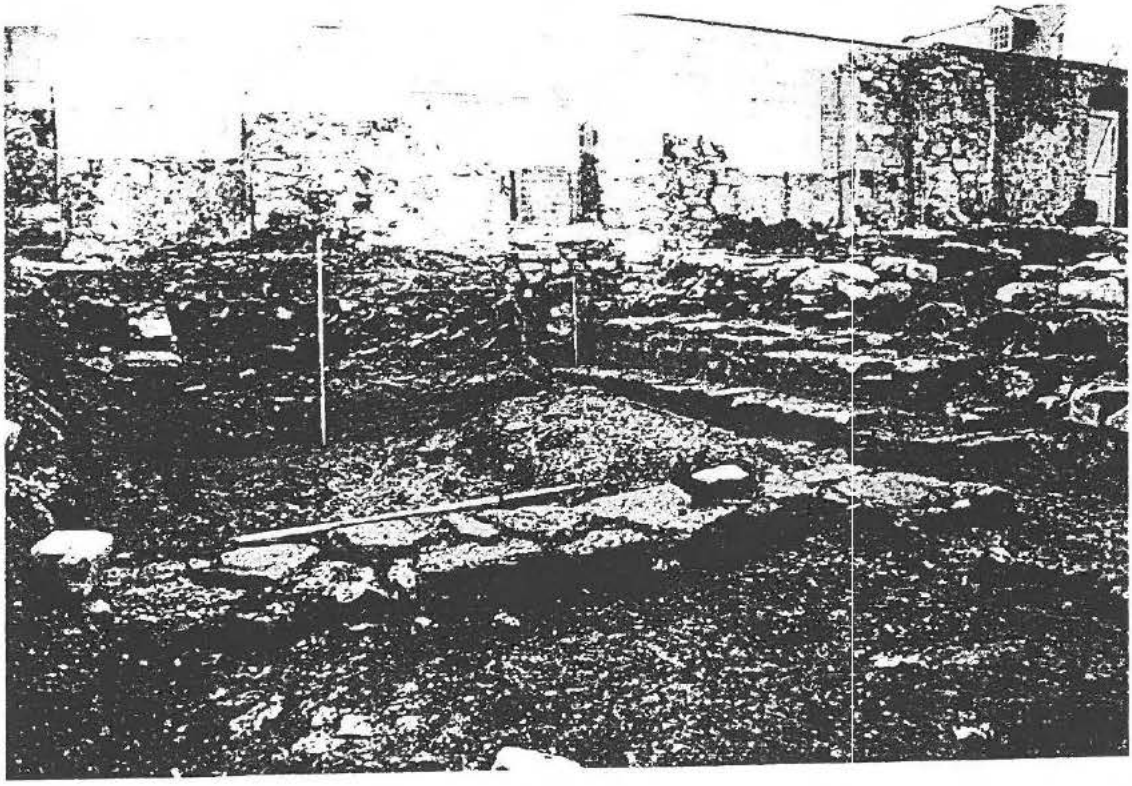
RCAHMW 1996 Plans of Bishop's Palace Outbuildings

Sandby, P 1776 Bangor in the County of Caernarfon (County Archives)

