Excavations at Northton, Western Isles of Scotland, 2010; Data Structure Report



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Summary

A Mesolithic human presence in the Outer Hebrides has long been postulated by palynologists but archaeological evidence for this period has, until recently, eluded discovery by archaeologists. The discovery of the first radiocarbon-dated Mesolithic deposits in the Western Isles at Northton, Harris in 2001 was therefore of considerable international research significance. Unfortunately, the site is rapidly being destroyed by coastal erosion. Consequently, a small-scale excavation of the Mesolithic horizon was undertaken in 2010 to establish the nature of the deposits and to undertake detailed environmental sampling before the site is destroyed. The excavated area of the Mesolithic deposit was 100% sampled and flotation for plant and animal remains was undertaken. No archaeological features were detected, but a sizeable assemblage of Mesolithic lithics, charcoal, carbonised plant macrofossils and fish bones was uncovered. It is proposed that this layer is a buried land surface that incorporates a palimpsest of disturbed and bioturbated hearth deposits containing fuel remnants and food waste.

Introduction

A Mesolithic human presence in the Outer Hebrides has been suggested by palynologists (e.g. Edwards 1996, 2000), but archaeological evidence for this period has, until recently, eluded discovery by archaeologists, due to the difficulty of locating Mesolithic sites under the thick peat deposits that characterise the topography of these islands and the destructive forces of relative sea-level rise since the early to mid Holocene. Consequently, the discovery of the first radiocarbon-dated Mesolithic deposits in the Western Isles at Northton, Toe Head peninsula, Harris (Figure 1; NGR: NF 975 912) in 2001 was of considerable international research significance (Gregory et al. 2005; Simpson et al. 2006) and represented the most north-westerly Mesolithic site in Europe. These small-scale excavations of the exposed cliff section revealed *in situ* Mesolithic deposits containing a few stone tools, and animal and plant remains (Figure 2). However, the site at Northton is rapidly being destroyed by coastal erosion. Coastal erosion is one of the biggest threats to archaeology in Scotland (Ashmore 2003a, 2003b), and is becoming an increasing problem, as sea levels rise as a consequence of global warming. Further small-scale excavation of the Mesolithic horizon was deemed necessary to establish the nature of the deposits and to undertake detailed environmental sampling before the site is lost to costal erosion.

Moreover, though some have argued for the importance of plant use in the Mesolithic (Clark 1976; Hather and Mason 2002; Mason *et al.* 1994; Mithen *et al.* 2001; Zvelebil 1994), detailed studies of archaeobotanical remains from Mesolithic sites have rarely been undertaken in Britain. This is largely a consequence of the assumption that plant resources were not an important component of Mesolithic subsistence strategies and that plant remains are rarely preserved on Mesolithic sites (Hather and Mason 2002:2). This has resulted in a lack of detailed environmental sampling and analysis of Mesolithic plant remains (Mason *et al.* 1994:54), and a consequent reinforcement of pre-existing ideas about the nature of the British Mesolithic economy. At the few sites where detailed sampling strategies have been implemented and techniques suitable for the identification of edible roots and tubers have been used, substantial quantities of plant remains have been found (Hather and Mason 2002:5; Mason *et al.* 2002:195). For instance, the statistically valid sampling strategies (*cf.* Jones 1991) and the identification methods used at the site of Staosnaig, Colonsay (Mithen 2001; Mithen *et al.* 2001) resulted in the recovery of 30-40,000 whole hazelnuts and over 400 edible tubers (*ibid*). The excavation and detailed sampling of the midden at Northton

provided an excellent opportunity to explore this poorly-understood element of Mesolithic subsistence in detail.

Likewise, considering that Northton is the only known Mesolithic site in the Outer Hebrides, the nature of the native terrestrial fauna available for exploitation in the Mesolithic of these islands is not known (Kitchener et al. 2004:80; McCormick and Buckland 2003:87). Consequently, the question of how and when terrestrial mammals, such as red deer, were first introduced into the Western Isles remains an important issue for debate (Fairnell and Barrett 2007; McCormick and Buckland 2003:87). Also, previous research has focused on the zooarchaeological remains from the numerous Mesolithic shell middens which are present in the Inner Hebrides and the West coast of mainland Scotland and the evidence for humananimal exploitation from non-shell midden sites in the region is comparably rare (Kitchener et al. 2004:80; Milner 2009:68). Moreover, in contrast to most terrestrial Mesolithic sites in mainland Scotland that suffer from poor animal bone preservation (Kitchener et al. 2004:80), the alkaline conditions of the machair soils at Northton provide excellent conditions for bone preservation (Gregory et al. 2005; Simpson et al. 2006). Therefore, the detailed analysis of the zooarchaeological material from Northton provides the potential to enhance knowledge of the terrestrial post-glacial fauna in the area and to study the relative importance of marine and terrestrial animal resources in Mesolithic subsistence strategies at non-shell midden sites.

Research Aims

- 1. To assess the state of erosion of the site.
- 2. To establish the nature of the Mesolithic deposits.
- 3. To undertake detailed sampling of the archaeobotanical and zooarchaeological remains from the Mesolithic deposits.
- 4. To establish if any later agricultural evidence or amendment is present in the Mesolithic deposits.
- 5. To reinstate the site by creating a contoured turf layer down to eroding edge.

