# VIKING UNST PROJECT
# EXCAVATIONS AT HAMAR: FIELD SEASON 2006

## INTERIM REPORT NO. 1
## (DATA STRUCTURE REPORT)

SHETLAND AMENITY TRUST
**UNIVERSITY OF BRADFORD**

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PART ONE: EXCAVATIONS AT HAMAR
PART TWO: PERSONNEL & RELATED RESEARCH
PART THREE: APPENDICES

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# PART ONE

# EXCAVATIONS AT HAMAR

# 1. INTRODUCTION

**J.M. Bond & Z. Outram**

The Viking Unst Project began in August 2005 with an integrated survey of key sites in the island of Unst (Bond *et al*. 2006). Using a Penmap survey as well as simple annotated plans, this initial investigation aimed to thoroughly record the sites in terms of surviving earthworks and the surrounding area. The first excavation season was carried out in July 2006 and focused on the site of Hamar under the direction of Dr. Julie Bond.

It has been suggested that Unst may have played an important role in the expansion of the Viking/Norse populations, acting as a staging post between Norway, Britain and the lands further west (Ritchie 1996: 71; Graham-Campbell & Batey 1998: 67). Published excavations include those undertaken at Underhoull (Small 1966), Sandwick (Bigelow 1985), and Framgord (RCAHMS 1946). Underhoull was excavated before the routine employment of sieving and sampling on archaeological excavations and so little can be said about the economy of the site or about its chronological sequence. A major aim of the Viking Unst Project is to excavate new sites in Unst employing up-to-date methodology to address these key issues. This research will advance our understanding not only of Unst's past, but of Shetland as a whole.

The sites investigated during the 2006 excavation season were Hamar, Baltasound (SMR site 3471, Nat Grid Ref. HP 6463 0933), and an exposed midden section close to the site of Underhoull, located on the east shore of Burga Sand in the Westing, shown in figure 1.1. Running concurrently, an excavation was carried out at Belmont by a Danish team led by Dr. Anne-Christine Larsen of Roskilde Skibsmuseet.

## 1.1 THE SITE OF HAMAR

The archaeological investigation of work carried out at Hamar can be divided into two phases: The first phase consisted of a trial excavation and a geophysical and standard archaeological survey (Stummann Hansen 1994; Bray *et al*. 1997). The second phase included a full open plan excavation directed by Dr Julie Bond and a survey which took advantage of recent developments in GIS (Geographical Information System).

### The First Phase of Investigation

The site of Hamar was first recorded by Stummann Hansen (Stummann Hansen 1995a; *ibid* 1995b; *ibid* 2000). He described it as a single (and possibly single-phase) longhouse almost 24m long, with no associated outhouses or offsets, aligned down slope. In 1994 Stummann Hansen undertook a standard survey of the site (Stummann Hansen 1995b) which identified several features, such as the entrances within the interior of the structure, part of a potential yard wall emerging from the upper end of the structure, and a circular feature interpreted as a hole used to collect the drain from the byre (Stummann Hansen 1995b; Stummann Hansen 2000: 91).

A geophysical survey of the site was also carried out by BUFAU (Birmingham University Field Archaeology Unit) using a Geoscan Research RM15 Resistivity Meter, operated with a twin-probe array and 0.5m mobile probe spacing, and processed using

the Geoplot program, version 2 (Geoscan Research). The survey encompassed the site itself, as well as a substantial area around the structure. The results of this survey clearly showed the position of the structure, as well as the entrances mentioned in the reports produced by Stummann Hansen (1995b). However, the potential yard wall identified in the field by Stummann Hansen (2000: Figure 5) was not recorded by the resistivity survey; it was suggested that excavation was needed to determine the nature of this feature (Bray *et al*. 1997: 7).

A trial excavation carried out by Stummann Hansen focused on a small trench, 60cm wide, which cut across the upper part of the structure. The excavations revealed a feature that could be interpreted as a bench setting running parallel to the outer wall. A floor surface was also identified at a depth of approximately 75cm below the level of the topsoil; the features excavated indicated that the structure had a sunken floor. A fragment of steatite was recovered from the floor surface, which "confirmed the dating of the structure to the Scandinavian period" (Stummann Hansen 2000: 90-91).

**The Second Phase of Investigation**

A second phase of archaeological investigation began with a survey carried out by Bond *et al.* (2006), which aimed to produce a Penmap survey of the site as well as the surrounding area in order to assess its position within the landscape. This demonstrated the unusual location of House 1 within the landscape, being positioned on a platform halfway up the hill and backed by an increasingly steep slope (Bond *et* al. 2006: Figure 1.1). The structure was aligned downslope with no obvious outbuildings or extensions. The trace of the potential yard wall seemed to follow the line of the platform on which the house sits. The back (upper and northern) wall of the structure appeared to be distinctively curved but only excavation would clarify if this was intentional or an effect of tumble from the original walls.

The survey did not highlight any areas of midden accumulation, nor could it identify the circular drain feature recorded by Stummann Hansen (Bond *et al*. 2006: 3). It was noted that the structure was suffering badly from rabbit damage, both internally and externally. It was suggested that excavation was necessary before any more of the valuable information held by the site was lost.

Using the data collected during this survey, a Geographical Information System (GIS) plot was produced by Maher which enhanced the site's visible features (Maher 2006: 13 and figure 2.4).

In 2003 an additional (possibly later) house was identified by Bond and Turner, higher up the slope. In the 2005 survey the original house was referred to as 'House 1', and the second structure 'House 2' (Bond *et al.* 2006).

## 1.2 THE RESEARCH AGENDA

The excavation of Viking/Late Norse settlements on the most northerly of the British Isles forms the centre of the much larger multi-faceted 'Viking Unst' programme, which includes historical research, place name interpretation, landscape survey, environmental history, heritage interpretation and community involvement and regeneration. Utilising recent developments in archaeological method and theory the maximum amount of

