Gloucestershire
COUNTY COUNCIL

THE ARCHAEOLOGICAL LANDSCAPE

OF

FRAMPTON ON SEVERN

GLOUCESTERSHIRE

UPDATED PROJECT DESIGN

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Aggregate Levy Sustainability Fund Project No. 4625 ASS

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REGISTERED • ORGANISATION • IFA

Contents

List of figures

Summary

This Updated Project Design is a proposal for further post-excavation and research intended to bring the archive material for a number of sites excavated in advance of gravel extraction in the environs of Frampton on Severn to publication. The results of a series of post-excavation assessments are detailed in this document and drawn together to present a narrative of the archaeological investigations in the area undertaken since the early part of the 20th century. The results of one key excavation, undertaken by R.J.C Atkinson at a sand quarry at Netherhills, are presented here for the first time, the site having remained unpublished since 1948.

Recommendations for further work, in particular a programme of radiocarbon dating, is outlined and a phased timetable and costing is presented.

1 Introduction

This Updated Project Design is a proposal for further post-excavation and research intended to bring the archive material for a number of sites excavated in advance of gravel extraction in the environs of Frampton on Severn, Gloucestershire to publication.

Stage I of the project examined the museum and excavation archives for four principal sites in the environs of Frampton on Severn where archaeological material of Prehistoric, Anglo Saxon and Roman date was recovered in advance of gravel extraction. Stage II of the project examined the aerial photographs from the area and transcribed archaeological features present onto digital base maps to NMP standards. This stage of work was not complete when this report was submitted, but a summary of NMP findings is given as Appendix 10.

The results of the assessment of the archive material from these sites, and the analysis of the aerial photographs, is of sufficient significance to justify full publication. A radiocarbon dating programme would aid the interpretation of the material from the sites analysed.

The final stage of the project will be the production of a report and research agenda for the area, published in an archaeological journal of suitable standing, and wider dissemination of the project results through lectures, newsletters and the Archaeology Service website.

Acknowledgements

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Sue Byrne and David Rice (Gloucester City Museum), Rob Kruszynski (Natural History Museum), David Mullin (Museum in the Park, Stroud) all provided access to the archives, as well as help and advice with the material. Simon Chaplin at the Museums of the Royal College of Surgeons of England helped locate the material from Perryway. Alan Lane, Susan Virgo, Alistair Whittle and the late John Evans at Cardiff University all helped to track down the Atkinson Netherhills archive, which was eventually traced via Rick Peterson (University of Central Lancashire) to Matt Leivers (Wessex Archaeology) and transported to Gloucestershire by Abigail Bryant.

Richard Bradley (University of Reading) helped with references to bell barrows with Beaker material and Frances Healy (Cardiff University) supplied useful information about Richard Atkinson's career.

Finally, thanks to all the specialists who examined the material in the various museums and also to Annette Hancocks (Cotswold Archaeology) for organising a small finds specialist at short notice.

2 Reasons for and circumstances of the project

2.1 Aggregates have been extracted from the area around Frampton on Severn, Gloucestershire, since at least the 17th century (Elrington & Herbert 1972, 139). The area is rich in archaeological sites, with material dating from the prehistoric, Roman and medieval periods having been recovered during the process of aggregate extraction between Frampton on Severn and Eastington. A series of crop mark sites are also visible on aerial photographs in this area. Excavation took place at several sites during the process of gravel extraction, but all occurred prior to Planning Policy Guidance Note 16 (PPG 16) and none of the material recovered from this work has been adequately published. The wider context and significance of this material is also poorly understood.

2.2 The Gloucestershire County Council Archaeology Service's project *The Aggregate Landscape of Gloucestershire: Predicting the Archaeological Resource* (ASLF Project Number 3346) identified unpublished archive material from R.J.C Atkinson's excavations at Netherhills, Frampton on Severn, held at the School of History and Archaeology, Cardiff University. This archive includes important Early Bronze Age Beaker material, as well as that from Roman and later periods. The site was destroyed by aggregate extraction in 1948 and fits within a wider landscape of aggregate exploitation, including sites which have produced archaeological material at Perryway (Baddeley 1928), Eastington Gravel Pit (Gardiner 1932) and Park Corner Farm/Townfield Farm (Garrod 1968). None of the latter has been adequately published, but material from these excavations is held by Gloucester and Stroud Museums. A series of cropmarks (including those of the site excavated by Atkinson) have been noted from aerial photographs in this area, but have not been analysed in detail.

2.3 The Severn Vale was identified in *The Aggregate Landscape of Gloucestershire* as an area which is in need of further examination, including the synthesis of previous work and further study of the physical processes which might affect the visibility of the archaeological resource. The Severn was also an area which was identified as having a lower than average density of prehistoric sites and a higher than average density of sites of unknown date (see http://www.gloucestershire.gov.uk/index.cfm?articleid=9770 for a summary of the results of this project).

2.4 The area around Frampton on Severn contains one of the larger reserves of sand and gravel in Gloucestershire outside the Upper Thames Valley. Growing demand for aggregates in the south west region may pose threats to these deposits, and their associated archaeology, in the future, adding to the need for understanding of this particular landscape. Publishing the Atkinson excavations, the re-evaluation of the Perrryway, Eastington Gravel Pit and Park Corner Farm sites and placing these in their wider landscape context will make accessible information about a poorly understood archaeological landscape that is likely to be subject of planning applications in the near future. As such, future management decisions will be better informed and more effective.