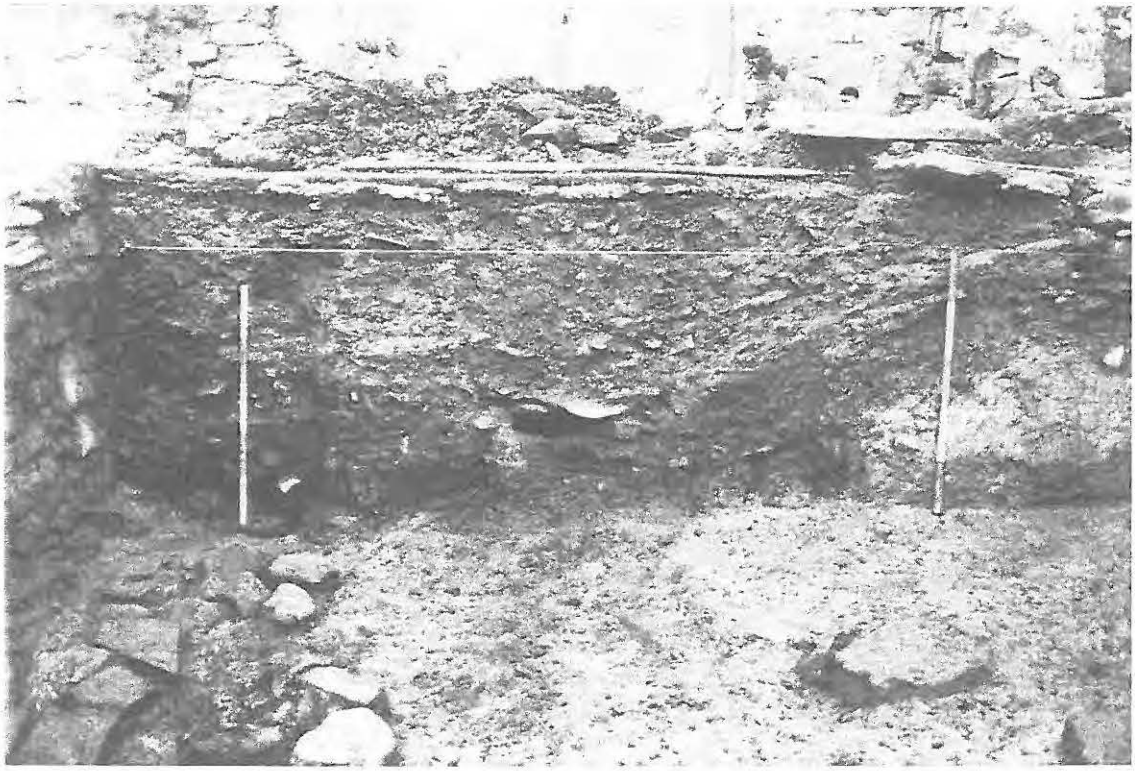


Bishop's Palace, Bangor . Plate 1 - general view of excavations viewed from the south.



Bishop's Palace, Bangor . Plate 2 - Structure 'A', wall and plinth to right centre. The footings of later outbuildings occupy the foreground. View from the south.

Bishop's Palace, Bangor . Plate 3 - west facing view along structure 'B', with 'C' and 'A' to the rear, respectively.



Bishop's Palace, Bangor . Plate 4 - north end of main section showing river bank, timber piles (foreground) and structure 'A' wall face.

Appendix 1

ARCHAEOLOGICAL RESEARCH & CONSULTANCY AT THE UNIVERSITY OF SHEFFIELD

DEINDROCHRONOLOGICAL ANALYSIS OF TIMBERS FROM BISHOP'S PALACE, BANGOR, GWYNEDD

ARCUS 273
July 1996

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Dendrochronological analysis of three oak samples from Bishops Palace. Bangor, Gwynedd

Summary
Tree ring analysis was carried out on three samples from two timber piles from the Bishops Palace, Bangor, Gwynedd. A site chronology, Bangor BP, was established from the three samples and was dated to AD973 - 1120 against medieval master chronologies. Sample la was complete to bark edge, giving a felling date of AD 1120/1121 for the timber piles.

Introduction
Three samples from two oak *(Quercus spp.)* piles from the Bishops Palace, Bangor, Gwynedd, were submitted for tree ring analysis at the Sheffield Dendrochronology Laboratory. Samples I a and I b were taken from the same untrimmed pile below the stone abutment. The pile was formed from a whole trunk. Sample 2 was also from a pile below the stone abutment. The trunk had been squared before use.

Method
The three samples were frozen for a minimum of 48 hours before being cleaned with a surform blade and knifed along the edge to clearly reveal the ring sequence. The prepared samples were then measured to an accuracy of 0.01mm, using a travelling stage linked to a computer. The ring width measurements are recorded automatically in a data capture program run on the computer (Tyers, *pers comm.).* Once measured, the individual tree-ring sequences are plotted using semi-log paper, The tree-ring sequences are then crossmatched against each other visually, using the graphs, and statistically using the crossmatching programs, Cros73 and Cross84 (Baillie and Pilcher, 1973; Munro, 1984) to compare the sequences and identify samples which are contemporary. The crossdating programmes test the correlation between samples using the Students t-value method. Matches over t=3.5 are considered significant providing that the usual match between samples is good and the match is replicated against a number of independent chronologies (Baillie, 1982).