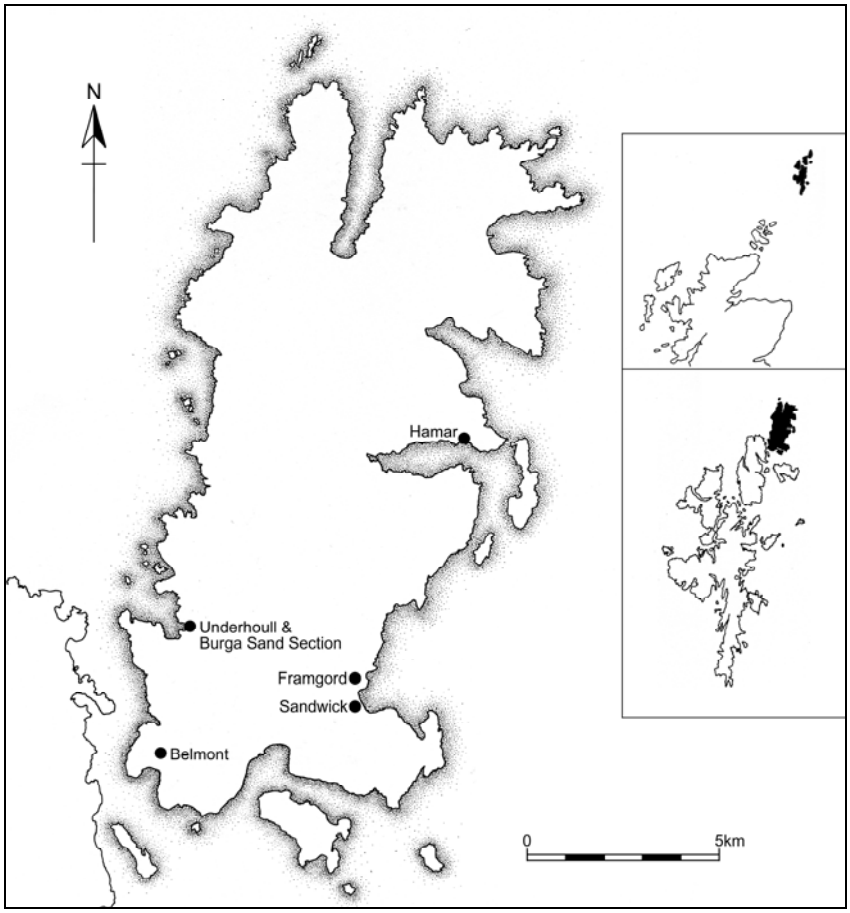

Figure 1.1: Location of the main Viking/Norse sites excavated to date in Unst

information will be gathered from these excavations in order to address the research issues outlined below.

Little is understood about rural Scandinavian settlement in Britain and much of what we do know is from sites in Orkney, such as Pool (Hunter 1990), Skaill (Buteux 1997), Birsay (Hunter 1986), Buckquoy (Ritchie 1977) and Westness (Kaland 1995). All of these sites are multiperiod settlements situated on good land and often part of a long subsequent settlement history. They are very different to many of the Unst sites, which appear to be short lived single phase settlements, often on poorer land.

One of the major questions addressed by these excavations is the reason for the apparent difference in settlement pattern in Unst, and for the subsequent abandonment of these sites in the Late Norse or medieval period. It is likely that the apparent distribution of sites has been influenced by subsequent settlement; the very best locations are probably occupied by modern farms, burying or obliterating the earlier settlement. However this does not explain the distribution of apparently abandoned farms on land not subsequently used for settlement or arable. Do these sites perhaps signal the next generation's move away from the primary Scandinavian settlements? If so, their short lifespan still needs to be explained. Norse farms in these locations may have been environmentally vulnerable; the solifluction stripes and mountain-tundra soils which can be seen on the Keen of Hamar, just 20m above the longhouse site, testify to its marginal location. It may be that several factors were involved; for example, the poorer climate of the later Norse and Medieval periods and the rise in the importance of fishing in the late Norse economy, as proposed by James Barrett and others (Barrett 2003), which may have led to the abandonment of more marginal agricultural settlements. It may be that some of the sites in upland locations are not abandoned farms, but shielings contemporary with settlements on better land which have subsequently disappeared.

Thus the main aim of the project is to understand this unusual settlement pattern by investigating its chronology, form, economic basis and landscape context, and to understand how this affected later settlement. The project will also seek to understand the date and nature of the initial Viking settlement of Unst, and how this fits into the models of Viking expansion across the North Atlantic.

### 1.2.1 Site development and chronology

The production of detailed chronologies for the sites investigated is essential to the interpretation of Viking settlement in Unst. The provision of an absolute chronology will facilitate the dating of the structural and depositional sequence of the sites and will provide a chronological framework for the interpretation and understanding of questions surrounding the sites' past inhabitants, economic development and cultural identity.

The dating programme devised for the Viking Unst project is based upon the integration of several techniques, focussing on the generation of research questions in the field as excavation is carried out and requiring specific sampling during the excavation process. Three scientific dating methods have been selected for use; archaeomagnetic dating of *in situ* fired structures such as hearths, accelerator radiocarbon dating of carbonised plant remains (cereal grains) from secure depositional events and surfaces and optically stimulated luminescence (OSL) dating of the last exposure to light of quartz grains within the stratigraphic sequence. It is necessary to utilise a range of dating methods as the radiocarbon calibration curve is insufficiently sensitive at crucial points to be used

as the sole dating technique. The application of these methods to targeted chronological problems has shown great potential in not only the reinforcement of dates produced by a single method but perhaps more importantly by the use of Bayesian statistics on the integrated data (Buck *et al.*, 1996). The establishment of an integrated absolute chronology for the Unst sites is essential in order to provide a framework for the other findings from the excavations and interpretations of the sites' economic development and cultural identity.

The analysis of the artefacts recovered will be of enormous importance to the interpretation of the sites excavated over the course of the Viking Unst Project. The expertise of Dr. Colleen Batey will be utilised.

### 1.2.2 The paleoeconomy of Viking and Norse Unst

Understanding the past economic exploitation of the surrounding landscape, shore and sea (e.g. for arable agriculture, animal husbandry, fishing and other resources such as fuel) is vital to our understanding of the sustainability of these sites. Analysis of the economic data will provide information regarding the subsistence base of the sites and the reasons for their success or failure. It is anticipated that most of the known sites in Unst (with the exception of those with a high windblown sand component) are unlikely to have good bone preservation, though some is possible. If recovered, bone would provide not just information on food resources but also technology (butchery, bone working) and possibly stable isotopic analysis for dietary and environmental reconstruction. Sampling for plant remains will indicate the nature of the arable contribution to the economy and what fuel resources were utilised, as well as providing material for AMS dating.

### 1.2.3 Formation of the archaeological deposits

An integrated research programme examining magnetic signatures, carbonised and fossilised organic components, phosphate and soil micromorphology will enable an understanding of fuel exploitation, the identification of surfaces within structures, the formation and management of arable soils and provide evidence for deposits associated with ironworking. It is hoped to investigate the nature and extent of any yards or infield surrounding the settlements; this will be important in settling the 'farm or sheiling' question for the sites in the higher areas

### 1.2.4 Manufacture, trade and contact

Evidence for manufacture, such as copper alloy casting and ironworking, together with imported cultural material, will provide evidence for both production and trade, which in turn provides further insight into the status of the sites and how this might have changed over time.

### 1.2.5 Status and social hierarchies in Viking/Late Norse period Unst.

Issues relating to the Viking/late Norse society in Unst will be addressed, and to this end investigation of the social status of the settlements will be important.

Geophysical survey will be used, if possible, to investigate the extent of settlements, the presence of midden, yard walls, and earlier structures. The results of the 'Penmap' survey in August 2005 seemed to show that some of the assumed single-structure and single-phase sites, such as Hamar and Lund, may be much more complex, and geophysics would be an obvious means of exploring this (Bond *et al.* 2006). It is hoped

that the nature and extent of the yards or infields surrounding the settlements could be looked at in order to settle the ‘farm or shieling’ question for the sites in the higher areas.

## 2. THE RESEARCH EXCAVATIONS AT HAMAR AND THE BAY OF UNDERHOULL IN 2006

**J.M. Bond & Z. Outram**

### 2.1 INTRODUCTION

The excavations carried out during July 2006 concentrated on House 1 at Hamar, but an opportunity arose to excavate a test pit in an eroding section on the east shore of Burga Sand, near the site of Underhoull. The section revealed midden material, which was sampled to provide material for environmental and dating analysis. The examination of this material is ongoing and will be discussed in more detail at a later date.