2.5 Stages I and II of *The Archaeological Landscape of Frampton on Severn* project, the aims and objectives of which are outlined below, were funded by the Aggregates Levy Sustainability Fund via English Heritage. This Updated Project Design represents the final deliverable of the initial phases of that project and presents the results of the first two stages of work, its significance and potential and outlines further work which can be undertaken on the material analysed.

3 Aims and objectives of Stages I and II of The Archaeological Landscape of Frampton on Severn

The following is taken from the Project Design for *The Archaeological Landscape of Frampton on Severn* (Mullin 2005).

Aim 1 To inform national and local curators, archaeologists, the Minerals Planning Authority, the aggregate industry and the general public on the potential importance of the archaeological deposits located on the gravel deposits in the environs of Frampton on Severn.

Aim 2 To examine and interpret archive material for archaeological sites excavated in advance of aggregate extraction in the Frampton on Severn area in order to better understand its chronology and significance.

Aim 3 To examine the landscape context of the finds made in advance of aggregate extraction by means of aerial photographic and environmental archaeological survey work.

Aim 4 To enable future management strategies to be better informed about the significance of the archaeological deposits in the Frampton on Severn area.

Aim 5 To disseminate the results of the study to relevant SMR/HERs, to members of the public, the archaeological profession, the minerals industry and other interested parties.

Objective 1 *Examination and interpretation of archive material for the site at Netherhills, excavated by Atkinson in 1948*

Objective 2 *Re-interpretation of material recovered from other excavations at aggregate sites in the environs of Frampton on Severn held by Gloucester and Stroud Museums.*

Objective 3 *Identification of material suitable for radiocarbon dating within the archive material identified above.*

Objective 4 *Analysis and transcription of aerial photographs from the study area.*

Objective 5 *Analysis and transcription of LiDAR data from the study area.*

Objective 6 *Completion of an updated Project Design for Stages III and IV of this study.*

4 Results

4.1 Netherhills

4.1.1 This site was excavated by R.J.C Atkinson in September 1948, in advance of the expansion of quarrying at the Netherhills gravel pit, located close to the junction of Perryway (the B4071) and the Gloucester Road (A38), to the east of the village of Frampton on Severn (figure 1). At least one ring ditch is visible in this area on aerial photographs (figure 3) in the Cambridge University Collection, taken in June 1948 (CUAP AN46-49, 16/06/1948) and the site is located within a field labelled "The Barrows" on the tithe map of 1815 (Gwatkin 1995).

4.1.2 There is no primary site archive for the site, beyond two reels of monochrome print film (Appendix 7), and the site was not published beyond a brief note in the Proceedings of the Cotteswold Naturalists Field Club (Clifford 1948, 50). The site is listed by O'Neil & Grinsell (1960, 114), who record six possible Bronze Age barrows in the parish, five of which are at Netherhills. The full details from O'Neil & Grinsell are given in full below:

> **Site 1**: 30 paces in diameter. 12-20 ft wide ring ditch with central pit 2½ft in diameter, containing burnt clay daub with wattle marks, 3 fragments of burnt bones (not certainly human), an ox tooth, several burnt unworked flint flakes, and a few sherds of probably at least 2 Beakers of type Bi. Near the pit was an oblong depression which had been dug into the old ground surface and re-filled. No primary interment was found. A secondary crouched skeleton, without grave goods in ditch on N side.
>
> **Site 2**: 32 paces in diameter. 5-6ft wide ditch with causeways. There was no evidence for any but the slightest mound. The only internal features found were 3 post holes 6-8ins diameter. The central area could not be examined. Not certainly a barrow.
>
> **Site 3**: 28 paces in diameter. Ring ditch: probably not a barrow, but of Roman date.
>
> **Site 4**: 25 paces in diameter. ring ditch with no finds.
>
> **Site 5**: 25 paces in diameter. ring ditch with no finds.

4.1.3 Although the Beakers from Site 1 are mentioned in Clarke's corpus of Beaker material from Britain and Ireland (Clarke 1970, corpus numbers 280 and 281), the material is described as fragmentary and as destroyed or lost. The primary reference used by both Clarke and the Gloucester Museum reference card for this material is the description given by O'Neil & Grinsell, outlined above, but it is unclear how Grinsell arrived at the identification of the Beakers as belonging to group Bi. The most complete account of the sites excavated by Atkinson at Frampton on Severn is that of Lewis Wilshire (1954), who presents the results of correspondence with Atkinson in his discussion of the history of *The Vale of Berkeley*.

4.1.4 Wilshire's (1954, 7-8) account suggests that at Site 1 a low mound, 70ft (c.21.30m) in diameter, survived and was surrounded by a ditch 12ft (c.3.50m) wide and 5ft (c.1.50m) deep. A berm, 20ft (c.6.00m) wide, separated the mound and ditch, suggesting that the barrow was of bell barrow type. The ditch was flat bottomed and a crouched skeleton of an adult male was recovered from near the base. In the centre of the site was a small pit, 2ft (c.0.50m) in diameter, which was filled with

"tightly rammed" fragments of a baked-clay structure, described as possibly a small oven or potters kiln. Although there was no central burial, sherds of *at least five* Beakers were recovered from this pit. Wilshire reports Atkinson's comments that the barrow was unusual in having no central burial, and also that the bell barrow is uncommon in Gloucestershire. Indeed, O'Neil & Grinsell (1960, 16-17) list only one other example from the county, that at St Oswald's Ring, Marshfield (now in South Gloucestershire), ironically also destroyed in 1947 (Russett 1985, 17-20). This is, however, now thought not to have been of bell form, but a saucer or pond barrow (Darvill & Grinsell 1989, 43).