Methods

To establish the extent of the coastal erosion, the exposed Mesolithic deposits were cleaned, drawn and photographed in section and a detailed survey of the site and the erosion was undertaken using an EDM. A 2 x 5 metre trench was laid out along the eroding edge of the exposed Mesolithic deposits, with the long axis of the trench running parallel to the now-eroded 'large section' recorded by Simpson *et al.* (2006: Figure) in 2001. During the excavation it became clear that it would not be possible to excavate and sample the whole of the 2 by 5m trench to the glacial till due to time constraints, and though the whole trench was excavated to the surface of the Mesolithic layer, only a 1 by 5m area of the Mesolithic deposit adjacent to the eroding edge was completely excavated and sampled.

All excavation was undertaken by hand and all deposits encountered were fully excavated using standard archaeological excavation methods. A single context recording system was used and finds were located in three dimensions relative to the site grid. Following Ballin (2009:90), unworked, as well as worked quartz was kept for specialist analysis. Plans were drawn at 1:20, sections drawn at 1:10 and digital photographs were taken. During the excavation, bulk samples were taken for environmental analysis and artefact retrieval. Due to the threat of complete destruction by coastal erosion, the potential rarity of archaeobotanical remains on Mesolithic sites and the importance of the site, a 100%

sampling strategy of all archaeological deposits was employed. The windblown sand layers (contexts [2], [11], [5], [6], [7]/[10], [12], [13] and [15]) were extremely homogeneous and were clearly non-anthropogenic. Consequently bulk samples were not taken from these layers. The soil from the bulk samples was processed using a flotation tank (Kenward *et al.*, 1980), with the residue caught in a 1 mm mesh and the flot in a 1.0 mm and 0.3 mm sieve. The material was air-dried before transportation back to the environmental laboratories in the Archaeology Department of Durham University for post-excavation analysis.

After excavation, the site was reinstated through the construction of a low stone wall at the front of the section with a seaweed and turf layer consolidating the trench behind the wall (Figure 3). This reinstatement strategy will not protect the remains in the face of long-term coastal erosion but will stabilise the section in the short-term.

Post-excavation methodology

Due to the wetness of the deposits during excavation and the difficulty in processing wet bulk samples in flotation tanks, a secondary reflot of the residues was undertaken using a 1mm sieve to retrieve unfloated plant material. Fragile bone was removed from the residues prior to secondary refloation. The residues were sorted by eye to 4mm and the 1mm and 2mm fractions were sorted under a microscope.

Rosie Bishop and Mike Church are responsible for supervising the post-excavation analyses of the remains recovered from the excavations. Rosie Bishop is also responsible for the post-excavation analysis of the archaeobotanical remains and charcoal recovered from the samples, which forms part of her supervised AHRC funded PhD research. Steph Piper and Emily Blake will be analysing the artefactual material and fish bone/marine shell assemblages respectively, as part of their supervised MA dissertations at the Department of Archaeology, Durham University. Prof. Peter Rowley-Conwy and Angela Perri will identify and analyse any zooarchaeological remains recovered from the samples and Lisa Snape-Kennedy (University of Reading) and Mike Church will undertake the routine soil tests on the samples. Matt Law, (University of Cardiff) will analyse any land snails present in the samples as part of his supervised PhD research.

Results

Erosion Survey

The extent of coastal erosion was monitored by undertaking an EDM survey of the eroding edge in relation to the existing Neolithic and Beaker earthworks and Mesolithic layers. This survey revealed that the exposed Mesolithic deposits in this area of the coast had eroded by about 1m since 2001, but that a greater area of the Neolithic and later remains overlying the Mesolithic deposits have been completely destroyed by coastal erosion, mostly during the major storm in winter 2006.

Contexts and stratigraphy

The excavation was divided into 5 stratigraphic phases (see Appendix 1). Phase 1 represents the most recent windblown sand layers encountered at the site. During the excavation, it became clear that there was a stratigraphic discontinuity in the sequence and that the later prehistoric and historic layers had been removed by a recent erosion event. This may have occurred during a huge storm in 2006, which, according to members of the local crofting

community, resulted in severe erosion of the coast in this area. Consequently, the Phase 1 layers probably consist of re-deposited material from the exposed section above the site. Phase 2 is interpreted as a mixed interface horizon. It consists of a series of *in situ*, but disturbed and/or truncated, windblown sand layers, which contain varying quantities of later intrusive material and prehistoric artefactual material. Phases 3-5 contain the only undisturbed *in situ* early prehistoric layers. Phase 3 is the upper most prehistoric horizon, and is thought to equate to context 10 in the 2001 excavations. This phase is undated and could represent either the latest Mesolithic contexts on the site or it could potentially be early Neolithic in date. It is proposed that 2 radiocarbon dates will be produced from context 14 to resolve the chronology of this phase. Phases 4 and 5 represent the middle and earliest Mesolithic layers on the site. They are equivalent to contexts 5 and 7 in the 2001 excavations, which were radiocarbon dated to c. 6510-6090 cal BC and c. 7060-6650 cal BC respectively (Gregory *et al.* 2005). Finally, Phase 6 is the natural glacial till.