### 2.2 THE EXCAVATIONS AT HAMAR (FIGURE 2.1)

Excavation focussed on the preliminary assessment of House 1. Previous work on the site had included the excavation of a small trial trench within the upper room of the house, carried out by Stummann Hansen (2000).

The site of Hamar was visible in the field prior to the start of the excavation, being recorded in the RCAHMS database as "the remains …of the foundations of a bow-walled longhouse, several lesser buildings and enclosure wall" (RCAHMS 2006). It is intended that the surrounding area will be assessed as well as the structure, so that activities within the 'yard' can be investigated. With this in mind the area for excavation was divided into three main sections, encompassing both the internal and external area of the main structure, which was split into the upper, middle and lower sections, as shown in figure 2.1. This would allow two baulks to be created, which in turn would provide sections of the stratigraphic sequence that would aid the interpretation of the site.

Following the removal of the turf and topsoil it was clear that the archaeology in some areas of the site was very thin, in particular the southern and western external areas where the bedrock was clearly exposed. The underlying deposits were quite mixed, possibly bioturbated. The discussion of the excavation first covers the interior of the structure and subsequently the area immediately surrounding it.

#### 2.2.1 THE INTERIOR OF THE STRUCTURE

The preliminary excavation of the structure revealed a sub-rectangular building divided internally into an upper and lower room aligned roughly N-S downslope on a small terrace: the upper room was approximately a third of the total area of the structure. Two small doorways were identified, linking the upper and lower rooms, and the lower room to the external area on the southern side. It is not yet clear if the structure was composed of turf and timber elements or built entirely of stone, as there were no signs of a slumped turf deposit and only a minimal spread of tumbled stone.

Following the removal of the turf and topsoil from the site, it was clear that the walls of the structure were composed of inner and outer faces, with a core of rubble and earth. A remnant of double faced walling on the western wall was also identified, defined by contexts [009] and [079] and built in the same manner as the main walls of the structure. This remnant of walling had not been previously identified during the original survey of the structure by Stummann Hansen (2000), or during the survey carried out by Bond *et*

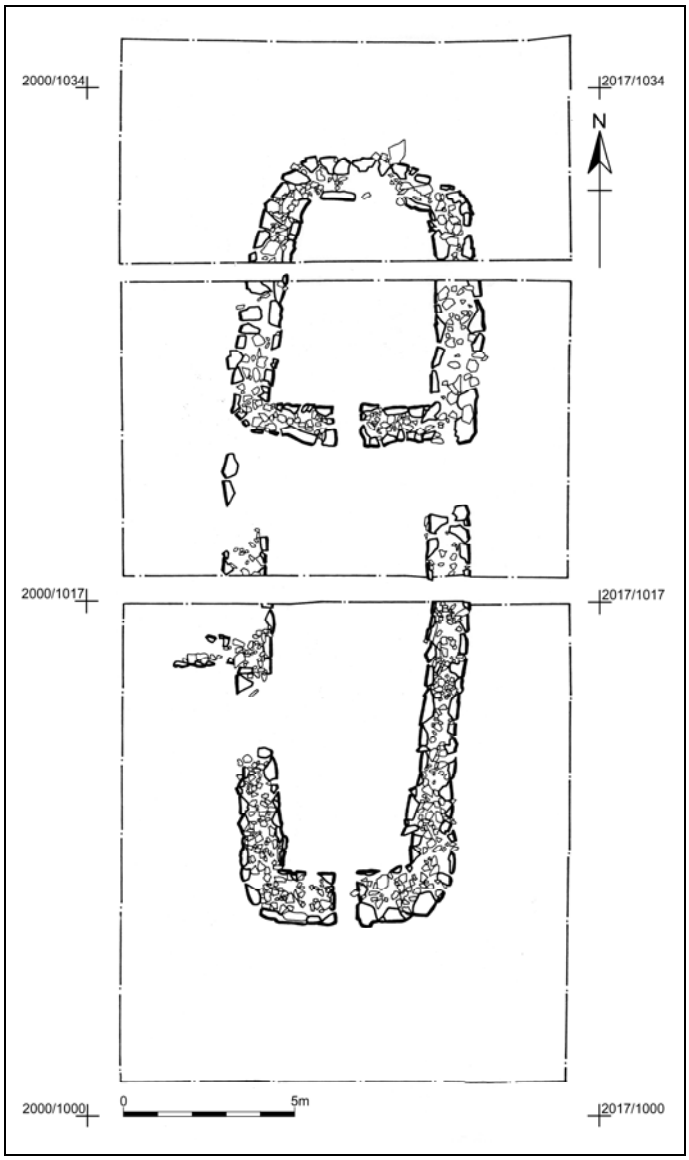

Figure 2.1: Plan of the excavated structure at Hamar (House 1)

*al.* (2006), as it only became visible following the removal of the turf from the area. It was clear that wall [009]/[079] butted the outer walling of the main structure, context [032], and was therefore built as part of a later event. It is important to note that the building of extensions onto longhouses is a common feature in Late Norse houses (Graham-Campbell & Batey 1998: 179; Bigelow 1985). The core material of this wall contained a fragment of a well carved steatite vessel discussed in section 3.2.2.

The excavation of the interior of the structure focussed on defining the ground plan of the building and understanding its later history and its relationship with the original ground surface. Excavation showed extensive rabbit damage around and in the walls but very little in the way of later deposits. There seems to be little soil development or slump on and around the walls and the surrounding area, and it is possible the whole site has been disturbed at some point in the past, perhaps scalped for turf. The wall dividing the upper room from the rest of the structure (context [010]) was shown to have been rebuilt, blocking an original doorway between the two rooms, and perhaps turning this upper area into a later planticrub or enclosure. At some point and perhaps associated with this later blocking, a large roughly made entrance had been created in the eastern long wall.

The excavation of the deposits enclosed within the upper room indicated some later post-medieval disturbance of deposits, and located the extent of Stummann Hansen's trial trench, which was re-excavated. The removal of the turf and topsoil deposits within this area revealed a number of gravel deposits as well as an area of stone tumble (context [070]) spreading south from the wall [010]. The initial excavation focused on the definition of the events associated with the blocking of the upper room through the construction of wall [010], which was assessed by first removing the rubble and tumble (context [070]) from the collapse of this wall. This revealed the doorway into the upper room, defined by two large stones (contexts [071] and [072]) and a possible threshold stone. The removal of rubble [070] demonstrated that it sealed a second rubble layer (context [021]) located to the south of the doorway. It was noted that the walling associated to the western and eastern sides of the doorway were very different in character: the western half of the wall, defined by context [073] was faced by very large stones, while the eastern part of the wall was composed of smaller stones (context [064]) that were sealed by a later, roughly rebuilt wall (context [069]) and the tumbled walling of [010]. Further investigation of this area of walling will hopefully clarify the events associated with the rebuilding of this wall.