4.1.5 Another site (probably Site 2) is described by Wilshire as consisting of a causewayed ditch, dug in a number of discontinuous sections, 70 feet (c.21.00m) in diameter. Two deep, steep sided pits were excavated from the inner edge of this ditch: both appeared to have been rapidly backfilled and contained fragments of Roman pottery. Two other sites are described as having been so much damaged by mechanical excavators that Atkinson could find no dating evidence but suggested from their size and shape that they were the remains of round barrows.

4.1.6 On Atkinson's death in 1994, the site archive passed to Cardiff University (where Atkinson was Professor of Archaeology) and was subsequently catalogued and ordered by Matt Livers (Southampton University and subsequently Wessex Archaeology). The archive (Appendix 7) consists of 33 small finds boxes, one large sheet of section drawings and two processed reels of monochrome print film. The crouched inhumation from Site 1 is held by Gloucester Museum under accession number Temp 735.

4.1.7 A record card in Gloucester Museum (GCM 1117), dated February 1958, mentions a ring ditch in the area excavated by Atkinson (from the description this appears to have been Site 2) and also comments that in a field on the opposite side of the road was a hollow in the ground, which produced a flint scraper and two flint flakes.

4.2 Excavation methodology and results

4.2.1 The excavations at Frampton on Severn, who referred to the site as "Whitminster", were carried out by Richard Atkinson and his team on behalf of the Ministry of Works. At the time Atkinson was Assistant Keeper of Archaeology at the Ashmolean Museum, Oxford, had previously excavated similar cropmark sites in the Oxford region and was involved with excavations at Dorchester on Thames (Atkinson 1942, 1947, Whittle *et al* 1992). How Atkinson became involved in the Netherhills sites remains unclear. The sites were presumably excavated under "salvage" conditions but no record survives of the length of time spent on site, the size of the excavation team or the excavation methodology. An analysis of the surviving site drawings, photographs and finds labels was used to attempt a reconstruction of the excavation and its results and this is presented below.

4.2.2 Site 1 (figure 3) was the first to be excavated, between the 18th and 24th September 1948. Although there are no overall photographs of Site 1 in the archive, it appears in the background of photographs of sites 2 and 3 (figure 4) and it is possible to reconstruct the excavation strategy. A long (north west - south east) trench was excavated parallel with Perryway, giving a section across the entire ring ditch. From the site photographs it appears that the legs of a skeleton were picked up in the northern section of this trench, which was subsequently extended north to catch the rest of the body. A box grid was positioned to the north of the east-west trench, in the apparent centre of the surviving barrow mound, in an attempt to locate

any central burial. Two small trenches were opened across the area of the ring ditch to the north and north east of the box grid.

4.2.3 The finds boxes in the archive are labelled with the "Cutting" from which the finds were recovered: A, B, C and D and with a small find (SF) number (see Appendix 7). SF numbers 1, 6, 7, 9, 13, 14, 21-24, 29, 30, 33, 36, 39, 41, 46, 48 and 50-68 are not present in the archive and were either not used or, more likely, are missing. A "cremation pit" occurred in the "wall" between cuttings B and C, so presumably each letter corresponds to an individual Wheeler box. Finds labelled as from the "east" cutting are presumably from the long E/W trench.

4.2.4 Sites 2 and 3 (figure 3) had already been uncovered in the edge of the quarry, although less than half of each feature was revealed in plan. The sites were treated as open area excavations as a result, and the site photographs suggest much of the fill of the ring ditches was excavated and internal features half sectioned. No finds were recovered from Site 2 (figure 5), but finds were retrieved from at least two pits and the ditch of Site 3 (figures 6 and 7). Excavations were focussed on the ditches and their interiors with no attention paid to picking up external features or the relationships between the ring ditches.

4.2.5 Only two section drawings survive for Sites 4 and 5 (figure 10), suggesting that small slots were excavated across both of these features. In common with the other sites, no plans are present in the archive and the exact location of these sites is unclear.

4.2.6 Section drawings in the archive consist of a roll of individual drawings on tracing paper, pasted onto a thick paper backing sheet. These were conserved by Christine Palmer of Gloucestershire County Records Office, then unrolled, scanned, imported into Adobe Illustrator and reduced to 25% of their original size. The drawings were originally drafted at 1 foot to the inch (all site measurements were in feet and inches). All site drawings are sections, no plans surviving in the archive.

4.2.7 Two rolls of monochrome print film from the archive were processed by Matt Livers and consist of 57 photographs of Sites 1, 2 and 3 under excavation. No photographs are present of Sites 4 and 5. As well as showing the sites under excavation, the archive photographs include four photographs of what appear to be close-ups of a comb-impressed Beaker sherd (figure 15) and two "working shots" of the quarry under excavation (figure 14).

