Lanton Archaeological Evaluation Phase 1

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LANTON ARCHAEOLOGICAL EVALUATION PHASE 1

Executive Summary

The fieldwalking at Lanton, Milfield, encompassed two areas: Area 1 designated for extraction on top of a fluvio-glacial sand and gravel terrace, and Area 2 on a flat area of alluvial river terrace below. Lithic tools typical of the Mesolithic and Neolithic-Early Bronze Age periods were recovered from Area 1 where a recognisable cluster of Neolithic material could be delimited in the northern sector. Occasional loose clusters of Mesolithic material were observed further away from this principal concentration. The lithic assemblage includes many fine, diagnostic pieces such as a leaf-shaped arrowhead, chisel arrowhead, barbed and tanged arrowhead, blade tools, Neolithic and Mesolithic scrapers, knives and cores together with waste flakes. A cache of blades was discovered on the surface in the north part of Area 1 indicating where a sub-surface feature fill had been clipped by the plough resulting in the dumping of the flints on the surface. The cache comprised 10 large blade and flake tools. A small 1m by 1m test pit was excavated above the cache and a further 48 large flints were found in a cone directly below the cache. This included scrapers, utilised and retouched blades and a spear point. All these pieces can be ascribed to the Neolithic-early Bronze Age and comprise one of the best-preserved caches of Neolithic flint material so far discovered in the county. Part of a buried archaeological feature was visible in the base of the test-pit cut into the sand and gravel substratum. The test pit results demonstrate the presence of buried archaeological features at the north end of the site.

A small number of largely undiagnostic lithics were recovered from Area 2 and were widely spread. The lithics from the this area are likely to have arrived in their respective locations as a result of slopewash and/or alluviation and are unlikely to represent immediate sub-surface archaeology, particularly as this area is alluviated. However, the potential exists for archaeological remains to be buried at depth in this area as earlier land surfaces will have been buried by successive layers of alluvium deposited by the river Glen.

Analysis of aerial photographs show the existence of a henge monument and ring ditch complex to the east of Area 1, together with a second henge complex that includes pit alignments and a probable mortuary enclosure to the north, in Ewart Park. A small area of organic sediment was noted on an aerial photograph and on the ploughed field surface. It is possible that this sediment could contain palaeoenvironmental residues that could inform on the past vegetation sequence of the landscape.
MAINS HILL ARCHAEOLOGICAL EVALUATION PHASE 1

Requested By: Wardell-Armstrong

Undertaken By: Archaeological Research Services

Dates of Field Work: Monday 27th October – Monday 3rd November 2003

1. INTRODUCTION

1.1 The archaeological evaluation of the Lanton site included an assessment of the aerial photograph coverage for the area together with close-spaced fieldwalking and ground inspection for evidence of any surviving archaeological and palaeoenvironmental features. A total of 166 lithics were recovered from the ploughed surface of Area 1 by fieldwalking and a further 48 from a 1m by 1m test pit. Two pieces of post-medieval pottery were also recovered from Area 1 together with a single fragment of early prehistoric pottery that is likely to belong to the Grimston Ware series. In total 214 lithics and three pieces of pottery were recovered from Area 1. Area 2 produced a total of 12 lithics and a possible broken whetstone.

1.2 Area 1 occupies an area of fluvio-glacial sand and gravel terrace while the adjacent Area 2 occupies an area of alluvial valley floor on the north bank of the river Glen at Akeld. The area of intended gravel extraction (Area 1) comprises a generally flat glacial outwash terrace that has been laid down at the end of the last ice-age c.15,000 years ago. Although low lying the site is raised up above the flood plain and is free from flood risk. The argilllic brown earth soils that overlie the gravel terrace in this part of the basin are free draining and relatively fertile (Payton 1980). Lying at the southern end of the Milfield Plain the terrace is close to a natural crossing point of the river Glen. Views from the site are currently obstructed by modern plantations, tree belts and hedging, but without this surrounding vegetation the site would otherwise command views around all sides of the basin. To the south and west the view is bounded by the steeply rising slopes of the Cheviot massif while to the east the Fellsandstone escarpment defines the horizon and to the north there are views to the hummocky terrain of the Tweed drumlin fields.

