

# **BAMBURGH RESEARCH PROJECT**

## **VILLAGE HALL, LINDISFARNE**



### **REPORT OF ARCHAEOLOGICAL MONITORING AND TEST PIT EXCAVATION**

Compiled for Ainsworth Spark Associates by The Bamburgh Research Project: Commercial Projects Section

BRP 11/05b

May 2012

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## **SUMMARY**

*This report has been compiled by The Bamburgh Research Project, Commercial Section for Ainsworth Spark Associates, Architects, and sets out the results of the monitoring and trial trench evaluation undertaken as part of the development of a new Village Hall in Holy Island Village, Lindisfarne, Northumberland between May 2011 and December 2011. The work, comprised the monitoring of ground reduction and foundation trenches and the subsequent excavation of three test pits sited to investigate the impact of the mini-pile foundation scheme on the deeper stratigraphy. The work was undertaken in compliance with a Written Schedule of Investigation compiled by the Bamburgh Research Project in May 2011 in response to a brief issued by the Northumberland County Council Conservation Team.*

*The development site is located in the central part of Holy Island Village, Northumberland, within a block of properties defined by Marygate to the north, The Green to the west, Crossgate Lane to the east and Prior Lane to the south. The site lies immediately off Crossgate Lane within the plot occupied by the previous village hall, now demolished (NGR NU 12580 41935).*

*The monitoring of the initial ground reduction and levelling together with the monitoring of the construction trench excavation revealed a series of homogeneous midden deposits of post medieval date. The excavation of the three test pits adjacent to some of the mini-piles revealed the presence of a clay subsoil at 11.19m OD at the base of Test Pit 1. Although the pottery evidence is very limited it is very likely that the the lower midden layers revealed within each test pit were of medieval date with the upper midden layers of post medieval date. A crude stone alignment, on a north east to south west alignment, and of very likely medieval date, was present in Test Pit 3. It probably represented the foundation for a wall or structure, but its limited exposure makes interpretation problematic.*

*A small group of twelve ceramic items was recovered comprised five fragments of pottery vessels, four fragments of clay pipe stems and three, probably, of ceramic building material. The material ranged in date from medieval to 19<sup>th</sup> century. A palaeoenvironmental sample from context 306 contained an accumulation of domestic waste, with animal bone, fish bone, marine shell, charred plant macrofossils and fuel waste. The cereal assemblage, comprising barley, oats and bread wheat alongside the presence of legumes, such as pea, is typical of both medieval and post-medieval sites in northern England and indeed resembles the assemblage recent revealed from the Manor House Hotel. A variety of fish taxa was identified, including ray family, cod family, Atlantic herring, Perciformes order, salmon and trout family, haddock, whiting, sand eel family and flatfish order. All taxa found were available in the immediate waters of the North Sea or local river systems, and most could have been caught using hook and line fishing, probably caught using a small boat in inshore or coastal waters, but nets or fish traps may have been used as well to catch some taxa like herring.*

*The monitoring and trial pit excavation has revealed the presence of extensive medieval and post medieval midden layers that would appear to reveal that the the depth of archaeological stratigraphy increased towards the street frontage, as subsoil was encountered at 11.19m OD at the base of Test Pit 1. Some structural activity would appear to have been present on site judging from the stone feature within Test Pit 3 and the shard of medieval glass found within the sample from context 306. The relative limited intervention at these depths makes a wider*

*interpretation of this evidence problematic.*

*The presence of some disarticulated human foot bones from the post medieval midden layer 301 within Test Pit 3, is interesting but hard to interpret clearly. Human bone can be disposed of following medical procedures but it is more likely that they derive from a disturbed burial. The presence of a number of ecclesiastical sites within the village provides ample opportunity for the disturbance of such remains. Otherwise the results of the analysis of the palaeoenvironmental sample and the faunal remains have produced results that are to be expected from sites on Lindisfarne. A rural economy, the presence of waste ground and a modest fish bone assemblage indicative of inshore fishing.*

**VILLAGE HALL,  
HOLY ISLAND,  
NORTHUMBERLAND  
REPORT OF ARCHAEOLOGICAL MONITORING  
AND EXCAVATION**

**1.0 INTRODUCTION**

- 1.0.1 This report has been compiled by The Bamburgh Research Project, Commercial Section for Ainsworth Spark Associates, Architects, and sets out the results of the monitoring and trial trench evaluation undertaken as part of the development of a new Village Hall in Holy Island Village, Lindisfarne, Northumberland between May 2011 and December 2011.
- 1.0.2 The work, which comprised the monitoring of ground reduction and foundation trenches and the subsequent excavation of three test pits sited to investigate the impact of the mini-pile foundation scheme on the deeper stratigraphy. The work was undertaken in compliance with a Written Schedule of Investigation compiled by the Bamburgh Research Project in May 2011 in response to a brief issued by the Northumberland County Council Conservation Team. The planning Authority reference is: 09/B/0073 and the Northumberland County Council Conservation Team reference number is: B2/2: 9114. The OASIS reference is bamburgh1- 126005.

**2.0 THE SITE**

**2.1 Location**

- 2.1.1 The development site is located in the central part of Holy Island Village, Northumberland, within a block of properties defined by Marygate to the north, The Green to the west, Crossgate Lane to the east and Prior Lane to the south. The site lies immediately off Crossgate Lane within the plot occupied by the previous village hall, now demolished (NGR NU 12580 41935) (Figures 1 and 2).

**2.2 Historical Background**

- 2.2.1 Mesolithic activity on the island is demonstrated by the presence of midden deposits at Ness End, on the northern side of the island, adjacent to Jenny Bell's Well and in the vicinity of the Fort on the Heugh. Neolithic activity within the village is indicated by a <sup>14</sup>C date for a single post-hole identified off Marygate, an un-provenanced find of a Neolithic axe near to St Cuthbert's Square and a rock carving from the Palace.
- 2.2.2 The Anglo-Saxon monastery on Lindisfarne was founded in AD 635 as a daughter house to the Monastery on Iona, Scotland. The focus of the monastery almost certainly lay beneath the later medieval priory site but the monastic enclosure would originally have been much more extensive. O'Sullivan has proposed the line of Marygate as the northern boundary to the site. The aceramic structural remains identified during the evaluation of

the Winery site by Northern Archaeological Associates in 2000 are likely, in part, to be early medieval in date and would support this hypothesis as they are more likely to be monastic than secular (NAA 2001).

- 2.2.3 The village on Holy Island existed from at least the medieval period, possibly being founded to service the early medieval monastery. Evidence for complex medieval archaeology was identified at the Castle View (Stewart and Bailey 2006) and during the Winery and Palace evaluations (NAA 2001). This indicates the presence of stratified medieval archaeology throughout the area of the village.
- 2.2.4 An extensive evaluation of the site surrounding the Winery, Public Toilets and the previous Village Hall was undertaken by Northern Archaeological Associates during 2000 (NAA 2001). Seven trial trenches were excavated. The earliest features that were revealed comprised trenches or gullies together with pits cut into natural subsoil, which were potentially either prehistoric or Anglo-Saxon in date. These features were overlain by a sequence of medieval deposits and some structures of 13<sup>th</sup> to 15<sup>th</sup> century date. These remains were in turn sealed by medieval to post-medieval midden deposits, between 0.9m and 1.2m thick, across much of the area. The main exception to this was the area to the north-west of the Winery, where medieval structural remains were found only 0.2m below existing ground level.
- 2.2.5 Trenches 2 and 6, excavated during this evaluation were of particular relevance to the present site being located immediately south of the Village hall site boundary in the Winery car park and within the Village Hall grounds adjacent to the previous village hall building, respectively. Trench 2 revealed the presence of complex archaeology cut into and forming the layers above the natural subsoil, which was encountered at a depth of 1.2m below ground level. These features of medieval as well as early medieval and possibly prehistoric date were sealed by 0.75m of midden deposit that had accumulated from the medieval to the modern period. Trench 6 was excavated to a depth of 1.53m below ground level before subsoil was encountered. A pit feature and a cobble surface were present cut into the subsoil and immediately above the subsoil, sealed by a further midden layer close to 1.5m deep. Monitoring of the erection of the store on the eastern side of the Winery, in 2006, again revealed the presence of midden layers to the full depth of excavation, which did not exceed 0.5m in in this instance (NAA 2006).

### **2.3 Impact of the development**

- 2.3.1 The planned work involves the construction of a foundation solution comprising ground beams and piling to form the base of the new building. This solution requires limited stripping over the area of the building footprint and localised excavation of the ground beams that should not exceed a depth of 500mm below the present ground level. Impact below this level will be kept to a minimum and will be principally a consequence of the insertion of the piles. The impact of a paved area to be laid to the immediate west and south of the new building will be limited to less than 500mm below ground level (Figure 2).
- 2.3.2 The proposed scheme of works would indicate some potential to impact on undisturbed stratigraphy, during ground reduction and ground beam excavation, should it be present

at an unexpectedly high level, and will disturb the upper layers of the midden deposit identified within the trial trenches. Some limited impact on deeper deposits will be incurred during the piling.

### **3.0 OBJECTIVES**

3.0.1 In the light of the potential for the construction works to impact upon preserved archaeological remains it was proposed that monitoring of the site stripping and foundation trench excavation would be undertaken during the construction phase to preserve by record any archaeological remains. In addition, three test pits, each at least 1m by 1m in plan and up to 1.5m deep, would be excavated adjacent to three of the mini-piles in order to evaluate the impact of the piling system on deeply buried stratigraphy.

### **4.0 METHODOLOGY**

#### **4.1 Archaeological monitoring**

4.1.1 The monitoring and excavation was to be carried out by suitably experienced archaeologists, familiar with the archaeological background to the site. All work was carried out in compliance with the codes of practice of the Institute for Archaeologists (IfA 2010) and followed the IfA Standards for Excavation (IfA 1996) The conformed to the following methodology.