4.2.8 The drawings for Site 1 (figure 8) show a single long section c.43m long, presumably running E/W, but not labelled. There are a further two section drawings of the ditch, 4 and 5m long, and a 6m long section showing a cremation pit. A skeleton is recorded in a secondary context in the "NE Extension" suggesting that the drawn section is north facing, the skeleton having been recovered from the "gap" in the section. The location of this gap suggests that the skeleton was not recovered from the ring ditch, but from above and outside it. This is supported by the sherds of Roman greyware and Severn Valley Ware (Appendix 1) recovered from the "body level" (SF 3). Five photographs (one of which is reproduced as figure 12) are the only surviving record of this skeleton, now housed in Gloucester Museum (Accession Number Temp 735). Analysis of this material has revealed that the archive box contains more than one individual, with a male, a female and a child represented. Site archive photographs show only a single body and the archive has therefore received extraneous material from another site. Although it is impossible to be certain, it is a very strong possibility that the male skeleton in the archive is the one

recovered from Atkinson's excavations, based on the completeness and its similarity to the individual shown in the site photographs (see Appendix 6).

4.2.9 Although not labelled as such, the sections (figure 8) appear to show the barrow mound (labelled "grey soil" on the original drawings) lying below a "dark red soil" (presumably subsoil) and sealing an old ground surface. The edge of the barrow material is separated from the ditch by a berm c.5m wide although an unlabelled deposit lies over both the barrow mound and the old ground surface at the west end of the section. This material is difficult to interpret but may represent slumped barrow mound material. The total diameter of the central barrow mound is c.23m. The sections show the ditch as c.3.5m wide, with a primary gravel fill up to 0.75m deep. The secondary fill of each ditch is shown as the same "dark red soil" which overlies the barrow mound. The distance between the two ditches is c.38m.

4.2.10 Approximately 4m from the western edge of the barrow mound, cut into the old ground surface, a small depression filled with barrow mound material is shown on the section (figure 8). Although this seems not to have produced finds it may represent a stakehole, cut into the old ground surface before the construction of the barrow. The corresponding area c.4m from the eastern edge of the barrow is in an area of tree root disturbance and it is uncertain if the stakehole represents a pre-barrow feature such as a stake circle or if it is an isolated feature. A similar depression, filled with barrow mound material, is shown on the section showing the cremation pit, but the relationship between these two possible stakeholes is uncertain.

4.2.11 A feature recorded as a "cremation pit", c.1m in diameter, is shown as cutting into the old ground surface, but also appears to have been cut from halfway down from the top of the barrow mound (figure 8). A series of site photographs (figure 11), however, clearly show that the pit is cut *from the top of* the old ground surface and *sealed by* the barrow mound material, suggesting that the section drawing is incorrect. The archive photographs (figure 13) show this pit under excavation, which appears to have proceeded stratigraphically until a compact fill in the base of the pit was encountered. The excavation strategy appears to have changed at this point and the area around the fill removed, leaving an "island" of fill in an otherwise empty trench. None of this compact fill is present in the archive, although it was described as "tightly rammed" baked clay by Wilshire (1954).

4.2.12 The finds recovered from the cremation pit (SF 17, 19, 25, 26, 27, 28, 32, 34 and 35) include fragments of *bos* tooth (Appendix 6), charcoal, flint, pottery and cremated human bone. The human bone does not represent a complete individual and is the selected remains of an individual who had been efficiently cremated on a pyre (Appendix 6). Although the pit was said to contain at least two Beakers, only a small fragment of Beaker pottery (SF 5) is present in the site archive (Appendix 1), recovered from the old turf level sealed by the barrow mound, *not* from the central cremation pit. Although photographs in the archive (figure 15) show at least one Beaker sherd, the current location of this, and other Beaker material from the site, is unknown. The pit also contained worked flint, which appears to have been a selected assemblage, with waste material deposited in the lower level (SF 25) and a chip, core and scraper deposited in the upper level (SF 19). Only material from the upper level is heavily burnt, suggesting that it passed through the pyre in which the cremation took place (Appendix 5). Although the pit contained charcoal, this could not be identified to species. A "nut" from the lower level of the cremation pit (SF 28) is, in fact, a charred acorn (Liz Pearson, pers com.).

4.2.13 The sections for Sites 2 and 3 are drawn together (figure 9) and it is uncertain which sections relate to which site. The profiles of the ring ditches are, however, narrower and shallower than those from Site 1 and have less complex fills. The diameter of both ring ditches appear to have been similar to that of Site 1. Photographs in the archive show Site 2 (figure 5) as located to the north west of Site 1 and to the north of Site 3. Less than half of the ring ditch appears to have been stripped of topsoil and c.80% of the ditch fill excavated. The ditch appears to have had a causeway or entrance gap in its western sector but only features visible in the interior of the ring ditch are three ?postholes and a pit. This pit *might* correspond to one of the section drawings. No central burial is recorded from this site, and it is a possibility that the centre of the ring ditch was not excavated, being located outside the area of the quarry in the field to the east.

4.2.14 Site 3 was located immediately to the south of Site 2 and roughly half of the ring ditch appears to have been stripped of topsoil (figure 6). Approximately 50% of the ring ditch is shown as excavated on the archive photographs and two large pits are present in the southern quadrant of the interior (figure 7). Finds are present in the archive from “Pit A”, “Pit B” and “circular pit”, as well as from the ditch (see 4.2.15 below). The section drawing and photographs of the most northerly of these pits shows that it was cut through the ring ditch. The relationship between the southern pit and the ring ditch is uncertain.