The re-excavation of Stummann Hansen's trial trench initially concentrated on the identification and recording of any features noted within the original report (Stummann Hansen 2000: 90-91). A number of deposits were excavated that were associated with the backfilling of this trench, including contexts [065], [086], and [087]. All of these contexts appeared to be homogenised through their disturbance, and the boundaries between the contexts were merged. A fragment of leather was recovered from context [065] (SF033), which suggested that the deposit was to some extent anaerobic in nature to allow the preservation of such an item. The excavation of the backfill deposits demonstrated that they sealed two main features of interest: a possible bench setting (context [092]) and *in situ* ashy deposits (contexts [089] and [090]) that were interpreted as a floor surface. Environmental samples were collected from context [089] with the hope of providing material for radiocarbon dating. A fragment of a steatite vessel was also recovered from context [090] (see section 3.2.2).

The feature interpreted as a possible bench setting was identified along the western wall. It was not clear if the feature was man-made and built up from material overlying the natural bedrock, or that the natural bedrock material was cut into to form the feature. However, it can be concluded from the re-excavation that the upper room appears to have been cut into the hill, as it is considerably lower than the bedrock surrounding the outer walls. Further excavation next season should resolve this issue. The re-excavation of this trench has also demonstrated that the floor surfaces survive and will therefore be extensively sampled for environmental, dating, and scientific analysis in the 2007 excavation season. A detailed section produced from the re-excavation of the trial trench can be found in figure 2.2.

The excavation of the lower room focused on the removal of the turf and topsoil which revealed a cultural layer, context [008]. A small sondage was excavated at the lower end of the building in order to investigate the depositional sequence there, which appeared largely sterile. This sondage confirmed that there were no substantial ashy or organic deposits within this end of the structure, and also revealed an intriguing feature which may be natural or may be a rock-cut drain or gully; more extensive excavation next year will resolve this.

### 2.2.2 AREAS EXTERNAL TO THE STRUCTURE

The initial excavation of the external area of the settlement resulted in the removal of all the remaining topsoil and turf, given the context number [002]. During the excavation of context [002] a number of artefacts were recovered, including several fragments of post-medieval pottery (SF004, SF018, SF019, SF021, SF023, & SF024), fragments of a pipkin handle (SF015 & SF020), barbed wire, iron nails (SF007 & SF008), and two fragments of glass (SF025 & SF026), discussed in chapter 3. The removal of context [002] demonstrated that in some areas deposits were very shallow, as the underlying bedrock was visible. Due to the scale of the excavation in the 2006 season, work was concentrated on specific external areas: the upper area of the site, which included the investigation of a small sondage, and the deposits lying south of walls [038] and [039].

The excavation of context [002] in the upper area of the site revealed a darker material containing small worn fragments of steatite (context [027]). This context sealed a layer of orange clay within the NE area of the trench (context [029]), containing flecks of charcoal, which in turn sealed context [028], described as an area of stone and gravel positioned east-west across the upper trench. Context [028] corresponded to the line of the potential yard wall identified within the survey carried out in 2005 (Bond 2006: Figure 1.3), as well as during the initial assessment by Stummann Hansen (2000: Figure 5). Further excavation of this feature is required to determine if it is part of a yard wall.

A small trench excavated on the upslope side of the structure and extending away from the back wall revealed what seems to be a small drainage ditch or soakaway cut into the bedrock and following the curve of the back wall (context [012]), presumably to prevent hillwash seeping through into the upper room (figure 2.3). The potential soakaway contained deposits of silty clay and gravel (contexts [075], [068] and [076]), all of which were sampled for environmental analysis. Context [068] contained patches of fibrous material preserved anaerobically: samples were collected of this material for analysis in the laboratory. The assessment of the soakaway feature will continue in the 2007 excavation season in order to determine how far it extends around the structure.

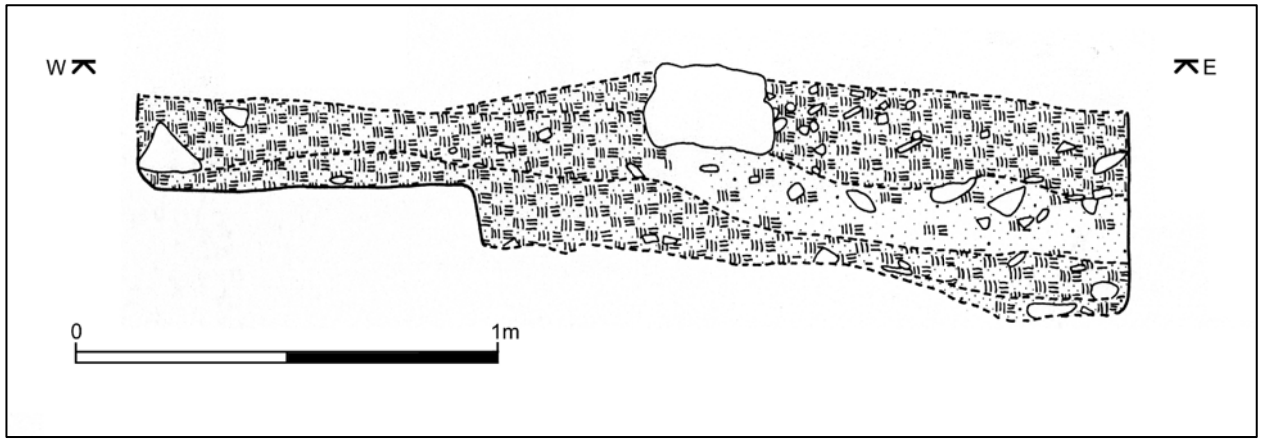


Figure 2.2: Section through the upper room (Stummann Hansen's trench)

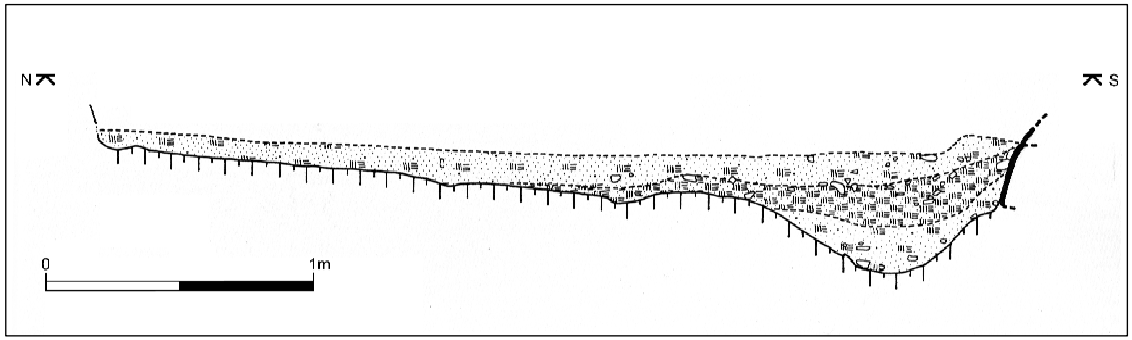


Figure 2.3: Section through the soakaway feature; external face of the house wall (context [012]) is visible in the far right of the section

In contrast to the upper area of the site, the downslope areas of external wall seemed to be built directly onto the bedrock and worn areas of bedrock immediately outside the southern entrance showed that it had been exposed in the past, presumably when the building was in use (figure 2.4). An area of tumble and rubble (context [006]) was identified, being immediately sealed by the topsoil context [002]. The rubble was concentrated around the base of wall [039], and was set into a clay-based matrix [063]. A number of artefacts were recorded from this area, including fragments of metal and steatite. Patches of anaerobically preserved material were found in cracks in the bedrock, which suggests that environmental remains may be recovered from these areas and more extensive sampling here and in the soakaway will take place next season.