4.1.2 A contingency of up to 10 person days of excavation could be invoked following consultation with the Assistant County Archaeologist, the client and the monitoring archaeologist.

#### **4.2 General standards**

4.2.1 All archaeological features identified during the monitoring will be recorded and sample excavated according to their type and form. This will represent 50% of all discrete features, 25% of all linear features of non-uniform fill and 10% of linear features with a uniform fill. Machine excavation of the topsoil will be under constant archaeological supervision and be undertaken by a machine with a toothless ditching bucket.

4.2.2 A 40 litre bulk palaeoenvironmental sample will be taken from all features recognised as suitable for the preservation of palaeoenvironmental remains.

4.2.3 Secure contexts will be sampled for dating where appropriate, whether on site or as sub samples of bulk samples. Any concentrations of charcoal or other carbonised material recovered on site will usually be retained. Any fired features such as ovens, kilns and hearths suitable for archaeo-magnetic dating will be sampled by an appropriately qualified specialist following consultation with the NCCCT.

4.2.4 Pottery and Animal Bone will be collected as bulk samples whilst significant artefacts

will be three-dimensionally recorded prior to processing. All finds will be recorded and processed according to the BRP system and submitted for post-excavation assessment. Finds recovery and storage strategies will be in accordance with published guidelines (English Heritage 1995 and IfA Guidelines for Finds Work). Finds are to be deemed a part of the archaeological archive and are to be deposited with the site record in the appropriate museum subsequent to the post excavational analysis. Should artefacts of gold or silver covered by the 1996 Treasure Act be recovered, appropriate procedures will be followed.

- 4.2.5 In the event of human burials being revealed they will be left *in situ* and treated in an appropriate manner. After consultation with the County Archaeological Officer, if excavation is required, work will comply with the relevant home Office regulations.
- 4.2.6 Any archaeological features encountered will be hand-cleaned, excavated and recorded:
1. A photographic record will be taken using black and white print, colour slide film at 35mm format. In addition a digital photographic record will be compiled.
  2. A written description of features will be recorded using the BRP *pro forma* context recording system.
  3. All features will be drawn at an appropriate scale using pre-printed permatrace. Plans will normally be drawn at a scale of 1:20 and sections at a scale of 1:10.
- 4.2.7 All archaeological features and horizons will be accurately tied into the Ordnance Survey grid. All levels will be tied in to Ordnance Datum.
- 4.2.8 Arrangements will be made with the appropriate museum for the deposition of the site archive within 6 month of the completion of the post-excavation report.

## **6.0 RESULTS**

### **6.1 Monitoring undertaken during construction groundworks**

- 6.1.1 The monitoring of the initial ground reduction and levelling together with the monitoring of the construction trench excavation revealed a series of homogeneous midden deposits of post medieval date.

### **6.2 Test Pit 1**

- 6.2.1 Test Pit 1 was located in the south west corner of the foundation scheme, located against the second pile from the west extent of the south side of the new development (Figure 2). The pit measured 2m east to west by 1.2m north to south. It was excavated to 1.02m below the present ground level (11.19mOD), mostly by machine under close supervision, and subsoil (107) comprising a red-brown silty clay was encountered at its base. Layer 104 overlay the subsoil to a depth of 0.13m and was formed from a firmly compacted silty clay with some gravel content, shell and coal



inclusions.

- 6.2.2 Layer 102 lay directly above layer 104 and was up to 0.18m thick and composed of a mid grey-brown clay silt with occasional shell. This was in turn overlaid by a more substantial midden layer, up to 0.7m thick, composed of a mid grey-brown sandy silt with some clay, with occasional shell and coal fragments. The layer contained a very small pottery assemblage of post-medieval date. The upper layer within the test pit (100) was up to 0.22m thick, but represented a midden layer truncated by the machine reduction of the site during the monitoring phase. It comprised amid grey-brown sandy silt with a clay content with occasional shell.
- 6.2.3 No dating evidence was present in the earliest layers and the small assemblage present in layer 101 included medieval and post medieval ceramic. By analogy with the trial trench evaluation undertaken in 2000 and from the limited evidence of the other test pits it is likely that layers 100 and 101 were of post medieval in date. Layers 102 and 104 could have represented preserved medieval midden material but only more extensive evidence could demonstrate this unambiguously.

### **6.3 Test Pit 2**

- 6.3.1 Test Pit 2 was located in the south east corner of the foundation scheme and measured 2.6m north to south and 1.2m east to west. The pit was excavated to a maximum depth of 1.52m, stepped up at the south side to allow for safe egress such that a 1.2m by 1.14m area was excavated to the full depth. As with Test Pit 1 the upper layers were removed by machine under supervision and the lower layers were hand excavated.
- 6.3.2 The earliest layer encountered (204) was revealed at the base of the pit, at 1.52m (10.75m OD) below the reduced ground level, but not excavated. It comprised an orange-brown and grey-brown clay silt with a substantial content of ash and charcoal and is likely to represent a midden layer with a fire waste content. Immediately overlying layer 204 a further midden layer (203) composed of a firmly compacted medium red-brown clay silt with some charcoal was present to a depth of 0.46m. A further midden layer (202), comprised of a dark grey-brown silt with clay and substantial shell and some charcoal overlay 203 to a depth of 0.54m. The uppermost layer (201) comprised a very dark grey-brown sand and silt with clay. Coal fragments, mortar and charcoal inclusions were present and the layer was up to 0.37m thick.
- 6.3.3 Layer 201 contained a small assemblage of 19<sup>th</sup> century pottery and two clay pipe stems of 17<sup>th</sup> to 18<sup>th</sup> century date that were probably residual. A fragment of roof tile and a single sherd of pottery of possible late medieval or early post medieval date was also present. It is likely from the evidence of the 2000 trial trenches and the absence of any modern material that the lower midden layers, 202, 203 and 204, were of medieval date.

### **6.4 Test Pit 3**

- 6.4.1 Test Pit 3 was located centrally on the outside of the northern side of the foundation

scheme and measured 2.2m east to west by 1.3m north to south. The upper layer, within the trench, was excavated by machine under supervision and the lower layers by hand to a maximum depth of 1.1m below the reduced ground level (11.02m OD) where an orange-brown clay subsoil was encountered in the south east corner of the trench in a *sondage* that had been excavated into an area defined by the trench edges and a stone feature, 303. This stone feature extended across the trench on a north east to south west alignment and was 0.67m wide, extending beyond the limit of excavation at both ends. It appeared to be a single course of irregularly split sandstone slabs, up to 0.58m by 0.45m by 0.1m laid in a crude line, two stones wide. It is quite possible that the feature represented the foundation for a structure, but the crude construction could represent a narrow path, though the uneven upper surface and lack of compaction would make this the less likely interpretation. The narrow trench made interpretation difficult and it was decided to leave the feature *in situ*.

- 6.4.2 Two thin layers of midden-like layers overlay the subsoil. The earliest of these (306) was 0.08m thick and comprised a middle orange-brown silty clay with shell inclusions which lay beneath a 0.1m thick middle yellow-brown silty clay (302) layer with occasional small stones and occasional charcoal and shell. Both layers appear to have built up against the south east face of the stone feature, the upper surface of 302 respecting the top of the structure. A further thin layer (304) comprised of a reddish orange-brown sandy clay up to 0.1m thick had accumulated against the stone feature on its north west side.
- 6.4.3 A deep midden layer (301), up to 0.72m thick, comprised of a mid grey-brown sandy silt with some clay content and occasional stones. A single sherd of unglazed medial pottery was recovered from layer 301, which may given the absence of any more modern finds be indicative of its date. A layer (300) of modern hardcore, laid following the ground reduction, directly sealed the midden layer.

## 6.5 Pottery Assessment

- 6.5.1 A small group of twelve ceramic items was recovered from the site: five fragments of pottery vessels, four fragments of clay pipe stems and three probably of ceramic building material. The material, which is listed below with comments, ranged in date from medieval to 19<sup>th</sup> century.
- 6.5.2 This small group is of no particular interest and its small size makes even the dating indications of limited value.

## 6.6 Palaeoenvironmental Assessment

### Results of sample from context 306

- 6.6.1 Both burnt and unburnt animal bone was present in the sample, with fish bone and small amounts of marine shell (periwinkle, mussel and oyster) also identified. The small fragments of coal shale and the crinoid (Pre-Quaternary fossil) recorded in the context reflect the local geology. Small amounts of fuel waste and fuel ash were recorded from the context and clinker/cinder was noted in the flot fraction. A fragment of glass was recovered from the residue.

- 6.6.2 The flot also contained low numbers of uncharred seeds. The sample was not waterlogged, and so the uncharred seeds are likely to be modern intrusive material. A few fragments of green paint, the presence of modern roots and a small number of earthworm egg cases also indicate some modern intrusion has occurred.
- 6.6.3 Occasional fragments of charcoal were identified and a small assemblage of charred plant macrofossils was present in the context. These included grains of barley, oat and wheat. Although the variability of wheat grain morphology prevents their identification to species with certainty, all three wheat grains had the characteristic compact shape associated with *Triticum aestivo-compactum* (Bread wheat). Diagnostic chaff was absent however, preventing definite species identification. A hazel nutshell fragment was also present in the context.
- 6.6.4 Charred weed seeds present include the arable weed fat-hen, together with weed seeds with wider habitat niches such as members of the goosefoot and grass families, docks and vetches. A pea or a large-seeded, uncultivated member of the pea family was recorded. A number of fragments of charred seaweed were also identified. Charred grains, hazel nutshell and charcoal suitable for radiocarbon dating is available for the sample. The results of the palaeoenvironmental assessment are presented in Appendix IV.