Phase 1 consisted of a sequence of 3 different sand deposits (contexts [2], [11] and [5]) underlying the natural turf layer, context [1] (Figure 4). The uppermost deposit (context [2]) was a pale cream windblown sand layer containing occasional medium-large angular boulders (15-70cm), with rare shells and bone. The modern nature of this layer was evidenced by the presence of a plastic bag. In the North-East corner of the trench, a rabbit burrow (Context [11]) ran through context [2] and was clearly visible in the North-South section edge. Context [5] was the lower 2cm of context [2], and was composed of the same pale cream windblown sand, but contained slightly more frequent bone and shell pieces. It is thought that all of these layers, except [11], had been redeposited from the exposed section above the site after the major storm event in 2006.

Phase 2 includes a number of *in situ* windblown sand layers of unknown date – contexts [6], [7], [10], [12], [13] and [15] (Figure 5). Directly underlying context [5] and overlying contexts [7], [10] and [12], was context [6], a mixed layer of sandy soil and grey sand with no small finds, which extended across the whole of the trench, except at the Northern end, where context [5], directly overlay contexts [7], [10] and [12]. It is probable that contexts [7] and [10] were the same deposit, since they were composed of the same material – loose, pale cream wind-blown sand with occasional small stones (c.0.5-2cm), chert/quartz lithics and a few ceramic sherds, shells and animal bones - though since they were separated by context [12] this remains uncertain. Context [12], was a mixed lens of pale cream and light brown sandy soil, containing occasional shell fragments. Beneath contexts [6] and [10], in the North-East side of the trench, was context [13], a loose, grey sandy layer with occasional shell fragments and an iron nail. Context [15] underlay context [13], and was a mixed layer of mid-brown silty sand with pale cream sand patches. Shells were frequent in context [15], but no artefacts were present in this layer. Though all of these contexts appear to be *in situ*, it is clear that there has been some modern bioturbation within Phase 2, since context [13] contained a modern iron nail, context [7] contained polystyrene and [7]/[10] contained several ceramic fragments. The modern nail in context [13], may derive from the 2001 excavation, since it is located in the corner of the trench close to the original section.

Beneath the wind blown sand layers were 3 main phases of *in situ* archaeological deposits. Phase 3 consisted of 2 prehistoric layers containing anthropogenic remains (contexts [14] and [3]), which were probably contemporary (Figure 6). These deposits had a very similar composition, except that context [14] contained more frequent shell and charcoal fragments. Both deposits were mid dark-brown smooth sandy silts containing a few flint/quartz/chert lithics, occasional shells, small and medium stones (c. 0.5-2cm and 2-8cm) and rare pieces of eroded pink granite and charcoal flecks. Context [3] was clearly more mixed with the

overlying layers than context [14], and contained more frequent patches of light-brown and grey sand. Neither deposits contained any positive or negative features.

Phase 4, contains a single occupation deposit, context ([9]), which extended across the whole of the excavated area (Figure 7). It consisted of a black organic sandy clayey silt containing anthropogenic material in the form of frequent charcoal flecking, fire-cracked rocks (c.5-25cm) and worked lithic material, together with rare burnt bone fragments. Occasional eroded rock patches were also present in this context. The fire-cracked rocks were randomly distributed within context ([9]) and formed no discernable structures.

Phase 5, included 2 contexts ([16] and [17]), which had a merging boundary between them and were probably contemporary (Figure 8). Context [16] was a light brown sandy-clayey silt containing occasional charcoal flecks, degraded clasts and small stones, which gradually graded into a silty-clay towards the bottom 1-2cm of the deposit. No artefactual material was present in context [16]. To the south of context [16], was a further possible occupation horizon, context [17], consisting of a dark brown loose sandy silt, with a few flint flakes, small gravel fragments (0.5-1cm), occasional charcoal patches, angular rocks (c.2-15cm) and rare rounded beach pebbles (c. 5-10cm). Both of the Phase 5 deposits became increasingly less organic towards the base, and gradually graded into the underlying Phase 6 deposit (context [8] – see Figure 9). Context [8], the natural glacial till was a compact mid-brown clay containing medium-large stones (c.5-30cm).

Preliminary Interpretation

Despite the recovery of a sizeable assemblage of Mesolithic lithics, charcoal, carbonised plant macrofossils and fish bones from the site, no archaeological features were detected in the excavated area of the trench. Consequently, it is proposed that Phases 3-5 (contexts [14], [3], [9], [16] and [17]) were general Mesolithic occupation layers that incorporate a scatter of lithic material and a palimpsest of disturbed and bioturbated hearth deposits containing fuel remnants and food waste. It is possible that these deposits had become disturbed through cultivation in the Neolithic or Bronze Age (Guttmann 2005:234, 2006). However, considering that the main Mesolithic layers [16]/[17] and [9] were sealed by a secondary layer [14]/[3] and no ard marks were visible within the Mesolithic layers, it seems more likely that these deposits had become bioturbated by natural processes, such as tree root action in the Mesolithic. The pottery sherd and sheep phalanx recovered in the 2001 context [5] (equivalent to the 2010 context [9]) may also have been redeposited through natural processes, such as worm action.

Similar Mesolithic occupation horizons, lacking positive or negative features have been recovered at Castle Street, Inverness (Wordsworth et al 1985) and at Lussa River on Jura (Mercer 1970-1). At both sites a scatter of Mesolithic lithic material, charcoal and plant remains were found deposited within organic rich soils.

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References

Ashmore, P. 2003a. Archaeology and the Coastal Erosion Zone. In Dawson, T. (ed.) *Coastal Archaeology and Erosion in Scotland:* 1-5. Historic Scotland. Edinburgh.