### 2.2.3 CONCLUSIONS AND FUTURE WORK AT HAMAR

The site of Hamar has been described in the past as one of the best preserved longhouses in the region. The excavations carried out as part of the Viking Unst Project have revealed that although substantial portions of the structure survive, the extensive rabbit damage in the area has severely disturbed many of the deposits associated with the structure, as well as the structure itself. This disturbance will have resulted in damage to the environmental evidence recorded on site. However, several aspects of the structure were identified from the excavation: the soakaway located on the upslope of the structure is an important feature that will be investigated further in the 2007 season. Other structures with drain-like features that run parallel to the outer walls have been identified at the Brough of Birsay, Orkney (Hunter 1986: Illus 22), and it will therefore be interesting to compare the findings of the features at Hamar to the evidence from this site.

The evidence recorded from the upper room of the structure has demonstrated the use and reuse of this area, which have included the identification of *in situ* floor surfaces, the blocking of the doorway, and the possible development of a planticrub. The undisturbed floor deposits will be extensively sampled during the 2007 season. It was also noted that the upper room may have been cut into the underlying bedrock, which is unusual as the internal and external deposits do not match. This aspect will also be addressed further within the 2007 excavation season.

Within the lower area of the structure it was noted that the deposits were largely sterile but a possible drain or gulley was revealed at the limit of the excavation within the sondage. It is not clear at present what this feature relates to and it will be investigated further in the 2007 season.

Excavation has suggested that the majority of the structural elements were built directly onto the bedrock. It could not be determined prior to excavation if the curved nature of the outer wall was in fact real, or if it related to the collapse of the outer wall. Excavation has indicated that the curvature may have been a deliberate feature, although a full investigation of the construction techniques of the walls will be carried out in the 2007 season, as the sondage within the upslope of the structure will be extended to address this issue. Within the lower area of the excavation, the drain/soakaway features recorded by Stummann Hansen (2000: 90) were not identified following the course of the excavation. It was therefore not immediately clear what the features identified by Stummann Hansen related to, but further investigation in the surrounding area may help clarify this.

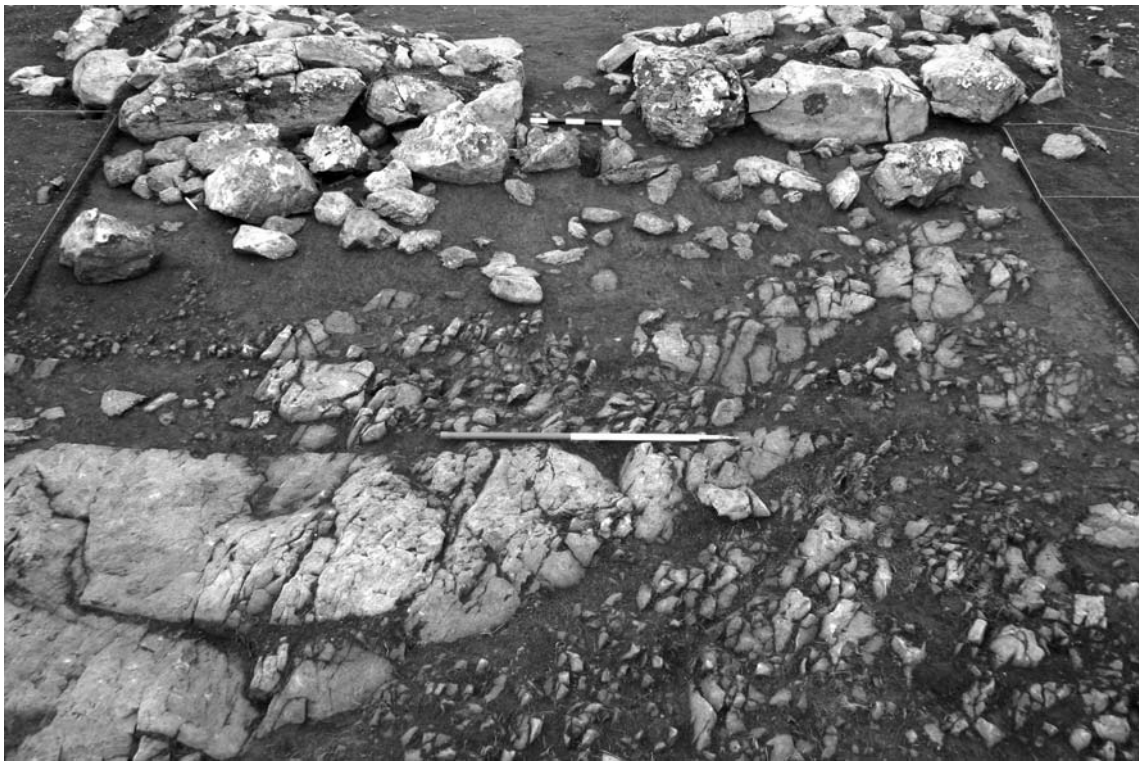

Figure 2.4: The lower external area of the site highlighting the exposed and worn bedrock

# 3. SUMMARY OF FINDS FROM THE 2006 SEASON

**J.M. Bond, D.J. Bashford, L.D. Brown, N.D. Melton, J.G. McDonnell & Z. Outram**

## 3.1 INTRODUCTION & OVERVIEW

**J.M. Bond & Z. Outram**

In total, 38 small finds were recorded during the 2006 excavation at Hamar. Here, the term 'small find' refers to the single unique identifier attributed to an individual artefact, or in some cases groups of an artefact type found together, for example a group of pottery sherds. The exact location of each 'small find' is tagged and then three-dimensionally recorded using a total station linked to the 'Penmap' survey package. This provides the potential for the analysis of the spatial distribution of the assemblage. Due to the nature of the deposits excavated from the structure at Hamar a dry sieving strategy was employed in addition to the established sampling strategy to maximise recovery of artefacts.

## 3.2 WORKED STONE

A number of stone items were recovered from the excavations at Hamar, which can be divided into artefacts of coarse stone and those of steatite. Each group will be discussed in turn.

### 3.2.1 COARSE STONE

**D.J. Bashford**

Of the small amount of coarse stone recovered from Hamar, on laboratory examination most proved to be unworked fragments of the local bedrock and schist. A large number of small blue green pebbles had also been recovered but although they do not appear to be part of the immediate geology these too appear to be unworked and unused. Thus, the coarse stone assemblage from Hamar includes only two objects that show any definite signs of working.

The first artefact, SF012, is a small rectangular block of fine-grained rock that is oval in cross section with a single flat surface. This surface has been worn smooth with the majority of the wear and scratching running up the length of the artefact. One edge of this surface has been bevelled and also shows a high degree of wear. Patches of slight polishing can be seen on the opposing side although these do not appear to indicate a working surface. Although made from a very soft stone a possible use for such an implement may have been as a whetstone/hone.