### **Discussion**

- 6.6.5 The sample appears to comprise an accumulation of domestic waste, with animal bone, fish bone, marine shell, charred plant macrofossils and fuel waste present. The cereal assemblage, comprising barley, oats and bread wheat alongside the presence of legumes, such as pea, is typical of both medieval and post-medieval sites in northern England (Greig 1991; Hall & Huntley 2007). A number of the cereal grains were unable to be identified to species, as preservation was generally poor with considerable pitting and distortion of the grains. Puffing and pitting of grain may reflect exposure to intense heat (cf. Boardman & Jones 1990) and with the presence of clinker/cinder and fuel waste in the context this may indicate the material was heated to high temperatures, or was burnt several times. The hazel nutshell fragment is also typical of this period as the use of gathered wild foods, such as hazelnuts, was also common. Very similar domestic waste assemblages have been identified from the nearby site of Manor House Hotel, Lindisfarne (Archaeological Services 2011).
- 6.6.6 The arable weed fat-hen, is likely to have been growing with the cereal crops, and this may be true of some of the other charred weed seeds such as grasses, goosefoots, docks and vetches. These could also reflect the proximity of areas of pasture or waste ground to the site.
- 6.6.7 The presence of charred remains of seaweed could reflect the incidental burning of seaweed brought in with the shellfish, although the many uses of seaweed include roofing, glass-making, fodder for livestock and as a fertiliser and food preservative (Buckland & Panagiotakopulu 2005; Hall & Kenward 2003; Walker *et al.* 1996).

### **Recommendations**

- 6.6.8 The assemblage of plant remains is small, and typical of medieval deposits, and therefore no further analysis is recommended.

- 6.6.9 Full analysis of the fish bone assemblage was recommended in order to provide information about fishing practices and the role of fish in the diet at this site. The fine fractions of the residue should be sorted under low magnification to ensure the full recovery of small fish bones. The results of this analysis is listed below.
- 6.6.10 The flot, bone and shell will be retained as part of the physical archive of the site. If additional work is undertaken at the site, the results of this assessment should be added to any further environmental data produced.

## 6.7 Fish bone analysis

- 6.7.1 The assemblage only produced 26 bones that could be identified; this is a very small assemblage which therefore limits its importance and potential for discussion. Full taphonomic information was only recorded for two fragments. These were both recorded as having ‘fair’ texture scores. One was recorded as 20-40% complete and the other as 40-60% complete. Based on overall qualitative assessment, the assemblage was only in moderate to poor condition. Fragments tended to be quite small and not readily identifiable, which could reflect the apparent small size of the fish consumed and/or the poor quality of the material. No burnt, crushed, acid etched or otherwise modified bones were observed.
- 6.7.2 A variety of taxa were observed, despite the small size of the assemblage (Table 1; see Table 3 for listing of common and scientific names). Ray family remains were the most numerous (including a few teeth and dermal denticles, which are found in large quantities in each individual animal), followed by cod family, Atlantic herring, Perciformes order, salmon and trout family, haddock, whiting, sand eel family and flatfish order. This diverse range is consistent with local fishing in the Lindisfarne region.

**Table 1:** Summary of identified taxa

Taxa	QC1	QC2	QC4	QC0	Total
Ray Family	2	1	3	2	6
Atlantic Herring		3			3
Salmon & Trout Family		2			2
Cod Family		3			5
Haddock		2			2
Whiting		2			2
Perciformes order		3			3
Sand Eel Family		2			2
Flatfish Order		1			1
Unidentified					111
Total	2	19	3	113	137

- 6.7.3 Fish sizes were recorded for as many fragments as possible using reference specimens of known length (Table 3.2). No fish greater than 50cm estimated total length was recovered. Most were small, between 15 and 30cm estimated total length, with a few slightly smaller or larger. These would suggest fishing in inshore, shallow coastal waters rather than any deep water fishing out in the North Sea. The two salmon and

trout family fragments could have been caught in either a local freshwater river, or in the sea. The smallest fish were most likely stomach contents from larger fish or seabirds, or bait (Alderstein *et al.* 2000). These include the sand eels, and those broadly identified as Perciformes order (a large group of fish families that are difficult to identify to species when very small).

- 6.7.4 The tiny size of the assemblage, together with its poor quality, makes it difficult to assess body part representation. However, a range of elements was recovered, including cranial bones and vertebrae.

**Table 2:** Fish total length estimates

Taxa	<15cm	15-30cm	30-50cm
Cod Family		4	1
Haddock			2
Whiting		2	
Flatfish Order	1		
Perciformes Order	3		

**Table 3:** Common and scientific names

Common name	Scientific name
Ray Family	Rajidae
Atlantic Herring	<i>Clupea harengus</i>
Salmon and Trout Family	Salmonidae
Haddock	<i>Melanogrammus aeglefinus</i>
Whiting	<i>Merlangius merlangus</i>
Cod Family	Gadidae
Sand Eel Family	Ammodytidae
Perciformes Order	Perciformes
Flatfish Order	Heterosomata (Plueronectiformes)

### Conclusions

- 6.7.5 Excavations at Lindisfarne Village Hall produced a tiny assemblage of fish bones recovered from a single feature. A variety of fish taxa was identified, including ray family, cod family, Atlantic herring, Perciformes order, salmon and trout family, haddock, whiting, sand eel family and flatfish order. All taxa found were available in the immediate waters of the North Sea or local river systems, and most could have been caught using hook and line fishing. Most were probably caught using a small boat in inshore or coastal waters, but nets or fish traps may have been used as well to catch some taxa like herring. It is likely the smallest taxa were stomach contents and/or bait from larger fish, or from seabirds.

## 6.8 Faunal remains assessment

- 6.8.1 A very small collection of animal bones was recovered. Fragments were only recorded as identifiable if they encompassed a unique zone, or non-replicable anatomical feature. Unidentifiable fragments were not counted and were noted only if all the fragments from a context were unidentifiable.

### Results and discussion

- 6.8.2 It can be seen from Table 4 that neither the post-medieval nor the medieval midden layers, (101) and (104) respectively, were rich in faunal remains. The winkle shells in (104) may suggest waste from baiting fishing lines rather than domestic refuse.
- 6.8.3 The post-medieval midden deposit (202), produced mostly unidentifiable fragments of cattle-size bones. The late medieval context (203), produced only two bones but these are in an excellent state of preservation. Both are from very young animals, a femur fragment from a veal calf and a metacarpal 3 from a pig (Table 5).

**Table 4:** Fragment counts for the species present, Test Pit 1

Contexts	101	102	104
Phase	post-medieval	post-medieval	late medieval
Cattle	2	-	-
Domestic fowl	1	-	-
Unidentifiable	-	present	-
Winkle shells	-	-	11

**Table 5:** Fragment counts for the species present, Test Pit 2

Contexts	202	203
Phase	post-medieval	late medieval
Cattle	2	1
Pig	-	1
Winkle shells	2	-

- 6.8.4 The post-medieval midden deposit (301) has more variety of species represented than the equivalent midden layers in Test Pits 1 and 2 (Table 6). The cattle bone is a mandible from a veal calf, rather than the fragments of limb bones and cattle-size ribs from adult animals seen in Test Pits 1 and 2. The wear on deciduous premolar 4 is comparable to species aged about 8 weeks old in the author’s reference collection. There are tooth marks indicating gnawing by a large dog. Part of a dog pelvis is present in this context, together with single metapodials of sheep and pig. The human bones comprise part of a metapodial and two phalanges, the size of the bones suggest part of a foot rather than a hand. This may indicate a disturbed burial.

**Table 6:** Fragment counts for the species present, Test Pit 3

Contexts	301
Phase	post-medieval
Cattle	1
Sheep/goat	1
Pig	1
Dog	1
Human	3

- 6.8.5 Context (306) produced no hand-recovered finds but the residue of the bulk sample contains fragments of winkle and mussel shell.

## **6.9 Conservation assessment**

- 6.9.1 A fragment of probable window glass from context (101) was examined and stabilised. The glass is irregularly shaped 30 x 17mm max x 1.25mm thick. All edges are broken, and the glass has extensive weathering on all surfaces, giving it an iridescent appearance. It was probably originally green/clear in colour. Despite its weathered state, fine scratches can be seen on both sides under X16 magnification, suggesting that the original surface is intact. No painted decoration is visible. The glass is very thin and flat, but its unstable and deteriorated state suggests it is of medieval date.
- 6.9.2 To stabilise the fragile surface, loose dirt was removed mechanically, using a water/industrial methylated spirits/non-ionic detergent mix, applied with cotton wool swabs. The glass was air dried. It was then surface coated with 6% Paraloid B72 (an ethyl methacrylate co-polymer) in acetone. The conserved glass may be stored in conditions of ambient temperature and relative humidity, avoiding extremes of both.
- 6.9.3 A corroded iron object from context (301) was also examined and X-radiographed. The X-ray confirmed that it is a tapering iron nail shank 45mm long, rectangular in section *c.* 8 x 4mm max. The point and the head are missing. Examination of the shape and section of the nail suggests that it was machine cut, and therefore probably 19th century in date.

## **7.0 CONCLUSIONS**

- 7.0.1 The monitoring and test pit excavation has revealed the presence of extensive medieval and post medieval midden layers that would appear to reveal that the the depth of archaeological stratigraphy increased towards the street frontage, as subsoil was encountered at 11.19m OD at the base of Test Pit 1. Some structural activity would appear to have been present on site judging from the stone feature within Test Pit 3 and the shard of medieval glass found within the sample from context 306. The relative limited intervention at these depths makes a wider interpretation of this evidence problematic.
- 7.0.2 The presence of some disarticulated human foot bones from the post medieval midden layer 301 within Test Pit 3, is interesting but hard to interpret clearly. Human bone can be disposed of following medical procedures but it is more likely that they derive from a disturbed burial. The presence of a number of ecclesiastical sites within the village provides opportunity for the disturbance of such remains. Otherwise the results of the analysis of the palaeoenvironmental sample and the faunal remains have produced results that are to be expected from sites on Lindisfarne. A rural economy, the presence waste ground and a modest fish bone assemblage indicative of inshore fishing.