4.2.15 A single crumb of undated pottery was recovered from the fill of Pit A at Site 3 (Appendix 1). Fragments of wood were recovered from this feature (SF 40), which may be identifiable to species (Liz Pearson, pers com.). Pit B contained sherds of Severn Valley Ware (SF 47) and a sherd of a late 1st to 2nd century rim ring necked flagon (SF 43). Three sherds of Bronze Age date (SF 42) were recovered from the gravel fill of pit B, but may have been residual within a probable Roman feature (Appendix 1). Charcoal and two sherds of South Gaulish samian ware of Dragondorff type 29, dating to the 1st century AD, were recovered from the circular pit (Appendix 1).

4.2.16 A single body sherd of Bronze Age pottery (SF 49) was recovered from the “outer ditch” of Site 3 (Appendix 1). The presence of Bronze Age pottery from the ring ditch and residual contexts, as well as the relationship between the northerly pit and the ring ditch, suggests that the site is indeed a Bronze Age ring ditch, with subsequent Roman activity. No contemporary burial was recovered from the central area of the ring ditch, but it is unclear if the centre of the site was revealed in plan and may have survived *in situ* below the field boundary to the east of the quarry.

4.2.17 The section drawing for Site 4 (figure 10) shows a narrow V-shaped ditch, that for Site 5 a deeper, U-profiled ditch which has an asymmetric fill, suggesting it silted from one side. No finds were recovered from either of these features and it is unclear whether they were indeed ring ditches, although O’Neil and Grinsell (1960, 114) record them as such. Due to the lack of a site plan, the location of Sites 4 and 5, and their relationship to other excavated sites at Netherhills, is not certain, but both sites appear on a single photograph taken by Atkinson (figure 14) and Site 5 is visible on an aerial photograph held by the Cambridge University Collection of Air Photos. The position of Site 5 is shown on figure 20.

4.3 The local context

The excavations at Netherhills were undertaken in response to the threat of gravel extraction to recently discovered sites. These sites were, however, located within a reasonably well known archaeological landscape, which had been explored by earlier archaeologists. Pioneering work was carried out by St Clair Baddeley in advance of gravel extraction at Perryway, to the east of Frampton Court, in the 1920s and further work was carried out by Gardiner at Eastington Gravel Pit in the 1930s. Archaeological monitoring was undertaken during the construction of the M5 in the 1960s and small scale archaeological work has been carried out in the Frampton on Severn area over the last 30 years. This work provides useful context for the material excavated at Netherhills and is detailed below.

4.3.1 Perryway

4.3.1.1 Material recovered from the gravel workings at Perryway, to the east of Frampton Court, was published by St Clair Baddeley in 1928, who believed he had discovered the location of a post-Roman settlement (figure 16). Extraction began at the site in 1907 and subsequently expanded between 1926 and 1928, with the site being flooded to form a lake when extraction ceased.

4.3.1.2 Three circular areas, measuring between 20 and 40 metres in diameter, were recorded within the extraction area and photographs of one of these appears in the published report (St Clair Baddeley 1928). The circular features are described as lying below 2 feet (c.0.60m) of humus and cut into the gravel to a depth of five feet (c.1.50m). No finds are recorded from the fills or interior of these features.

4.3.1.3 A series of burials were recovered from close to these circular areas, a total of thirty individuals, both male and female, lying with their feet to the east, being represented. Some of these burials were accompanied by iron objects, including a spearhead, but no pottery, beads or coins were recovered. Subsequent expansion of the gravel workings in 1926 uncovered “many bones”, but no pottery or coins. Some of the bones were recovered from graves and part of an iron sword was also retrieved. In 1927, a further three adult skeletons were uncovered and a pair of Roman or Anglo Saxon iron shears were found at this time. The bone recovered from Perryway was analysed by Sir Arthur Keith who described ox, pig, sheep, goat, horse and dog, as well as human. Keith found it impossible to date the bones using the methods of the day: typological analysis, but described them as “curious and puzzling” and possibly of various dates (quoted in St Clair Baddeley 1928, 133).

4.3.1.4 In addition to the burials and circular features noted at Perryway were two parallel lines of six post holes, 21ft (c.6.50m) apart, forming what was described as a structure, 26ft (c.7.90m) in length. This was interpreted as an oblong timber house, associated with a series of pits, interpreted as wells. A human jaw and some small bones were recovered from one of these.

4.3.1.5 A linear feature was also noted in 1927, running NNE/SSW and described as 9 feet wide (2.70m) by 4 to 5 feet (c.1.50m) deep. No finds are recorded from this feature, which ran for at least 30 yards (c.27.50m).

4.3.1.6 The whole site at Perryway was interpreted as a “tribal settlement of some permanence…[of]…non-Christian folk”: the settlement of a group of “pioneer Saxon invaders”. St Clair Baddeley raised the possibility that the site may continue to the south and west and material was indeed recovered from this area by Mr Brian Frith in 1953 and donated to Gloucester Museum. Part of the area was also excavated by

Gloucester and District Archaeological Research Group in 1968. Five pits and a stone footing were recorded during this work, but the site has not been published beyond a note in the Group's newsletter GLEVENSIS (Garrod 1968). One of the excavated pits was modern; the others were described as being pear-shaped and c.3.5ft (c.1m) deep, containing rubbish of third to fourth century AD date, including sherds of Glevum and Samian ware.