1.3 The free draining soils, lack of flood risk, proximity to fresh water and a natural bridging point, together with the short distance to the surrounding uplands make the site particularly attractive as an area for past human settlement.
2. ARCHAEOLOGICAL BACKGROUND

2.1 The fluvio-glacial gravel terraces of the Milfield plain are well known for their rich archaeological remains, many of which are considered to be of national importance having been designated 'scheduled ancient monuments'. In particular this includes a Neolithic ‘ritual complex’ that includes henges (Harding 1981; Waddington 1999; 2001), pit alignments (Miket 1981, Waddington 1997), an avenue and ‘settlement’ sites (Miket 1987; Waddington 1999), the latter usually represented by clusters of Neolithic pits. In addition to these sites further evidence of Neolithic settlement features has recently come to light at Woodbridge (Waddington 2000, SMR reports). There are also early Bronze Age ring ditch cemeteries (Miket 1985), as well as Iron Age palisaded and fort sites. There are important early medieval sites including two royal towns; Bede’s ‘Maelmin’ next to Milfield village (Gates and O’Brien 1988), and his ‘Ad Gefrin’ or ‘Yeavering’ (Hope-Taylor 1977), as well as the early medieval village site at Thirlings (O’Brien and Miket 1991).

2.2 A large-scale fieldwalking project has been undertaken in the Milfield basin that has sampled over 10 million square metres of ground at 5m and 10m intervals (Waddington 1999 and 2001a). This has allowed the 5 different geological land facets in the basin to be characterised in terms of their lithic densities. These include the Cheviot slopes, the sand and gravel terraces, the alluvial valley floor, the boulder clays and the sandstone escarpment. The results of this survey show quite clearly that it is the sand and gravel terraces that consistently produce the highest densities of stone tools from the ground surface and they evidently form the main focus for Mesolithic and Neolithic activity in the basin. As a result it has been shown that fieldwalking is a useful method for characterising areas of past human activity on the gravel terraces.

2.3 Fieldwalking has been shown to be successful in identifying and delimiting areas of prehistoric activity in the Milfield basin (Waddington 1999; 2001a; Passmore and Waddington 2002). For example, used in combination with detailed geomorphological mapping, this method identified areas of Mesolithic and Neolithic activity on low relief gravel ‘islands’ set within the alluvial floodplain where previously it had been thought that no surface archaeology existed. Small-scale test-pitting over one of the scatters revealed a stakehole feature which subsequent C14 analysis dated to the early Neolithic. Elsewhere in Northumberland excavation of a surface scatter of Neolithic material revealed an early Neolithic settlement site defined by post-holes, stakeholes, hearth and ‘rubbish’ pits (Waddington and Davies 2002).
Fig. 1 Location Map of Lanton showing 45m contour
3. AERIAL PHOTOGRAPHS

3.1 The checking of the aerial photograph coverage for the area against the detailed transcriptions undertaken for the Milfield Basin Geoarchaeology Project have shown that no traces of archaeological features have yet been identified by aerial photography within Area 1 or Area 2. Previous consultation of aerial photographs has shown that there are no visible features within the area, although a henge and ring ditch complex lies immediately east of Area 1 near Akeld Steads (Harding 1981) and there is another immediately to the north in Ewart Park (Miket 1981; Waddington 1997). A ground and polished stone axe head made from Cheviot andesite was discovered in this area inside the crop-mark feature thought to be a mortuary enclosure (Waddington and Schofield 1999) as well as Neolithic-early Bronze Age flint tools (Weyman archive, Museum of Antiquities).
4. FIELDWALKING AND TEST PIT

4.1 The fieldwalking was undertaken at 2m interval spacing. The 2m interval is considered to produce a 100% visual inspection of the field surface with each walker observing 1m either side of their line (Tolan-Smith 1997). Any artefact clusters that exist within the ploughsoil can be identified using this sampling interval. By employing close-spaced fieldwalking as an evaluation technique not only were areas of potentially disturbed archaeological features able to be identified but also the ploughsoil, which is a potential archaeological resource in itself, was also able to be accurately sampled. Although the ground has a very gradual slope, dipping marginally to east and south, surface artefacts are unlikely to have moved very much from their original location of discard as the landform is stable and flat over most of its extent (see Waddington 1999 and 2001a for results of associated research on artefact movement and model of effects of ploughing on surface scatters in the Milfield Basin).