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**APPENDIX I**

**Context list**

**Test Pit 1**

- 100 Modern hardcore
- 101 Midden layer
- 102 Midden layer
- 103 lens within 102
- 104 Midden layer
- 105 Pile
- 106 Soil displaced by pile

**Test Pit 2**

- 200 Modern Hardcore
- 201 Midden layer
- 202 midden layer
- 203 Midden layer
- 204 Layer with burnt material

**Test Pit 3**

- 300 Modern hardcore
- 301 Midden layer
- 302 Layer against wall 303
- 303 Stone wall
- 304 Layer against wall 303
- 305 Subsoil
- 306 Lower layer against wall face

## APPENDIX II

### VILLAGE HALL, HOLY ISLAND, NORTHUMBERLAND

#### ARCHAEOLOGICAL MONITORING AND EXCAVATION WRITTEN SCHEDULE OF INVESTIGATION

#### 1.0 Introduction

- 1.0.1 This Written Schedule of Investigation has been compiled by The Bamburgh Research Project, Commercial Section for Ainsworth Spark Associates, Architects. The document sets out the project design for an archaeological watching brief and excavation to be undertaken during groundworks associated with the construction of a new village hall, Holy Island Village, Northumberland, on the site of the previous, now demolished, hall. The Planning Authority reference number is: 09/B/0073 and the Northumberland County Council Conservation Team reference number is: B2/2: 9114.
- 1.0.2 The Written Schedule of Investigation details the proposed scheme of works for the watching brief and excavation. The document has been prepared in order to fulfil a requirement for the planning application, as laid out in the brief issued by The Northumberland County Council Conservation Team.

#### 2.0 THE SITE

##### 2.1 Location

- 2.1.1 The development site is located in the central part of Holy Island Village, Northumberland, within a block of properties defined by Marygate to the north, The Green to the west, Crossgate Lane to the east and Prior Lane to the south. The site lies immediately off Crossgate Lane within the plot occupied by the previous village hall, now demolished (NGR NU 12580 41935) (Figures 1 and 2).

##### 2.2 Archaeological background

- 2.2.1 Mesolithic activity on the island is demonstrated by the presence of midden deposits at Ness End, on the northern side of the island, adjacent to Jenny Bell's Well and in the vicinity of the Fort on the Heugh. Neolithic activity within the village is indicated by a <sup>14</sup>C date for a single post-hole identified off Marygate, an un-provenanced find of a Neolithic axe near to St Cuthbert's Square and a rock carving from the Palace.
- 2.2.2 The Anglo-Saxon monastery on Lindisfarne was founded in AD 635 as a daughter house to the Monastery on Iona, Scotland. The focus of the monastery almost certainly lay beneath the later medieval priory site but the monastic enclosure would originally have been much more extensive. O'Sullivan has proposed the line of Marygate as the northern boundary to the site. The aceramic structural remains identified during the evaluation of the Winery site by Northern Archaeological Associates in 2000 are likely, in part, to be early medieval in date and would support this hypothesis as they are more likely to be monastic than secular (NAA 2001).
1. The village on Holy Island existed from at least the medieval period, possibly being founded to service the early medieval monastery. Evidence for complex medieval archaeology was identified at the Castle View (Stewart and Bailey 2006) and during the Winery and Palace evaluations (NAA 2001). This indicates the presence of stratified medieval archaeology throughout the area of the village.
  2. An extensive evaluation of the site surrounding the Winery, Public Toilets and the previous Village Hall was undertaken by Northern Archaeological Associates during 2000 (NAA 2001). Seven trial trenches were excavated. The earliest features that were revealed comprised trenches or gullies together with pits cut into natural subsoil, which were potentially either

prehistoric or Anglo-Saxon in date. These features were overlain by a sequence of medieval deposits and some structures of 13<sup>th</sup> to 15<sup>th</sup> century date. These remains were in turn sealed by medieval to post-medieval midden deposits, between 0.9m and 1.2m thick, across much of the area. The main exception to this was the area to the north-west of the Winery, where medieval structural remains were found only 0.2m below existing ground level.

- 2.2.5 Trenched 2 and 6, excavated during this evaluation were of particular relevance to the present site being located immediately south of the Village hall site boundary in the Winery car park and within the Village Hall grounds adjacent to the previous village hall building, respectively. Trench 2 revealed the presence of complex archaeology cut into and forming the layers above the natural subsoil, which was encountered at a depth of 1.2m below ground level. These features of medieval as well as early medieval and possibly prehistoric date were sealed by 0.75m of midden deposit that had accumulated from the medieval to the modern period. Trench 6 was excavated to a depth of 1.53m below ground level before subsoil was encountered. A pit feature and a cobble surface were present cut into the subsoil and immediately above the subsoil, sealed by a further midden layer close to 1.5m deep. Monitoring of the erection of the store on the eastern side of the Winery, in 2006, again revealed the presence of midden layers to the full depth of excavation, which did not exceed 0.5m in this instance (NAA 2006).

### **2.3 Impact of the development**

- 2.3.1 The planned work involves the construction of a foundation solution comprising ground beams and piling to form the base of the new building. This solution requires limited stripping over the area of the building footprint and localised excavation of the ground beams that should not extend a depth of 500mm below the present ground level. Impact below this level will be kept to a minimum and will be principally a consequence of the insertion of the piles. The impact of a paved area to be laid to the immediate west and south of the new building will be limited to less than 500mm below ground level (Figure 2).
- 2.3.2 The proposed scheme of works would indicate some potential to impact on undisturbed stratigraphy, during ground reduction and ground beam excavation, should it be present at an unexpectedly high level, and will disturb the upper layers of the midden deposit identified within the trial trenches. Some limited impact on deeper deposits will be incurred during the piling.

### **3.0 OBJECTIVES**

- 3.0.1 In the light of the potential for the construction works to impact upon preserved archaeological remains it is proposed that a continuous watching brief be conducted during the ground work and provision made for the suspension of machine excavation to allow for the hand excavation and recording of archaeological deposits where encountered. In the case of preserved medieval layers, hand excavation will continue to the required depth of the foundations.
- 3.0.2 Due to the use of piles in the foundation solution following their insertion up to three exploratory test pits will be excavated under archaeological supervision. The pits will be 1m by 1m in plan and excavated to 1.5m below the top of the pile in order to allow for the archaeological recording of the impact of the pile on the stratigraphy to be made by the compilation of a detailed section at a scale of 1:10. Throughout the monitoring process should archaeological material be encountered the consultant will keep the Assistant County Archaeologist informed.

### **4.0 METHODOLOGY**

#### **4.1 Watching brief and archaeological excavation**

- 4.1.1 During all construction related excavation activity a suitably experienced archaeologist, familiar with the archaeological background to the site, will be present to excavate and record any items of interest that are revealed. All work will be carried out in compliance with the codes of practice of the Institute for Archaeologists (IfA 2010) and should follow the IfA Standards for Watching Briefs (IfA 2008). Excavation undertaken as part of the mitigation strategy will comply with the IfA Standard and Guidance

for Excavation (IfA 1996) The work will conform to the following methodology.

- 4.1.2 A contingency of up to 10 person days of investigation and an additional machine day is available to be invoked following consultation with the Assistant County Archaeologist, the client and the monitoring archaeologist.

## **4.2 General standards**

- 4.2.1 All archaeological features identified during the monitoring will be recorded and sample excavated according to their type and form. This will represent 50-100% of all discrete features, 25% of linear and curvilinear features of non-uniform fill and 10% of linear and curvilinear features of uniform fill. Machine stripping will be undertaken using a toothless ditching bucket wherever possible.
- 4.2.2 A 40 litre bulk palaeoenvironmental sample will be taken from all features recognised as suitable for the preservation of palaeoenvironmental remains.
- 4.2.3 Secure contexts will be sampled for dating where appropriate, whether on site or as sub samples of bulk samples. Any concentrations of charcoal or other carbonised material recovered on site will usually be retained. Any fired features such as ovens, kilns and hearths suitable for archaeo-magnetic dating will be sampled by an appropriately qualified specialist following consultation with the NCCCT.
- 4.2.4 Pottery and Animal Bone will be collected as bulk samples whilst significant artefacts will be three-dimensionally recorded prior to processing. All finds will be recorded and processed according to the BRP system and submitted for post-excavation assessment. Finds recovery and storage strategies will be in accordance with published guidelines (English Heritage 1995 and IfA Guidelines for Finds Work). Should artefacts of gold or silver covered by the 1996 Treasure Act be recovered, appropriate procedures will be followed.
- 4.2.5 In the event of Human burials being revealed they will be left *in situ* and treated in an appropriate manner. After consultation with the County Archaeological Officer, if excavation is required, work will comply with the relevant home Office regulations.
- 4.2.6 Any archaeological features encountered will be hand-cleaned, excavated and recorded:
- 4.2.7 All archaeological features and horizons will be accurately tied into the Ordnance Survey grid. All levels will be tied in to Ordnance Datum.
- 4.2.8 Arrangements will be made with the appropriate museum for the deposition of the site archive within 6 month of the completion of the post-excavation final report.

## **5.0 MONITORING**

- 5.0.1 Access will be made available at all reasonable times to the archaeological representatives of the Northumberland County Council Conservation Team to inspect the excavation site.
- 5.0.2 Access to the site will be on the basis of prior notification and subject to any relevant health and safety considerations.

