Bishop's Palace Gogarth Llandudno

Archaeological Excavation
May 2007

GAT Project No. 1865

Report No. 674

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

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Prepared for CADW

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Bishop's Palace Gogarth Llandudno

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BISHOP'S PALACE, GOGARTH, LLANDUDNO

ARCHAEOLOGICAL EXCAVATION (G1865)

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Summary

An archaeological excavation has been conducted on the site of the former Bishop's Palace, Gogarth, Llandudno. The excavation programme was conducted between August and September 2005 and was a continuation of work begun in 1997 by the Gwynedd Archaeological Trust. The site comprised the remains of a 13th century building (Block A) located atop an eroding cliff, which has been interpreted as a stone built chamber block belonging to the Bishop's of Bangor. Located to the northwest of this building were the remains of a larger 14th century complex of hall and ancillary rooms (Block B), which may have partly replaced the functions of the earlier chamber. The excavation of the site in 1955-6 by Douglas Hague of the RCHAMW was the first attempt at phasing the occupation of the two buildings: Hague suggested that Block A was built about 1280 and was destroyed by Owain Glyndŵr in c.*1402. During this time Block A was extended to the west by the construction of an adjoining building against the gable wall of the block. Prior to the destruction of Block A, Block B was constructed during the fourteenth century but ceased to be a residence during the fifteenth century.*

The excavations in 1997 and 1998 focussed on the cliff-facing section between the two blocks that had not been examined by Hague and which, due to continual erosion, had exposed the rubble core of Block A as well as the extension attached to the block. The excavation revealed that the "extension" to Block A was, most likely, a small functional building, such as a bakehouse or a chapel. The excavation also concentrated on an area between Blocks A and B, and identified a metalled surface between the two blocks, thought to be contemporary with Block A and earlier than Block B and the building attached to Block A.

The aim of the 2005 excavation, conducted partly in response to the collapse of one of the walls of Block A, was to expand on the work from the 1997-1998 programme, examining in greater detail the metalled surface located between the two blocks and to examine the extent of erosion along the cliff edge. A small excavation was also conducted within Block 'A' on the site of Hague's excavation in 1955, from which two pieces of suspected roof timber were recovered for radiocarbon dating.

The excavation revealed further information regarding the phasing for the site: the timbers removed from inside Block A provided a date range between the twelfth and thirteenth centuries, through radiocarbon dating, as did charcoal samples from the metalled surface. A radiocarbon date from the early fifteenth century recovered from outside the Block A batter may be related to the destruction of the block, perhaps carried out c.*1402 by Owain Glyndŵr. Several pottery sherds were also recovered from site: a late thirteenth/early fourteenth century sherd was recovered form below the metalled surface, whilst sherds ranging from the thirteenth to the fifteenth century were recovered from the collapse/demolition layers associated with Block A. In addition, the vertebrate analysis of the bones recovered from site revealed that, as well as cow, the inhabitants consumed fish and deer, a diet indicative of their high social status.*

1 INTRODUCTION

Cadw grant-aided Gwynedd Archaeological Trust (GAT) to undertake an archaeological excavation of the site of Bishop's Palace, Gogarth, Llandudno in response to the continuing erosion of the cliff edge, and in particular the collapse of one of the large upstanding sections of masonry which had formed the north-west wall of Block A. The work was undertaken in 2005.

The site was formerly the residence of the Bishop of Bangor and is divided into two parts: a 13th century building (Block A), which consists of the remains of a stone-built chamber block and a 14th century complex (Block B), which includes a large hall with ancillary rooms. Block A is situated at the top of a 6m high cliff formed from the eroding glacial till. Half of it had fallen into the sea by 1800 and possibly as early as the 17th century (Davidson 2001, 59). The building sits longitudinally along the cliff edge, so the northeast elevation and part of each of the two gable walls remain.

Previous excavation had been undertaken at Gogarth both by Gwynedd Archaeological Trust in 1997-8 (Davidson 2001) and by RCAHMW in 1955-6 (Hague 1956).

1.1 Acknowledgements

Gwynedd Archaeological Trust is grateful to the Railway Convalescent Homes for allowing access to the site and in particular to the manager at Gogarth, Mrs Talkington, for her help whilst the excavations were ongoing. Thanks must also go to the staff of *Walls and Fences* for their work in clearing the site of vegetation in advance of the excavations. The work was ably assisted by volunteers Mr T P T Williams and Frank Gooding, and the Trust is very grateful to both for all their help.

2. OBJECTIVES

The excavation was conducted entirely by hand and focussed on an area 120m² in size, linking the western end of Block B and the south-eastern corner of Block A. This was the location of the previous excavations undertaken by the Trust in 1997. The purpose of the 2005 excavations was to expand the earlier work to take into account new areas of erosion, and to try to put into the earlier findings into a wider context.

It was hoped to identify and understand further the metalled surface that existed between the two buildings, and specifically to understand the relationship between the metalled surface and Block B.

Additional work was conducted within Blocks A and B. The work inside Block A was intended to identify the burnt timbers described by Hague in the1955 RCHAMW excavation programme, which were thought to be the remnants of a destruction phase. The work inside Block B was intended to identify any activity associated with the building that had been preserved by the demolition layers.

The cliff-facing section, originally recorded during the 1997-1998 programme, was again examined following further erosion of the face.

3. BACKGROUND INFORMATION

3.1 Geology and topography

The site is located on a level coastal terrace on the south side of the Great Orme, at a height of 20m OD. The terrace is *c*.100m wide and lies between the steep slopes of the Orme, which climb to a height of over 200m on the northeast and the encroaching sea on the southwest. The terrace is formed from a thick layer of glacial till which overlies limestone rock. The terrace has been eroded by the sea, removing the majority of Block A.

3.2 Archaeological and historical background

The medieval parish of Llandudno comprised three townships, each established on the lower slopes of the Great Orme. The township of Y Gogarth at the southwestern 'corner' of the Great Orme was latterly the smallest but it contained the palace of the Bishop of Bangor. The Manor of Gogarth (which included all three townships) was reputedly bestowed on Anian, Bishop of Bangor by King Edward I in recognition of services rendered to the crown, notably the baptism of the first Norman Prince of Wales, newly born at Caernarfon. Gogarth was listed in the taxation of the Bishop's lands in 1291 and was also included in the extent of the Bishop's lands undertaken in 1306, whilst two letters were sent from Gogarth in 1309 and 1345 (Davidson 2001, 60). The palace remained in the possession of the Bishop and then the Church Commissioners until 1894, when it was sold to W F Mason who erected the large house which became the Railway Convalescent Home (*ibid.* 61).

The two structures comprising the site, namely Blocks A and B, were first properly identified and recorded in 1924 by Hughes and North, who planned and described the site. This was followed by a description compiled by the RCHAMW in 1949. Douglas Hague of the RCHAMW conducted an excavation of the site in 1955 and 1956 in an attempt to characterise the two structures. The excavation areas were inside the two blocks, as well as another excavation to the landward side of Block A. Hague concluded that Block A had been constructed *c*.1280 and Block B was constructed in the 14th century to provide more accommodation and a large hall. He also stated that Block A was possibly burnt down by Owain Glyndŵr *c*.1402 and that the site ceased as a residence during the 15th century (Hague 1956).

The 1997 Trust excavations focussed on the area to the northwest of Block A, where erosion was the most active and where Hague had not excavated. A building had been formerly identified here, but nothing had been noticed of its character. The aims of the project were to record the eroding section and to ascertain the nature and significance of the remaining archaeological deposits. The cliff section was cleaned and drawn and on the landward side an area of

c.30m² was excavated (Davidson 2001, 62). In 1998 a full record of the upstanding remains of Block A was undertaken by GAT.

The remains within the eroding section were identified as the core of a wall, 4.0m in length, running east-west along the cliff face. The east end was marked by two sandstone blocks, thought to be either quoins for a wall or the remnant of a doorjamb. The structure to which the wall belonged would have been to the south and there were no surviving remains. It was not thought to be an extension of Block A, but was more likely a small building such as a bakehouse or a chapel. A cobbled area was identified between Blocks A and B and was thought to be contemporary with Block A but pre-dating Block B.

4. EXCAVATION RESULTS

4.1 Block A and associated features.

Block A

A small excavation was conducted inside Block A to locate and remove pieces of charred timber identified by Hague during his excavation of the site in 1955-56.

The excavation area measured *c*.4.0m² in size and was located to the immediate east of an entrance that was partly filled with demolition/collapse material. This demolition material continued into the excavation area and comprised a 1.20m high bank of material incorporating successive layers of building material (Contexts 401 to 404; Figure 5). The original floor surface of Block A was identified below the demolition layers and comprised a 0.15m thick deposit of compacted lime mortar that overlay the natural clay (Context 406). Above this was the deposit that contained the pieces of burnt timber described by Hague (Context 405; Figure 4).

Two pieces of timber were removed for radiocarbon dating. One sample produced a date at 2 sigma of CAL 1060 AD to 1217AD, a calibrated age of cal 1162 AD (KIA32436). The second sample produced a date at 2 sigma of CAL 1164 AD to 1272 AD, a calibrated age of AD 1220 (KIA32437) (for full results see Appendix 4). The radiocarbon results gave a date range within the twelfth to thirteenth century AD. Though the age of the trees at felling is not known, it is assumed that mature oaks were used for the larger roof timbers. If this was so, some one hundred years should, perhaps, be added to the calibrated dates, thus giving a date range within the later 13th century date for Block A.

Above this deposit was a 0.18m thick deposit of compacted stones (Figure 4). Hague interpreted this deposit as a secondary occupation layer after the destruction of the Block by fire and prior to the collapse of the building. No evidence for secondary occupation was identified associated with this layer, however it was difficult to interpret the deposit within the confines of the excavation area so Hague's hypothesis could not be explored further.

Block A Batter

The batter supporting the superstructure of Block A was exposed at the north-eastern corner of the building, revealing, beneath a substantial deposit of rubble, a well-built construct of dressed sandstone and limestone bonded with a white lime mortar (Context 106; see Figures 5 and 7). It was difficult to tell whether the batter was built within a specific foundation cut or whether it exploited a natural depression in the landscape (Context 126). Either way, this cut/depression was filled with a 0.20m thick deposit of limestone blocks and fragments of stone, mixed with a sand/silt onto which the batter was built.

Metalled Surface and associated features

Outside Block A and beneath the metalled surface was a thin, compacted layer of sand/silt that lay directly above the natural clay. This deposit was similar in appearance to the natural clay, but was compacted and contained patches of charcoal, suggesting it was a pre-metalling surface or a trampled/compacted "natural" surface associated with the building of Block A. Charcoal was removed from this deposit for radiocarbon dating and produced a date at 2 sigma of CAL 1223 AD to 1290 AD, a calibrated age of cal 1277 AD (KIA32438) (for full results see Appendix 4). Also a small sherd of pottery was recovered from this deposit that was identified as a "Coal Measure Clay" fabric of late thirteenth/early fourteenth century date (see para. 4.5 and Appendix 3). This deposit was not identified during the 1997 excavation, but the metalled surface was not exposed as far as the Block A batter at that time, so it was possible that this compacted surface was limited to the area immediately surrounding the batter and did not spread across the entire area towards Block B.

The metalled surface was first identified in the 1997 excavation. No dating evidence was recovered, but the metalled surface was thought to be contemporary with the earlier use of Block A and earlier than the construction of Block B (Davidson: 67), suggesting it was deposited during the thirteenth century when Block A was built, or sometime prior to the construction of Block B in the fourteenth century (based on Hague's timeline).

The metalled surface covered the foundation cut for the batter, proving that it was deposited after the construction of Block A (see Plate 7) and it also covered the foundation cut for the adjoining building which butted Block A. A sample of charcoal from the metalled surface was sent for radiocarbon analysis and produced a date at 2 sigma of CAL 1162 AD to 1260 AD, a calibrated age of cal 1216 AD (KIA32439) (for full results see Appendix 4). This date was in fact *earlier* than the date produced for the deposit *below* the metalled surface. However, both dates are from the thirteenth century, and the statistical error and age of felled timber would explain the difference.

The relationship between the metalled surface and Block B was also investigated and the spread of stone forming the metalled surface was exposed from the Block A batter westwards to Block B, incorporating the area originally exposed during the 1997 excavation. It was thought, following excavation of a small trial trench in 1997, that the metalled surface continued below Block B, showing it to be earlier (Davidson: 65). Further investigation in 2005 appeared to show that whilst the metalled surface respected the presence of the foundation course of Block B along the south-facing elevation, it did appear that the foundation for the east-facing elevation of Block B had disturbed the metalled surface (Figure 8) and it was also thought possible that the foundation for Block B along the south-facing elevation was cut into the metalled surface and the surface subsequently repaired. On balance, therefore, the stone metalling is interpreted as post-dating Block A and pre-dating Block B, but in use throughout part of the life of both structures.

Structure adjoining Block A (context 120)

Abutting the Block A batter was a four-metre long wall foundation, identified in the 1997 excavation as the remaining wall of a small structure that had nearly all been lost to erosion (Context 120; Figures 2 and 8; Plates 6 and 9). The relationship between the two was originally visible on the seaward-facing section of the exposed cliff face (Plate 9). The surviving wall foundation (constructed from limestone and white lime mortar) was at least one metre wide and may originally have been wider, with most of the inner face of the wall having succumbed to sea erosion (Plate 9). The foundation course was cut into the natural and the foundation cut was covered by the metalled surface suggesting it was built prior to the metalled surfaced, though after the construction of Block A (cf. Plates 7 and 8).

The width of the foundation trench on the landward side may argue for the presence of a stone batter below the surface level (see plate 8), though it was not possible to excavate down to confirm this. Hague, however, recorded a batter on the west wall of this building.

No datable evidence was recovered but the fact that the foundation cut was sealed by the metalled surface, suggested that it was built during the later thirteenth century.

Wall (context 116)

At the northwestern end of the ruined structure (context 120) was the remains of another wall (Context 116; Figure 1; Plate 6), orientated northwest to southeast. The wall was originally identified in the 1997 excavation, and was found to be butted against the outer face of 120 (Davidosn: 67).

The current excavations showed the wall was built onto a clay foundation layer (Context 123), which in turn was built onto a layer of rubble (Context 121) that partly covered the foundation trench of wall 120 (See Figure 7). Wall 116 was therefore built after the construction of wall 120, and apparently after the metalled surface had gone out of use, as a thin layer of collapse and clay separated it from the metalled surface (108). There was slight evidence for the presence of a cut through the rubble to allow the construction of the wall at the lower level after the build-up of collapse, but some doubt remains as to the certainty of this.

A series of demolition/collapse layers which, from the way they slope away from wall 116, appear to have fallen from it, were identified. These, however, included slate and stone (Contexts 111 to 114; Figure 7; Plate 6), and there is no evidence that wall 116 was ever part of a roofed structure. The alternative is that the rubble and slate layers may be from the structure associated with wall 120. Two pottery sherds were recovered from the primary collapse layer (Context 114): the first, a small, abraded sherd with a fine oxidised sandy fabric and a clear glossy glaze on the exterior was identified as a Cistercian-type ware dated to the late fifteenth/sixteenth century; the second was an

unglazed body sherd thought to be fourteenth to fifteenth century in date. (For a detailed description of both fabrics, see para. 4.5).

It was also noted that the collapse material from Block A was mixed with the collapse material that lay next to wall 116, (Plate 6), suggesting that the collapse material from two different structures was accumulating at the same time. (see Figure 7 for the relationship between the layers of collapse from both structures).

It has not proved possible to date the construction of wall 116 with certainty. If, as the evidence suggests, the metalled surface was no longer in use when the wall was built, it is also likely that structure 120 had gone out of use, though the wall was still standing to allow 116 to be built against it. If this was the case then the most likely period for the wall to be built would be within phase 7 (see below) which follows the collapse of much of Block A and structure 120. The wall does not appear to belong to a structure, and therefore, despite its well-built appearance it is best interpreted as a boundary wall.