Samples which crossmatch are combined to form the site master curve which is used where possible, to obtain absolute dates for a phase or site as it enhances the main climatic signal and reduces the effects of local growth conditions on the ring sequence (Baillie, 1982). Unmatched samples are tested against the site master. Any additional samples which crossmatch are combined with the site master curve. The remaining unmatched sequences and the site master curve are then compared with reference chronologies to obtain an absolute date.Once a date span has been established for the site master, it is possible to date the individual ring sequences incorporated in that master. To achieve a precise felling date the timber must have the bark edge present which marks the final year of growth. The season of felling can sometimes be identified based on the presence or absence of late spring/summer cell growth in the final ring. This will indicate whether the tree was felled during the growing period (incomplete ring), or in winter after the main growing season is over (complete ring). If a tree has incomplete sapwood it is possible to establish a felling date range using a 10-55 sapwood estimate. These are the 95% confidence limits for British oaks over 10 years old (Hillam *et al,* 1987). The maximum felling range will be 45 years, decreasing relative to the number of sapwood rings remaining on the sample (Hillam *et al,* 1987). The sapwood estimate will provide a date range for the felling of the timber. Where a sample does not have any sapwood an extra 10 rings are added to the date of the last measured ring. These represent the minimum number of sapwood rings expected. A probable *terminus post quem* for felling is obtained but, because an unknown number of outer rings have been removed through timber conversion, the actual felling date may be much later.

The sapwood estimates provide a date range for the felling of the timbers and, by association, the building of the structure. Consideration should be given. however, to the delayed use of timber caused by seasoning, stockpiling or the reuse of timber within a structure as these factors may affect the interpretation of the tree-ring results. In general, timber was used while still green and easily worked, so that structures using primary timbers would have been built soon after felling (Rackham, 1990). The possibility of repairs being made to the structure should also be taken into account. Tree-ring dating provides precise dates for the tree ring sequences and is a completely independent process but the interpretation of the results may be refined through study of other archaeological and documentary evidence.

Results

Details of the samples are given in Table 1. All three samples were suitable for dendrochronological dating as they had long clear ring sequences, including sapwood. Samples need to have at least 50 rings to be certain the sequence is unique (Baillie, 1982). The two timbers crossmatched to form a site master chronology, Bangor BP, which is 148 years long. The t values obtained between each sample are given in Table 2. The very high t value obtained between I a and I b are because the two sequences came from the same timber. These two samples were combined to form a mean sequence, sample 1, prior to inclusion in the site master chronology. Table 3 gives the ring width for Bangor BP. Figure I illustrates the relative positions of the individual sequences in site master chronology. Comparison of Bangor BP with various medieval master curves dated the site master to AD973 - 1120 (Table4).

All three samples had sapwood and 1a was complete to bark edge. The final ring has both spring and summer wood cells indicating that the tree was felled in the late summer or winter of .AD 1120/1121. Although sample 2 did not have sapwood complete to bark edge, the comparison of the two separate timbers would suggest that this tree was felled in the same year.

Conclusion

The tree ring chronology from Bishops Palace, Bangor, spans the period AD973 - 1120, with the two trees being felled in late summer/winter of AD 1120/21. This has provided a valuable new set of data for north west Wales, as chronological coverage from the medieval period is currently quite sparse from this region. The Bangor site master matches well against other chronologies from the Welsh borders, as well as sites in south east England, east Anglia and across to Dublin, Ireland. If further oak timbers are found at the site, it is strongly recommended that dendrochronological analysis be carried out. This may not only improve the interpretation of this site, but also provide long term benefits to the use of dendrochronology in north west Wales.

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Table 1: Details of the samples analysed from Bishops Palace, Bangor.

Sample	Location	Dimensions (mm)	Total No. Rings	Sapwood	Pith	AGR (mm/yr)	Comment	Date
1a	below stone revetment	420 x 360	146	35	V	1.4	Bark edge	AD975-1120
1b	Below stone Revetment	420 x 360	147	33	C	1.3		AD973-1119
2	Below stone revetment	370 x 340	121	13	F	1.9	Pith rotted	AD991-1112

Table 2: t value matrix for timbers from Bishops Palace, Bangor.

Key: \ = overlap < 15 years: =t-values less than 3.00; * = empty triangle

Sample	Sample	
	lb	2
la	25.61	8.03
lb	*	8.18

Table 3: Summary of Tree-ring widths for Bishops Palace, Bangor, site master chronology, (Bangor BP), AD973 to AD1120

Year	Ring Width Data										No. of trees per year
AD973			84	19	100	101	156	123	288	443	1 1 1 1 1 1 1 1
-	95	373	266	252	238	270	234	210	306	195	1 1 1 1 1 1 1 1 1 1
-	95	168	212	234	191	246	199	199	179	309	1 2 2 2 2 2 2 2 2 2