## **6.0 POST-EXCAVATION WORK, ARCHIVE AND REPORT COMPILATION**

- 6.0.1 On completion of the excavation an assessment of the site records and finds will be undertaken in accordance with English Heritage (1991) guidelines. This will include:
- collation of all site records
  - compilation of a report
  - production of context, photographic, finds and illustration databases
  - analysis of the finds assemblage by relevant specialists

- environmental assessment of selected bulk samples

6.0.2 The assessment report, with each page and paragraph numbered and with cross referenced illustrations, will be submitted to NCC Conservation Team within 6 months of the completion of the sit work. This report will include:

1. summary of the project background
2. site location
3. methodology
4. results of the watching brief
5. site location plans and illustrations of results at appropriate scales
6. interpretation of the results in an appropriate context
7. post-excavation assessment of the site archive
8. catalogue and assessment of the artefactual archive
9. catalogue and assessment of the faunal remains
10. catalogue and assessment of the palaeoenvironmental samples recovered
11. appendix containing a list and summary of each recorded context

6.0.3 Where appropriate an updated project specification will be compiled and submitted to the NCC Conservation Team within 2 months of the approval of the assessment report. This document will comply with English Heritage MAP 2 (EH 1991) Section 6 and Appendix 5.

6.0.3 An appropriate level of publication will be agreed with the NCC Conservation Team and prepared in line with MAP 2, Sections 7 and 8 and Appendix 7. A copy of the report should be submitted by the archaeologist to the commissioning client, and the County HER within 2 months of completion of the work. A summary will be prepared for 'Archaeology in Northumberland' and an article will be submitted to a local or national journal if appropriate.

6.0.4 The site archive will be prepared to the standard specified in the Management of Archaeological Projects, appendix 3 (HBMC 1991) and in accordance with the Guidelines for the Preparation of Excavation Archives for Long Term Storage (UKIC 1990). A summary account of the context record will be included and written by the supervising archaeologist. The archive will be deposited at the specified museum within 6 months of completion of the work on site.

6.0.5 An online OASIS form will be completed for the project as part of the post-excavation assessment process.

## **7.0 PERSONNEL**

7.0.1 The designated project manager Graeme Young, is one of the five directors of the Bamburgh Research Project. A graduate of Newcastle University, with 23 years of experience in field archaeology including directing a number of excavations of urban medieval sites in Newcastle and Durham. He is an Associate Member of the Institute for Archaeologists.

7.0.2 Additional field staff, with appropriate archaeological experience, will be engaged as required.

## **8.0 SUB-CONTRACTED SPECIALISTS**

2.2.1 Although it is not possible to predict the range of artefacts that may be recovered provision has been made for the analysis of the most common artefacts.

<b>Material</b>	<b>Specialist</b>
Medieval pottery	Jenny Vaughan
Post-medieval pottery	Jenny Vaughan
Prehistoric pottery	Blaise Vyner
Roman Pottery	Blaise Vyner

Animal bone  
Palaeoenvironmental  
Conservation  
Metalwork analysis

Durham University Archaeological Services  
Durham University Archaeological Services  
Karen Barker  
David Sim

## **9.0 HEALTH AND SAFETY**

- 9.0.1 The Bamburgh Research Project complies with the 1974 Health and Safety Act and its subsequent amendments in all its operations. The SCAUM manual and the Bamburgh Research Project Health and Safety Policy Document is followed for all site works. A designated and appropriately trained first aider is present at all times during working hours. A First Aid kit, Accident Book and telephone are provided for each project. Safety footwear is mandatory on all excavation sites. Where required safety helmets and reflective jackets are provided. It is policy for a vehicle to be present at an excavation and staff must be appropriately equipped for bad weather.
- 9.0.2 All staff undergo a safety induction prior to commencing work on site. A written risk assessment is undertaken specific for each site. The safety assessment is reviewed on a daily basis and changes to the working conditions monitored continually during adverse weather conditions.



### Appendix III

#### Pottery Assessment

A small group of twelve ceramic items was recovered from the site: five fragments of pottery vessels, four fragments of clay pipe stems and three probably of ceramic building material. The material, which is listed below with comments, ranged in date from medieval to 19<sup>th</sup> century.

##### Context 101 [1 chip dismissed as natural]

- Sherd of red earthenware, weight 6 gm. 17<sup>th</sup>/18<sup>th</sup> century
- Sherd of reduced green glazed pottery, weight 11 gm. Dark grey sandy fabric with oxidised internal surface. Glazed surface is roughened with small pieces of fired clay. Probably late medieval (15<sup>th</sup>/16<sup>th</sup> century).
- Two pieces of clay pipe stem, bore 5/64". One is marked TENNANT BERWICK (all on one side). This version of maker's mark is not noted in Robert's article about Tennant's pipe factory (Roberts 1988). On most of the earlier pipes the name appears as C. Tennant while on later pipes it is Tennant & Son. It is possible this stem is mid rather than late 19<sup>th</sup> century.
- Chip of ?tile, weight 25 gm.
- Very small chip of hard fired tile/brick, weight 4 gm.

##### Context 201

- Rim sherd of transfer printed white earthenware, weight 4 gm.
- Sherd of white china, weight 4 gm.

These are likely to be 19<sup>th</sup> century.

- Two clay pipe stems, one with bore of 7/64" and one of 6/64". These are possibly later 17<sup>th</sup>/early 18<sup>th</sup> century.

##### Context 202

- Possible fragment of roof tile, weight 34 g. Coarse pinkish fabric with thin buff core.

##### Context 301

- Sherd of unglazed medieval pottery, weight 5 gm. Sandy grey fabric with buff exterior margin and surface and pale brown internal surface. Probably 13<sup>th</sup> century.

This small group is of no particular interest and its small size makes even the dating indications of limited value.

Context	pot type	type no.	form_s h	count	weight	comments
1001	buff	4		1	4	Pale grey (reduced buff?) with green gl
1001	rg	7		1	5	Same ves in 1043
1001	rhst	16	r+h b	4	49	Probably not all same ves. Clear grey salt gl, probably Raeren mug. Base is just the frill. Same ves in 1018?
1001	lcr	20		3	42	Frag of frying pan in 1018
1001	lcr	20	ft	1	70	Foot has three deep finger imps. Probably not cauldron - ? dish
1001	red	27	b	5	51	Possibly 17 <sup>th</sup> and 18 <sup>th</sup> c. material here. Clubbed base - possibly 18 <sup>th</sup> c.
1001	red	27	b	1	66	Plain base ?flatware
1001	tge	28		1	2	With blue painted decoration
1001	creamw	33	r	3	3	Rim (2 sh.) has thin red brown line, other sherd has

Context	pot type	type no.	form_s h	count	weight	comments
						mottled brown patch
1001	coarse st	35		1	50	Coarse cream coloured stoneware with brown glaze.
1018	orange buff	5		3	18	Quite fine fabrics orange buff with glaze ?late med.
1018	rg?	7		1	2	Spl of glaze
1018	rg	7		1	4	Sandy fabric, copper in glaze
1018	lrg	8		1	76	
1018	pink?	10	r	1	9	Abraded clubbed rim
1018	Scarb	11		1	5	
1018	rhst	16		1	6	
1018	lcr	20	r+h	2	42	Rim with scar from handle, sooted
1018	lcr	20	r+h	6	263	Frying pan with folded handle which has partly split away, glaze over broken surfaces. Sooted.
1018	pm white?	26		1	10	Dull light grey with large iron stained (brown) patch on light green gl. Flattish frag ?post-med whiteware
1018	red sl rev	27		1	20	Reversed slip, very hard fabric with reduced core.
1018	red sl	27		4	85	At least 3 different vessels
1018	staffs	29	r	1	12	With small 'pie crust' imps
1028	rg	7		1	9	
1043	bgrey	4		1	15	Light brown/grey fabric ?ungl bit of gl ves.
1043	rg	7	b	3	121	Same ves in 1001. Pinkish int surface, pale grey ext margin, good green gl.

**Abbreviations used:**

b	base
ext	external
ft	foot
frag	fragment
gl	glaze/glazed
h	handle
imps	impressions
lcr	Low Countries redware
rg	reduced greenware
rhst	Rhenish stoneware
Scarb	Scarborough ware
sl	slip
Staffs	Staffordshire type slipware
ves	vessel
w	..ware

## **Appendix IV**

### **Palaeoenvironmental Assessment**

#### **Summary**

##### **The project**

This report presents the results of palaeoenvironmental assessment of a bulk sample taken during archaeological works at Lindisfarne village hall, Northumberland.

The works were commissioned by Bamburgh Research Project, and conducted by Archaeological Services Durham University.

##### **Results**

The sample comprises an accumulation of domestic waste including animal bone, fish bone, marine shell and fuel waste. The charred plant macrofossil remains include barley, oat, wheat, pea, weed seeds and fragments of seaweed as well as part of a hazel nutshell.

##### **Recommendations**

The assemblage of plant remains is small, and typical of medieval deposits, and therefore no further analysis is recommended.

Full analysis of the fish bone assemblage is recommended in order to provide information about fishing practices and the role of fish in the diet at this site. The fine fractions of the residue should be sorted under low magnification to ensure the full recovery of small fish bones.

The flint, bone and shell should be retained as part of the physical archive of the site. If additional work is undertaken at the site, the results of this assessment should be added to any further environmental data produced.

#### **Project background**

##### **Location and background**

Archaeological works were conducted by Bamburgh Research Project at the Lindisfarne village hall, Northumberland. This report presents the results of palaeoenvironmental assessment of a single bulk sample comprising a layer of medieval origin.

##### **Objective**

The objective of the scheme of works was to assess the palaeoenvironmental potential of the sample, establish the presence of suitable radiocarbon dating material, and provide the client with appropriate recommendations.

##### **Dates**

The sample was received by Archaeological Services on 23rd January 2012. Sample processing, assessment and report preparation was conducted between 24th and 26th January 2012.

##### **Personnel**

Sample processing, assessment and report preparation was conducted by Dr Carrie Drew.

##### **Archive**

The site code is **LVH11**, for **Lindisfarne Village Hall 2011**. The flint, small finds, and residue fraction <4mm in size are currently held in the Environmental Laboratory at Archaeological Services Durham University awaiting collection. The charred plant remains will be retained at Archaeological Services Durham University.