Demolition Layers

A series of demolition/collapse layers surrounded Block A, forming a distinctive bank that hid the majority of the batter (Plates 3 to 5). Part of this bank was removed during the 1997 excavation programme in an attempt to investigate the batter and two distinct phases of demolition/collapse were identified: an initial phase of slate and other building debris thought to have come from either Block A or structure A1 (Davidson: 66); a second phase of collapsed upstanding masonry thought to have resulted from the clearing of stone from the structure. It was thought that the wall described above (Context 116) was cut through the earlier phase of collapse, whilst remnants of this wall were incorporated into the secondary phase of collapse/demolition, suggesting it was built between these two phases.

The 2005 excavation identified similar activity, although the cut for the wall through the earlier demolition/collapse phase was not identified.

The primary layer of demolition material (Context 118) was 0.45m thick, and contained flecks of mortar mixed with clay/silt. A secondary layer (Context 117) followed this, which contained small stones in a silt/clay deposit. Directly above this was another deposit, which contained frequent inclusions of roof slate broken into fragments (Context 105; Figure 5; Plates 4 and 5). Mixed into this deposit were shell fragments, mortar and other fragments of building material. These deposits were most likely caused by the collapse of the top of the structures forming Block A and/or structure A1.

A sixteenth century pottery sherd from one of the demolition collapse layers of the wall (Context 114), below the slate-rich layer, suggests that the collapse of these structures began in at least the sixteenth century.

Immediately above the slate-rich layer was a shell and mortar-rich deposit (Context 110), interpreted as another demolition/collapse layer. This was covered by a 0.20m thick silt-rich layer that did not contain extensive demolition material (Context 104; Figure 5; Plates 4 and 5). This deposit was thought to be a buried soil, representing a period of structural stability during a bank of topsoil may have formed over the initial layers of building collapse. This must have happened after the deposition of the sixteenth century pottery sherd in Context 114, although a precise date is not available.

Above the buried soil were the final two layers of demolition/collapse that formed the remainder of the mound (Contexts 102 and 103; see Figure 5; Plate 5). These two deposits contained large blocks of masonry from Block A. The 1997 excavation suggested that these two deposits were caused either by the natural erosion of the upstanding masonry or the clearing of stone into a single pile after it had fallen from the building (Davidson: 66).

Cliff Section

The cliff section was originally inspected and recorded during the 1997 excavation. The cliff section lay immediately adjacent to the northwest gable wall of Block A and measured 8.0m in length with an average height of 2.0m. The section lay at the top of the marine cliff and appeared as rubble masonry, with mortar and charcoal inclusions. Most of the masonry represented the inner core of the wall, of which one face had fallen into the sea. The 1997 excavation provided a detailed description of the exposed section (Davidson: 62-4) and during the 2005 excavation, the cliff was re-recorded to assess the extent of the erosion and to record any further information.

The cliff-facing section (Plates 9 and 10) comprised the Block A batter (Context 106), the abutting wall (context 120) and the later wall (Context 116). Several collapse layers (described above) were also visible, as were the foundation layers for all three structures. A possible doorway was identified along the cliff section during the 1997 excavation, close to the Block A batter. The interpretation was based upon an area of collapse that appeared to fill a void that could either have been a doorway or a gap between the two structures (Davidson: 63). The 2005 excavations were not able to confirm this.

4.2 Block B

The construction of Block B, which comprised a large hall and ancillary rooms, was thought to have begun within half a century of Block A (Davidson: 68). It was thought that the site was in regular use by the Bishops of Bangor and that "the comparatively settled times argued for the construction of a more comfortable dwelling" (*ibid*.). The 1997 excavation focussed on the southeastern end of one of the ancillary rooms, exposing the foundation layer of the structure as well as the metalled surface that existed between Blocks A and B (Figure 2 and 3).

The Metalled Surface

The metalled surface only extended as far as the extreme northern end of Block B and then continued along the south-facing elevation (Figure 8). It did not continue along the east-facing elevation. A lime mortar base layer for the metalled surface was identified, which had been set onto the natural sand (Context 310). A charcoal sample from the metalled surface was sent for radiocarbon analysis and produced a date at 2 sigma of CAL 1162 AD to 1260 AD, a calibrated age of cal 1216 AD (KIA32439) (for full results see Appendix 4), suggesting it was deposited in the thirteenth century before the construction of Block B.

It appeared that the metalled surface had been disturbed during the construction of Block B, especially on the east-facing elevation where the metalled surface may have been partially removed to accommodate the foundation level of the structure (Figure 4).

Foundation Cut

A possible foundation cut (Context 307; Plate 16), was identified below the Block B building. It was difficult to tell within the confines of the excavation area whether it was an actual cut or whether the structure had utilised a natural slope, which was built up using a foundation layer. The foundation cut outside the east-facing elevation appeared to be a cut rather than a slope (Figure 8).

Foundation Layer

A 0.40m high foundation layer (Context 305; Plate 16) was built into the foundation cut using limestone blocks with a lime mortar bond. The foundation course was 2.0m long along the east-facing elevation (Figure 9). The remainder of the cut was backfilled with smaller pieces of limestone rather than blockwork as the elevation continued northwards (Figure 9).

Upstanding Remains

The upstanding remains of Block B (Context 304; Plate 13) were identified along the south and east-facing elevations and were built onto the foundation layer of the structure (Figures 9 and 10; Plate 16). The construction materials were the same as the foundation layer but were in a state of disrepair, standing at most two courses high.

Internal Floor Surface

A possible internal floor surface (Context 205), extant as a thin deposit of irregular stones was identified (Figure 9; Plate 15). It was not thought to be a demolition layer, as it appeared quite evenly spread within the structure and differed in appearance to the demolition layers above.

This deposit covered both the natural sand and the foundation cut for the ancillary building and was sealed by a succession of demolition/collapse layers. No datable artefacts were recovered.

Demolition/Collapse Layers

A total of four demolition layers were recorded above the possible internal floor surface (Contexts 201 to 204). The deposits contained fragments of mortar, rubble and slate, which appear to have been deposited from the south to form a mound that covered the south-facing elevation and butted against the east-facing elevation. No datable artefacts were recovered from any of the deposits.

External Demolition/Collapse Layers

A sequence of demolition/collapse layers were recorded outside of the east-facing elevation of Block B (Contexts 302 to 303; Plate 14). They formed a discrete bank of material that spread for a couple of metres eastwards towards Block A before levelling out. The material appeared to have been deposited from the north and may have come from the main hall of Block B. The deposits included mortar, slate and small stone fragments. The material may have been dumped as part of general site clearance.

5. DISCUSSION OF PHASING AND CHRONOLOGY

5.1 Radiocarbon dates

Table 1 Summary of radiocarbon dating evidence

Context no.	***Description***	***Charcoal***	***Dating method***	***Lab No.***	***Conventional radiocarbon age***	***2 Sigma calibration***
405	Burnt Timber	Oak	AMS	KIA32436	890±30 BP	CAL 1060 AD to 1217AD
405	Burnt Timber	Oak	AMS	KIA32437	825±25 BP	CAL 1164 AD to 1272 AD
109	Burnt Timber	Unidentified	AMS	KIA32438	560±22 BP	CAL 1317 AD to 1427 AD
108	Charcoal	Unidentified	AMS	KIA32439	835±25 BP	CAL 1162 AD to 1260 AD
124	Charcoal	Hazel	AMS	KIA32440	755±25 BP	CAL 1223 AD to 1290 AD

Five radiocarbon samples were sent for AMS dating:

- Two pieces of timber were recovered from inside Block A (Context 405) and were thought to be from the roof or first floor of the structure, originally identified during Hague's excavation. One sample produced a date at 2 sigma of CAL 1060 AD to 1217AD, a calibrated age of cal 1162 AD (KIA32436). The second sample produced a date at 2 sigma of CAL 1164 AD to 1272 AD, a calibrated age of AD 1220 (KIA32437) (for full results see Appendix 4). These dates are statistically contemporary, and, given that mature oak trees may have been used for construction, give a date for the timbers of the later 13th century.

- A sample of charcoal was recovered from a disturbed area surrounding the Block A batter (Context 109). It was unclear whether the deposit was part of the metalled surface or earlier, but it was sealed by a demolition layer (Context 105) which contained sherds of thirteenth to fifteenth century pottery. The radiocarbon sample produced a date at 2 sigma of CAL 1317 AD to 1427AD, a calibrated age of cal 1403 AD (KIA32438) (for full results see Appendix 4).

- A sample of charcoal was recovered from the metalled surface between Blocks A and B (Context 108), which produced a date at 2 sigma of CAL 1162 AD to 1260 AD, a calibrated age of cal 1216 AD (KIA32439) (for full results see Appendix 4). The radiocarbon data gave a date range within the twelfth to thirteenth century AD.

- A sample of charcoal was recovered from a deposit below the metalled surface (Context 124), which produced a date at 2 sigma of CAL 1223 AD to 1290 AD, a calibrated age of cal 1277 AD (KIA32440) (for full results see Appendix 4).

Samples KIA 32436, 32437, 32439 and 32440 show no statistically significant age difference and correspond with the expected timeline for the construction and occupation of Block A in the thirteenth century. Except for KIA 32440, the samples were taken from oak, which has the potential for varied dates depending on whether the charcoal derived from the centre of the tree or near the outside. KIA 32440 was sampled from hazel, which has less potential for a disparity in dates due to the quicker growth cycle of the tree.

The charcoal from KIA 32438 was not identified and the date from this sample was the only example from the fourteenth/fifteenth century (see Appendix 2 for a detailed description of the charcoal species analysis).

The samples were originally taken in an attempt to provide phasing that would enhance the known chronology as well as suggest dates for specific activities: the construction of Block A with KIA 32436, 32437and 32438 and the laying of the metalled surface with samples KIA 32439 and 32440. The timber samples from Block A (KIA 32436 and 32437) confirm the thirteenth century date suggested by Hague for its construction. It was hoped that KIA 32440, recovered from the foundation cut of the Block A batter, would also confirm this date, but instead the calibrated age of 1403 AD would suggest this charcoal is intrusive, and that it dates from about the time of the destruction of the site suggested by Hague. The radiocarbon dates for the two samples from above and below the metalled surface overlap, and confirm the suggestion that it was laid during the mid to late thirteenth century, in between the construction of Blocks A and B.

5.2 Site chronology

The following phases, derived from the site stratigraphy and dating evidence, are now suggested:

Phase 1 (late 13th century): construction of Block A. This includes context 124 underlying the stone metalling, and possibly also the lime layer within Block A (406).

Phase 2 (late 13th century): construction of structure 120. This took place after Block A, but before the laying down of the stone metalling (108).

Phase 3 (c. 1300): construction of metalled surface 108. This post-dated the construction of structure 120, but is thought to have pre-dated Block B.

Phase 4 (early 14th century): destruction of Block A by fire.

Phase 5 (c. 1400): construction of Block B.

Phase 6 (after 1400): initial collapse marked by contexts 112, 113 and 114 from structure 120, and contexts 117 and 118 from Block A.

Phase 7 (after 1500): buried soil (context 104) associated with a relatively stable period. This is the most likely phase for the construction of the wall 116, which certainly post-dates the initial phases of collapse of Structure 120.

Phase 8: Further collapse of masonry represented in contexts 102 and 103.

6. ANALYSIS OF FINDS

6.1 Bone analysis

Table 2 Summary of Vertebrate Analysis and Species Identification

Context no.	*Description*	*Pig*	*Cow*	*Deer*	*Caprovid*	*Poultry*	*Cod*	*Other*
105	Block A Demolition/ Collapse Layer	3	10		8			16 (Medium to Large Mammal)
107	Rubble Core of Structure 120		1		1			3 (1 Unidentified Bird; 2 Medium Sized Mammal)
110	Block A Demolition/ Collapse Layer	1	1	1		1Chicken		3 (1 Unidentified Bird; 2 Large Sized Mammal)
114	Structure 116: Primary collapse layer				1			
124	Compacted charcoal-rich deposit below metalled surface 108	1						1 (Medium Sized Mammal)
202	Block B Demolition/ Collapse Layer	2	5	2	4	1 Goose	1	12 (Medium to Large Mammal)

6.1.1 Vertebrate Analysis and Species Identification

A total of eighty bone fragments were recovered from the site for species identification: five from Block 'A' (Contexts 105, 107, 110, 114, and 124, see Table 2, above) and one from Block 'B' (Context 202; see Appendix 2 for a detailed description of the vertebrate analysis). Most of the fragments were recovered from the demolition layers associated with Blocks A and B (Contexts 105 and 202 respectively).

The species identification focussed on the state of preservation and colour of the fragments, and the appearance of broken surfaces. Supplementary information, such as fragment size, dog gnawing, burning, butchery and fresh breaks, were also noted, where applicable.

Bone fragments were identified to species or species group using the PRS modern comparative reference collection (Appendix 2). The bones which could not be identified to species were described as the 'unidentified' fraction. Within this fraction, fragments were grouped into two categories: large mammal (assumed to be cattle, horse or large cervid) and medium-sized mammal (assumed to be caprovid, pig or small cervid).

Generally, the bones were well-preserved and fawn in colour. Fresh breakage damage was noted throughout albeit fairly limited in extent, whilst butchery marks were also evident particularly on the material from Contexts 105 and 202.

Cattle and caprovid remains were prevalent, but pig bones were also identified (Appendix 2; Table 1). Mandibular canine fragments representing both male (from Context 202) and female (from Context 110) individuals were also identified. Other species were not well represented but remains included a roe deer (*Capreolus capreolus* (L.)) scapula from Context 110 and two fallow deer (*Dama dama* (L.)) calcaneae from Context 202. One of the latter had been chopped.

Bird remains included fragments of goose and chicken. Medullary bone was noted on the inner surfaces of a chicken tibiotarsus fragment indicating that the hen was 'in lay'. The goose bone was of a size consistent with both wild species of geese and the domestic goose so its origin could not be established. A single fish bone from Context 202 was identified as possibly cod; this premaxilla represented a large fish of over a metre in length.

Both cattle and caprovids were represented by a range of skeletal elements, although caprovid mandibles were relatively numerous from Context 105. In general, bones suggesting primary butchery waste (i.e. head and terminal limb bones) were quite common for cattle, whilst (excluding the mandibles in Context 105) meat-bearing elements were more numerous for caprovids. The 'unidentified' fraction was mostly composed of large and medium-sized mammal rib, shaft and vertebra fragments.

6.1.2 Discussion:

The majority of the remains were recovered from demolition/collapse layers and comprised mainly butchery waste and meat-bearing elements from cow and caprovid species. Both examples indicate the dietary consumption of the occupants as well as the domestic duties conducted within the site. The recovery of deer in both "Blocks" as well as a possible cod bone in Block B, suggest a more exclusive diet that correlates well with the high status attached to the occupants of the building.

It was assumed that the bone fragments found within the demolition/collapse layers originated from the occupation of both structures, rather than from a period of occupation associated with the collapse of the buildings. The bone fragments included butchery marks evident of large-scale consumption of meat that would correlate with the occupation of the site as a high status dwelling rather than the more disparate occupation of the site that would be expected during its demolition/collapse. The only deposit associated with a period of post-occupation "stability", when topsoil formed on top of the initial phase of demolition/collapse (Context 104), did not produce any bone fragments nor anything to indicate the site was occupied on an extensive level.

The only contexts directly associated with the occupation of the site: the rubble core of the structure attached to Block A (Context 107) and the compacted deposit below the metalled surface (Context 124) contained small amounts of butchery waste including pig, cow and caprovid examples.

6.2 Pottery Analysis

6.2.1 Description

A total of nine pottery sherds were recovered from Block A. No examples were recovered from Block B. The sherds were subsequently sent for specialist analysis (see Appendix 3). Six sherds were recovered from the demolition layer outside Block A (Context 105), two from the primary collapse layer of the wall adjacent to Block A (Context 114) and a single sherd from a compacted layer below the late thirteenth century metalled surface (context 124). A fragment of fired daub was also recovered from Context 105.

For a detailed description of the individual fabrics see Appendix 3.