AD1001	207	250	181	187	75	118	196	216	207	158	2 2 2 2 2 2 2 2 2 2
-	153	180	211	143	174	173	270	227	213	204	2 2 2 2 2 2 2 2 2 2
-	254	253	228	133	127	203	190	176	181	179	2 2 2 2 2 2 2 2 2 2
-	147	164	159	159	105	81	138	302	219	269	2 2 2 2 2 2 2 2 2 2
AD1051	174	125	129	61	182	165	163	153	149	193	2 2 2 2 2 2 2 2 2 2
-	204	176	204	182	88	121	139	159	175	189	2 2 2 2 2 2 2 2 2 2
-	138	193	187	166	160	175	145	146	134	113	2 2 2 2 2 2 2 2 2 2
-	76	66	81	69	95	116	109	90	147	96	2 2 2 2 2 2 2 2 2 2
-	106	114	154	90	148	151	193	142	130	85	2 2 2 2 2 2 2 2 2 2
AD1101	55	146	138	68	114	124	90	64	51	69	2 2 2 2 2 2 2 2 2 2
-	73	68	45	72	51	64	62	76	153	70	2 2 1 1 1 1 1 1 1 1

Table 4: Dating the Bishops Palace site master chronology, AD 973 -1120. t-values with dated reference chronologies. All the reference curves are independent.

Key: SDL - Sheffield Dendrochronology Laboratory

Reference chronologies		*T* Values
Carlisle:	Carlisle Medieval (Baillie, *pers comm*)	6.74
Beverly:	Eastgate, Beverly (Groves, 1992)	4.55
Montgomery:	Hen Domen, Montgomery (SDL, *unpubl.*)	4.24
Bristol:	Dundas Wharf, Bristol (SDL, *unpubl.*)	5.97
Norwich:	Whitefriars, Norwich (Hillam, 1983)	4.96
	Quayside, Norwich (SDL, *unpubl.*)	4.93
London:	New Fresh wharf (SDL, *unpubl.*)	6.08
	Billingsgate (SDL, *unpubl.*)	4.73
Scotland:	Scotland (Baillie, 1977)	5.38
Ireland:	Dublin 1 (Baillie, 1977)	3.61

Figure 1: Bar chart showing the relative positions in the samples included in the site chronology, Bangor BP.

Key: White bars - heartwood rings; Hatched area - sapwood rings; C - pith; B - bark edge

Appendix 2

Wood from site at Bishop's Palace, Bangor
By Dr Caroline Earwood

Wood from below the stone abutment (Structure A)

Timber Posts

1. Length of untrimmed trunk wood 0.83m long x 0.38m maximum diameter. The upper surface of the trunk (presumably a pile) has been cut off nearly flat using an axe: there are remains of toolmarks across the surface, mainly slight ridges. The lower end of the trunk has been roughly pointed but is damaged, probably from being driven into the river bed, and has suffered some decay. No toolmarks are apparent on the lower end of sides of the pile.

Species: Quercus sp.

I would recommend that the pile be drawn (1:4) and that the top surface is drawn at 1:1 to show the toolmarks. Before drawing the wood should be thoroughly cleaned with water. No brushes or tools should be used as this will damage the surface of the wood. Sampling for dendrochronology should be carried out using a chain saw. The cut should be about 5-6cm side depending on the stability of the wood. Take care to retain the sapwood which is soft and will easily fall off. The sample should be double wrapped in plastic bags excluding as much air as possible.

2. Length of squared timber cut from a whole tree trunk, presumably the bottom of a pile. The top end has been cut to remove it from excavation the lower end has been roughly pointed but is damaged and decayed. There are no surviving toolmarks on the wood although it has been clearly squared on either side removing much of the sapwood. Length remaining 0.55m, dimensions of top 0.37m x 0.41m.

Species: Quercus sp.

I would recommend that a dendro sample be taken from this piece having first removed the top part of the pile to below the heartrot (ie. About 15cm from top). Before sampling the pile should be drawn.

If the third pile, not seen by myself, can be located it should also be sampled for dendrochronology.

Dendro samples should be submitted to Jennifer Hillam, Department of Archaeology and Prehistory, West Court, Mappin Street, Sheffield, S14 4DT Tel: 0114 2763146, having first checked that they are acceptable and ascertained the charge for a spot date.

3. Various pieces of worked and unworked wood from modern context 040

A variety of ends of piles and stakes of split and roundwood were noted. The condition of the wood confirms that these are relatively modern.

a. Saw cut timber with rectangular section and wedge shaped end. 0.66m x 0.08m x 0.04m. Species: Quercus sp.
b. End of pile with wedge shaped point cut with axe and pointed top. 0.7m long x 0.09m x 0.09m. Species: Quercus sp.
c. Fragment of wood, probably end of stake 0.31m x 0.07m x 0.05m. Non oak species.
d. Two fragments of birch roundwood (Betula sp.) with intact bark, one piece cut to a point with an axe. 0.17m c.0.2m and maximum diameter of 0.45m.
e. Eroded roundwood with bark cut to pencil point with an axe. 0.71m long x 0.21m in diameter. Porbably birch (Betual sp.)
f. End of pile with rectangular section cut to wedge shaped point with an axe. In poor condition. 0.4m long x 0.06m x 0.07m.