Ashmore, P. 2003b. Coastal Erosion of Archaeological Sites. In Dawson, T. (ed.) *Coastal Archaeology and Erosion in Scotland:* 203-215. Historic Scotland. Edinburgh.

Ballin, T. B. 2009. Quartz technology in Scottish prehistory. *Scottish Archaeological Internet Report* 26.

Clark, D. L. 1976. Mesolithic Europe: The economic basis. In Sieveking, G., Longworth, I. H. and Wilson, K. E (eds.) *Problems in Economic and Social Archaeology*: 449-481. Duckworth. London.

Edwards, K. J. 1996. A Mesolithic of the Western and Northern Isles of Scotland? Evidence from pollen and charcoal. In Pollard, T. and Morrison, A. (eds.) *The early prehistory of Scotland*: 23-38. Edinburgh University Press. Edinburgh.

Edwards, K. J. 2000. Pollen, archaeology and burdens of proof. In Young, R. (ed.) *Mesolithic lifeways: current research from Britain and Ireland*: 67-74. Leicester Archaeology Monographs. Leicester.

Fairnell, E. H. and Barrett, J. H. 2007. Fur-bearing species and Scottish islands. *Journal of Archaeological Science* 34: 463-484.

Gregory, R. A., Murphy, E. M., Church, M. J., Edwards, K. J., Guttmann, E. B. and Simpson, D. A. 2005. Archaeological evidence for the first Mesolithic occupation of the Western Isles of Scotland. *The Holocene* 15(7): 944-950.

Guttmann, E. B. A. 2005. Midden cultivation in prehistoric Britain: arable crops in gardens. *World Archaeology* 37(2): 224 – 239.

Guttmann, E. 2006. Soil micromorphology. In Simpson, D. D. A., Murphy, E. M. and Gregory, R. *Excavation at Northton, Isle of Harris*. 26-30. BAR British Series 408. Oxford.

Hather, J. G. and Mason, S. L. R. 2002. Introduction: Some Issues in the Archaeobotany of Hunter-gatherers. In Hather, J. G. and Mason, S. L. R. (eds.) *Hunter-gatherer archaeobotany: perspectives from the northern temperate zone*: 1-14. University College, Institute of Archaeology. London.

Jones, M. 1991. Sampling in Palaeoethnobotany. In Zeist, W., Wasylikowa, K., and Behre, K. (eds.) *Progress in Old World Palaeoethnobotany*: 53-62. A.A. Balkema. Rotterdam.

Kenward, H. K., Hall, A. R. and Jones, A. K. G. 1980. A tested set of techniques for the extraction of plant and animal macrofossils from waterlogged archaeological deposits. *Science and Archaeology* 22: 3-15.

Kitchener, A.C., Bonsall, C. and Bartosiewicz, L. 2004. Missing mammals from Mesolithic Middens: a comparison of the fossil and archaeological records form Scotland. In Saville, A. (ed.) *Mesolithic Scotland and its Neighbours:* 73-82. Society of Antiquaries of Scotland. Edinburgh.

Mason, S., L., R., Hather, J. G., and Hillman, G. C. 1994. Preliminary investigation of the plant macro-remains from Dolni Vestonice II, and its implications for the role of plant foods in Palaeolithic and Mesolithic Europe. *Antiquity* 68: 48-57.

Mason, S., L., R., Hather, J. G., and Hillman, G. C. 2002. The archaeobotany of European hunter-gatherers: some preliminary investigations. In Hather, J. G. and Mason, S. L. R. (eds.) *Hunter-gatherer archaeobotany: perspectives from the northern temperate zone*: 188-196. University College, Institute of Archaeology. London.

McCormick, F. and Buckland, P. C. 2003. Faunal Change. In Edwards, K. J. & Ralston, I. B. M. (eds.) *Scotland after the Ice Age: Environment, archaeology and history, 8000BC – AD 1000*: 83-108. Edinburgh University Press. Edinburgh.

Mercer, J. 1970-1. A Regression-time Stone-workers' Camp, 33 ft OD, Lussa River, Isle of Jura. *PSAS 103*:1-32.

Milner, N. 2009. Subsistence. In Conneller, C. and Warren, G. (eds.) *Mesolithic Britain and Ireland: New Approaches*: 61-82. Stroud. Gloustershire.

Mithen, S. 2001. *Hunter-gatherer landscape archaeology: the Southern Hebrides Mesolithic project, 1988-1998, Volume 2.* McDonald Institute for Archaeological Research. Cambridge.

Mithen, S., Finlay, N., Caruthers, W., Carter, S. and Ashmore, P. 2001. Plant Use in the Mesolithic: Evidence from Staosnaig, Isle of Colonsay, Scotland. *Journal of Archaeological Science* 28: 233-234.

Simpson, D. D. A., Murphy, E. M. and Gregory, R. A. 2006. *Excavation at Northton, Isle of Harris*. BAR British Series 408. Oxford.

Wordsworth, J., Bradley, R., Dickson, C., Harman, M., Mate, I and Harden, G. 1985. The excavation of a Mesolithic horizon at 13-24 Castle Street, Inverness. *PSAS* 115: 89-103.

Zvelebil, M. 1994. Plant Use in the Mesolithic and its Role in the Transition to Farming. *Proceedings of the Prehistoric Society* 60: 35-74.