Context 105: Demolition/Collapse Layer; Block A

Three sherds from a rim jar were recovered from this context. The fabric was identified as similar in appearance to examples from the Rhuddlan kiln recorded in the Chester Fabric Reference collection, dated to the mid-thirteenth century (see Appendix 3).

Two pottery sherds with a pink/white fabric were also recovered from this deposit. The fabric was identified as "Coal Measure clay" similar in appearance to wares found in a dump of kiln waste near Ewloe, Flintshire that were dated to the fourteenth/fifteenth century (see Appendix 3). One example was a rim sherd bevelled on the interior and exterior and a ribbed neck with a remnant of green glaze on the surface of the fabric.

Context 114: Primary Collapse Layer of Structure Context 116; Block A

Two fabrics were recovered from the primary collapse layer associated with the remnants of a structure built onto the Block A extension (Context 120). This structure was originally identified during the 1997 excavation programme.

A small, abraded sherd with a fine oxidised sandy fabric and a clear glossy glaze on the exterior was identified within the deposit. It was thought to be comparable to that of late fifteenth/sixteenth century wares from Chester, which occur in Cistercian-type ware cup forms (Appendix 3).

The second sherd from the same deposit was an unglazed body sherd from just above the base of a narrow wheel thrown vessel. The fabric contains numerous sub-rounded quartz grains. The exterior margin and surface are oxidised red whilst the core and interior margin are reduced black and the interior surface a dark reduced grey. The fabric is not distinctive enough to identify precisely nor does enough remain of the form that would aid identification. The size and shape of the sherd is comparable to small baluster or biconical jugs or bottles (see Rutter 1977, 19 figs 1-10); such forms are common in the fourteenth and fifteenth centuries.

Context 124: a compacted charcoal-rich deposit below the metalled surface between Blocks A and B

A very small fragment of a fine vessel was recovered from this context. The fabric was made from a white firing "Coal Measure clay", with a glossy slightly mottled green glaze on the exterior. The fragment is comparable to that of green glazed whiteware jugs and fragments that form a small but regular component of medieval pottery assemblages in Chester and North Wales (Appendix 3); a late thirteenth or early fourteenth century date is suggested for this ware with a possible provenance in the Ewloe area of Flintshire. This date correlates well with the 2-sigma radiocarbon date obtained for Context 124, which had a calibrated age of cal 1277 AD (KIA32438) (for full results see Appendix 4).

6.2.2 Discussion (see Appendix 3 for full discussion)

Analysis suggests a local provenance for the pottery fabrics and an assemblage that is not unusual for the North Wales coast/Chester area, although potential Rhuddlan wares are not commonly noted. No Continental imports were present but this may be because of the small size of the assemblage rather than indicative of any other reason. The most common vessel forms were jugs.

The pottery assemblage was small but provides a useful addition to the radiocarbon data. The whiteware from context 124 is compatible with a late 13th century date for the stone metalling. The remaining fabrics would confirm a period of use of the site from the late 13th century through to c. 1500.

7. CONCLUSIONS

The excavations undertaken in 2005 have confirmed a late 13th century date for the construction of Block A, which was followed shortly after of construction of an adjoining structure (120) of which all but one wall has been lost to erosion. A stone metalled surface was subsequently laid down on the landward side of 120. The construction of Block B followed, and this has been dated on architectural grounds to the early 14th century (Hague 1956). Block A was destroyed by fire, possibly *c*. 1400, though no confirmation for this was found. The site appears to have been abandoned *c*. 1500, at about the time a new residence for the Bishops was being built in Bangor.

8. REFERENCES AND OTHER SOURCES CONSULTED

Published Sources

Davidson, A. 2001. Bishop's Palace, Gogarth, Llandudno. Report on 1997 and 1998 Excavation and Recording Work. *Transactions of the Caernarvonshire and Historical Society 62*, pp. 62-79.

Hague, D., 1956. The Bishop's Palace, Gogarth, Llandudno *Transactions of the Caernarvonshire and Historical Society 17*, pp. 09-22.

Appendix I
Context Register

Context Number	Site Sub	Description	Finds	Comments
101	A	Bioturbated Topsoil		
102	A	Rubble Layer containing frequent sub-angular stones of various sizes up to 600mm; deposit of Block A building rubble, containing material that has gradually been falling from the superstructure for some time. Mixed with bioturbated topsoil. Has been truncated by a modern fence/pathway.	SF 1: Green Glazed "Stone"	Below 101
103	A	Loose, white-brown sand-silt; frequent lime mortar and sub-angular stone inclusions up to 400mm in size. A demolition collapse layer from Block A. Some of the sub-angular stones appeared to be dressed, including two red sandstone blocks and a possible window mullion. The red sandstone could have come from the batter as the batter is constructed from similar material.		Below 102
104	A	Buried Soil: Deposit of silt-rich soil sandwiched between a thick collapse layer of building rubble (Context 103) and a thin layer of slate (Context 105). Thought to represent a phase between two periods of building collapse with (105) representing the collapse of building material followed by a period of building stability during which context (104) developed followed by further, more substantial collapse. May have been a mound of grassy earth for several generations.		Below 103
105	A	Collapse layer comprising fragments of roof slate, presumably the primary phase of building collapse. Several sherds of Medieval pottery recovered from the deposit	SF 2: Oxidised Ware SF3: Decorated Oxidised Ware SF 4: Green Glazed Body Sherd SF 5: Oxidised Ware same as SF 2 SF6: Cream Ware (Rim Sherd) SF 9: Oxidised Ware	

106	A	45° Batter, part of Block A construction. Built from blocks of dressed sandstone and sub-angular blocks of locally sourced oolithic limestone. Bonded with a lime-rich mortar (grey-white in colour). Forms base of Block A, acting as a built-in buttress. Is partially collapsed. Can also be seen from the cliff section where it has become dislodged from the structure. It is also apparent form this section that a low-rise wall butts against this batter		Butted by 107
107	A	Rubble Core of Structure 120		Butts 106
108	A	Metalled surface consisting of small sub-rounded pebbles and larger sub-rounded/angular stones. Tight compaction, bonded by dark-brown grey sand-silt.		
109	A	Possible foundation cut for (106)		
110	A	Demolition layer between an apparent buried soil: (104) and a layer of demolition (105); contains a high proportion of shell fragments; reason unclear although could be rubble core material.		Below 104; Above 105
111	A	A collapse layer possibly associated with the collapse of structure 116. Part of a sequence of collapse layers representing 116 and Block A superstructure.		
112	A	A deposit of slate fragments; difficult to tell whether they were directly associated with a roof collapse or were simply tipped into the area so could come from structure 116 or from the immediate southwest.		
113	A	Collapse layer containing demolition material possibly from structure 116 to the immediate southwest. Part of a more general sequence of demolition and collapse from Block A and structure 116.		
114	A	Possible primary collapse layer from structure 116. Part of a larger sequence of tipping/demolition both from Block A and structure 116.	SF 7: Glazed (Internal) Body Sherd; SF 8: Body Sherd	
115	A	**Number not used**		

116	A	NE-SW aligned partially demolished wall built from sub-angular and sub-rounded stone with lime mortar bond. Built onto a clay foundation layer that seals an earlier NW-SE aligned foundation course. The SW-NE return of 116 has disappeared since the 1997 season excavation, having fallen into the sea. Context 116 is the remains of a small structure of unknown function. Thought in the 1997 season to be post-medieval, specifically 19th century, but nature of collapse layers suggest otherwise as they are part of a sequence of collapse material from Block A. Probable boundary wall.		
117	A	Demolition layer below 105. Very similar in overall composition to 105 but differs in having less frequent slate. Part of the general sequence of rubble collapse/collapse within the area.		
118	A	Originally recorded as 110. Part of the general sequence of collapse identified as rubble collapse from Block A. This deposit appears more consolidated than layers 102-105, as they contain structural rubble, whereas this layer contains mostly lime mortar flecking mixed with sand/silt. Moreover, this deposit seals metalled surface 108, thus proving it was not part of the original construction of the batter.		
119	A	Natural Sand		
120	A	Wide foundation wall for Block A, built from locally sourced stone and lime mortar; partially demolished; clearly visible on cliff section as a NW-SE aligned structure. Same as 4.00m long wall identified by Hague and Davidson in 1955 and 1997 respectively. Thought to be an extension block added to Block A and not part of original build.		
121	A	Primary collapse layer above foundation 120; sealed by structure 116 and collapse layer 114		
122	A	Foundation cut for 120; cuts 109 (Natural Sand).		
123	A	Clay foundation for structure 116; above demolition layer 121, proving that 116 was built some time later.		
124	A	Compacted charcoal-rich deposit below metalled surface 108. Possible evidence of early phase of destruction (Glyndŵr rebellion?) or of localised burning.	SF10: Green Glazed Body Sherd	

125	A	A thick foundation deposit utilising locally sourced limestone blocks as well as other stone fragments mixed with sand-silt and deposited into a foundation cut. Part of the original construction phase of Block A. Used to reinforce the batter.		
126	A	Possible foundation for the batter. Difficult to tell whether an actual cut terraces the landscape or a natural depression sloping southwestwards. Either way, primary foundation for Block A.		
201	B	Bioturbated topsoil. Contains fragments of roof slate.		
202	B	Collapse layer containing fragments of lime mortar and small fragments building rubble (sub-angular). Thought to be collapsed rubble core material from Context 304 (NNW-SSE aligned elevation from Block B).		
203	B	Mortar/rubble deposit below 202		
204	B	Mortar/rubble deposit below 203		
205	B	Possible demolition layer. Appears too consolidated to be a simple demolition/tipping layer but does not appear consolidated enough to be a floor surface proper. Either way, suggestive of late-medieval, early medieval activity within the SW end of Block B; i.e. the reuse of the area after partial collapse.		Also included Oyster Shell
206	B	Foundation layer supporting foundations course Context 206. Fill of Context 207		
207	B	Appears to be a natural depression/slope, rather than a specific foundation cut, as it continues southeastwards from Block B. It can also be seen in the NW facing section on the outside of Block B, with various collapse layers falling against it. Has been filled by Context 206, which has been deposited as a foundation fill to support foundation course 305.		
208	B	Natural Sand		
301	B External	Bioturbated topsoil		
302	B External	Collapse/demolition layer containing building material from Block B. Material has been tipped from the north and includes mortar, slate and small stone fragments. It is, therefore, less indicative of a collapsed superstructure and more indicative of general demolition material. Assumed the activity is post-medieval landscaping.		

303	B External	Tipping layer comprising demolition material deposited from the north and presumably from Block B. Deposit includes relatively small fragments of sub-angular stone and slate, with the stone sourced from the rubble core of a structure. Similar to 302.		
304	B External	Southeastern elevation of Block B that has largely collapsed. Has been breached to create a pathway and is extensively ruined, with only the final two courses standing in some places and the rubble core in others. Bonded in lime mortar and built onto foundation course Context 305.		
305	B External	Foundation course for elevation 304, the southeastern end of Block B. The foundation course has been built to accommodate the natural NE-SW aligned slope, which leads to the cliff edge, with the larger blocks rising above the slope and levelling off, to be replaced by a foundation cut (Context 307).		
306	B External	Foundation cut backfill, contemporary with foundation course 305, and, along with the latter, the primary phase in the construction of the southeastern end of Block B (recorded as Context 304).		Fill of 307
307	B External	Foundation trench contemporary with construction of foundation course 305: the southeastern end of Block B.		
308	B External	Metalled surface associated with Block B, but also part of the metalled surface between Block A and B. The metalled surface was laid after the foundations were built for Block B and not prior to its construction as was thought in the 1997 excavation.		Same as 108
309	B External	Compacted sand cut by foundation trench 306. Unclear whether natural or part of construction of Block B		
310	B External	Foundation layer for metalled surface 308		
311	B External	Natural sand		
401	A Internal	Bioturbated topsoil within Block A		
402	A Internal	Bioturbated demolition layer within Block A; differs from above in nature of inclusions		
403	A Internal	Demolition layer within Block A; differs from above in nature of inclusions		
404	A Internal	Demolition layer within Block A; differs from above in nature of inclusions		

405	A Internal	Charcoal-rich deposit with inclusions of burnt timber indicative of fire damage, possibly part of Glyndŵr attack. Originally identified by Hague in 1955.		
406	A Internal	Original internal floor surface constructed from lime mortar.		

Appendix II

Palaeoecology Research Services

Evaluation of biological remains from excavations at Bishop's Palace, Gogarth, Llandudno (site code: G1865) (Reproduced from John Carrott's Report for Gwynedd Archaeological Trust)

Introduction

An archaeological evaluation excavation was undertaken by Gwynedd Archaeological Trust on land at Bishop's Palace, Gogarth, Llandudno (approximate NGR SH 759 829), between August and September 2005. This work was carried out in response to the threat to the site from continual erosion of the cliff edge.

The area under investigation was formerly the residence of the Bishop of Bangor and located on a cliff formed of glacial till. Half of the complex had fallen into the sea by 1800 or possibly earlier. The standing remains date from the 13th and 14th centuries.

The current excavation focussed on an area between parts of the 14th century complex (Block 'B') which included a large hall and ancillary rooms. Further work was carried out within Block 'A' (the 13th century stone-built chamber) and Block 'B' to ascertain the extent of erosion and the nature and significance of archaeological deposits identified by 20th century excavations. These were assigned to three phases of activity as follows:

Phase 1 – 13th century construction

Phase 2 – 14th century construction

Phase 3 – post-14th century metalled surfaces and demolition/destruction debris

Five spot samples and a small collection of hand-collected animal bone were recovered and submitted to Palaeoecology Research Services Limited (PRS), County Durham, for an evaluation of their bioarchaeological potential.

Methods

The five spot samples appeared to have been collected by hand. There were three small bags of charred remains (primarily charcoal) from Contexts 108, 109 and 124 and two fragments of burnt timber (Context 405). The material recovered from Context 405 was washed in the laboratory and then dried.

The submitted remains were identified as closely as possible and their suitability for radiocarbon dating by standard radiometric technique or accelerator mass spectrometry (AMS) was also considered.

Nomenclature for plant taxa follows Stace (1997), whilst the identification of the charcoal follows Schoch *et al*. (2004).

Hand-collected vertebrate remains

For the hand-collected vertebrate remains, subjective records were made of the state of preservation, colour of the fragments, and the appearance of broken surfaces ('angularity'). Other information, such as fragment size, dog gnawing, burning, butchery and fresh breaks, was noted, where applicable.

Bone fragments were identified to species or species group using the PRS modern comparative reference collection. The bones which could not be identified to species were described as the 'unidentified' fraction. Within this fraction, fragments were grouped into two categories: large mammal (assumed to be cattle, horse or large cervid) and medium-sized mammal (assumed to be caprovid, pig or small cervid). These groups are represented in Table 1 by the category labelled 'Unidentified'.

Results

Spot samples

The spot samples were all recovered from Block ‘A’.

Context 108 [metalled surface; ?14th century]
Sample 6

The material (2 g) recovered from this deposit was mostly unidentifiable fragments of charcoal (2 to 8 mm), together with a few undisaggregated sediment lumps (to 1 mm).

Context 109 [?foundation cut]
Sample 4

Most of the plant remains (2 g) were fragments of charcoal (of 3 to 11 mm). It was possible to identifiy some of the larger pieces as stem wood of oak (*Quercus*). In addition, there was a single rather poorly preserved charred grain of naked wheat (*Triticum aestivum* L./*T. durum* Desf./*T. turgidum* L.).

Context 124 [compacted deposit below metalled surface 108]
Sample 7

This sample (28 g) was mostly undisaggregated sediment lumps (to 8 mm), with some small stones (to 8 mm), and a few small bone and shell fragments. The pieces of charcoal (of 3 to 15 mm) were mostly of stem wood, with many being identified as hazel (*Corylus*). Several ‘sliver’-like charcoal fragments were of a second diffuse-porous taxon, this could not be identified more closely, however.

Context 405 [charcoal-rich deposit with inclusions of burnt timber]
Sample 2 – central timber

The sample (55 g) was of pieces of charcoal (to 40 mm), often as ‘slivers’, which probably derived from structural timbers of oak (stem wood). Modern rootlets were also noted.