The second coarse stone artefact, SF095, is a rounded pebble with a slightly flattened and highly polished base, which was probably used as a counter or gaming piece. A small amount of scratching and wear is visible on the upper rounded surface and although faint a small area of graffiti is visible along one edge. This forms either two crosses roughly joined together or possibly a diamond with a cross at one end. This item was found within context [065], the backfill of the trial trench excavated by Stummann Hansen.

### 3.2.2 STEATITE

**L.D.Brown**

Of the nine fragments of steatite recovered from the 2006 excavations, four examples are worked. These artefacts are described here.

Each of the examples displays large numbers of chisel marks on each of the surfaces, particularly the internal surface. The wall thickness of the fragments is between 16mm and 24mm and where the fragment is large enough to ascertain the profile (three of the four examples), it is curved.

Two fragments, SF017 and SF043, were recovered from within the gravel material [030] which butted wall [031] within the northern area of the middle section of the house, close to the baulk. SF017, the larger of the two fragments has a fairly abraded exterior surface, with the internal surface displaying deep chisel marks.

One fragment, SF042, was recovered from the area defined as the 'upper room' of the structure. The context, [090], is described as a possible floor deposit at the base of the re-excavated Stummann Hansen trench (2.2.1, above). Although degraded and fairly uneven in wall thickness it appears to be a vessel rim. The exterior surface shows rough chisel marks and is also sooted in places. The interior of the vessel fragment is heavily chiselled, the marks running vertically from the rim.

SF051, the larger of the fragments, was excavated from within the rubble and soil core of wall [079]. The wall thickness is 16mm and the profile curved. Chisel marks are present on both surfaces (figure 3.1).

## 3.3 POTTERY AND FIRED CLAY

**J.M. Bond, Z. Outram, & N.D. Melton**

A total of 10 fragments of pottery were recovered from the 2006 excavations at Hamar, of which most were fragments of post-medieval pottery, discussed below. Of particular interest were the two fragments of a pipkin handle that were once conjoined.

### 3.3.1 THE POTTERY

The pottery recovered from the site mostly consisted of small fragments of relatively thin, abraded sherds of an orange/brown fabric and appeared to be post medieval in date. The majority were body sherds of vessels with a red/orange/brown glaze, mostly on just one surface. A fragment of a base sherd was recovered, SF004, which was glazed on both the internal and external faces. Another sherd, SF019, had evidence of external linear decoration. All of the sherds were found within the area external to the structure and within the general topsoil context [002].

In addition to the red glazed wares, two body sherds were recovered that were green glazed (SF023 and SF024), both of which were found within context [002]. The sherds were very similar to the red glazed sherds, being relatively thin, abraded, and glazed just on one surface. SF018 was a thicker sherd that had a white glaze on both the internal and external faces. This was the only example of this type of ware, and was also found within context [002].

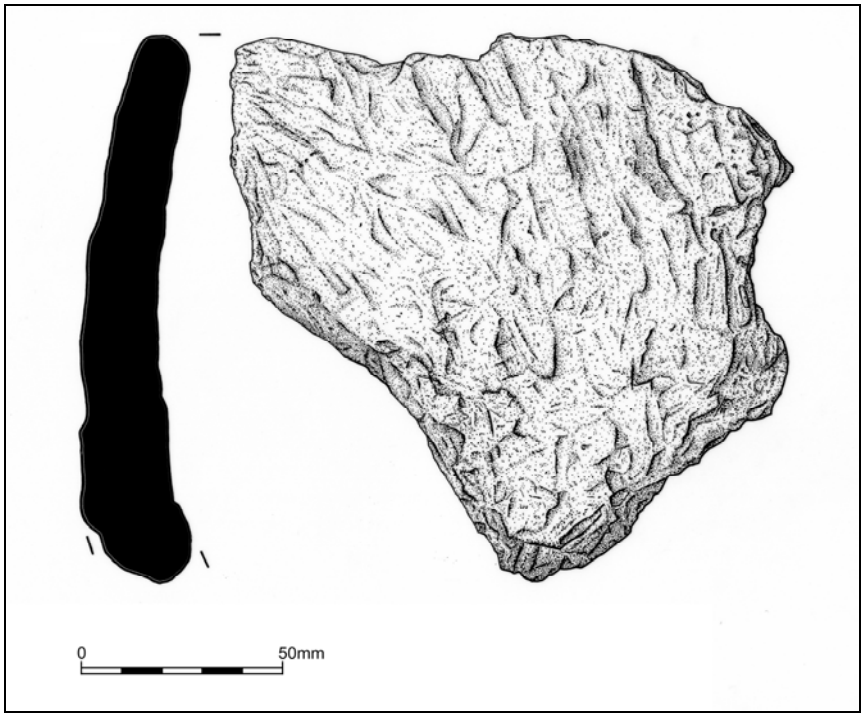

Figure 3.1: A fragment of a steatite vessel (SF051)

### 3.3.2 THE PIPKIN HANDLE (figure 3.2)

A pipkin, or a *stjertepotte*, is a pot with a globular body, a rounded base with three legs and a tubular handle (Lindsay 1983: 567). They are part of a class of pottery known as redware, the pipkin being the most frequently recovered example of this ware in Scotland (Verhaeghe 1983: 24). Two conjoining fragments of pipkin handles were recovered from the 2006 excavation season at Hamar (SF015 and SF020). The handle was tubular in form and made from a pale orange-brown fabric. The handle has an applied collar around the upper area of the handle, located approximately 50mm from the rim. The rim itself is rolled over to form a lip, which effectively resembles a second collar. Both fragments were found within context [002] in the eastern area of the external settlement.

Parallels for the handle were found from the excavations at Scalloway Castle (Hall & Lindsay 1983: Figure 6, no.16). This type of vessel was manufactured from the 16$^{th}$ century onwards throughout Northern Europe and England, providing a *terminus post quem* for the deposition of the fragments at Hamar (Lindsay 1983: 567). However, the typologies and dates associated with the Scalloway Castle examples have been criticised in recent years and are currently being reviewed (Blackmore 1999: 167).

Other examples of pipkin handles were found at the Biggings, Papa Stour (Blackmore 1999: Figure 81). Although these were not identical in decoration to that recovered from Hamar, they were all dated to the c.17$^{th}$ century. These dates tie in well with work carried out on the redware pottery found from excavations in Iceland. Sveinbjarnardóttir developed a typology and chronology for the Icelandic examples of pipkin handles (1996: Figure 35). Unfortunately, the example from Hamar could not be directly related to those found in Iceland, although it shares similarities with the later examples, such as types F and G, which were also decorated with cordons. The Icelandic examples were dated to the later half of the 17$^{th}$ century (Sveinbjarnardóttir 1996: 115).

It can therefore be concluded that the fragments of pipkin handles recovered from Hamar could be paralleled at other sites within Shetland, and could be dated to c.17$^{th}$ century. The recovery of these artefacts is important as they may relate to the later use and modification of the site.

## 3.4 METAL

**J.M. Bond, J.G. McDonnell & Z. Outram**

Several fragments of iron were recovered from the excavations at Hamar, of which 14 fragments were assigned a specific small find number. Approximately half of these items were classified as possible fragments of iron nails. Of particular interest is SF007, which although heavily corroded, appears to be a clench nail with a diamond-shaped rove (figure 3.3). Examples of clench nails are common throughout this period, with examples being found at other sites, such as Jarlshof (Brown 2005: 54 & Figure 3.8), and Old Scatness (McDonnell 1999: section 3.2). The remaining nails are also heavily corroded, but it is clear that they vary in thickness and length. All of the possible nails require further analysis, including the production of X-rays. It is important to note that all of the possible fragments of nails were recovered from topsoil deposits, contexts [002] and [003]. The remaining 7 items of iron that were assigned small finds numbers can not be identified at present due to the extent of corrosion. Further X-ray analysis is required to identify the artefact types.