![Fig. 2 View south across the site towards the Cheviot hills](image)

4.2 This area of terrace is located on a bluff above the river Till with views to south, east and west at an elevation of 50m above OD. It forms the area designated for sand and gravel extraction by the client. A total of 166 lithics were recovered from the ploughed field surface which extends over an area of 27.12ha (see Fig. 3). This gives an overall surface lithic density of 6.1 lithics per ha. This can be compared with the average counts for the different geological zones in the basin as established by the authors previous work (see Table 1 below). This work has shown that, on average, the lithic densities for the areas of gravel terraces where known Neolithic and Early Bronze Age archaeological remains exist (e.g. henges, avenue, ring ditches etc) is 14.7 per ha. This means that the count for the Lanton site as a whole is significantly below this average. However,
there are clear clusters of finds at the Lanton site, particularly in the north-west and north-east of the site (see Fig. 4). On the basis of this distribution a north-west cluster and a north-east cluster have been delimited on Fig. 4. What is noteworthy about the north-west cluster is that the surface density within this area is 11.3 per ha which is much closer to the average for areas of known archaeological remains on the gravel terraces. If the edge of the cluster had been drawn more tightly around the main concentrations then clearly this density would increase further.

<table>
<thead>
<tr>
<th>Geological Zone</th>
<th>Lithic density per ha. (100% coverage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raised Gravel Terraces</td>
<td>14.7</td>
</tr>
<tr>
<td>Cheviot Slopes</td>
<td>10.6</td>
</tr>
<tr>
<td>Sandstone Slopes</td>
<td>6.4</td>
</tr>
<tr>
<td>Alluvial Gravel Islands</td>
<td>3.8</td>
</tr>
<tr>
<td>Boulder Clay</td>
<td>2.4</td>
</tr>
<tr>
<td>Alluvial Terraces</td>
<td>0.3</td>
</tr>
</tbody>
</table>

*Table 1 showing average lithic densities per ha from different geological settings in the Milfield basin (from Waddington 2001a).*

4.3 Therefore, although the overall density for the Lanton site may appear to be quite low when compared with the counts from areas with known archaeological monuments, the clusters in the northern sector contrast sharply with the large blank areas elsewhere on the Lanton site. This contrast suggests some areas of the Lanton site are likely to be archaeologically sterile while a clustered area of Neolithic activity is evidenced at the north end of the site. Taken on its own, the northern sector of Area 1 has produced the highest density of diagnostic Neolithic material from any surface survey so far undertaken in the county. Occasional clusters of Neolithic material were located away from this main concentration but the density of Neolithic finds falls off sharply. With only one diagnostic Neolithic piece in the southern area of the site this reinforces the view that the Neolithic-early Bronze Age activity is largely confined to the north end of Area 1. It is also worth noting that diagnostic Neolithic and early Bronze Age flints have been previously discovered in the fields immediately north of the Lanton site in Ewart Park (Joan Weyman archive, Museum of Antiquities, Newcastle) where the crop marks of a henge, mortuary enclosure and pit alignments are located (see Fig. 1). It is likely that the Area 1 cluster of material is associated with activity connected with the Ewart and Akeld ceremonial complexes (see above and crop mark data on Fig. 1).

4.4 Mesolithic material was found dispersed across the site with some loose concentrations in both the northern and southern areas of the site. This is typical for Mesolithic finds, which tend to have a more dispersed distribution pattern than the more tightly focused Neolithic and early Bronze Age scatters. It is feasible that some buried Mesolithic features may survive at the site and if any were to be anticipated then it is most likely that they would occur at the north end of the site.
in amongst the Neolithic features as this is where the highest density of Mesolithic material was located (see Fig. 4).