Sample 3 – balk side timber

The submitted material (17 g) contained modern rootlets, several waterlogged modern leaves of ferns (Pteridophyta) and two large concretions. Identifiable plant remains were mostly restricted to ‘sliver’-like fragments of charcoal (5 to 25 mm) from oak stem wood, which probably derived from structural timber.

Hand-collected vertebrate remains

Six deposits, five from Block ‘A’ and one from Block ‘B’ produced a small assemblage of bone amounting to 80 fragments. Of these, most were recovered from Contexts 105 and 202 (Table 1). Medieval pottery was recovered from one of these deposits (Context 105) but no dating information was available for any of the other contexts. Most were demolition or rubble layers. Ten of the bones were measurable and seven were mandibles with teeth *in situ* of use for providing biometrical or age-at-death data.

Generally, the bones were well-preserved and fawn in colour. Fresh breakage damage was noted throughout albeit fairly limited in extent, whilst butchery marks were also evident particularly on the material from Contexts 105 and 202.

Cattle and caprovid remains were prevalent, but pig bones were also identified (Table 1). The last included mandibular canine fragments representing both male (from Context 202) and female (from Context 110) individuals. Other species were not well represented but remains included a roe deer (*Capreolus capreolus* (L.)) scapula from Context 110 and two fallow deer (*Dama dama* (L.)) calcaneae from Context 202. One of the latter had been chopped.

Bird remains included fragments of goose and chicken. Medullary bone was noted on the inner surfaces of a chicken tibiotarsus fragment indicating that the hen was ‘in lay’. The goose bone was of a size consistent with both wild species of geese and the domestic goose so its origin could not be established. A single fish bone from Context 202 was identified as ?cod; this premaxilla represented a large fish of over a metre in length.

Both cattle and caprovids were represented by a range of skeletal elements, although caprovid mandibles were relatively numerous from Context 105. In general, bones suggesting primary butchery waste (i.e. head and terminal limb bones) were quite common for cattle, whilst (excluding the mandibles in Context 105) meat-bearing elements were more numerous for caprovids. The 'unidentified' fraction was mostly composed of large and medium-sized mammal rib, shaft and vertebra fragments.

Discussion and statement of potential

Ancient biological remains from the five samples examined were restricted to charcoal and one charred cereal grain of naked wheat from Context 109. The charcoal present was, in most cases, stem wood of oak (*Quercus*), with smaller quantities of hazel (*Corylus*), often in the form of 'slivers' and probably derived from structural timber.

The charred cereal grain from Context 109 would provide sufficient suitable material for radiocarbon dating of the deposit to be attempted, via AMS, if required. Charcoal fragments could also be used for this purpose but would not be ideal as the age of wood growth prior to charring would be indeterminate. Also many of the oak fragments appeared to derive from structural timbers which could add a further discrepancy between the radiocarbon date obtained and the date of the charring event.

The interpretative value of the vertebrate material from these excavations was somewhat restricted by the small size of the assemblages and the uncertain date of the deposits. However, the presence of the remains of deer correlates well with the high status of the inhabitants who were believed to occupy these buildings during the medieval period. The consumption of large fish, as hinted at by the ?cod bone may also suggest a degree of affluence among the occupants.

Recommendations

No further study of the biological remains recovered from these deposits is warranted. Although the value of the current bone assemblage is limited, the good preservation of the vertebrate remains does demonstrate that any future excavations at this site may recover more interpretatively valuable assemblages and this should certainly be borne in mind in the event of further works being undertaken.

Retention and disposal

All of the biological remains should be retained for the present.

Archive

All material is currently stored by Palaeoecology Research Services (Unit 8, Dabble Duck Industrial Estate, Shildon, County Durham), along with paper and electronic records pertaining to the work described here.

Acknowledgements

The authors are grateful to John Roberts of Gwynedd Archaeological Trust, for providing the material and the archaeological information.

References

Schoch, W. H., Heller, I., Schweingruber, F. H. and Kienast, F. (2004). Wood anatomy of central European Species. Online version: www.woodanatomy.ch

Stace, C. (1997). *New flora of the British Isles: 2nd Edition*. Cambridge: Cambridge University Press.

Table 1. Hand-collected vertebrate remains from excavations at Bishop's Palace, Gogarth, Llandudno, by context.

Species		**105**	**107**	**110**	**114**	**124**	**202**	**Total**
Sus f. domestic	pig	3	-	1	-	1	2	7
Dama dama (L.)	fallow deer	-	-	-	-	-	2	2
Capreolus capreolus (L.)	roe deer	-	-	1	-	-	-	1
Bos f. domestic	cow	10	1	1	-	-	5	17
Caprovid	caprovid	8	1	-	1	-	4	14
Anser sp.	goose	1	-	-	-	-	1	2
Gallus f. domestic	chicken	-	-	1	-	-	-	1
cf. *Gadus morhua* L.	?cod	-	-	-	-	-	1	1
unidentified bird		-	1	1	-	-	-	2
large mammal		7	-	2	-	-	10	19
medium-sized mammal		9	2	-	-	1	2	14
Total		**38**	**5**	**7**	**1**	**2**	**27**	**80**
Wt (g)		680	58	84	22	10	522	1376

Appendix III

Pottery from the Bishop's Palace Gogarth Llandudno. GAT Project no. 1865.

(Reproduced from Julie Edwards' Report for Gwynedd Archaeological Trust)

Methodology
Nine fragments (95 g) of pottery were sent for identification. Six sherds are from context [105], two from [114] and a single sherd from [124], although the latter is wrongly labelled as being from [114]; one fragment, SF 3 [105], is probably a piece of fired daub. The pottery was recorded by sherd count and weight according to ware type within context groups as recommended in the guidelines of the Medieval Pottery Research Group (MPRG 2001). The common ware names used in the report are those employed in the Chester City Council Fabric Reference collection. This report summarises the pottery; detailed comments on individual fragments can be found in the archive.

Condition
The sherds vary in size but all are small and there are no complete profiles of vessels or any large pieces that indicate a particular form or vessel size. Only one fragment, a jug rim in [105], has any features by which to identify form. Surface condition varies but none of the pieces are badly abraded and three joining sherds in [105] are in good condition and appear as though freshly broken.

Description
Context A [105]
Small finds nos. 5, 2 and 9
Three joining sherds (weighing 42 g) from [105] have a hard sandy fabric with a reduced dark brown exterior, a red oxidised interior and reduced grey core. The inclusions consist of numerous fine to medium sized quartz grains and sparse fine to medium rounded limestone fragments. The exterior has a patchy lead glaze which varies in thickness and is sparse in places. The glaze varies in colour from a reduced green/brown to a fine brown lustre. The fabric is similar to samples in the Chester Fabric Reference collection from the Rhuddlan kiln (fabric 267) and this may be a potential source for this vessel. The date of the kiln is suggested to be mid-thirteenth century (Quinnell et al 1994 217 -218).

The sherds have a white deposit on the interior which is possibly residue left from heating a liquid or perhaps storing urine. Scientific analysis would be required to determine which.

Small find no. 4
Fragment of pink/white ware made from Coal Measure clay and similar to wares found in a dump of kiln waste near Ewloe, Flintshire (Harrison & Davey 1977); fourteenth or fifteenth century in date.

Small find no. 6
Rim sherd from a pink/white ware jug (rim radius 56 mm) with a thickened rim, bevelled on the interior and exterior and a ribbed neck. Most of the sherd is unglazed but there is a splash of reduced green glaze close to one of the broken edges. The ware is in a Coal Measure fabric similar to wares found at Ewloe but the rim form is unusual. The piece is probably fourteenth or fifteenth century in date

Context A [114]
Small find no. 7
A small abraded fragment with a fine oxidised sandy fabric and a clear glossy glaze on the exterior. The fragment weighs less than 1 g and it is difficult to precisely identify such a small sherd. However the fine oxidised fabric is comparable to that of late fifteenth/sixteenth century wares from Chester which occur in Cistercian-type ware cup forms (Edwards in prep).

Small find no. 8
Unglazed body sherd from just above the base of a narrow wheel thrown vessel. The fabric contains numerous sub-rounded quartz grains. The exterior margin and surface are oxidised red whilst the core and interior margin are reduced black and the interior surface a dark reduced grey. The fabric is not distinctive enough to identify precisely nor does enough remain of the form that would aid identification. The size and shape of the sherd is comparable to small baluster or biconical jugs or

bottles (see Rutter 1977, 19 figs 1-10); such forms are common in the fourteenth and fifteenth centuries.

Context [124] labelled as [114]
Small find no. 10
Very small fragment of a fine walled thrown vessel made from white firing Coal Measure clay with a glossy slightly mottled green glaze on the exterior. The fragment is comparable to that of green glazed whiteware jugs and fragments that form a small but regular component of medieval pottery assemblages in Chester and North Wales (fabric 11 in Edwards 1997); a late thirteenth or early fourteenth century date is suggested for this ware with a possible provenance in the Ewloe area of Flintshire.

Discussion
Where identification has been possible the pottery assemblage is not unusual for the North Wales coast/Chester area, although potential Rhuddlan wares are not commonly noted. No Continental imports are present but this may be because of the small size of the assemblage rather than indicative of any economic conditions. Where vessel form can be identified jugs predominate.

It is difficult to determine a deposition date for such small assemblages however a terminus post quem in the fourteenth century or possibly later may be suggested for context A [105] whilst for A [124] it may be late thirteenth or early fourteenth and for A [114] late fifteenth or sixteenth, although the sherd on which this date is based is very small and it is possible that it is intrusive.

JEC Edwards
January 2007

Bibliography
Davey, P J ed 1977 Medieval pottery from excavations in the North West. University of Liverpool.

Edwards, JEC 1997 Report on the pottery from excavations at Rhosyr G1193. Archive pottery report for Gwynedd Archaeological Trust

Edwards, JEC in prep Pottery from 25 Bridge Street Chester, CHE/25BS01

Harrison, H M & Davey P J 1977 Ewloe. In: Davey P J 1977 92- 99

MPRG 2001 *Minimum Standards for the Processing, Recording, Analysis and Publication of Post-Roman Ceramics.* Medieval Pottery Research Group Occasional Paper **2.**

Rutter, J A 1977 Old Market Hall pit group. In: Davey 1977. 18-20.

Quinnell, H, Blockley, MR with Berridge, P 1994 Excavations at Rhuddlan, Clwyd 1969-73 Mesolithic to Medieval. CBA Research Report 95.

Appendix IV

Results of the Radiocarbon Analysis

(Reproduced from Prof. Dr. Pieter M. Grootes' Report for Gwynedd Archaeological Trust)

KIA32436 sample 2

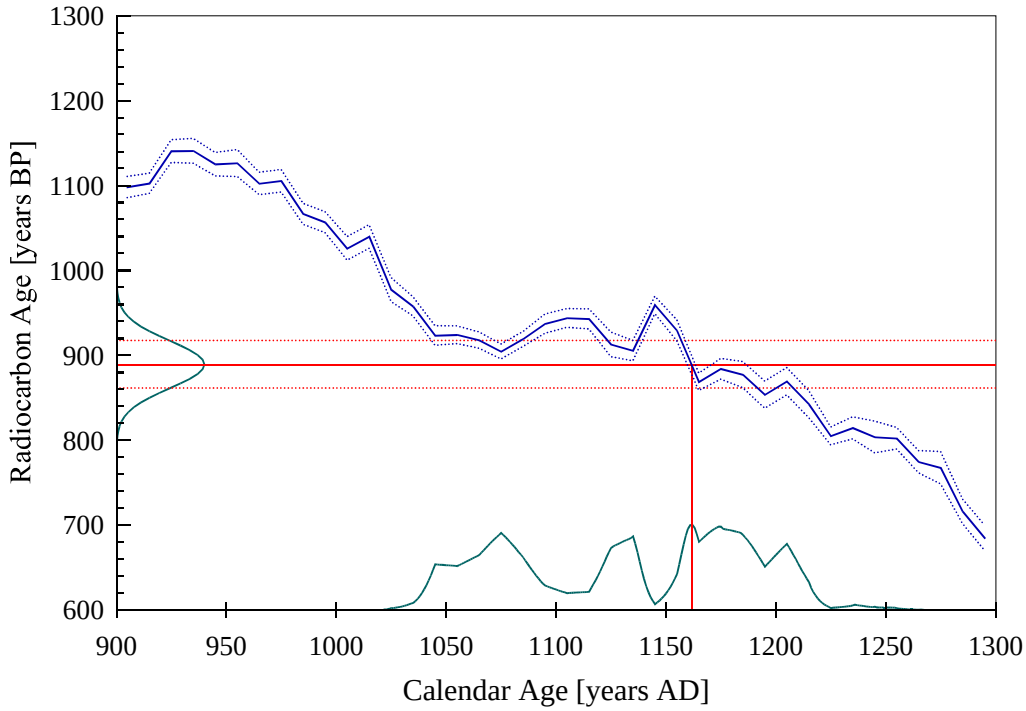
charcoal, deposit associated with internal features (timber either from roof or first floor), Bishops Palace, Gogarth, Llandudno

Fraction	Corrected pMC†	Conventional Age	$\delta^{13}C$(‰)‡
charcoal, alkali residue, 5.4 mg C	89.52 ± 0.31	890 ± 30 BP	-30.10 ± 0.30

Radiocarbon Age: BP 889 ± 28
Calibrated Age: cal AD 1162

One Sigma Range: cal AD 1060 - 1086 (Probability 19.1 %)
(Probability 68,3 %) 1122 - 1138 (Probability 10.9 %)
1156 - 1193 (Probability 30.7 %)
1197 - 1210 (Probability 7.5 %)

Two Sigma Range: cal AD 1039 - 1104 (Probability 33.4 %)
(Probability 95,4 %) 1110 - 1142 (Probability 16.2 %)
1150 - 1217 (Probability 45.8 %)



References for calibration:

The calibrated age is according to “CALIB rev 4.3” (Data set 2),

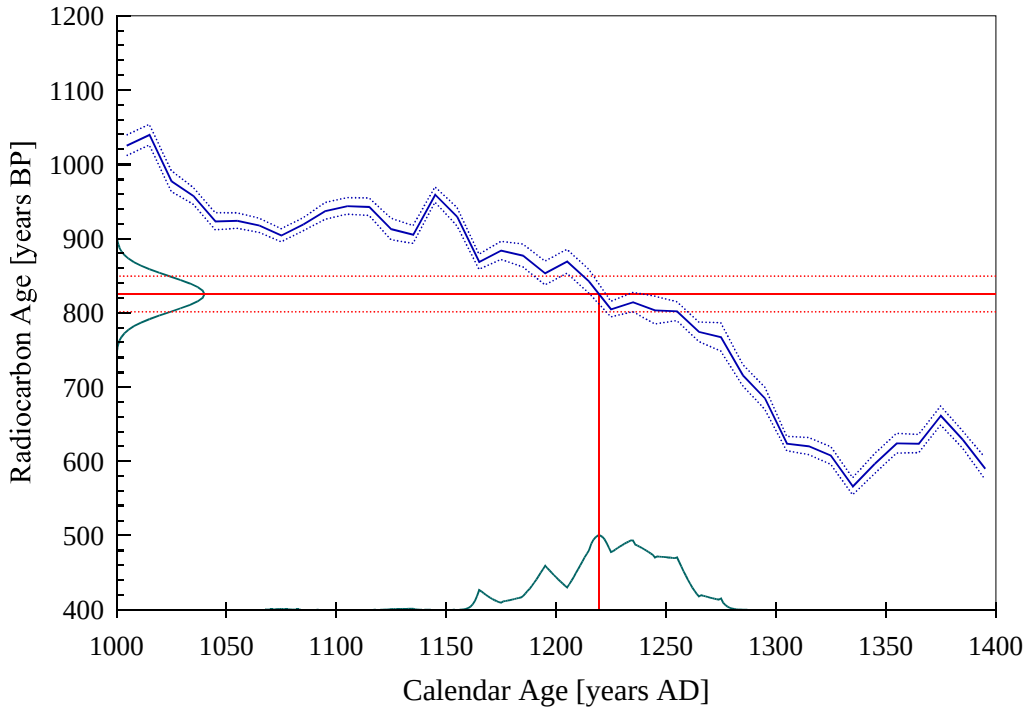
Stuiver et al., Radiocarbon **40**, 1041 - 1083, 1998