4.3.1.7 The material recovered from these sites is housed in several collections, with Gloucester Museum holding the material recovered by Brian Frith and a selection of material recovered by St Clair Baddeley. The majority of the human remains recovered from Perryway were originally held by the Royal College of Surgeons but were transferred to the Natural History Museum, where they are now located. Stroud Museum also houses material from "Frampton Gravel Pit" which corresponds to the Perryway site.

4.3.2 Analysis of museum collections for Perryway

4.3.2.1 The human bone held by the Natural History Museum was analysed by Christie Cox and the report is reproduced as Appendix 6. A total of nine accessions (PA SK261 to PA SK269) were examined, with a total of 10 individuals represented. A range of ages from old child (5-8 years old) to old adult (50+ years old) are present, with women, men and children all represented. The dental health of this population was poor, with calculus, abscesses, caries and periodontal disease all present. One individual (PA SK263) had healed trauma to the arm and head and another (PA SK267) displayed slight criba orbitalia: a consequence of iron deficiency. None of the osteological material was dated, but the card index held by the Natural History Museum describes PA SK265 (an adult female) as being recovered from a grave containing a fragment of 1st century pottery. PA SK268 is also described as from a grave containing three fragments of a "small Romano-British cup".

4.3.2.2 The pottery recovered from Perryway in Gloucester Museum was analysed by Jane Timby (Appendix 1). A total of 111 sherds were examined, all of which, with the exception of three medieval pieces, were of Roman date. The majority of the material consisted of Severn Valley Ware, although Black Burnished Ware, micaceous greyware and Oxfordshire ware were also present. Four sherds of Malvernian ware were also identified. The assemblage spans the 1st to 4th centuries AD and is from the same general location as the skeletons described above, but no detailed contextual information recording the relationships between features and pottery finds survives in the archives.

4.3.3 Eastington Gravel Pit

4.3.3.1 Eastington Gravel pit lies to the east of the A38, opposite the junction with Perryway (the B4071: figures 1,2 and 16). A flint tool from this area was reported by Gardiner (1932) and identified by Mr Reginald Smith of the British Museum as being Late Palaeolithic, similar to other finds from Cheddar and Derbyshire. This item is listed in the catalogue of Earlier Upper Palaeolithic material from Britain, complied by C.J Bonsall (Wymer & Bonsall 1977, 420), where it was considered to represent part of a possible Earlier Upper Palaeolithic open air site.

4.3.3.2 A burial urn was subsequently recovered from the site by Miss Hopkins of Leonard Stanley and donated to Stroud Museum. Gardiner showed these finds to Elsie Clifford, who subsequently brought Reginald Smith to look at the gravel pit. Gardiner divided the site into four fields, but found archaeological material only in three of these.

4.3.3.3 In Field 1 (figure 16), the top 1ft (c.0.30m) of alluvium had been removed, revealing a series of features. These included a circular pit 6ft (1.80m) across, at bottom of which was a layer of brown clay. Resting on this was a black layer, on which were fragments of a large two-handled pot. This was subsequently identified by C.F.C Hawkes of British Museum as "La Tene II-III" of the Early Iron Age. Fragments of two other grey coarse ware pots, decorated with incised lines, were found in gravel next to the pit about 4½ feet (c.1.40m) below the surface and were associated with a baby's skeleton. Further pottery finds included "pre-Roman fine pottery", similar to material from Hengistbury Head, dating to 50BC to 50AD. Black Burnished Ware and Samian Ware were also recovered and Romano-British pottery was also found in Field 2.

4.3.3.4 Bone implements were recovered from the site in 1927, including a bone pin with a carved end. Two of these pins and a flint knife were found in a pit containing black pottery. An ivory handled knife; a long piece of polished bone, pointed at both ends and two rectangular pieces of bone, polished on the outside face and decorated with circle and dot ornament, fixed together with iron pins were also recovered from the site. The bone objects were discussed by Ireland (1984) who considered the pointed implement to be a pin-beater and the square, ring and dot ornamented pieces to be strengthening ribs from a composite bone comb. Both of these artefacts and an annular baked clay loom weight from the site were considered to be of Anglo Saxon date.

4.3.3.5 Gardiner recorded a series of sinuous "trenches" in Fields 1 and 3 (figure 16). These consisted of sections of three parallel ditches, 3ft wide (c.0.90m) and 1ft 10ins (c.0.55m) deep, with a fourth, larger ditch, 2ft 6ins (c.0.75m) deep and 4ft (c.1.20m) wide to the east. These ran for at least 10 yards (9m) and were filled by alluvium. Similar trenches were noted in Field 3, and the whole network was interpreted as defensive, possibly representing palisade slots for a bridgehead of uncertain date, although they were "said to" cut the pit containing Early Iron Age pottery, mentioned above. Russett (1991, 14) has suggested that these may, in fact, represent the remains of Medieval gravel extraction.

4.3.3.6 Finally, a series of skeletons were found in the gravel workings at Eastington, described by the foreman of the quarry company as numbering between 30 and 40 in Field 1, with "about a dozen more" in Field 3. All were buried separately, apart from in one part of Field 1 where eight were found together. Towards the beginning of December 1929 another skeleton was found and the skull donated to Stroud Museum. Another skull, broken by diggers, was recovered later and is illustrated in the published report. Subsequently a complete, extended skeleton was excavated but no finds were recovered with it. This was also given to Stroud Museum. Sir Arthur Keith identified the skeleton as a woman, aged about 30, and the skull as belonging to an older man.