4.5 The assemblage from this field (including the finds from the test-pit) is particularly notable for the quality and quantity of tools present and the amount of chronologically diagnostic material. Of the entire assemblage 36.4% are tools (ie. belong to the tertiary stage in the reduction sequence), while 52.3% belong to the secondary stage and 11.2% to the primary stage. For detailed information and catalogue of all finds see Appendix1; for a summary see Table 2 below. Finds of particular note include a leaf-shaped arrowhead and a chisel arrowhead, both in pristine condition. There are also many other typical Neolithic pieces including end scrapers, edge-trimmed and retouched blades, a spear point and a serrated blade. Early Bronze Age pieces include a broken barbed and tanged arrowhead, as well as scrapers and flake tools. The Mesolithic material is represented by a large number of micro-cores (21), a variety of blades and blade tools, and some typical scrapers with abrupt unifacial retouch.

<table>
<thead>
<tr>
<th>Artefact Type</th>
<th>Quantity</th>
<th>Dating Associations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flakes</td>
<td>88</td>
<td>3 Meso, 13 Neo/Eba</td>
</tr>
<tr>
<td>Blades</td>
<td>26</td>
<td>7 Meso/Neo, 8 Neo</td>
</tr>
<tr>
<td>Cores</td>
<td>23</td>
<td>21 Meso, 1 Neo/Eba</td>
</tr>
<tr>
<td>Retouched Flakes</td>
<td>11</td>
<td>2 Meso, 8 Neo/Eba</td>
</tr>
<tr>
<td>Retouched Blade</td>
<td>9</td>
<td>1 Meso, 1 Meso/Neo, 6 Neo, 1 Neo/Eba</td>
</tr>
<tr>
<td>Edge-Trimmed Flakes</td>
<td>3</td>
<td>1 poss Meso</td>
</tr>
<tr>
<td>Edge-Trimmed Blades</td>
<td>5</td>
<td>4 poss Meso</td>
</tr>
<tr>
<td>Utilised Flakes</td>
<td>13</td>
<td>11 Neo/Eba</td>
</tr>
<tr>
<td>Utilised Blades</td>
<td>17</td>
<td>5 Meso/Neo, 10 Neo</td>
</tr>
<tr>
<td>Scrapers</td>
<td>14</td>
<td>2 Meso, 3 Meso/Neo, 3 Neo, 4 Neo/Eba</td>
</tr>
<tr>
<td>Serrated Blade</td>
<td>1</td>
<td>Neo</td>
</tr>
<tr>
<td>Leaf Arrowhead</td>
<td>1</td>
<td>Early Neo</td>
</tr>
<tr>
<td>Chisel Arrowhead</td>
<td>1</td>
<td>Late Neo</td>
</tr>
<tr>
<td>Barbed and Tanged</td>
<td>1</td>
<td>Eba</td>
</tr>
<tr>
<td>Spear Point</td>
<td>1</td>
<td>Neo</td>
</tr>
</tbody>
</table>

**Table 2 Summary of finds from Area 1**

4.6 The small fragment of early prehistoric pottery (find no. 1035) is most similar to the Grimston Ware series pottery that has been found at a number of sites across the gravel terraces of the basin. However, being such a small piece this attribution is not definite, although on the basis of its fabric, colour and lack of decoration it can certainly be considered to be Neolithic-early Bronze Age in date. As pottery does not survive long in the ploughsoil it is evident that this fragment was brought to the surface by the latest ploughing episode on the field. This suggests that the plough had clipped a buried archaeological feature, dislodging the pottery and bringing it to the surface as the soil was turned.
4.7 The two fragments of post-medieval pottery were both found at the very north-west end of the site (find no's 1115 and 1125). As there was such a small quantity of this ceramic from the field it is unlikely that it is representative of settlement activity, but rather could be associated with manuring or discard of waste.