KIA32437 sample 3

charcoal, deposit associated with internal features (timber either from roof or first floor), Bishops Palace, Gogarth, Llandudno

Fraction	Corrected pMC†	Conventional Age	$\delta^{13}C$(‰)‡
charcoal, alkali residue, 5.4 mg C	90.24 ± 0.27	825 ± 25 BP	-26.35 ± 0.29

Radiocarbon Age: BP 825 ± 24
Calibrated Age: cal AD 1220
One Sigma Range: cal AD 1194 - 1196 (Probability 1.4 %)
(Probability 68,3 %) 1210 - 1257 (Probability 66.9 %)
Two Sigma Range: cal AD 1164 - 1171 (Probability 2.9 %)
(Probability 95,4 %) 1182 - 1272 (Probability 92.5 %)


1200
1100
1000
900
800
700
600
500
400
Radiocarbon Age [years BP]
1000
1050
1100
1150
1200
1250
1300
1350
1400
Calendar Age [years AD]

References for calibration:

The calibrated age is according to “CALIB rev 4.3” (Data set 2),
Stuiver et al., Radiocarbon **40**, 1041 - 1083, 1998

KIA32438 sample 4

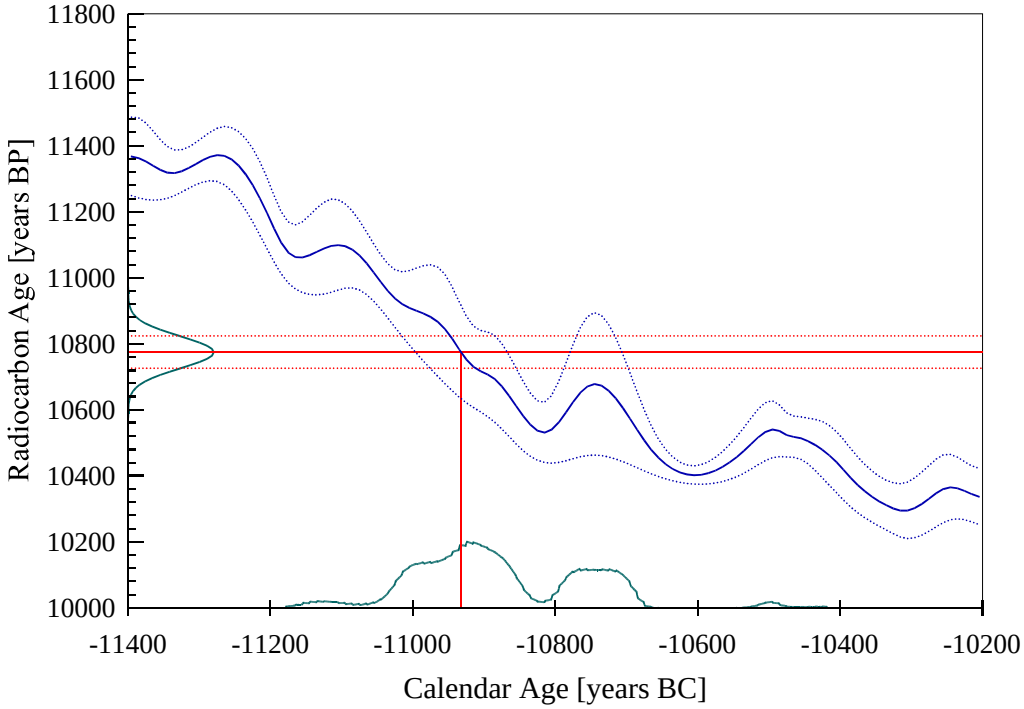
charcoal, foundation cut for medieval batter, Bishops Palace, Gogarth, Llandudno

Fraction	Corrected pMC†	Conventional Age	$\delta^{13}C$(‰)‡
charcoal, alkali residue, 6.3 mg C	26.15 ± 0.16	10775 ± 50 BP	-29.00 ± 0.25

Radiocarbon Age: BP 10774 ± 49
Calibrated Age: cal BC 10932

One Sigma Range: cal BC 11011 - 10860 (Probability 56.0 %)
(Probability 68,3 %) 10770 - 10764 (Probability 1.4 %)
10763 - 10727 (Probability 9.6 %)
10726 - 10720 (Probability 1.4 %)

Two Sigma Range: cal BC 11136 - 11113 (Probability 1.0 %)
(Probability 95,4 %) 11052 - 10818 (Probability 66.5 %)
10815 - 10676 (Probability 27.9 %)



References for calibration:

The calibrated age is according to “CALIB rev 4.3” (Data set 2),
Stuiver et al., Radiocarbon **40**, 1041 - 1083, 1998

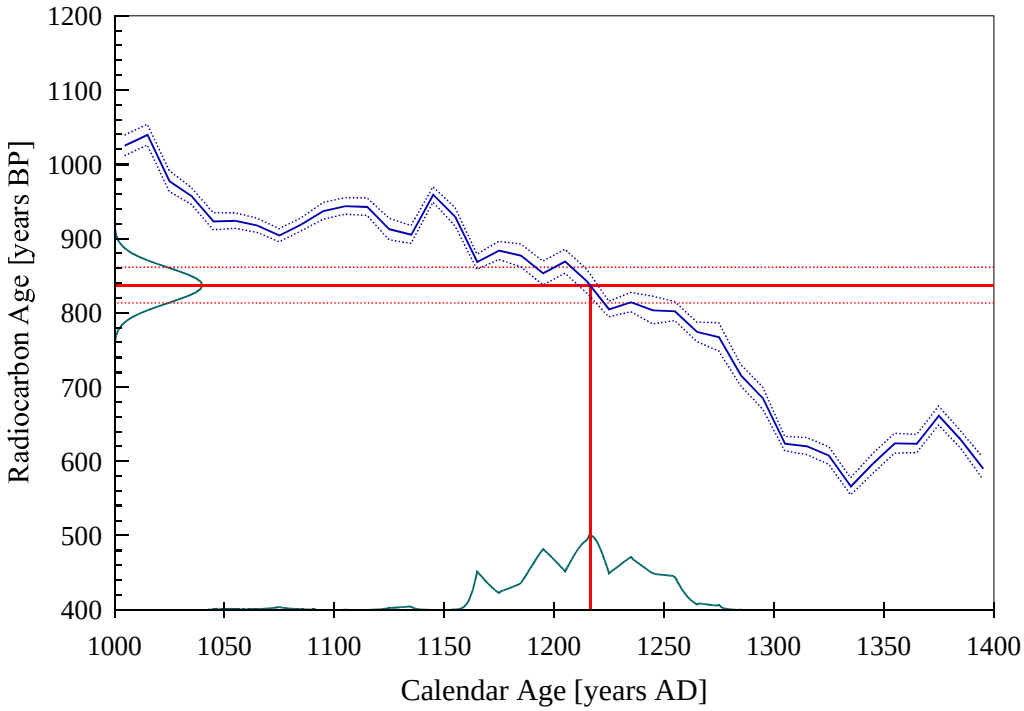
KIA32439 sample 6

charcoal, post medieval metalled surface, Bishops Palace, Gogarth, Llandudno

Fraction	Corrected pMC†	Conventional Age	$\delta^{13}C$(‰)‡
charcoal, humic acids, 4.6 mg C	90.10 ± 0.27	835 ± 25 BP	-29.58 ± 0.32

Humic Acids:

Radiocarbon Age: BP 837 ± 24
Calibrated Age: cal AD 1216
One Sigma Range: cal AD 1165 - 1165 (Probability 0.7 %)
(Probability 68,3 %) 1188 - 1225 (Probability 47.1 %)
1226 - 1244 (Probability 20.5 %)
Two Sigma Range: cal AD 1162 - 1260 (Probability 95.4 %)


Radiocarbon Age [years BP]
1200
1100
1000
900
800
700
600
500
400
1000
1050
1100
1150
1200
1250
1300
1350
1400
Calendar Age [years AD]

References for calibration:

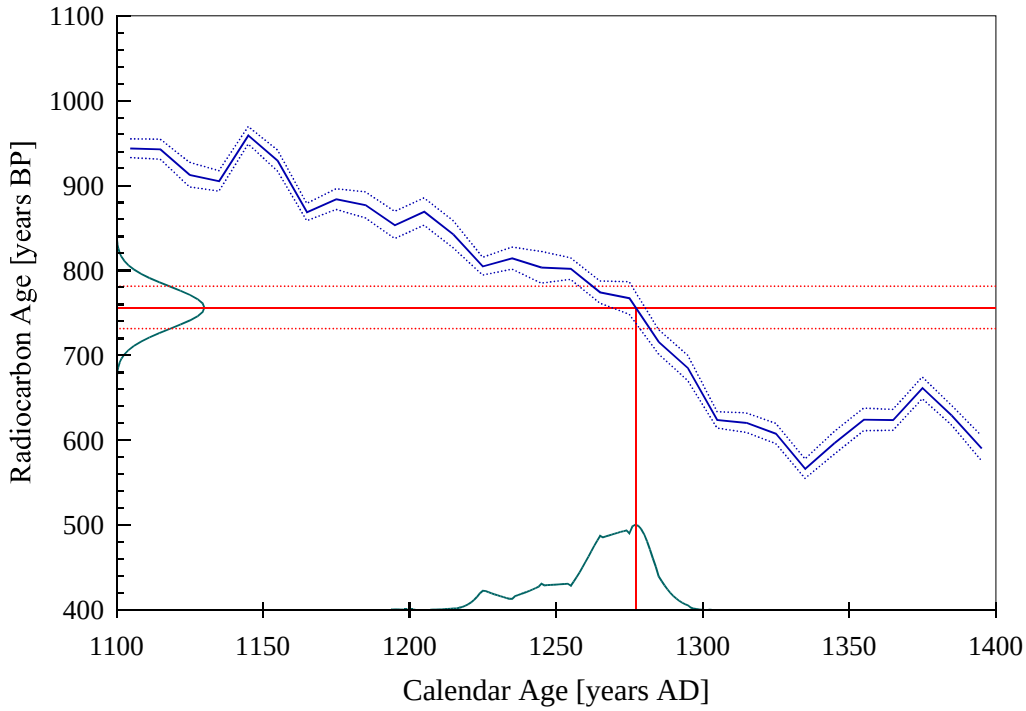
The calibrated age is according to “CALIB rev 4.3” (Data set 2),
Stuiver et al., Radiocarbon **40**, 1041 - 1083, 1998

KIA32440 sample 7

charcoal, from a deposit below the metalled surface possibly an earlier phase of construction, Bishops Palace, Gogarth, Llandudno

Fraction	Corrected pMC†	Conventional Age	$\delta^{13}C$(‰)‡
charcoal, alkali residue, 5.0 mg C	91.02 ± 0.28	755 ± 25 BP	-26.57 ± 0.23

Radiocarbon Age: BP 756 ± 25
Calibrated Age: cal AD 1277
One Sigma Range: cal AD 1257 - 1285 (Probability 68.3 %)
Two Sigma Range: cal AD 1223 - 1232 (Probability 4.8 %)
(Probability 95,4 %) 1236 - 1290 (Probability 90.6 %)


1100
1000
900
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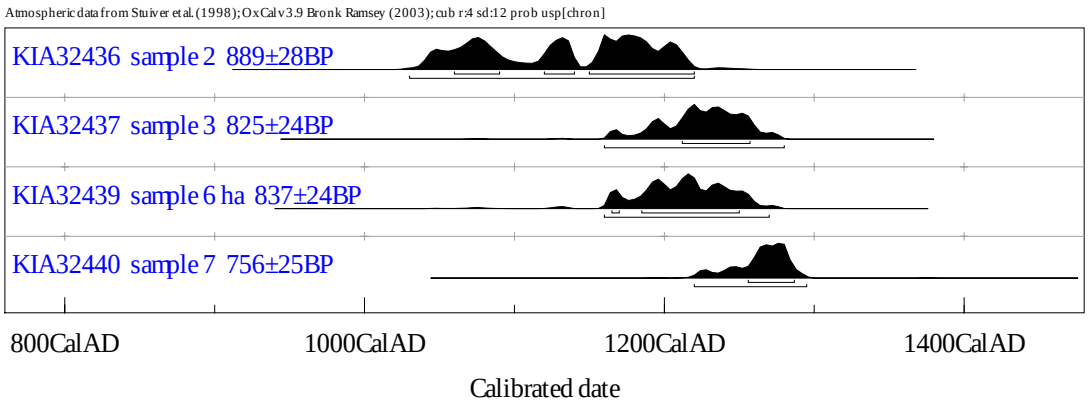
700
600
500
400
Radiocarbon Age [years BP]
1100
1150
1200
1250
1300
1350
1400
Calendar Age [years AD]



Overview over the dating results of KIA 32436, 32437, 32439 and 32440 - (ha - humic acids).