##### **Methods**

The bulk sample was manually floated and sieved through a 500µm mesh. The residue was examined for shells, fruitstones, nutshells, charcoal, small bones, pottery sherds, flint and industrial residues, and was scanned using a magnet for ferrous fragments. The flint was examined at up to x60 magnification for charred and waterlogged botanical remains using a Leica MZ6 stereomicroscope. Identification of these was undertaken by comparison

with modern reference material held in the Environmental Laboratory at Archaeological Services Durham University. Plant nomenclature follows Stace (1997). Habitat classifications follow Preston *et al.* (2002).

### **Results**

Both burnt and unburnt animal bone was present in the sample, with fish bone and small amounts of marine shell (periwinkle, mussel and oyster) also identified. The small fragments of coal shale and the crinoid (Pre-Quaternary fossil) recorded in the context reflect the local geology. Small amounts of fuel waste and fuel ash were recorded from the context and clinker/cinder was noted in the flot fraction. A fragment of glass was recovered from the residue.

The flot also contained low numbers of uncharred seeds. The sample was not waterlogged, and so the uncharred seeds are likely to be modern intrusive material. A few fragments of green paint, the presence of modern roots and a small number of earthworm egg cases also indicate some modern intrusion has occurred.

Occasional fragments of charcoal were identified and a small assemblage of charred plant macrofossils was present in the context. These included grains of barley, oat and wheat. Although the variability of wheat grain morphology prevents their identification to species with certainty, all three wheat grains had the characteristic compact shape associated with *Triticum aestivo-compactum* (Bread wheat). Diagnostic chaff was absent however, preventing definite species identification. A hazel nutshell fragment was also present in the context.

Charred weed seeds present include the arable weed fat-hen, together with weed seeds with wider habitat niches such as members of the goosefoot and grass families, docks and vetches. A pea or a large-seeded, uncultivated member of the pea family was recorded. A number of fragments of charred seaweed were also identified. Charred grains, hazel nutshell and charcoal suitable for radiocarbon dating is available for the sample. The results of the palaeoenvironmental assessment are presented in Appendix 1.

### **Discussion**

The sample appears to comprise an accumulation of domestic waste, with animal bone, fish bone, marine shell, charred plant macrofossils and fuel waste present. The cereal assemblage, comprising barley, oats and bread wheat alongside the presence of legumes, such as pea, is typical of both medieval and post-medieval sites in northern England (Greig 1991; Hall & Huntley 2007). A number of the cereal grains were unable to be identified to species, as preservation was generally poor with considerable pitting and distortion of the grains. Puffing and pitting of grain may reflect exposure to intense heat (cf. Boardman & Jones 1990) and with the presence of clinker/cinder and fuel waste in the context this may indicate the material was heated to high temperatures, or was burnt several times. The hazel nutshell fragment is also typical of this period as the use of gathered wild foods, such as hazelnuts, was also common. Very similar domestic waste assemblages have been identified from the nearby site of Manor House Hotel, Lindisfarne (Archaeological Services 2011).

The arable weed fat-hen, is likely to have been growing with the cereal crops, and this may be true of some of the other charred weed seeds such as grasses, goosefoots, docks and vetches. These could also reflect the proximity of areas of pasture or waste ground to the site.

The presence of charred remains of seaweed could reflect the incidental burning of seaweed brought in with the shellfish, although the many uses of seaweed include roofing, glass-making, fodder for livestock and as a fertiliser and food preservative (Buckland & Panagiotakopulu 2005; Hall & Kenward 2003; Walker *et al.* 1996).

### **Recommendations**

The assemblage of plant remains is small, and typical of medieval deposits, and therefore no further analysis is recommended.

Full analysis of the fish bone assemblage is recommended in order to provide information about fishing practices and the role of fish in the diet at this site. The fine fractions of the residue should be sorted under low magnification to ensure the full recovery of small fish bones.

The flot, bone and shell should be retained as part of the physical archive of the site. If additional work is undertaken at the site, the results of this assessment should be added to any further environmental data produced.

**Data from palaeoenvironmental assessment**

Context		306
Feature		Layer
Material available for radiocarbon dating		□
Volume processed (l)		17.5
Volume of flot (ml)		170
<i>Residue contents</i>		
Bone (burnt)	indet. frags	(+)
Bone (calcined)	indet. frags	(+)
Bone (unburnt)	indet. frags	+
Bone (unburnt)	fish	++
Coal shale		(+)
Crinoid		(+)
Fuel waste		+
Glass (number of fragments)		1
Shell (marine)		++
<i>Flot matrix</i>		
Bone (unburnt)		+
Charcoal		+
Clinker / cinder		++
Coal shale		++
Earthworm egg case		+
Fuel ash		+
Paint	frags.	(+)
Roots (modern)		++
Uncharred seeds		+
<i>Charred remains (total count)</i>		
(a) <i>Chenopodium album</i> (Fat-hen)	seed	3
(c) <i>Avena</i> sp (Oat species)	grain	2
(c) Cerealia indeterminate	grain	10
(c) <i>Hordeum</i> sp (Barley species)	grain	5
(c) Fabaceae cf. <i>Pisum sativum</i> (cf. Pea)	fruit	1
(c) <i>Triticum</i> cf. <i>aestivum</i> (cf. Bread Wheat)	grain	3
(s) Phaeophyceae (Brown seaweed)	frond midrib / bladder frags	11
(t) <i>Corylus avellana</i> (Hazel)	nutshell fragment	1
(x) <i>Chenopodium</i> sp (Goosefoots)	seed	3
(x) Poaceae undifferentiated (Grass family)	>1mm caryopsis	3
(x) <i>Rumex</i> sp (Docks)	nutlet	2
(x) <i>Vicia</i> sp (Vetches)	seed	3

[a-arable; c-cultivated; s-seaweed; t-tree/shrub; x-wide niche.

(+): trace; +: rare; ++: occasional; +++: common; ++++: abundant]

## **Appendix V**

### **Fish bone analysis, faunal remains and conservation assessment**

#### **1. Summary**

##### **The project**

- 1.1 This report presents the results of fish bone analysis of medieval layer (306), sampled during archaeological works at Lindisfarne Village Hall, Northumberland. The results of assessment of small finds and faunal remains recovered from the site are also presented.
- 1.2 The works were commissioned by Bamburgh Research Project, and conducted by Archaeological Services Durham University.

##### **Results**

- 1.3 The small assemblage of sieved fish remains from layer (306) was in poor condition and was fragmentary. A variety of fish taxa was identified, all consistent with local fishing in inshore or coastal waters, or in local rivers. Some of the smallest fish may have been stomach contents from larger fish or seabirds.
- 1.4 Cattle, sheep/goat, domestic fowl, pig and dog were identified in the small collection of faunal remains from the site. Some of the identified bones were from juvenile animals, such as veal calf and juvenile pig. Winkle shells recovered from context (104) may suggest waste from baiting fishing lines rather than domestic refuse. Human foot bones were recovered from context (301), which may indicate the presence of a disturbed burial.
- 1.5 A fragment of probable window glass, potentially of medieval date and a tapering machine-cut iron nail shank, of probable 19th century date, were identified and conserved.

##### **Recommendations**

- 1.6 No further work is recommended on the faunal remains in the present assemblage. However, contexts (203) and (301) indicate the potential high calibre of preservation of bones from juvenile animals on this site and should be retained if further work is proposed. The human bones from Test Pit 3 should be examined by an appropriate specialist and the presence of human remains in any further excavation needs to be considered.
- 1.7 No further work is recommended for the glass and iron objects.
- 1.8 The bone, fish bone and small finds should be retained as part of the physical archive of the site. If additional work is undertaken at the site, the results presented here should be added to any further environmental data produced.

#### **2. Project background**

##### **Location and background**

- 2.1 Archaeological works were conducted by Bamburgh Research Project at Lindisfarne Village Hall, Northumberland. Midden layers and dumped deposits of medieval and post-medieval date were excavated. This report presents an analysis of fish bone recovered following the assessment of a bulk palaeoenvironmental sample of medieval layer (306)(Archaeological Services 2012). A conservation assessment of two small finds and an assessment of the hand-recovered faunal remains are also presented.

##### **Objective**

- 2.2 The objective of the fish bone analysis was to provide a list of taxa present, minimum number of individuals and fish sizes, and provide information regarding fishing methods and fishing areas. The scheme of works also aimed to establish the palaeoenvironmental potential of the faunal remains and assess and conserve the two small finds.

##### **Dates**

- 2.3 The samples were received by Archaeological Services on 3rd February 2012. Analysis, assessment and report preparation were conducted between March and April 2012.

### Personnel

- 2.4 Fish bone analysis was undertaken by Dr Jennifer Harland. Faunal assessment was by Louisa Gidney and conservation assessment was by Jennifer Jones.

### Archive

- 2.3 The site code is **LVH11**, for **Lindisfarne Village Hall 2011**. The small finds, faunal remains and fish bone, are currently held in the Environmental Laboratory at Archaeological Services Durham University awaiting collection.

## 3. Fish bone analysis

### Methods

- 3.1 A very small assemblage of sieved fish remains was recovered from excavations at Lindisfarne Village Hall, Northumberland. A total of 137 fish bones were recovered, 26 of which could be identified. All were from layer (306), which was described by the excavator as a compacted mid yellow-brown silty clay with frequent stones, shell and gravel. The nature of this layer was not fully defined, though it was not thought to be a midden. It was probably of high medieval date.
- 3.2 This assemblage was recorded using the York System, an Access database utility designed for recording zooarchaeological assemblages. The fish reference collection held in the Department of Archaeology, University of York was used for identification. The recording protocol is fully detailed in Harland *et al.* (2003). Briefly, this entails the detailed recording of the 18 most commonly occurring and easily identified elements, termed quantification code (QC) 1. For each of these, the element, species, approximate size, side, fragmentation, texture and any modifications are recorded in detail. Fish vertebrae (QC2) are recorded in more limited fashion, with counts, element and species recorded. Some elements are unusual and particularly diagnostic, like otoliths, and are fully recorded (QC4). The final category of material (QC0), includes elements not routinely identified as well as unidentifiable material. Elements that are from very unusual species, or that are butchered, are recorded in detail even if not from the QC1 category. Data analysis involved structured database queries, as well as manipulation using Excel.