Surface Cache
4.8 A cache of 10 large blades and flakes interleaved with each other were discovered lying on the field surface in a patch of freshly ploughed up orange gravel (Fig. 5). It occurred at the north end of Area 1 as part of the north-west cluster of Neolithic-early Bronze Age flints. The presence of these pristine pieces on the surface suggested that a sub-surface feature had been truncated by the plough and the flints from its disturbed fill redeposited on the surface. All the pieces are of nodular flint that has evidently been imported to the area, and all are typical of Neolithic or early Bronze Age manufacturing traditions. On examination most of the blades and flakes showed evidence of retouch and utilisation indicating their use as tools before they were discarded.

Fig. 5 View of the blade cache in Area 1 lying in freshly ploughed up orange gravel
Fig. 4 Distribution of findspots in Area's 1 and 2
Fig. 4 Distribution of findspots in Area's 1 and 2 with artefact clusters highlighted
**Test Pit**

4.9 On the advice of the county archaeology section a 1m by 1m test-pit was excavated around the flint cache and the entire contents of the pit passed through a 0.5mm sieve. An additional 48 large flint pieces were found in a tight ‘cone’ immediately below the cache, again all in pristine condition. They included an end scraper, a large cortical side scraper together with a spear point and other retouched tool forms that are Neolithic-early Bronze Age in date. Including the flints from the surface cache (making a total of 58), 42 are diagnostic of the Neolithic-early Bronze Age. On cleaning the base of the pit an interface between differing natural geology was identified with orange gravel on the south side of the pit and buff coloured sand on the north side (Figs. 6 and 7). In the north-west corner of the pit part an archaeological feature was identified that comprised a cut feature with a different coloured and textured fill than the surrounding natural substratum. The fill of the archaeological feature comprised a brown silty sand with charcoal flecks. It is thought that the cache of flints were brought up to the surface from this truncated feature.

![Fig. 6 Test pit looking south with natural orange gravel at the rear, buff coloured sand in the centre with the grey feature fill with charcoal flecks in the bottom right of the pit (scale = 0.5m)](image)

4.10 The presence of the archaeological feature in the base of the test pit demonstrates the presence of buried archaeology at the north end of the Lanton site. With its associated flints it can be reasonably attributed to the Neolithic-early Bronze Age, and as such, is likely to be contemporary with the ceremonial henge complexes at Akeld Steads to the east and Ewart Park to the north.
**Fig. 7 Plan of test pit**

- Brown silty sand
- Charcoal flecks
- Archaeological feature
- Yellow fluvio-glacial sandy silt
- Orange ferruginous gravel

Scale: 1:10
Area 2

4.11 Area 2 is located on the alluvial flood plain at a lower elevation than Area 1 being at 38-40m OD. The area walked extended over 4.9ha and produced a total of 12 lithics that included five flakes, three cores, two retouched flakes, one blade and one utilised flake (see Figs 3 and 4 above and Table 3 below). A broken whetstone made from igneous rock was also recovered. This gives a lithic density of 2.4 per hectare at 100% coverage which is considerably lower than for Area 1. However, it compares well with the average density on alluvial surfaces for the area (see Table 1) which is 0.3 per ha. The low count is, no doubt, partly a result of this low lying ground being an area that has accumulated a depth of alluvial deposits throughout the Holocene resulting in the masking of any earlier archaeology by a successive build up of fine-grained sediments resulting from overbank flow. Any archaeological remains that may survive in this area are likely to be buried at a depth of at least 0.5 – 1.0m if not considerably more. The 12 lithic finds are considered most likely to have been brought on to the surface of this area as a result of the downslope movement of artefacts from the surrounding higher slopes. Alternatively they may have been deposited by floodwaters that have brought eroded archaeological material from further upstream and redeposited it in this localised floodplain setting. However, the former is considered most likely as the lithics showed no evidence of having been rounded or rolled by river action and there is clear evidence for stone-age activity on the terrace above in Area 1 (see above).