Figure 1: Site location.

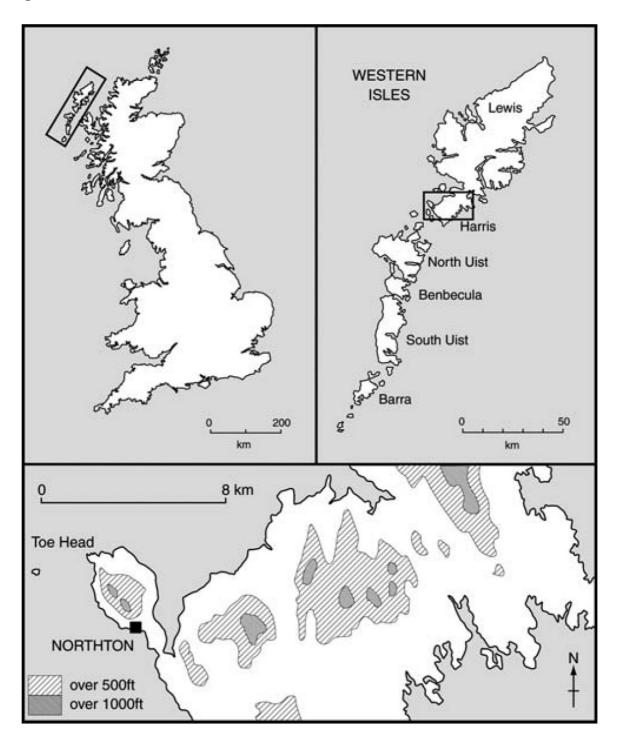


Figure 2: Trench placement in relation to the coastal erosion edge, facing north.



Figure 3: Trench following reinstatement, facing north.



Figure 4: Phase 1 modern deposits, facing north.



Figure 5: Phase 2 windblown sand deposits, facing east.



Figure 6: Phase 3 late Mesolithic / early Neolithic *in situ* deposits (Contexts 3 and 14), facing east.



Figure 7: Phase 4 Mesolithic horizon (Context 9), facing east.



Figure 8: Phase 5 basal Mesolithic horizon (Contexts 16 and 17).



Figure 9: Underlying glacial till (Context 8), facing east.



Context	Description					
1	Turf layer.					
2	Pale cream redeposited windblown sand layer immediately below turf.					
3	Mid dark-brown smooth sandy silt in North of trench, similar to context 14, but with less frequent shell inclusions (Late Mesolithic / early Neolithic horizon).					
4	Cleaning layer of eroded midden edge in South of trench.					
5	Lower 2cm of context 2 (pale cream redeposited windblown sand layer).					
6	Mixed layer of in situ sandy soil and grey sand with no small finds.					
7	Pale cream in situ windblown sand layer underlying context 6.					
8	Natural glacial till.					
9	Black organic sandy clayey silt containing anthropogenic material (middle Mesolithic horizon).					
10	Pale cream in situ windblown sand layer underlying context 6, perhaps same as context 7.					
11	Rabbit burrow in North-East corner of trench.					
12	Mixed lens of pale cream and light brown in situ sandy soil.					
13	Grey in situ sandy layer in North-East corner of trench.					
14	Mid dark-brown smooth sandy silt in North of trench, probably the same as context 3 (Late Mesolithic / early Neolithic horizon).					
15	Mixed in situ layer of mid-brown silty sand with pale cream sand patches, underlying context 13.					
16	Light brown sandy-clayey silt gradually grading into a silty-clay towards the bottom 1-2cm of the deposit (lower Mesolithic horizon).					
17	Dark brown loose sandy silt (lower Mesolithic horizon).					

Table 1: Northton 2010 context list

Table 2: Northton 2010 drawing list

Drawing Number	Scale	Area	Context Numbers	
1	1:20	1	Contexts 3, 6, 7, 8, 9, 10 and 12	
2	1:20	1	Contexts 3, 13 and 14	
3	1:20	1	Contexts 3, 14 and 15	
4	1:20	1	Contexts 3 and 14	
5	1:20	1	Contexts 9 and 14	
6	1:20	1	Contexts 9 and 14 (same as plan 5 but with new finds levels)	
7 1:20 1		1	Contexts 16 and 17	
8	1:20	1	Contexts 8, 9 and 14	
9	1:10	1	East-facing section through contexts 9 and 16/17	
10	1:10	1	South-facing section	
11	1:10	South-East extension	South-facing section	
12	1:10	1	West-facing section	
13 1:10 1		1	Sample overlay for drawing Number 9	

Table 3: Northton 2010 photo list

Shot number	Area	Description	Facing	Date
		Pre-excavation shot-general state of erosion prior to		
01-06	1	excavation	Ν	09/08/2010
		Pre-excavation shot-general state of erosion prior to		
07-09	1	excavation	Е	09/08/2010
		Pre-excavation shot-general state of erosion prior to		
10-12	1	excavation	W	09/08/2010
		Pre-excavation shot-general state of erosion prior to		
13-15	1	excavation	S	09/08/2010