### Results

- 3.3 The assemblage only produced 26 bones that could be identified; this is a very small assemblage which therefore limits its importance and potential for discussion. Full taphonomic information was only recorded for two fragments. These were both recorded as having ‘fair’ texture scores. One was recorded as 20-40% complete and the other as 40-60% complete. Based on overall qualitative assessment, the assemblage was only in moderate to poor condition. Fragments tended to be quite small and not readily identifiable, which could reflect the apparent small size of the fish consumed and/or the poor quality of the material. No burnt, crushed, acid etched or otherwise modified bones were observed.
- 3.4 A variety of taxa were observed, despite the small size of the assemblage (Table 3.1; see Table 3.3 for listing of common and scientific names). Ray family remains were the most numerous (including a few teeth and dermal denticles, which are found in large quantities in each individual animal), followed by cod family, Atlantic herring, Perciformes order, salmon and trout family, haddock, whiting, sand eel family and flatfish order. This diverse range is consistent with local fishing in the Lindisfarne region.

**Table 3.1:** Summary of identified taxa

Taxa	QC1	QC2	QC4	QC0	Total
Ray Family	2	1	3	2	6
Atlantic Herring		3			3
Salmon & Trout Family		2			2
Cod Family		3			5
Haddock		2			2
Whiting		2			2
Perciformes order		3			3
Sand Eel Family		2			2
Flatfish Order		1			1

Unidentified				111	111
Total	2	19	3	113	137

- 3.5 Fish sizes were recorded for as many fragments as possible using reference specimens of known length (Table 3.2). No fish greater than 50cm estimated total length was recovered. Most were small, between 15 and 30cm estimated total length, with a few slightly smaller or larger. These would suggest fishing in inshore, shallow coastal waters rather than any deep water fishing out in the North Sea. The two salmon and trout family fragments could have been caught in either a local freshwater river, or in the sea. The smallest fish were most likely stomach contents from larger fish or seabirds, or bait (Alderstein *et al.* 2000). These include the sand eels, and those broadly identified as Perciformes order (a large group of fish families that are difficult to identify to species when very small).
- 3.6 The tiny size of the assemblage, together with its poor quality, makes it difficult to assess body part representation. However, a range of elements was recovered, including cranial bones and vertebrae.

**Table 3.2:** Fish total length estimates

Taxa	<15cm	15-30cm	30-50cm
Cod Family		4	1
Haddock			2
Whiting		2	
Flatfish Order	1		
Perciformes Order	3		

**Table 3.3:** Common and scientific names

Common name	Scientific name
Ray Family	Rajidae
Atlantic Herring	<i>Clupea harengus</i>
Salmon and Trout Family	Salmonidae
Haddock	<i>Melanogrammus aeglefinus</i>
Whiting	<i>Merlangius merlangus</i>
Cod Family	Gadidae
Sand Eel Family	Ammodytidae
Perciformes Order	Perciformes
Flatfish Order	Heterosomata (Pleuronectiformes)

### Conclusions

- 3.7 Excavations at Lindisfarne Village Hall produced a tiny assemblage of fish bones recovered from a single feature. A variety of fish taxa was identified, including ray family, cod family, Atlantic herring, Perciformes order, salmon and trout family, haddock, whiting, sand eel family and flatfish order. All taxa found were available in the immediate waters of the North Sea or local river systems, and most could have been caught using hook and line fishing. Most were probably caught using a small boat in inshore or coastal waters, but nets or fish traps may have been used as well to catch some taxa like herring. It is likely the smallest taxa were stomach contents and/or bait from larger fish, or from seabirds.

## 4. Faunal remains assessment

### Methods

- 4.1 A very small collection of animal bones was recovered. Fragments were only recorded as identifiable if they encompassed a unique zone, or non-replicable anatomical feature. Unidentifiable fragments were not counted and were noted only if all the fragments from a context were unidentifiable.

### Results and discussion

- 4.2 It can be seen from Table 4.1 that neither the post-medieval nor the medieval midden layers, (101) and (104) respectively, were rich in faunal remains. The winkle shells in (104) may suggest waste from baiting fishing lines rather than domestic refuse.



- 4.3 The post-medieval midden deposit (202), produced mostly unidentifiable fragments of cattle-size bones. The late medieval context (203), produced only two bones but these are in an excellent state of preservation. Both are from very young animals, a femur fragment from a veal calf and a metacarpal 3 from a pig (Table 4.2).

**Table 4.1:** Fragment counts for the species present, Test Pit 1

Contexts	101	102	104
Phase	post-medieval	post-medieval	late medieval
Cattle	2	-	-
Domestic fowl	1	-	-
Unidentifiable	-	present	-
Winkle shells	-	-	11

**Table 4.2:** Fragment counts for the species present, Test Pit 2

Contexts	202	203
Phase	post-medieval	late medieval
Cattle	2	1
Pig	-	1
Winkle shells	2	-

- 4.4 The post-medieval midden deposit (301) has more variety of species represented than the equivalent midden layers in Test Pits 1 and 2 (Table 4.3). The cattle bone is a mandible from a veal calf, rather than the fragments of limb bones and cattle-size ribs from adult animals seen in Test Pits 1 and 2. The wear on deciduous premolar 4 is comparable to species aged about 8 weeks old in the author’s reference collection. There are tooth marks indicating gnawing by a large dog. Part of a dog pelvis is present in this context, together with single metapodials of sheep and pig. The human bones comprise part of a metapodial and two phalanges, the size of the bones suggest part of a foot rather than a hand. This may indicate a disturbed burial.

**Table 4.3:** Fragment counts for the species present, Test Pit 3

Contexts	301
Phase	post-medieval
Cattle	1
Sheep/goat	1
Pig	1
Dog	1
Human	3

- 4.5 Context (306) produced no hand-recovered finds but the residue of the bulk sample contains fragments of winkle and mussel shell.

## 5. Conservation assessment

- 5.1 A fragment of probable window glass from context (101) was examined and stabilised. The glass is irregularly shaped 30 x 17mm max x 1.25mm thick. All edges are broken, and the glass has extensive weathering on all surfaces, giving it an iridescent appearance. It was probably originally green/clear in colour. Despite its weathered state, fine scratches can be seen on both sides under X16 magnification, suggesting that the original surface is intact. No painted decoration is visible. The glass is very thin and flat, but its unstable and deteriorated state suggests it is of medieval date.
- 5.2 To stabilise the fragile surface, loose dirt was removed mechanically, using a water/industrial methylated spirits/non-ionic detergent mix, applied with cotton wool swabs. The glass was air dried. It was then surface coated with 6% Paraloid B72 (an ethyl methacrylate co-polymer) in acetone. The conserved glass may be stored in conditions of ambient temperature and relative humidity, avoiding extremes of both.
- 5.3 A corroded iron object from context (301) was also examined and X-radiographed. The X-ray confirmed that it is a tapering iron nail shank 45mm long, rectangular in section c. 8 x 4mm max. The point and the head are missing. Examination of the shape and section of the nail suggests that it was

machine cut, and therefore probably 19th century in date. The iron nail should be stored in an airtight polythene box with active silica gel, to maintain a relative humidity of 20% or less, in order to prevent further corrosion. The silica gel should be regularly monitored and regenerated as necessary.

**6. Recommendations**

- 6.1 No further work is recommended on the faunal remains in the present assemblage. However, contexts (203) and (301) indicate the potential high calibre of preservation of bones from juvenile animals on this site and should be retained if further work is proposed. The human bones from Test Pit 3 should be examined by an appropriate specialist and the presence of human remains in any further excavation needs to be considered.
- 6.2 No further work is recommended for the glass and iron objects.
- 6.3 The bone, fish bone and small finds should be retained as part of the physical archive of the site. If additional work is undertaken at the site, the results presented here should be added to any further environmental data produced.