<table>
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<tr>
<td>Flakes</td>
<td>5</td>
<td>1 poss Eba</td>
</tr>
<tr>
<td>Blade</td>
<td>1</td>
<td>1 prob Meso</td>
</tr>
<tr>
<td>Cores</td>
<td>3</td>
<td>3 Meso</td>
</tr>
<tr>
<td>Retouched Flakes</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Utilised Flake</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Whetstone</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Table 3 Summary of lithic finds from Area 2*
Fig. 8  Selected lithic finds from Area 1
5. **GROUND INSPECTION**

5.1 An inspection of the ground surface in Area 1 was undertaken to identify whether any surface expression of archaeological features could be noted or whether any potential palaeoenvironmental sediments could be located. No archaeological features were able to be discerned from the surface inspection. However, a small area of organic sediments were noted in the north-east sector of the site and, although this is probably the remains of a shallow in-filled ice-wastage feature, it could form an organic residue sequence that could potentially contain information about the past environment in the area.
6. DISCUSSION

6.1 Area 1 contains Mesolithic stone tools distributed across the site with a possible focus in the northern area. These finds are suggestive of transient stays by hunter-gatherer groups who may have established encampments on this free-draining terrace. It is possible that some Mesolithic archaeological features may lie buried on this site and the northern area should be targeted as the most likely area. Some Mesolithic activity is also indicated in the central southern area of the site.

6.2 A clear concentration of Neolithic and early Bronze Age stone tools is located in the northern part of Area 1. This includes a wide range of tool types ranging from fancy arrowheads to typical processing tools such as scrapers, serrated and retouched blades, knives and other edge-trimmed tools. Such a range of tools is consistent with the type of material found on settlement sites of this period elsewhere in the county.

6.3 The presence of the pottery fragment and an archaeological feature in the test pit demonstrate that buried archaeological features survive in the northern sector of the site. Taking into account the type of flint tools that are present here this suggests that there is likely to be a Neolithic-early Bronze Age settlement area below a swathe of ground in the northern sector of the site. Given that no features can be discerned on aerial photographs it is likely that the buried features are relatively small and not monumental in size like henges. Neolithic settlements are frequently characterised by spreads of pits that contain domestic refuse, although some of this material may have been discarded as part of a ritualised act. Therefore, it is considered most likely that there is an extensive spread of Neolithic-early Bronze Age pit features at the north end of the Lanton site probably not dissimilar to the remains previously recorded at Woodbridge.

6.4 Neolithic settlements contemporary with henge monument complexes are rare finds and the sites at Woodbridge, and perhaps Lanton, provide significant potential to understand activities and the nature of settlement and occupation around henge sites. Excavation of Neolithic pits at the Coupland, Bolam (Waddington 1999; Waddington and Davies 2002), and nearby Thirlings site (Miket 1987), revealed clusters of pits cut into the underlying sand and/or gravel. They typically contained pottery, flint tools and waste, charred debris including charcoal, hazelnut shells and cereal grains and occasionally small fragments of burnt bone. Organic material that was not burnt did not survive. A broken polished stone axe from the Lake District was also found in one such pit at the Bolam and at Thirlings a quernstone and fruit pips were also discovered (Miket 1987). One of the radiocarbon dated pits at Coupland has provided the earliest direct evidence for cereal cultivation in the north-east. Therefore, these pits are usually artefact rich and can be very informative about past life at these sites. Pit features such as those anticipated at Lanton are relatively easily excavated compared to more complex monumental sites such as henges and ring ditches.
7. PUBLICITY, CONFIDENTIALITY AND COPYRIGHT

7.1 Any Publicity will be handled by the client.


8. STATEMENT OF INDEMNITY

8.1 All statements and opinions contained within this report arising from the works undertaken are offered in good faith and compiled according to professional standards. No responsibility can be accepted by the author/s of the report for any errors of fact or opinion resulting from data supplied by any third party, or for loss or other consequence arising from decisions or actions made upon the basis of facts or opinions expressed in any such report(s), howsoever such facts and opinions may have been derived.
9. REFERENCES


APPENDIX 1

FINDS DATABASE