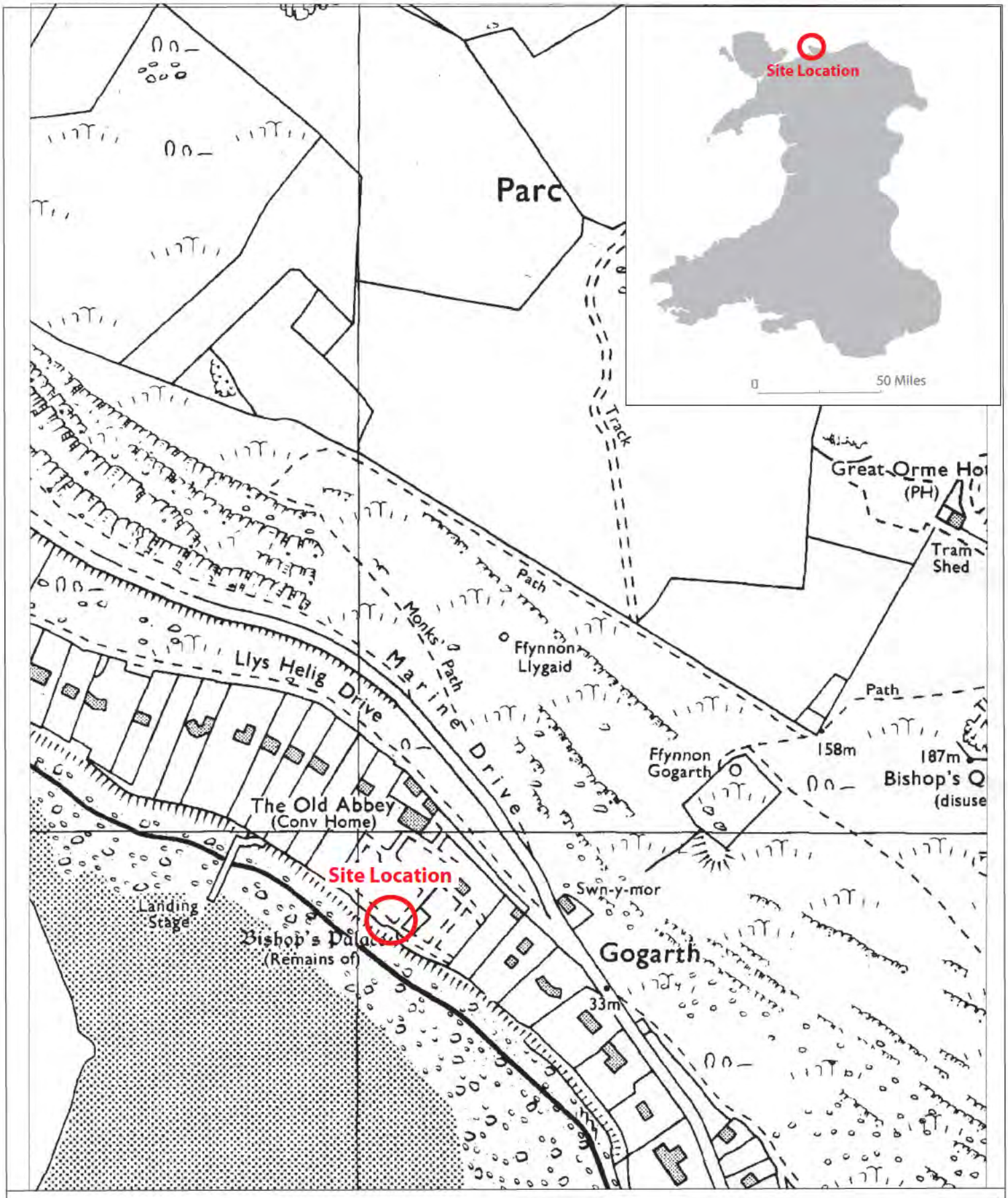


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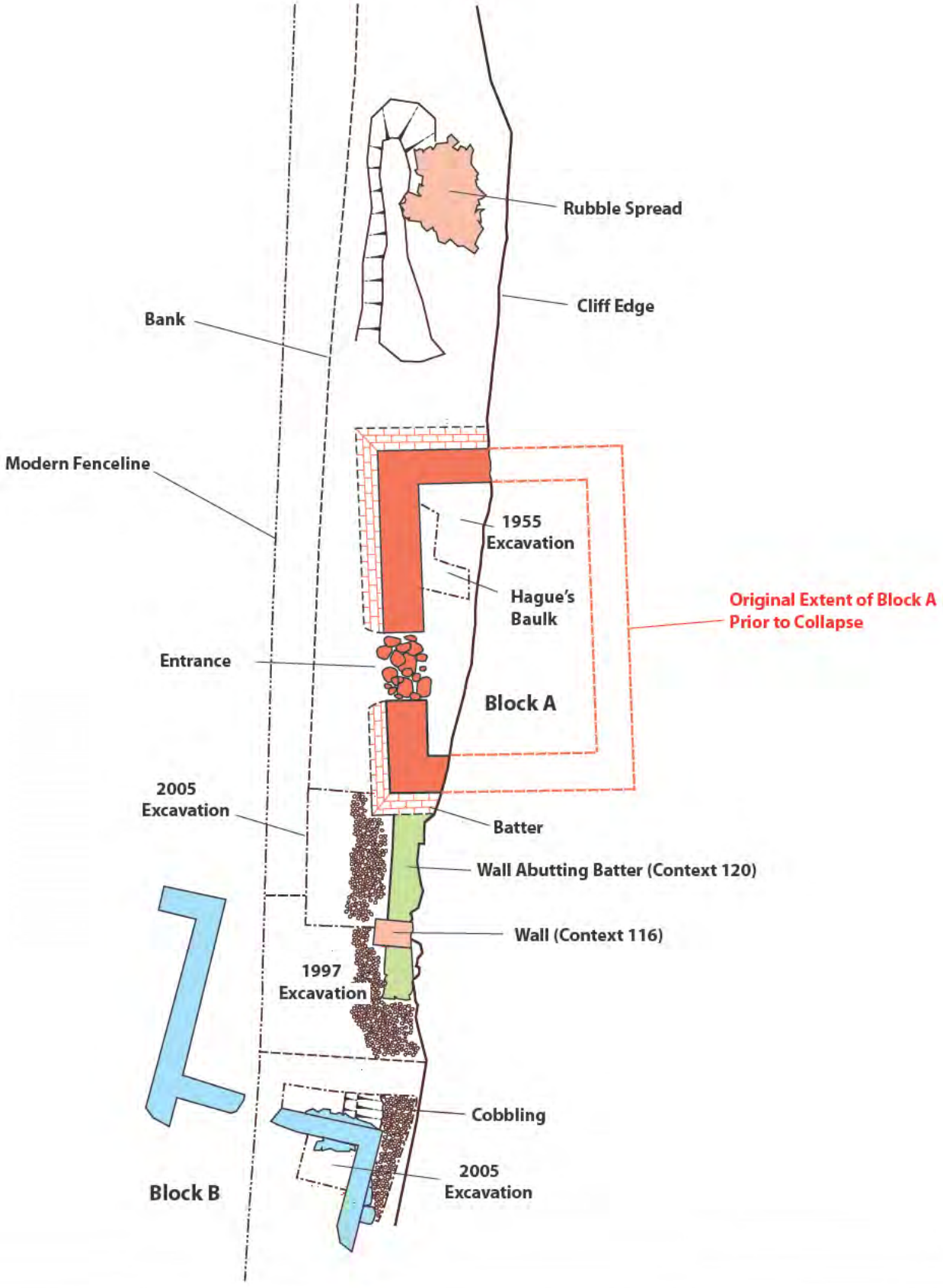
Figure 1. Site Location
Scale: 1:5000@A4



Cobbling

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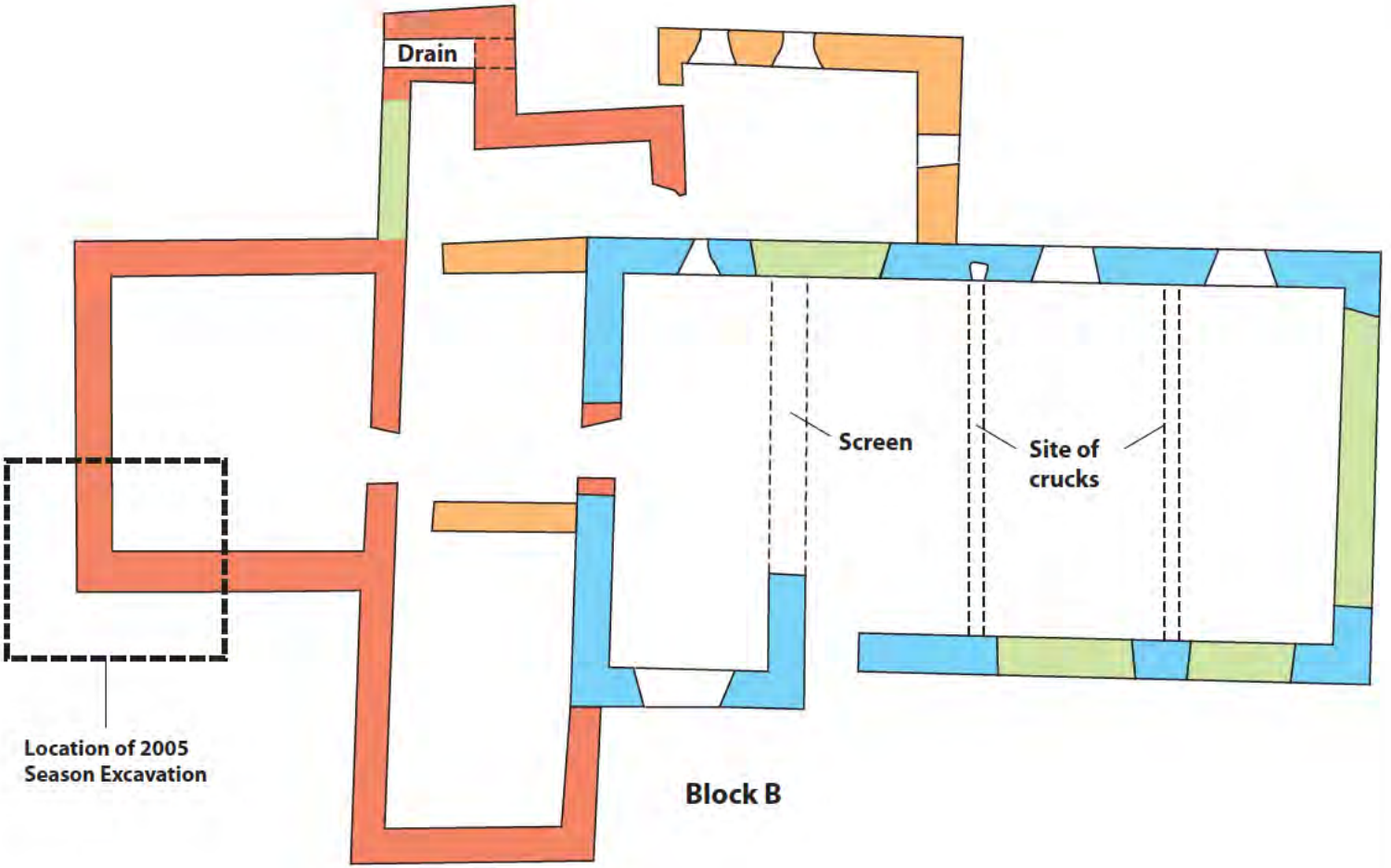
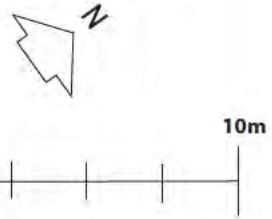
Figure 2: Blocks A and B





Early 14th Century. Period One

Early 14th Century. Period Two

Early 14th Century. Period Three and Uncertain

Modern Rebuild

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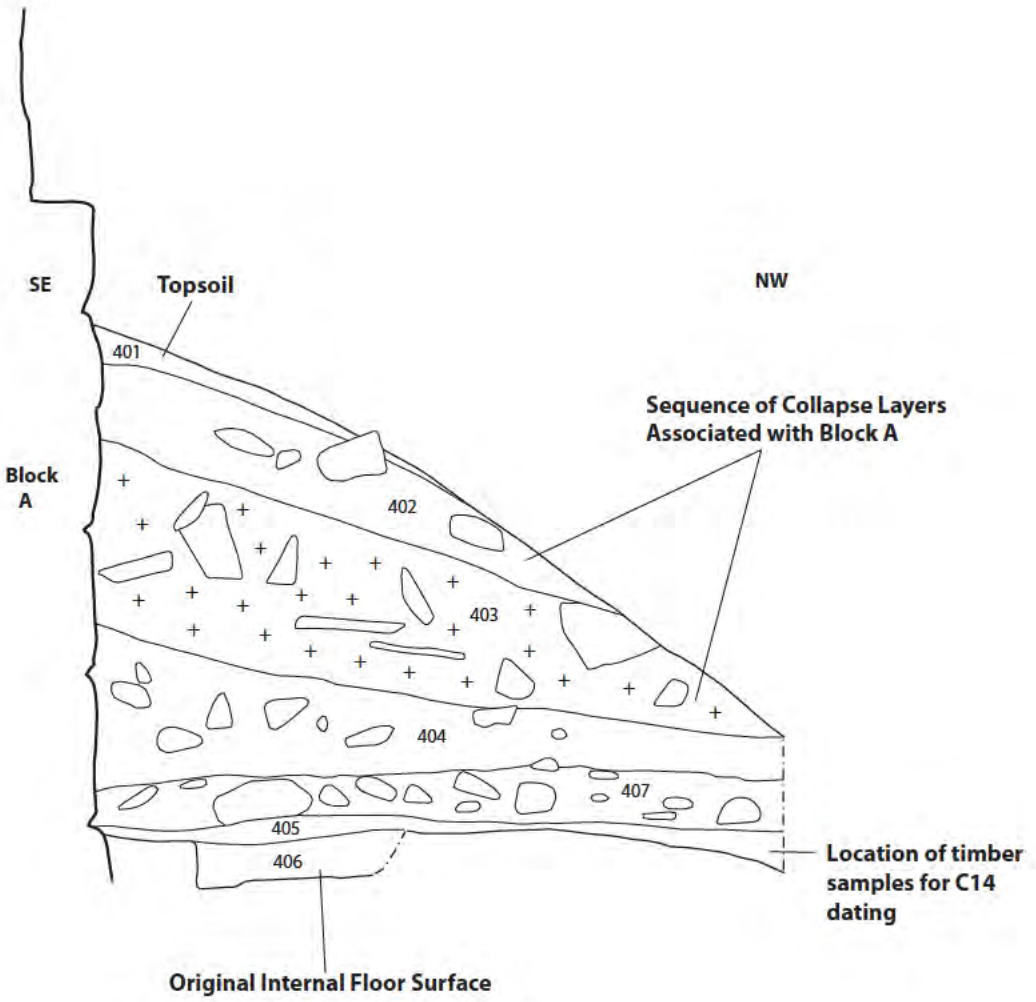
Figure 3: Block B



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Site Plan

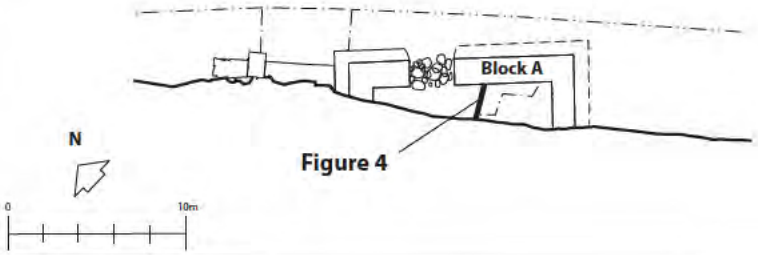

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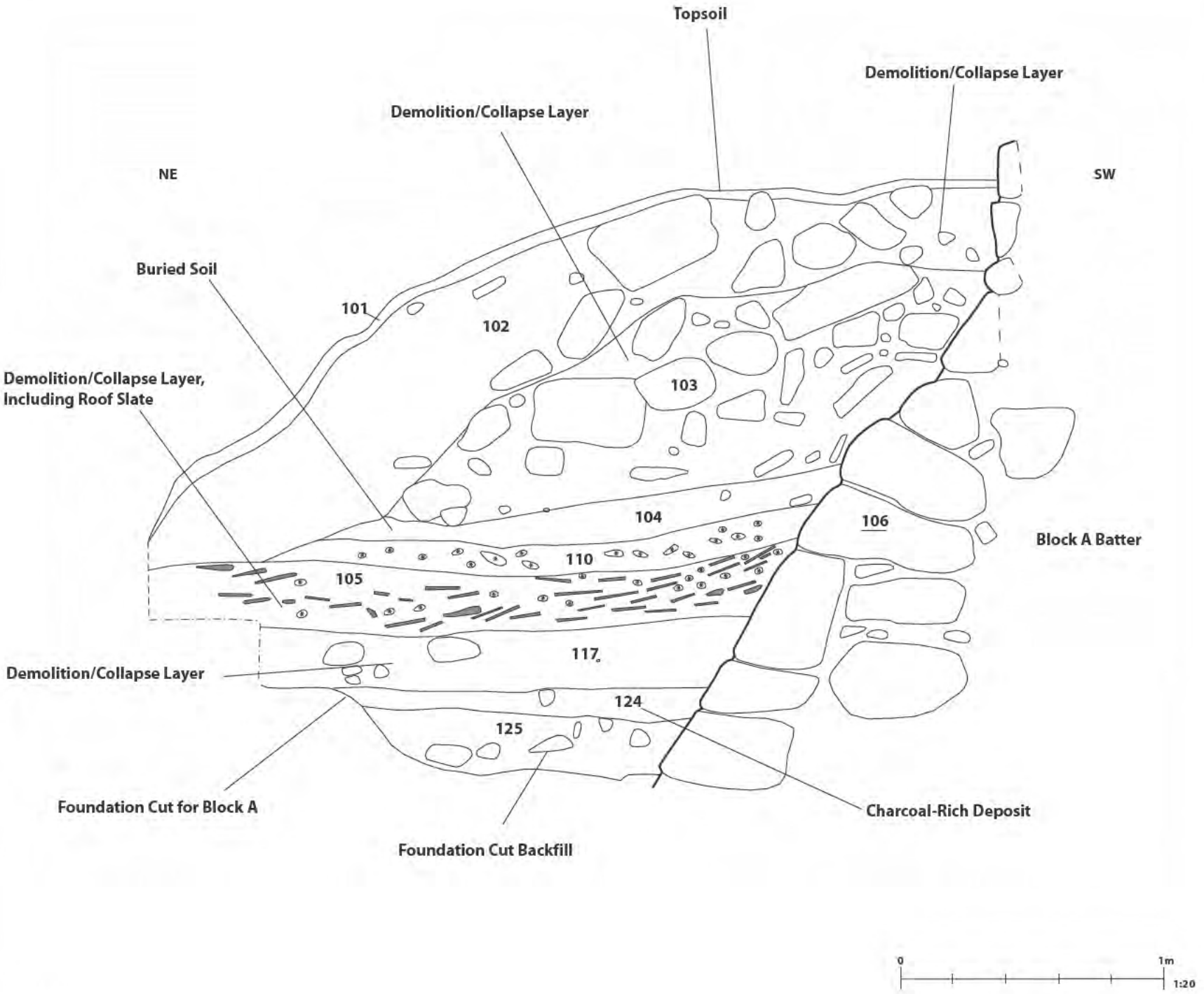
Figure 4: Northwest Facing section of Block A, incorparting Hague's area & location of Timbers used for C14 dating.