	1			
16-18	1	Pre-excavation shot of trench area	Ν	09/08/2010
19-21	1	Pre-excavation shot of trench area	Е	09/08/2010
22-24	1	Pre-excavation shot of trench area	W	09/08/2010
25-27	1	Pre-excavation shot of trench area	S	09/08/2010
28-33	1	Pre-excavation shot of eroded edge	Ν	09/08/2010
34-39	1	General shots of 'temple' from site	W	09/08/2010
40-42	1	Shots of trench area after deturfing (top of context 2)	Ν	10/08/2010
43-45	1	Close-up shot of eroding edge after de-turfing	Ν	10/08/2010
46-48	1	Shots of trench area after deturfing	W	10/08/2010
49-57	1	Contexts 9,8,6,7,3 pre-excavation	Ν	10/08/2010
58-60	1	Contexts 9,8,6,7,3 pre-excavation	Е	11/08/2010
61-63	1	Contexts 9,8,6,7,3 pre-excavation	S	11/08/2010
64-66	1	Extent of contexts 7/10	Е	11/08/2010
67-69	1	Contexts 13 and 7/10	S	12/08/2010
70-72	1	Extent of context 3	S	13/08/2010
73-75	1	Contexts 3,14,9,8 (whole trench after cleaning)	Ν	13/08/2010
76-78	1	Close-up of west end of trench	Ν	13/08/2010
79-81	1	Close-up of east end of trench	Ν	13/08/2010
82-84	1	Contexts 3,14,9,8 (whole trench after cleaning)	Е	13/08/2010
85-87	1	Contexts 3,14,9,8 (whole trench after cleaning)	S	13/08/2010
88-90	1	Contexts 3 & 14 (whole trench after cleaning)	Ν	14/08/2010
91-93	1	Close-up of trench (West end)	N	14/08/2010
94-96	1	Close-up of trench (East end)	Ν	14/08/2010
97-99	1	Contexts 3 & 14 (whole trench after cleaning)	W	16/08/2010
	South-			
100-102	East Extension	Turf (pre-excavation)	Ν	16/08/2010
103-105	1	Top of context 9	N	16/08/2010
106-108	1	Top of context 16	N	17/08/2010
109-114	1	Top of context 10	N	17/08/2010
115-117	1	Context 9	N	17/08/2010
118-120	1	Context 9 (West end)	N	17/08/2010
121-123	1	Context 9 (West end)		
124-126	1	Context (Last end)	N	$1 / (1 \times / (1 \times / (1 + 1)))$
	1	Context 9 (Fast end)	N F	17/08/2010
127-129	1	Context 9 (East end)	Е	17/08/2010
127-129	1	Context 9 (East end)	E S	17/08/2010 17/08/2010
130-132	1	Context 9 (East end) Working shot of excavation in context 9	E S E	17/08/2010 17/08/2010 17/08/2010
130-132 133-135	1 1 1	Context 9 (East end) Working shot of excavation in context 9 Context 9 removed, showing contexts 16 and 17	E S E N	17/08/2010 17/08/2010 17/08/2010 17/08/2010 18/08/2010
130-132	1	Context 9 (East end) Working shot of excavation in context 9 Context 9 removed, showing contexts 16 and 17 Context 9 removed, showing contexts 16 and 17 (West end)	E S E	17/08/2010 17/08/2010 17/08/2010
130-132 133-135	1 1 1	Context 9 (East end) Working shot of excavation in context 9 Context 9 removed, showing contexts 16 and 17	E S E N	17/08/2010 17/08/2010 17/08/2010 17/08/2010 18/08/2010
130-132 133-135 136-138	1 1 1 1 1	Context 9 (East end) Working shot of excavation in context 9 Context 9 removed, showing contexts 16 and 17 Context 9 removed, showing contexts 16 and 17 (West end) Context 9 removed, showing contexts 16 and 17 (middle of	E S E N N	17/08/2010 17/08/2010 17/08/2010 18/08/2010 18/08/2010
130-132 133-135 136-138 139-141	1 1 1 1 1 1	Context 9 (East end)Working shot of excavation in context 9Context 9 removed, showing contexts 16 and 17Context 9 removed, showing contexts 16 and 17 (West end)Context 9 removed, showing contexts 16 and 17 (middle of trench)Context 9 removed, showing contexts 16 and 17 (East end)Context 9 removed, showing contexts 16 and 17 (East end)Context 9 removed, showing contexts 16 and 17 (East end)	E S E N N N	17/08/2010 17/08/2010 17/08/2010 18/08/2010 18/08/2010 18/08/2010
130-132 133-135 136-138 139-141 142-144	1 1 1 1 1 1 1 1	Context 9 (East end)Working shot of excavation in context 9Context 9 removed, showing contexts 16 and 17Context 9 removed, showing contexts 16 and 17 (West end)Context 9 removed, showing contexts 16 and 17 (middle of trench)Context 9 removed, showing contexts 16 and 17 (East end)	E S E N N N N	17/08/2010 17/08/2010 17/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010
130-132 133-135 136-138 139-141 142-144 145-147	1 1 1 1 1 1 1 1 1 1	Context 9 (East end)Working shot of excavation in context 9Context 9 removed, showing contexts 16 and 17Context 9 removed, showing contexts 16 and 17 (West end)Context 9 removed, showing contexts 16 and 17 (middle of trench)Context 9 removed, showing contexts 16 and 17 (East end)Context 9 removed, showing contexts 16 and 17 (East end)Context 9 removed, showing contexts 16 and 17 (East end)	E S E N N N E	17/08/2010 17/08/2010 17/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010