In view of the context in which this wood was found I would not recommend any further work.

4. Wood from "black organic layer"

a. Two fragments of roundwood, unworked. Diameter c.0.015m, maximum length 0.02m. Non oak species.
b. Three very badly damaged pieces of oak, one at least being the remains of a stake with pointed end. Maximum length 0.41m.
c. Substantial remains of wooden bowl now in three pieces.

The bowl is a typical medieval shape with a flat base and slightly sloping sides. Maximum diameter 0.017m, diameter of base c.0.01m, height of bowl 0.04m. It was not possible to identify the species as the bowl requires cleaning.

I would strongly recommend that the bowl be kept totally immersed in water in a rigid plastic box which is stored in a cool room. The bowl should ideally be cleaned in laboratory conditions and I suggest that the National Museum of Wales should be contacted to ascertain if they are willing to receive this find. The bowl is highly fragile and should be treated with care. A radiocarbon accelerator date should be obtained. The typology of the bowl indicates a medieval date is likely although it could be of post medieval date. Finds such as this are extremely rare, particularly so from Wales, and the bowl should be identified for species, radiocarbon dated and conserved.

If you are able to place the bowl in the care of the National Museum of Wales I would be willing to examine it further after it has been cleaned to identify the wood species and give you a fuller report.

Appendix 3

REPORT ON POTTERY FROM GAT 1383, BANGOR

By Julie Edwards, Chester Archaeology

Two sherds were retrieved from stratified contexts, (07) and (010), within structure A. Both sherds are made in the same hard, whitish grey firing fabric and are glazed on the exterior. Sherd 01 is thicker that 02 and has a pale yellowish green glaze whilst 02 has a dark yellow glaze. Both appear to have been wheelthrown. Sherd 01 has very small fragments (<2mm) of pink fired clay sticking to the glaze which may indicate different clay types being fired within the same kiln.

It is difficult to closely date the sherds as the fabric type is not one which has yet been studied or defined closely, although recently it has been noted in assemblages in North Wales (eg Ty'n Twr, Bethesda) and Chester (notably at 5-7 Foregate Street). The fabric has some similarity to but is not the same as the pink/white wares found in wasted material near Ewloe, Flintshire thought to date from sometime in the fourteenth century. A vessel in this pink/white ware was found in Chester containing coins dating to c.1361 (Rutter, 1977). The ware occurs in forms which generally date to the fourteenth and fifteenth centuries, however it has been suggested that these Ewloe type wares first appear at the end of the thirteenth century (Papazian and Campbell 1992, 59).

The large assemblage from 5-7 Foregate St, Chester is currently being studied. Pottery in a fabric similar to the Bangor sherds has been found in contexts with thirteenth/fourteenth century red/grey wares but not pink/white, it is therefore possible that this type pre-dates or at least comes into use earlier that the pink/white wares. Further work on the 5-7 Foregate St material is needed to confirm this and is in progress.

In conclusion it would seem that the Bangor sherds are likely to be fourteenth century in date but may be from the early part of the century with a possibility of a late thirteenth century date. At the moment a lack of well dated assemblages hinders close dating of the ware.

Fabric description

Terms are those used in the DUA Pottery Archive Users Handbook, 1984.

Colour – greyish white (Munsell, white 10YR 8/1) throughout, the unglazed interiors are discoloured but appear a dirty buff colour.

The fabric is hard, has a harsh feel and an irregular to hackly texture.

Inclusions – moderate clear and grey, ill-sorted quartz which varies from very fine to medium in size (<0.5mm) and is sub-angular in shape. Moderate quantities of an unidentified dense white inclusion which is opaque, ill-sorted, varying in size from very fine to medium (<0.5mm); angular and sub-angular in shape. Flecks of a red and black material, possibly iron compound, varying from very fine to fine in size (up to 0.25mm); sub-angular, irregular and flat in shape.

Glaze – finish varies from slightly lustrous to glossy. Crazed. Colour from dark yellow (10YR 6/8 to 2.5Y 6/8) to pale green (5Y 5/4 to 6/4).

Sherd weight

Find 01 Structure A (07) – 1 sherd 15g.
Find 02 Structure A (010) – 1 sherd 4g.

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