KEY

Slate

Shell

Site Plan

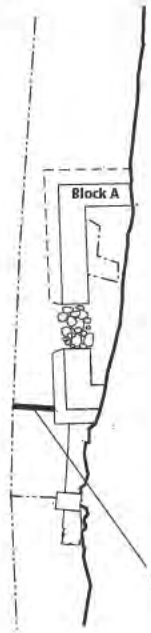


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Figure 5: Northwest Facing Section of Block A Collapse.

Date: May 2007

Scale: 1:20

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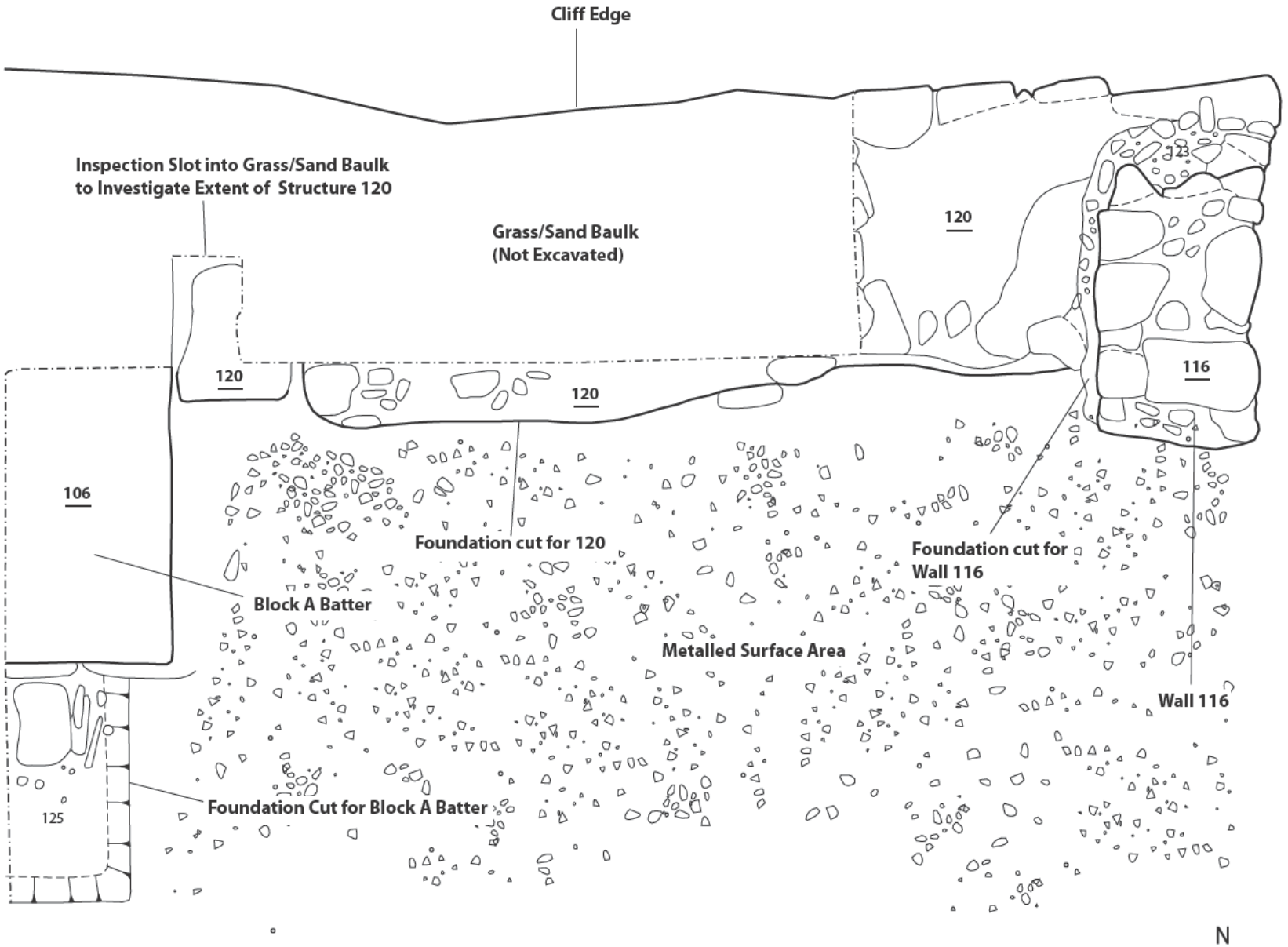

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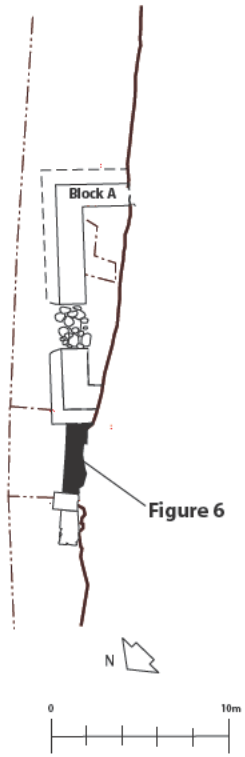

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Figure 6: Plan of area between Blocks A and B inc. Base of Batter, Foundation Cut and Metalled Area

Date: May 2007

Scale: 1:25

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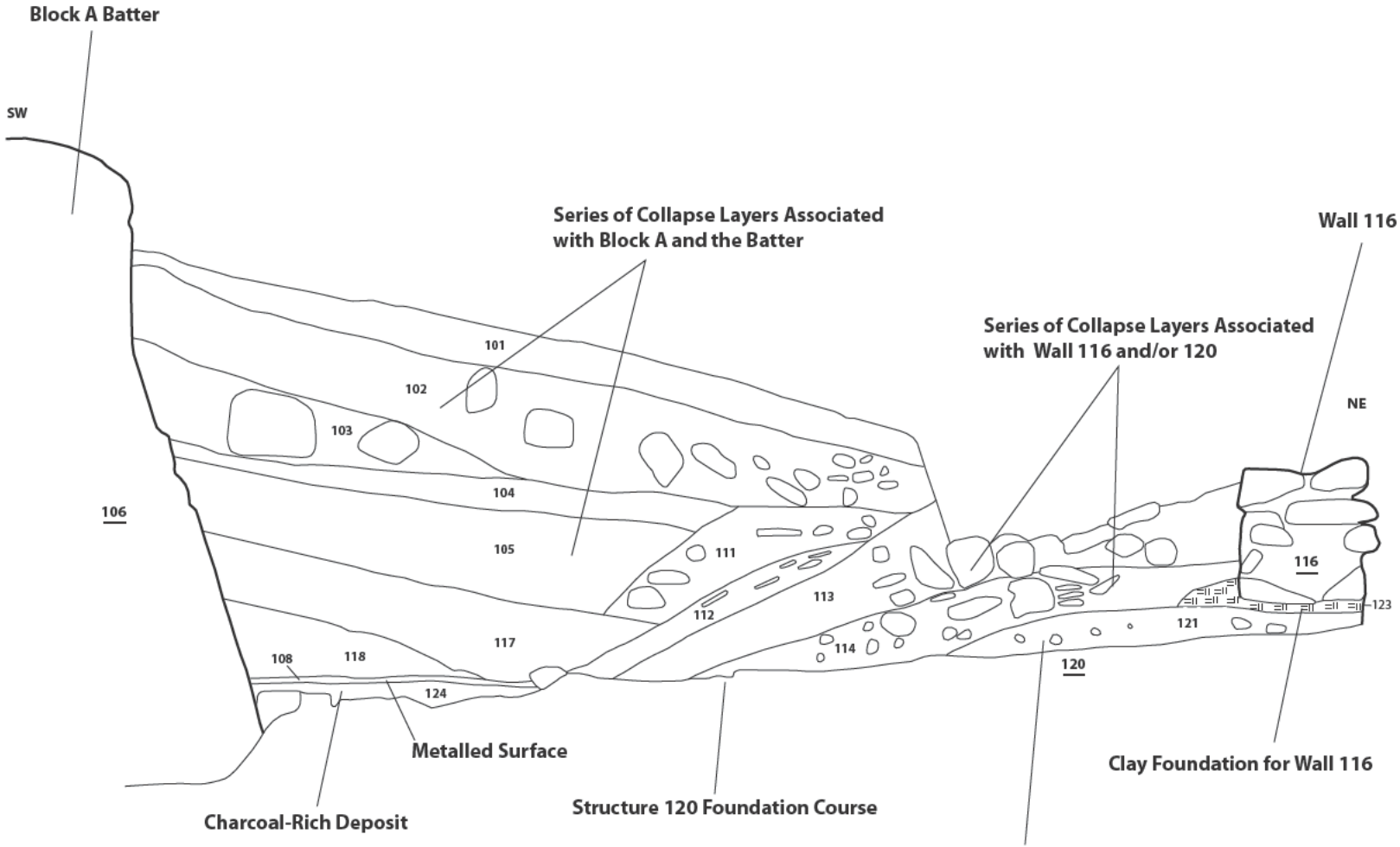

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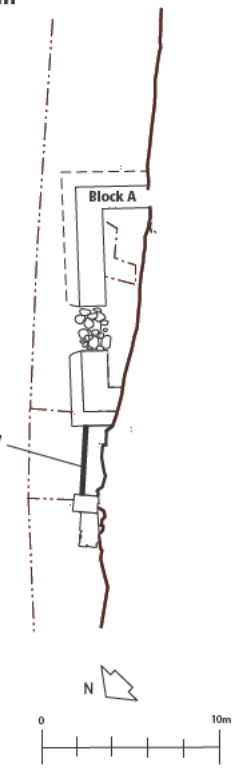

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Figure 7: Southeast Facing Section of Block A Batter Collapse

Date: May 2007

Scale: 1:25

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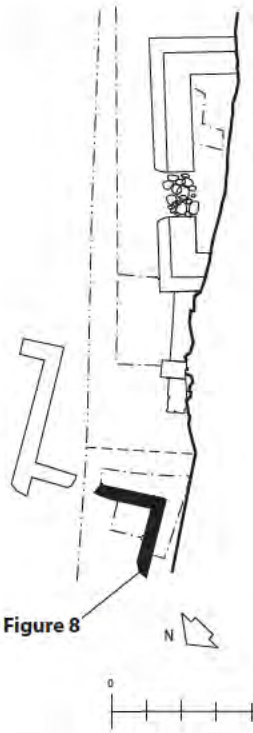

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Figure 8: Block B Foundation Level

Date: May 2007

Scale: 1:40

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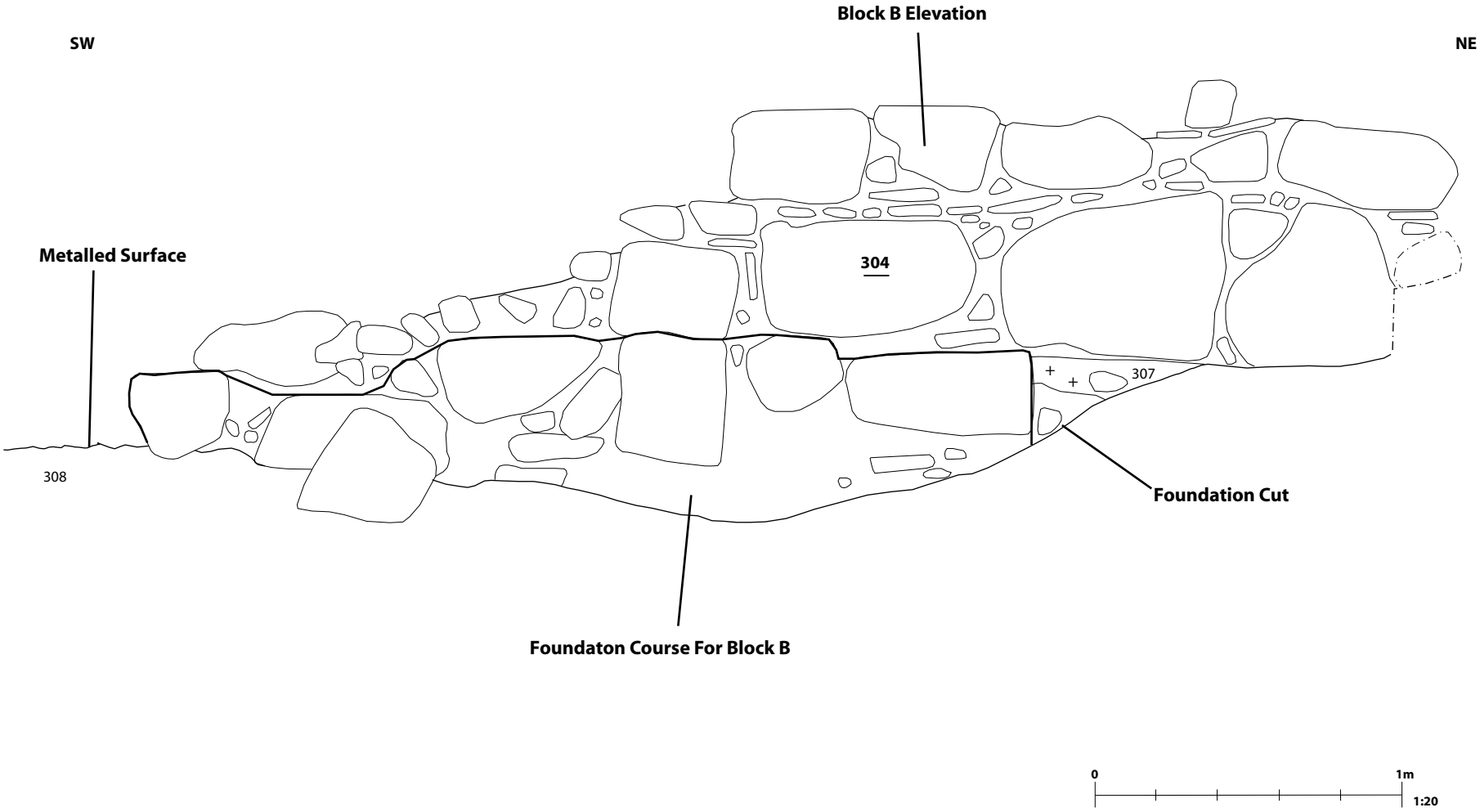

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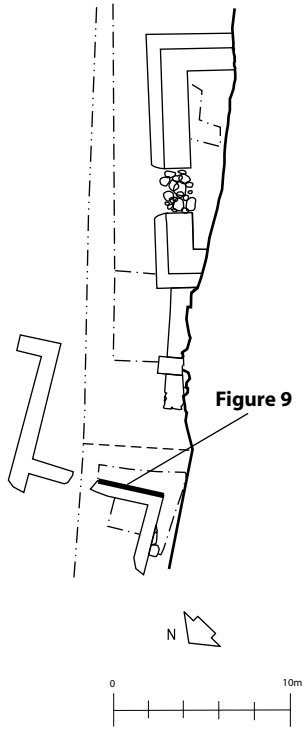

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Figure 9: Southeast Facing Elevation of Block B

Date: May 2007

Scale: 1:20

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Plate 1: View South of Block A Remains prior to Clearance