130-132 133-135 136-138 139-141 142-144 145-147 148-150	1 1 1 1 1 1 1 1 1 1 1 1 1 1	Context 9 (East end)Working shot of excavation in context 9Context 9 removed, showing contexts 16 and 17Context 9 removed, showing contexts 16 and 17 (West end)Context 9 removed, showing contexts 16 and 17 (middle of trench)Context 9 removed, showing contexts 16 and 17 (East end)Context 9 removed, showing contexts 16 and 17 (East end)Context 9 removed, showing contexts 16 and 17 (East end)Context 9 removed, showing contexts 16 and 17 (East end)Context 9 removed, showing contexts 16 and 17 (East end)Context 9 removed, showing contexts 16 and 17 (East end)	E S E N N N E S	17/08/2010 17/08/2010 17/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010
130-132 133-135 136-138 139-141 142-144 145-147 148-150 151-153	1 1	Context 9 (East end)Working shot of excavation in context 9Context 9 removed, showing contexts 16 and 17Context 9 removed, showing contexts 16 and 17 (West end)Context 9 removed, showing contexts 16 and 17 (middle of trench)Context 9 removed, showing contexts 16 and 17 (East end)Context 9 removed, showing contexts 16 and 17 (East end)Context 9 removed, showing contexts 16 and 17 (East end)Context 9 removed, showing contexts 16 and 17 (East end)Context 9 removed, showing contexts 16 and 17 (East end)Context 9 removed, showing contexts 16 and 17 (East end)Close-up of contexts 16 and 8 (West end)	E S E N N N E S S N	17/08/2010 17/08/2010 17/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010 19/08/2010
130-132 133-135 136-138 139-141 142-144 145-147 148-150 151-153 154-156	1 1	Context 9 (East end) Working shot of excavation in context 9 Context 9 removed, showing contexts 16 and 17 Context 9 removed, showing contexts 16 and 17 (West end) Context 9 removed, showing contexts 16 and 17 (middle of trench) Context 9 removed, showing contexts 16 and 17 (East end) Context 9 removed, showing contexts 16 and 17 (East end) Context 9 removed, showing contexts 16 and 17 (East end) Context 9 removed, showing contexts 16 and 17 (East end) Context 9 removed, showing contexts 16 and 17 (East end) Close-up of contexts 16 and 8 (West end) Close-up of contexts 16 and 8 (Middle end)	E S E N N N E S S N N	17/08/2010 17/08/2010 17/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010 19/08/2010 19/08/2010
130-132 133-135 136-138 139-141 142-144 145-147 148-150 151-153 154-156 157-159	1 1	Context 9 (East end) Working shot of excavation in context 9 Context 9 removed, showing contexts 16 and 17 Context 9 removed, showing contexts 16 and 17 (West end) Context 9 removed, showing contexts 16 and 17 (middle of trench) Context 9 removed, showing contexts 16 and 17 (East end) Context 9 removed, showing contexts 16 and 17 (East end) Context 9 removed, showing contexts 16 and 17 (East end) Context 9 removed, showing contexts 16 and 17 (East end) Context 9 removed, showing contexts 16 and 17 (East end) Close-up of contexts 16 and 8 (West end) Close-up of contexts 16 and 8 (Middle end) Close-up of contexts 16 and 8 (East end)	E S E N N N E S S N N N N	17/08/2010 17/08/2010 17/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010 19/08/2010 19/08/2010 19/08/2010
130-132 133-135 136-138 139-141 142-144 145-147 148-150 151-153 154-156 157-159 160-162	1 1	Context 9 (East end)Working shot of excavation in context 9Context 9 removed, showing contexts 16 and 17Context 9 removed, showing contexts 16 and 17 (West end)Context 9 removed, showing contexts 16 and 17 (middle of trench)Context 9 removed, showing contexts 16 and 17 (East end)Context 9 removed, showing contexts 16 and 17 (East end)Context 9 removed, showing contexts 16 and 17 (East end)Context 9 removed, showing contexts 16 and 17 (East end)Context 9 removed, showing contexts 16 and 17 (East end)Close-up of contexts 16 and 8 (West end)Close-up of contexts 16 and 8 (Middle end)Close-up of contexts 16 and 8 (East end)Contexts 16 and 8South-facing section of South-East trench extensionSouth-facing section through contexts 9/16 (West End)	E S E N N N E S S N N E E	17/08/2010 17/08/2010 17/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010 19/08/2010 19/08/2010 19/08/2010 19/08/2010 19/08/2010 19/08/2010
130-132 133-135 136-138 139-141 142-144 145-147 148-150 151-153 154-156 157-159 160-162 163-166	1 1	Context 9 (East end)Working shot of excavation in context 9Context 9 removed, showing contexts 16 and 17Context 9 removed, showing contexts 16 and 17 (West end)Context 9 removed, showing contexts 16 and 17 (middle of trench)Context 9 removed, showing contexts 16 and 17 (East end)Context 9 removed, showing contexts 16 and 17 (East end)Context 9 removed, showing contexts 16 and 17 (East end)Context 9 removed, showing contexts 16 and 17 (East end)Close-up of contexts 16 and 8 (West end)Close-up of contexts 16 and 8 (Middle end)Close-up of contexts 16 and 8 (East end)Contexts 16 and 8South-facing section of South-East trench extension	E S E N N N E S N N N E N N E N N	17/08/2010 17/08/2010 17/08/2010 17/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010 18/08/2010 19/08/2010 19/08/2010 19/08/2010 19/08/2010 20/08/2010