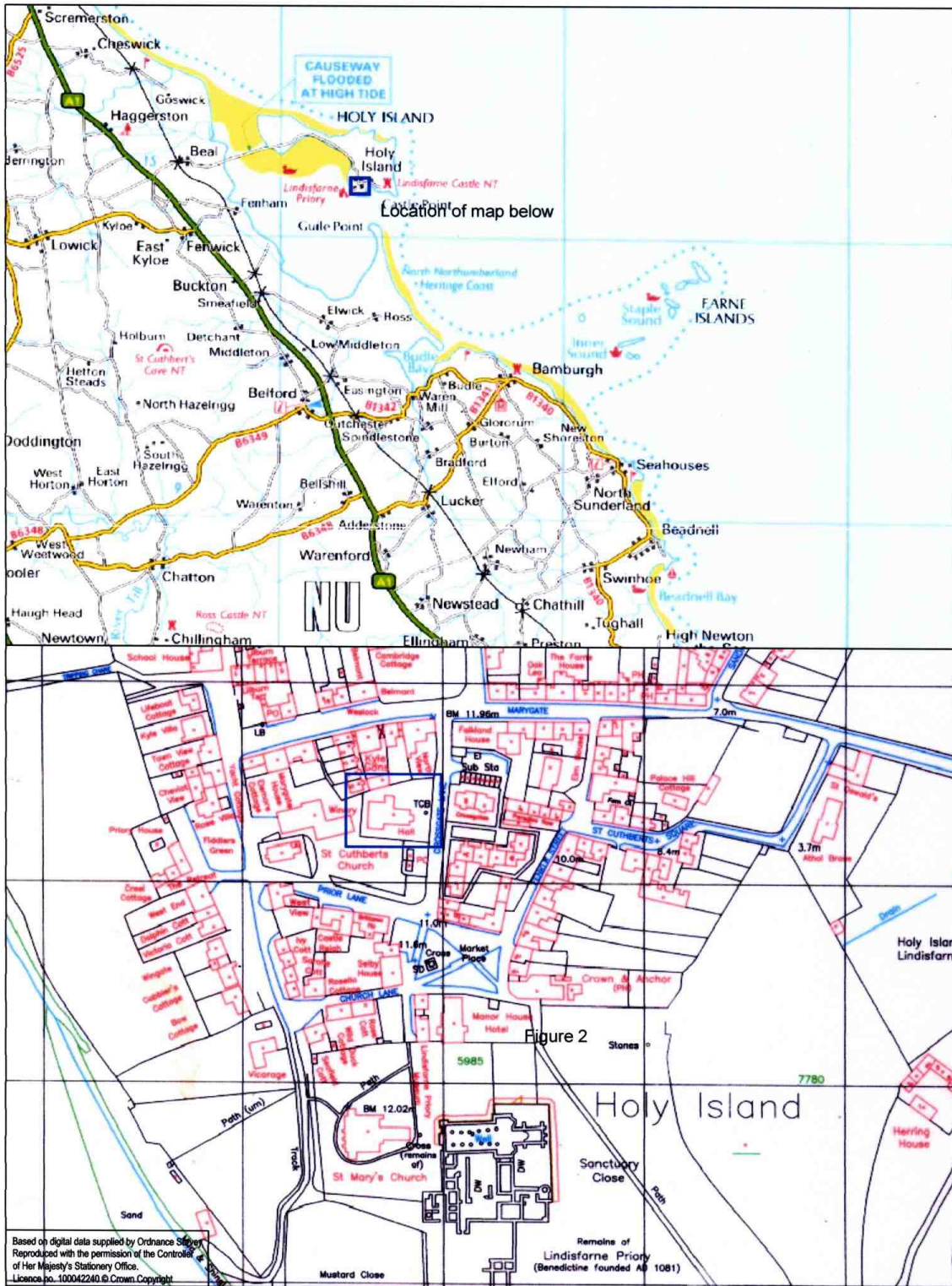


Figure 1 Site location

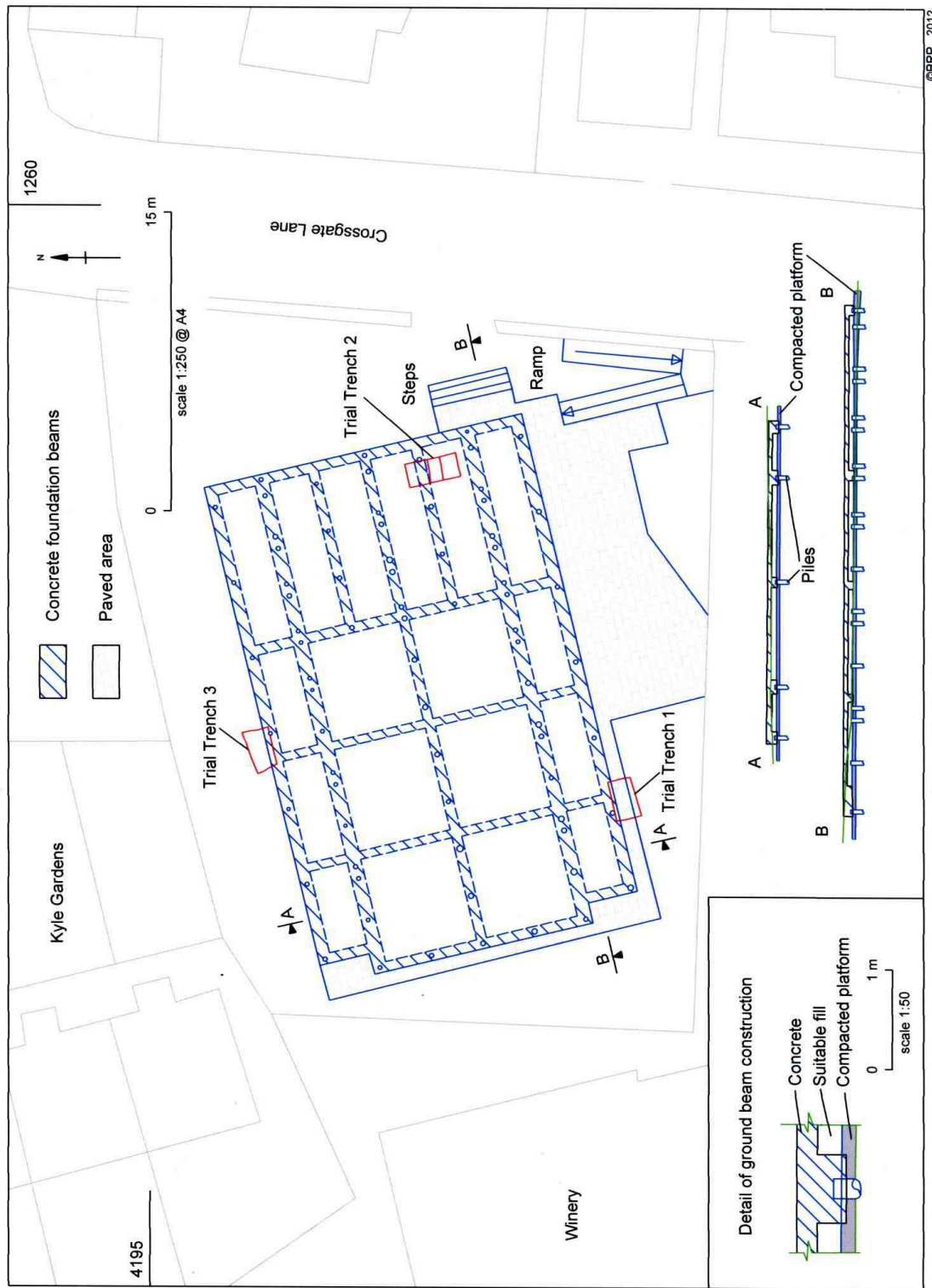


Figure 2 Building foundation plan

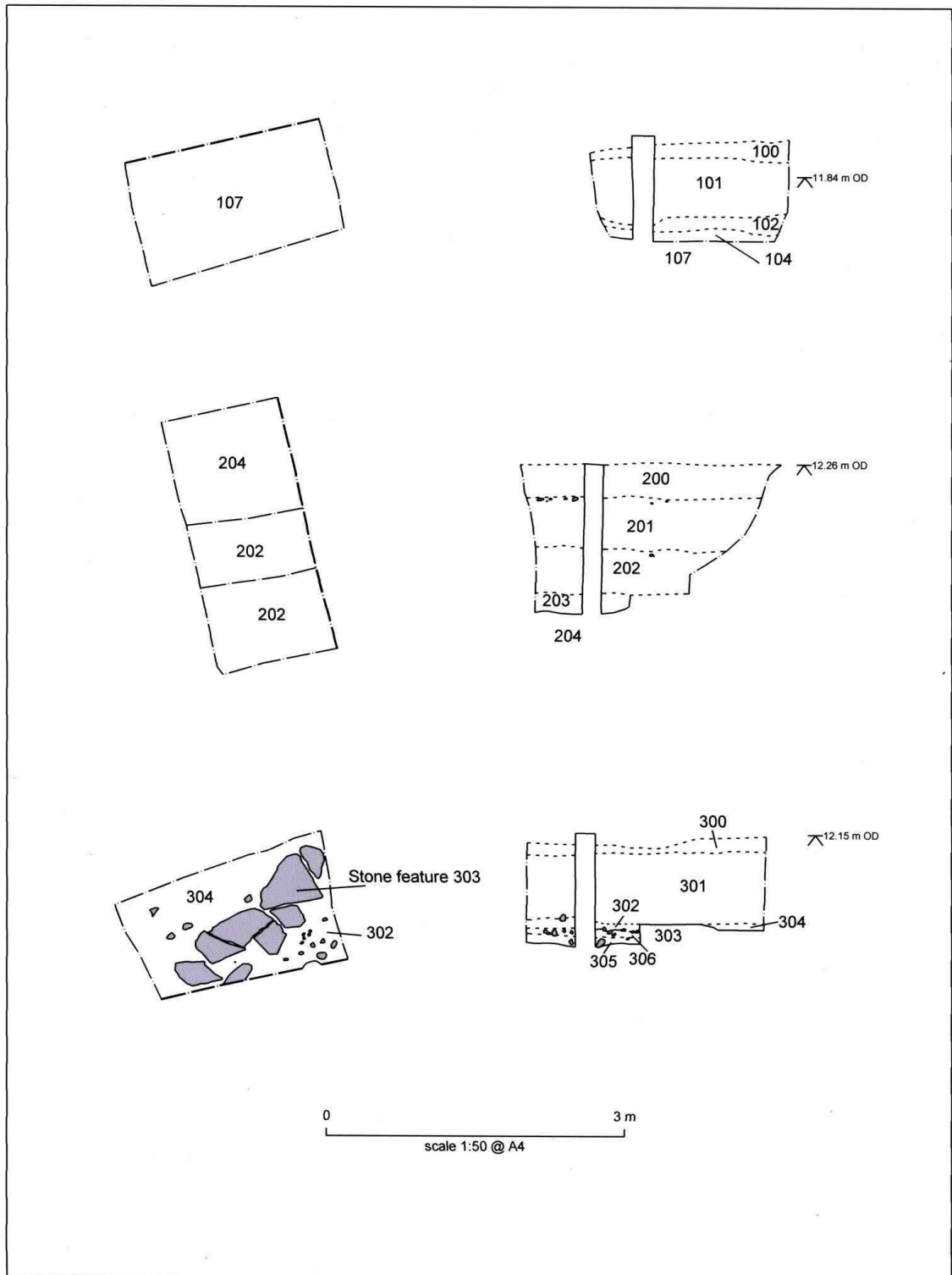


Figure 3 Trial pit plans and sections





*Plate 1: Test Pit, facing north*



*Plate 2: Trial trench, facing west*





*Plate 3: Test Pit 3, facing south*