Plate 2: View West of Block A Remains prior to Clearance

Plate 3: Block A: Demolition/Collapse Layers

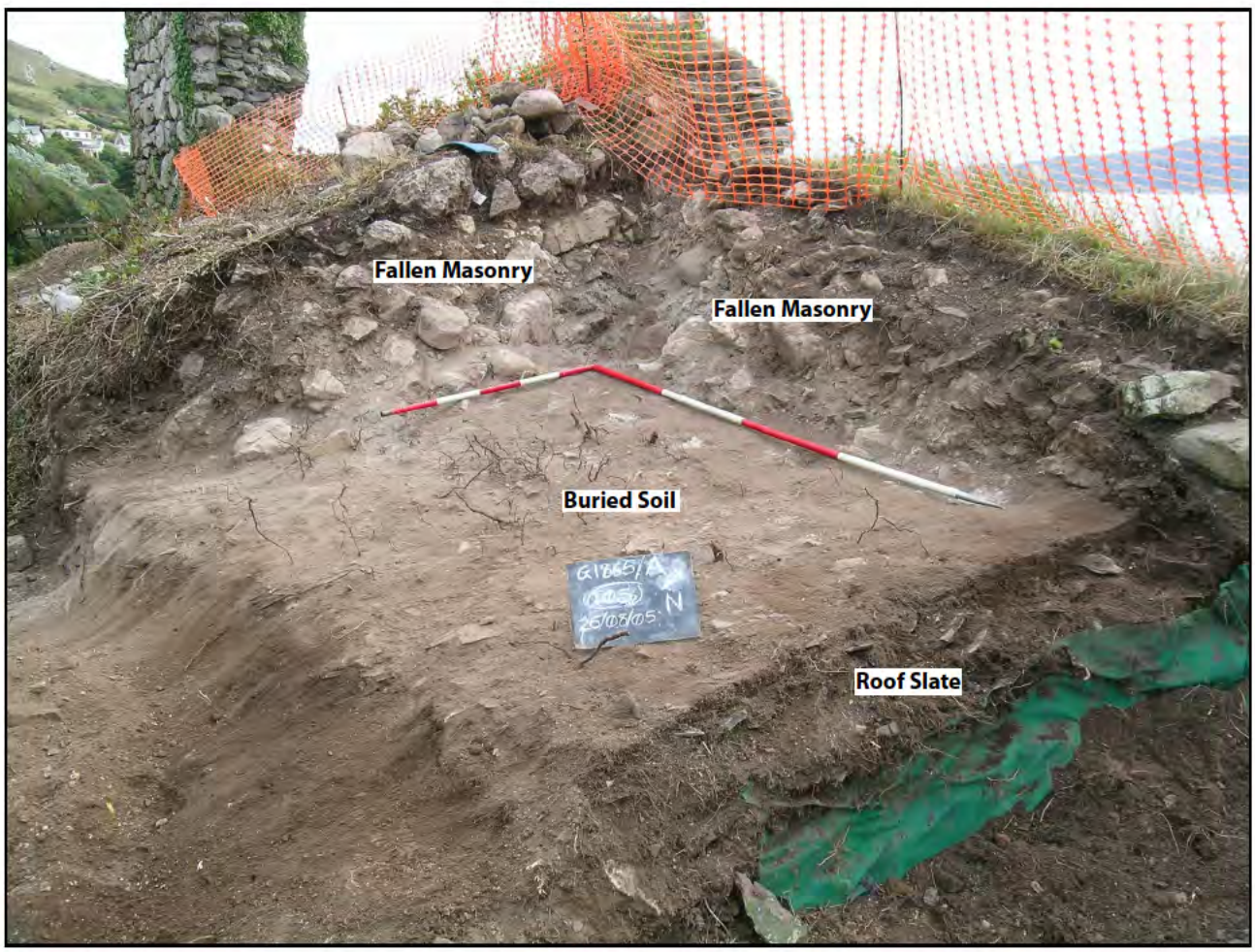

Plate 4: Block A: Demolition/Collapse Layers. Note: Green Mesh Represents Edge of 1996 Excavation

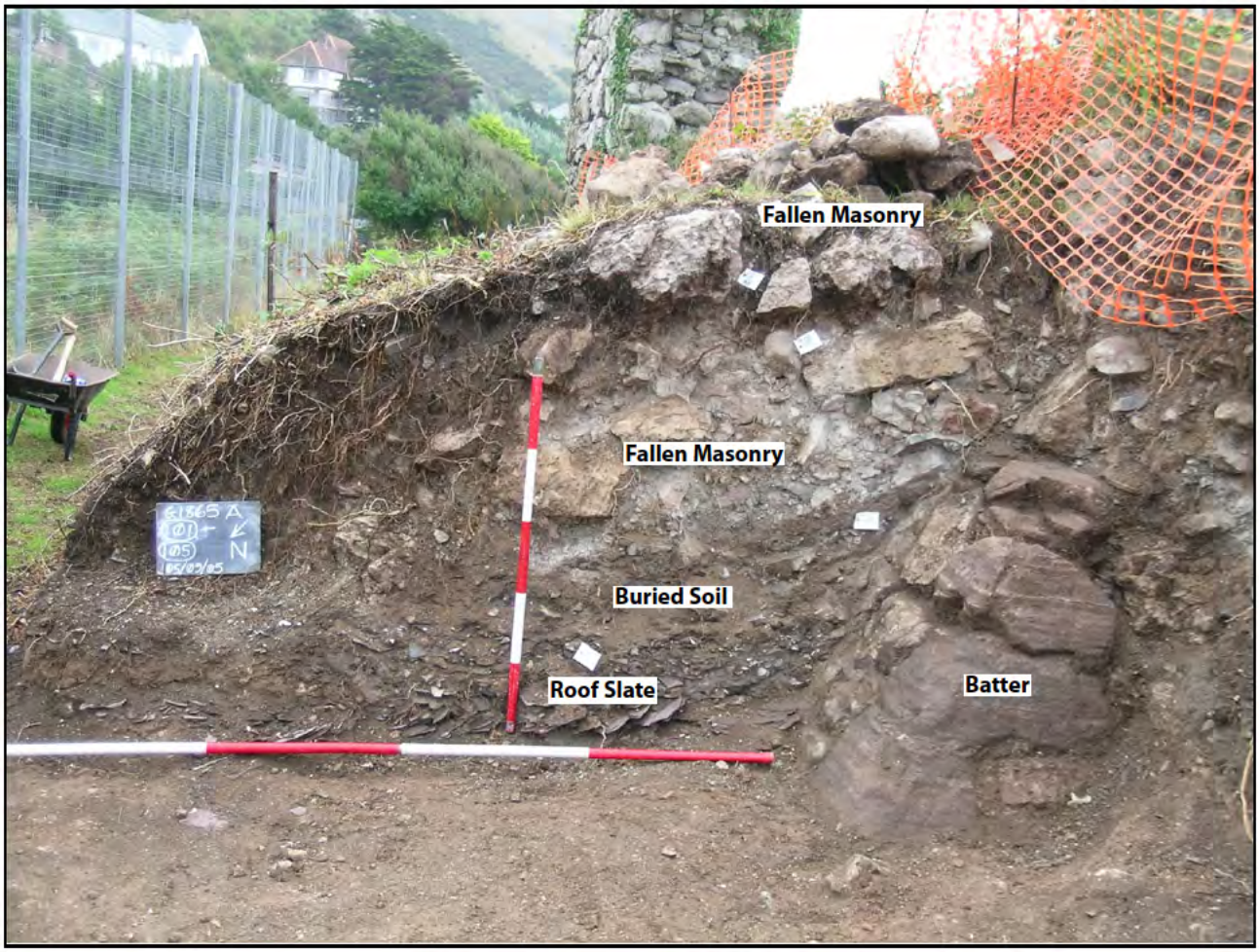

Plate 5: Block A: Demolition/Collapse Layers

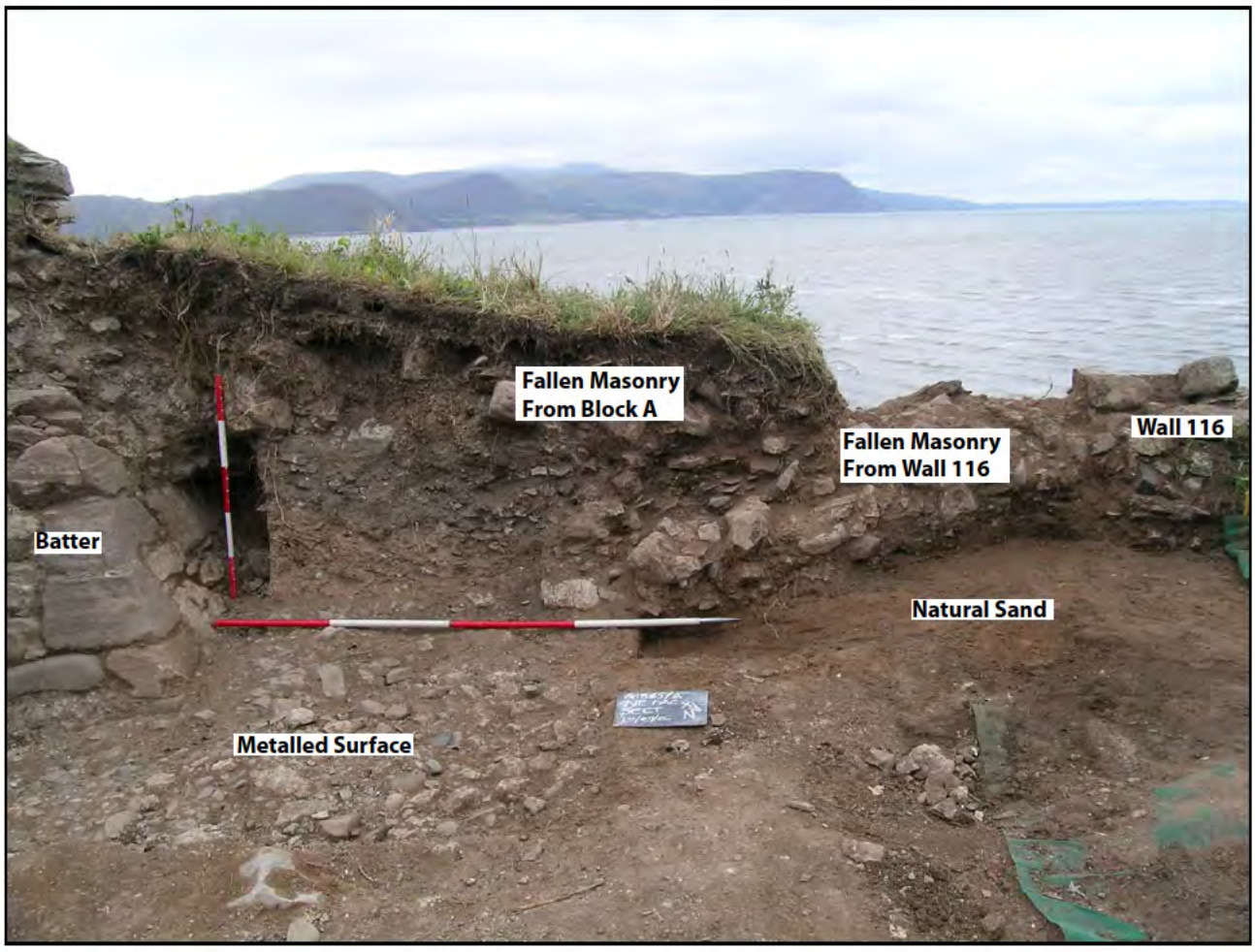

Plate 6: Block A: Demolition/Collapse Layers and Associated Features

Plate 7: Block A: Batter and Metalled Surface Exposed

Plate 8: Block A: Batter with Metalled Surface Removed. Foundation level of Structure 120 is visible

Plate 9: Block A: Cliff-Facing Section: Rubble Core of Batter

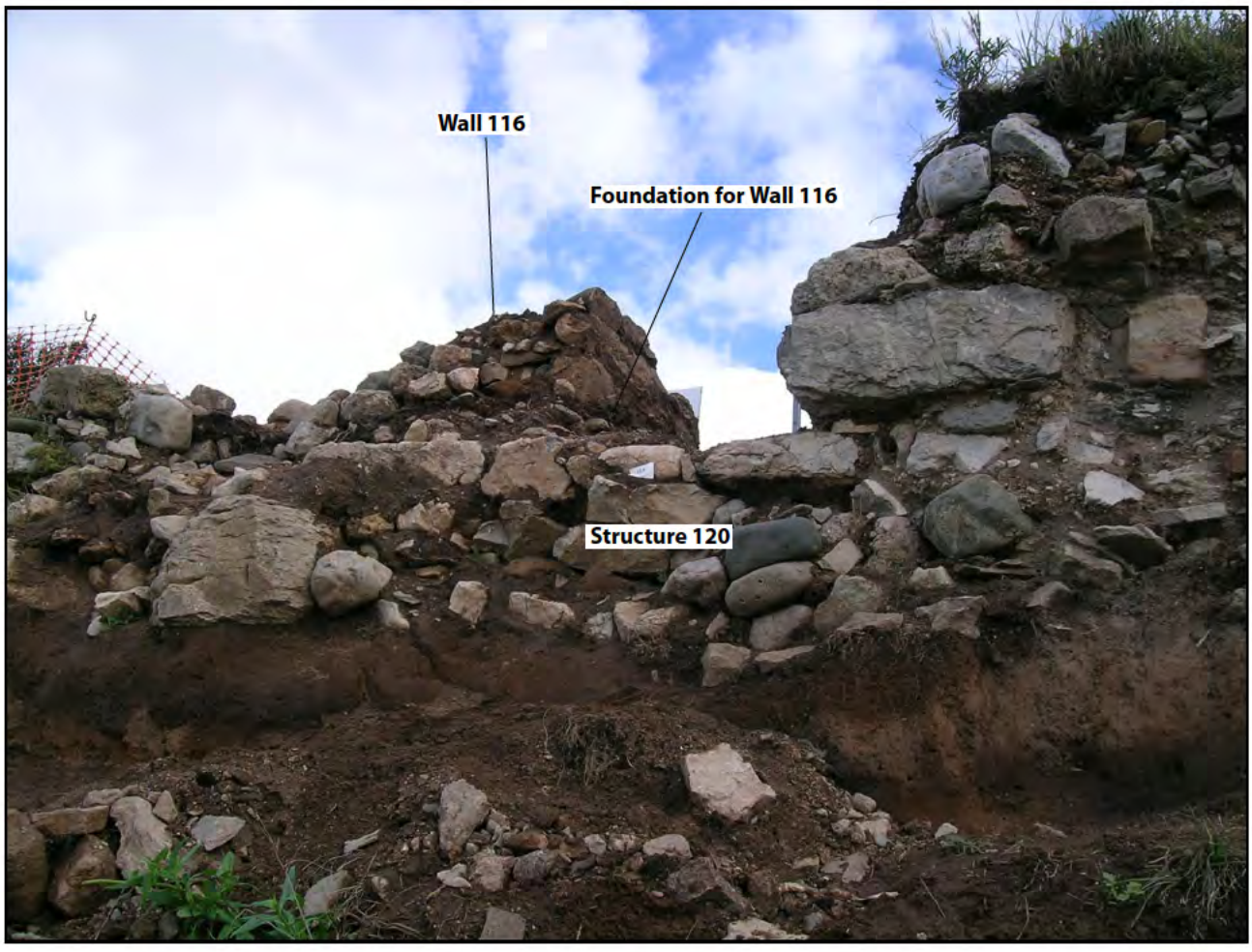

Plate 10: Block A: Cliff-Facing Section: Structure 120 and Wall 116

Plate 11: Block A: Internal Collapse, Burning and Floor Surface (Location of Hague Excavation)

Plate 12: Block A: Internal: Close-up of Burnt Timber Prior to Removal

Plate 13: Block B: View West of Upstanding Remains

Plate 14: Block B: View East of External Demoiltion/Collapse Layers

Plate 15: Block B: View East of Ancillary Building including Potential Floor Surface

Plate 16: Block B: View East of Ancillary Building with Foundation Level Exposed

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