4.3.3.7 The gravel workings at Eastington expanded to the south, into the area of Field 4 (figure 16), in 1934 and Gardiner (1934) subsequently reported finds of a Woolly Rhino tooth, a horse tooth, a Neolithic arrowhead and a bronze brooch. The brooch was identified by G.C Dunning as Roman, dating to c.50AD. All of these finds were donated to Stroud Museum.

4.3.4 Analysis of museum collections for Eastington Gravel Pit

4.3.4.1 A single collection of human bone from Eastington is held by Stroud Museum (Accession Number 50.257), representing the fragmentary remains of a young adult

female (Appendix 6). No contextual information is available for this material, but this probably represents the individual identified by Keith (see 4.3.3.6).

4.3.4.2 A total of 178 pottery sherds, ranging in date from the Iron Age to the Post Medieval period, held by Stroud Museum were examined by Jane Timby (Appendix 1). The earliest material from Eastington is Iron Age in date and includes Malvernian tempered jars and grog tempered ware. An Iron Age loom weight was also present in the collections. Roman material included Severn Valley Ware, but also early Roman greywares and central Gaulish Samian ware. A small amount of medieval and post medieval pottery was also present.

4.3.4.3 Small finds held in Stroud Museum were examined by Ed McSloy (Appendix 2) and included two Roman brooches, a Roman knife and a copper alloy hand, probably from a statue. A single Anglo Saxon spearhead (Swanton H2 form), a clay loom weight and bone comb were the only Anglo Saxon items identified in the collections, the latter having previously been discussed by Ireland (1984). There is no detailed information regarding from precisely where in the gravel workings at Eastington any of this material was recovered.

4.3.4.4 Stroud Museum also holds worked flint from the Eastington area, although the only material certainly recovered from the gravel workings are the two Palaeolithic implements (2012 and 3079), previously reported and illustrated by Gardiner (1934) and Burkitt (1938) and a Mesolithic backed bladelet (1946.26/7; see Appendix 3).

4.3.5 Other Sites

4.3.5.1 Eleven sherds of 5th to 6th century grass tempered pottery were found in 1969 during investigations on the line of the M5 motorway, 500m to the south east of Eastington Gravel Pit (Fowler & Walthew 1971, 61: Eastington Site 1). This material was located close to a scatter of Romano-British pottery and is held by Stroud Museum but could not be located for this study.

4.3.5.2 Romano-British pottery was also recovered during the construction of a pipeline between Tewkesbury and Frampton on Severn by the Ministry of Defence in 1991 (Young 1993). The section of this pipeline within the study area ran parallel with the A38 to the west of Fromebridge and to the east of Nastfield Farm, c.500m north west of Netherhills (figure 2). This pottery is held by Gloucestershire County Council Archaeology Service and was examined by Jane Timby (Appendix 1). A total of 44 sherds were recovered from the pipeline, the majority of which were of Roman date. Severn Valley ware dominates the Roman material, spanning a date range of the 1st to 4th centuries AD. A single sherd of possible late Saxon/Early Medieval date was recovered, as well as Medieval cooking wares.

4.3.5.3 Two sherds (Glos 12460) from the pipeline were identified as potentially of Bronze Age date and were recovered from the same location as a scatter of worked flint, c.500m to the north west of the excavation site at Netherhills, which included a Bronze Age thumbnail scraper (Glos 12480). Other flint recovered from the pipeline was of mixed date, but contained a significant Mesolithic element (Appendix 4).

4.3.5.4 A Roman site at Whitminster, previously interpreted as a villa (Fowler & Walthew 1971, 57-60, Chouls 1993), is located c.3.5km to the east of Frampton village and 1km east of Netherhills (figure 2). The ascription of villa status to this site is based on the presence of tesserae, coins, brooches, pits and building remains of 2nd and 3rd century AD dates. The status of this site is, however, far from clear.

Roman coins (Claudius I, Philip I, Tetricus I and Tetricus II) and pottery have also been recorded from Frampton village (GSMR 7006 and 7007).

4.3.5.5 Collections of material, including worked flint and pottery and described as being from Eastington and from Frampton on Severn, are held by Gloucester and Stroud Museums. The exact locations from which this material was recovered is uncertain, but material is recorded from Middlehall Farm, Eastington; Cress Green, Eastington and Hock Cliff, Frethern (Appendix 3). Lithic material has also been recovered from the Arlingham/Frethern area (Curtis 1998) and is held by Gloucester Museum (Accession Number 52-1995 and recorded as GSMR 18300 to 18304, 20405 and 20422).

4.3.6 NMP analysis of aerial photographs

4.3.6.1 The analysis of the aerial photographs for OS quarter sheet SO70NE was not complete at the time of the submission of this Updated Project Design, due to CUCAP supplying incorrect photographs to the NMP team. Appendix 10 details the initial stages of analysis *but should not be seen in any way as representing the final result of the NMP analysis of this area.* Although the results of the NMP analysis are not available the results will not affect the recommendations of this Updated Project Design.

4.3.6.2 The NMP recorded the ring ditch to the east of Townfield Farm and the ring ditch complex at Netherhills from oblique photographs supplied by the Cambridge University Collection of Air Photos (figure 19). The NMP was successful in locating one of the ring ditches excavated by Atkinson for which no other location information exists. This lies to the north west of Netherhills Sites 1 and 2 (figure 20) and, from the similarities in both the form and the sections draw by Atkinson, probably corresponds to Site 5.