In addition to the items that were assigned small find numbers, a number of iron artefacts were recovered by hand and as a result of the dry sieving programme, being recorded as 'tray finds'. This included several modern nails, barbed wire, and a shotgun cartridge. All of these items were modern in date and are therefore not of archaeological importance.

The programme of collecting bulk samples also revealed evidence of iron working, with examples of slag and hammerscale being found. A preliminary assessment suggests that they were formed as a by-product of welding, although further analysis if required to confirm this (McDonnell *pers.comm*).

### 3.5 OTHER ARTEFACTS OF INTEREST

**J.M. Bond and Z. Outram**

The remaining items that were recovered from site included three fragments of glass, and a small piece of leather. The glass fragments (SF025 and SF026) related to two small sherds of thin blue/green glass. There were no distinguishing features on the sherds, and they were both found within the topsoil context [002]. It is therefore not possible at present to determine which period the glass relates to, although it is hoped that further analysis may help clarify this situation.

The final artefact of importance related to a small fragment of leather, SF033, recovered from the backfill deposits of the trial trench excavated by Stummann Hansen. The preservation of the leather indicated that the burial conditions were anaerobic in nature. The leather fragment itself is approximately 3cm long; further analysis will be carried out following conservation.

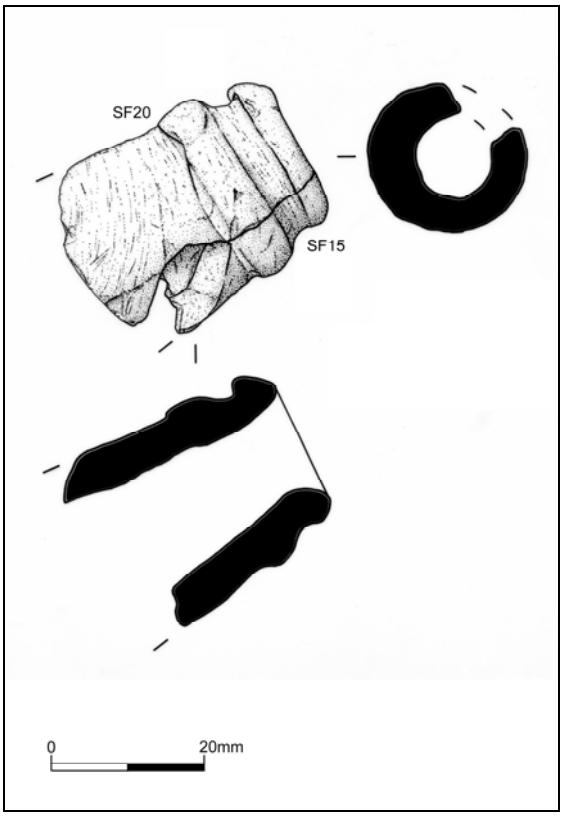

Figure 3.2: Two conjoining fragments of a pipkin handle (SF015 & SF020)

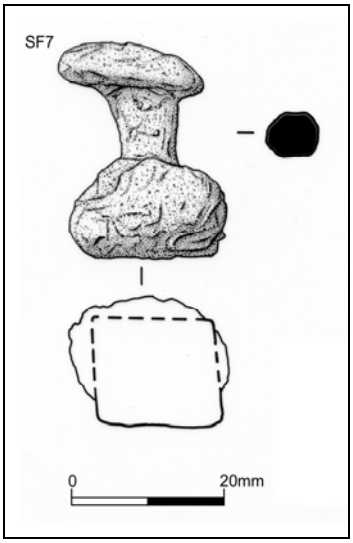

Figure 3.3: A possible clench nail (SF007)

# 4. ENVIRONMENTAL EVIDENCE

**J.M. Bond, Z. Outram, R.A. Nicholson, M. Church, J.E. Cussans & V Turner**

## 4.1 BIOARCHAEOLOGICAL SAMPLING

J.M. Bond, Z. Outram & V Turner

The environmental sampling programmes used at the two sites assessed during the 2006 excavation season were vital in addressing the research aims proposed at the start of the project. The archaeological excavations at Hamar revealed four main areas for sampling: the archaeological deposits located outside of the house, a sondage placed within the upper room to re-excavate the trial trench originally excavated by Stummann Hansen, a sondage within the lower room stretching from the eastern wall (defined by contexts [034], [035] and [036]) to level with the lower doorway, and a sondage located from the edge of the trench to the outer wall, defined by context [012]. The areas sampled outside the main structure revealed that the deposits were often very shallow, with evidence of the underlying bedrock protruding through. The area available for sampling within the upper room of the house was limited due to the size of the Stummann Hansen trench, and consisted of several disturbed deposits which sealed possible floor layers. Only a small area of the floor was exposed and so the quantity of material available was restricted. The limited extent of the deposits resulted in the need to maximise the information gained from them through the environmental sampling programme.

The excavation of the eroding section at Burga Sand in Westing near the site at Underhoull aimed to sample midden deposits, and resulted in three samples being collected: one from context [003] and two from [004].

As discussed above, it was felt that maximising the information available from these new excavations was an important aspect of the project.. With this in mind, a programme of sieving was begun at the site of Hamar with between 50 and 100% of each excavated deposit being sieved. Large A-frame sieves with a 6mm mesh were used to dry sieve deposits.

Bulk samples were taken from all significant contexts (e.g. midden deposits and floor surfaces) at both Hamar and from the eroding midden at Burga Sand,. The samples were processed in a flotation tank at the University of Bradford: the light fraction was collected in a 500μm mesh and the residue in a 1mm mesh. Bulk sample sizes ranged from 1-134 litres, the majority being between 20-40 litres. When collecting material for bulk samples, a maximum of 60 litres was aimed for but the majority of the samples were smaller than this due to either the size of the deposits, or the size of the excavated area. In total, 11 bulk samples were taken from 11 contexts producing 359 litres of deposit for processing in the flotation tank from the excavations at Hamar. The excavations at Burga Sand, Westing, produced three bulk samples from two contexts, and produced 46 litres of material for processing.

Only one GBA (‘general biological analysis’) sample was collected from Hamar, as a possible anaerobic deposit was recovered from a surface layer within the northern area of the external settlement (SF066, and context [068]). The sample will be analysed in the laboratories at the Universities of Bradford and Durham. In addition to the GBA

sample, spot samples of discrete deposits of significant material were taken from Hamar and two from Burga Sands. The three samples from Hamar all related to the identification of discrete areas of fibrous material that had been preserved *in situ*. In contrast to this, the two samples collected from Burga Sands related to control samples from the topsoil of the excavated trench.

Samples for pH, phosphate, and magnetic susceptibility analysis were taken from the deposits at Burga Sand which will be assessed at the Universities of Bradford and Durham.