179-182	1	South-facing section of trench	Ν	20/08/2010
183-186	1	West-facing section of trench	Е	20/08/2010
187-207	1	Reinstatement shots	Various	21/08/2010

Table 4: Small Finds from Northton 2010

Small finds number	Context	Material	Description
1	3	flint	flint flake
2	14	quartz	quartz flake?
3	13	quartz	quartz flake?
4	14	chert?	flake?
5	10	quartz	irregular quartz flake
6	7	chert	struck bladelet
7	7	quartz	arrowhead blank
8	7/10	scallop shell	fish descaler?
9	7	ceramic	sherds
10	7/10	stone	flake knife
11	10	ceramic	sherd
12	10	quartz & bone	general unworked quartz and bone bag for c. 10
13	10	ceramic	sherd
14	10	quartz	scraper
15	13	iron	nail
16	3	quartz	general unworked quartz
17	14	quartz	lithic?
18	3	quartz	lithic?
19	14	chert?	lithic?
20	14	quartz	lithic?
21	14	quartz	lithic?
22	9	stone	possible cobble tool
23	9	stone	possible grinding stone?
24	9	stone	possible pounder
25	9	chert	worked chert
26	9	chert	worked chert?
27	9	chert	worked chert?
28	9	chert?	worked chert?
29	9	quartz	possible scraper?
30	9	quartz	quartz flake
31	9	chert?	chert flake
32	9	quartz	worked quartz flake
33	9	chert	chert flake
34	9	flint	flint flake
35	9	quartz	quartz flake
36	9	quartz	flint flake
37	9	lithic/bone?	lithic/bone?
38	9	quartz	quartz flake
39	9	quartz	quartz flake
40	9	chert?	chert flake
41	9	flint	flint flake
42	9	quartz	2 quartz flakes

-		granite	possible cobble tool
90	9	quartz?	quartz debitage
89	9	quartz	quartz flake
88	9	chert	chert flake
87	9	chert	chert chip
86	9	quartz	quartz flake
85	9	quartz	quartz flake x2
84	9	quartz	quartz flake
83	9	quartz	quartz flake
82	9	quartz	quartz flake
81	9	chert	flake
80	9	quartz	quartz flake
79	9	flint	worked flint
78	9	flint	flint flake
77	9	quartz	quartz core?
76	9	chert?	chert chip
75	9	quartz	quartz flake
74	9	quartz	quartz flake
73	9	quartz	quartz flake
72	9	quartz	quartz debitage
71	9	quartz	quartz debitage
70	9	quartz	quartz chip
69	9	quartz	quartz flake
68	9	chert?	chert chip
67	9	stone	round pebbles
66	9	flint	flint chip
65	9	flint?	worked flint
64	9	chert?	debitage?
63	9	chert?	struck fragment
62	9	chert	microlith?
61	9	quartz	quartz fragment
60	9	quartz	quartz fragment
59	9	stone	round pebble
58	9	quartz	quartz fragment
57	9	quartz	quartz fragment
56	9	quartz	quartz fragment
55	9	quartz	quartz flake
54	9	flint	flint flake
53	9	quartz	quartz flake
52	9	quartz	quartz flake
51	9	quartz	quartz chip
50	9	chert	chert flake
49	9	quartz	quartz flake
48	9	quartz	quartz flake
47	9	quartz	quartz flake
46	9	quartz	quartz flake
45	9	chert	chert flake
44	9	quartz	quartz flake
43	9	quartz	2 quartz flakes

92	9	flint	quartz flake
93	9	flint	flint flake (debitage?)
94	9	flint	flint flake
95	9	quartz	quartz flakes (not worked)
96	9	chert	chert flake
97	9	flint	flint flake
98	9	beach cobble	possible hammer stone
99	9	stone	hammer stone
100	17	flint	flint flake
101	17	flint	flint flake
102	9	chert	chert flake found in sample

Table 5: Sample list from Northton 2010

Sample	Context	Reason for sampling	Number of tubs/bags (1 tub = 10 litres)	
1	1	For routine soil tests	1	
2	2	For routine soil tests	1	
3	2	Bone and shell	1	
4	4	Bulk sample: but sieved to 1mm in stream	9	
5	5	Bone and shell	1	
6	6	Bulk sample: but sieved to 1mm in stream	1	
7	7/10	For routine soil tests	1	
8	10	Bone	1	
9	13	For routine soil tests	1	
10	13	Bone	1	
11	10	Animal tooth	1	
12	10	Bone	1	
13	3	Bone	1	
14	10	Bone	1	
15	15	For routine soil tests	1	
16	3	Bulk sample	27	
17	14	Bulk sample	24	
18	9	Bulk sample	1	
19	16	Bulk sample	1	
20	14	Bone (Lepus sp.)	1	
21	9	Bulk sample	41 1/3	
22	9	Bone	2 bags	
23	17	Bulk sample	8.5	
24	9	Bulk-patch of bone	1 bag	
25	17	Hand retrieved charcoal	1 bag	
26	17	Hand retrieved charcoal	1 bag	
27	16	Bulk sample	9	
28	9	Horizontal transect for soil analysis	20 bags	

Appendix 1: Harris matrix from Northton 2010