The sampling programme for the Viking Unst Project was therefore dominated by the use of bulk and spot samples. These samples are being processed during the post-excavation assessment, providing evidence of mammal and fish bones, charred plant remains and marine shells. The analysis of these samples is ongoing and will be discussed following the detailed assessments of the recorded evidence. The samples have been processed in part by placement students from the University of Bradford, and by trained volunteers.

Samples for soil micromorphology studies were taken by V Turner, from test pits in the immediate vicinity of the site. Study of the soils surrounding Hamar and the other sites (by V Turner in conjunction with I Simpson of the University of Stirling) will be of crucial importance in understanding the nature of these settlements and their economic base. Work on this material is ongoing.

## 4.2 PLANT REMAINS

**J.M. Bond & M. Church**

The samples from Hamar have produced few charred plant remains, which is to be expected given that no settlement deposits have yet been excavated in detail. Samples sorted have produced charred weed seeds and fuel residues (including charcoal and charred root material) but only one cereal grain (barley). The samples from Burga Sands near Underhoull have in contrast been relatively rich, with charred weed seeds and barley grains present. It is anticipated that much more palaeobotanical material will be produced from Hamar in the 2007 season, when floor deposits in the upper room are excavated and sampled in full. The palaeobotanical material so far produced will be forwarded to Dr Church for further analysis.

## 4.3 MAMMAL BONES

**J.E.Cussans**

### 4.3.1 MAMMAL BONE FROM HAMAR

Only two contexts yielded any hand collected mammal bone, both of which were topsoil deposits. Context [002] contained one rabbit pelvis and one rabbit molar, plus a sheep sized rib fragment and some ossified cartilage fragments. The rib and cartilage fragments appeared to have been subject to recent weathering, appearing bleached white. Context [003] contained two rabbit bones, an unfused tibia and the distal and shaft portion of a femur. No signs of butchery or other modifications were present on any of the bones, which all appear to be of relatively recent origin.

### 4.3.2 MAMMAL BONE FROM THE ERODING SECTION, BURGA SANDS, WESTING

Mammal bones were found in three contexts from the eroding midden at Burga Sands, which were recovered from soil samples passed through a 4mm sieve. Context [002] was part of the topsoil deposit and contexts [003] and [004] were both sandy deposits with anthropogenic additions.

Context [002] contained an unfused rabbit ilium. Context [003] contained cattle, sheep, pig, horse and rabbit bones, plus a number of indeterminate cattle and sheep sized fragments. Cattle bones were two molar fragments (one charred); sheep bones were one humerus fragment, one foetal scapula, one maxillary molar and one other molar fragment. One molar fragment and a scapula fragment represented pig. The scapula had an oblique chop below the neck on the medial side. An acetabulum fragment and a 3$^{rd}$ phalange were identified as horse; the 3$^{rd}$ phalange was similar in size to that of a Shetland pony. A rabbit ischium and radius (both unfused) and a metapodial were recorded. In addition to the pig scapula fragment, butchery was observed on one piece of indeterminate cattle sized flat bone. A few cases of canid type gnawing were noted and a high proportion of the cattle and sheep sized bone fragments were charred or calcined.

Context [004] contained cattle, sheep and rabbit bones. The cattle bones consisted of two fragments of metapodial, one charred and one calcined. Sheep bones identified were a few fragments of charred distal femur and a mandibular fourth deciduous premolar (in wear). The rabbit bones consisted of a skull fragment and a complete atlas. No butchery marks or pathologies were noted on any of these bones.

One unstratified bone was recovered from the eroding section; this was a neonate cattle ischium.

# 5. DATING AT HAMAR

**Z. Outram, and C.M. Batt**

## 5.1 OBJECTIVES OF THE DATING PROGRAMME

The main aim of the dating programme of the Viking Unst Project is to provide a precise absolute chronology for the development of the sites under assessment. This is seen as an essential part of the research agenda. This is largely due to the relatively few scientific dates produced for the large area occupied during these periods (Jansen 1972: 30; Fridriksson & Vésteinsson 2003). Dating these structures is crucial to answering the research questions proposed as part of the Viking Unst Project: without accurate dates we cannot begin to build a model for Scandinavian settlement and society on Unst.

Due to the small scale of the excavations at Hamar and the eroding section at Burga Sands during the 2006 season, only one scientific dating technique was employed: AMS radiocarbon dating, discussed below. It is hoped that further excavation will allow other dating methods to be utilised, including archaeomagnetic dating on any hearths identified, as well as optically stimulated luminescence dating on any quartz rich deposits.

## 5.2 AMS RADIOCARBON DATING

The use of AMS radiocarbon dating forms the major component of dating strategies, being a well established technique. Contexts for dating will selected by J. Bond, M. Church, Z. Outram, and C. Batt; decisions will be based on the availability of material, the integrity of the deposit and the importance of its position within the stratigraphic sequence. The final selection will be carried out after the recording of the archaeobotanical samples.

The AMS technique has been selected as it allows small samples to be dated, reducing interpretive difficulties due to delayed use, residual material or contamination. The main material which will be used is charred barley grains due to the short-lived and seasonal nature of the grains. The grains have been obtained by flotation of carefully excavated samples (see Section 4.1). The results of the radiocarbon dating will be calibrated using the Oxford Radiocarbon Accelerator unit programme OxCal v.3.10 (Bronk Ramsey 2005) that utilises the most recent Reimer *et al.* (2004) calibration curve. The final results will be presented in appropriate academic publications.

# *PART TWO*

# PERSONNEL & RELATED RESEARCH

# 6. PROJECT OUTCOMES

## 6.1 PRESENTATIONS

Bond, J.M. and Dockrill, S.J. 2006. Old Scatness and Viking Unst. The University of Bradford seminar series.

Bond, J.M. 2006. Excavations in the Faroes and Viking Unst. Smyril Line ferries from the Faroe Islands to Shetland.

## 6.2 PROJECT RELATED PUBLICATIONS

Bond, J.M., Larsen, A-C, and Turner, V.E. *Submitted.* Viking Unst: Hamar and Belmont. In Turner, R. (ed.) *Discovery and Excavation in Scotland*. Edinburgh: the Council for Scottish Archaeology.

(Text and photographs were also produced by Bond, Freeth and Outram (2006) to be included in the Viking Unst Project Newsletter; this material was also circulated as a newsletter to the students and volunteers from the University of Bradford).

# 7. PERSONNEL

## 7.1 MANAGEMENT TEAM

Jimmy Moncrieff (Shetland Amenity Trust)
Val Turner (Shetland Amenity Trust)
Julie Bond (University of Bradford/Shetland Amenity Trust)

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Graham Whittington

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***Viking Unst Project Co-ordinator***
Robina Barton

***Interpretation Staff***
Keith Prosser
Tony Sheratt

## 7.4 POST-EXCAVATION

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***Assistant Post-Excavation Manager***
Zoe Outram

***Research Assistant***
Chrissie Freeth

***Post-Excavation Staff***
Daniel Bashford *Illustrator*
Julia Cussans *Archaeozoological Assistant*
Zoe Outram *Archaeobotanical Assistant*

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***Placement Students***
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Francis Tiller

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# 9. SPONSORS AND ACKNOWLEDGEMENTS

## 9.1 SPONSORS

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