4.3.6.3 The majority of sites identified by the NMP lie outside the study area considered here (see Appendix 10). The Frampton on Severn area is dominated by the remains of ridge and furrow but the area has the potential to yield more cropmarks, as the ridge and furrow is ploughed away raising the possibility that underlying archaeology will be revealed. The NMP analysis recommends that specific sites should benefit from revisits, and that targeting those areas where extraction is still taking place will help to record any potential new sites before they are lost.

4.3.7 Lidar data

Objective 5 of the original Project design (see section 3, above) was to analyse lidar data to assess its usefulness in the context of this project and also to map palaeochannels within the study area with a view to sampling for environmental data. Unfortunately the Frampton on Severn area is not covered by Environment Agency data and this part of the project did not proceed. As an alternative staff undertaking the NMP mapping aspect of the project were asked to identify palaeochannels from aerial photographs, but none were visible.

4.4 Discussion

4.4.1 Excavation at Netherhils Site 1 revealed the ring ditch visible from aerial photographs to be a bell barrow with a central cremation pit and a subsequent inhumation in the ditch. The central cremation pit at contained a small assemblage (less than 0.5g) of human bone, flint, charcoal, *bos* teeth, a charred acorn and Beaker pottery. Contemporary commentators also report burnt clay daub with wattle marks and/or baked-clay from the primary fill of the pit. Neither this material nor the two to five Beakers survive in the archive. The only Beaker material present was a small sherd, recovered from the old ground surface, sealed by the barrow mound (SF 5, Appendix 1).

4.4.2 Beaker pottery is traditionally regarded as representing a ceramic tradition which marks the beginning of the Bronze Age in Britain (c.2500 to 2000 cal BC). The pottery is frequently associated with the inhumed remains of individuals, usually accompanied by grave goods including copper objects, flint tools and other objects although Beaker has also been recovered from "domestic" sites. Attempts to classify the pottery based on stylistic traits have generally been unsuccessful, and a programme of radiocarbon dating associated material (Kinnes *et al* 1991) has not clarified the chronological relationships between Beakers of different form or decoration. The latest analysis of the Beaker phenomena, by Stuart Needham (2005), attempts to integrate the analysis of style and form, as well as considering depositional context, to formulate a developmental model for Beaker pottery in the British Isles. As the Beaker(s) from Frampton on Severn are not available for study, it is impossible to assess quite how these fit within any of the extant typo-chronological schemes.

4.4.3 The deposition of human remains within a simple pit below a round barrow is a common feature of Gloucestershire round barrows and there are few examples of more complex grave structures such as cists (Darvill 1987, 104). The cremation at Netherhills Site 1 has been identified as human (Appendix 6), but does not represent a complete individual and may be a token deposit of bone, the majority of which was disposed of elsewhere. Grimes (1960) noted the presence of such token deposits of human bone at three of the round barrows in the Burn Ground cemetery, and from a primary cist at Chedworth Down, commenting that such practise was common on the Cotswolds. O'Neil and Grinsell (1960, 19) also draw attention to this practise stating that such token cremation deposits have also been found in Somerset and Berkshire. The pit at Netherhills Site 1 also contained other material selected for burial with the token human remains. The flintwork (Appendix 5) appears to have not only been selected from a larger assemblage, but also seems to have been deposited in a structured way, with waste material placed in the lower level of the pit and a chip, core and scraper in the upper level. Only material from the upper level is heavily burnt, suggesting that it may have accompanied the body on the pyre. The *bos* teeth from the pit do not appear to have passed through the pyre (Appendix 6) and again seem to represent material selected from a larger assemblage of animal remains. The charred acorn from the cremation pit is unusual and rare within archaeological contexts and its presence might suggest the selection of oak for use in building the funeral pyre. It is uncertain if oak was used exclusively, but selective clearance of oak in the Early Bronze Age elsewhere in the country may have been connected to its use in the cremation process (Mullin 2003, 90). The presence of the acorn also suggests that the wood was collected in the autumn.

4.4.4 Although the Beaker(s) from the cremation pit are not present in the archive, it is reasonable to imply that this material was recovered from this context and subsequently lost (and is probably represented by the missing SF numbers detailed

above). The recovery of Beaker pottery associated with a cremation under a round barrow is unusual, the dominant rite for Beaker burial being crouched inhumation. O'Neil & Grinsell (1960, 14-15) record an example of this style of burial below a round barrow at Ivy Lodge in King's Stanley, where a crouched inhumation in a stone cist was accompanied by a roulette decorated Beaker. An inhumation burial at Barnwood, Gloucester, accompanied by a Beaker and a flint knife, was also stated to have been recovered from below a ploughed-out barrow (Clifford 1930). Although unusual, the presence of cremated remains with Beaker is not unique in Gloucestershire, the round barrow at Horsley (O'Neil & Grinsell 1960, 119) contained a primary cremation associated with Beaker pottery, located within a small pit which also contained flint flakes and *bos* teeth. Beaker pottery is known from other funerary contexts, such as flat graves, with no covering barrow mound, at Slaughter Bridge, Bourton on the Water (Dunning 1932) and Shurdington gravel pit (GSMR 3799). Gravel extraction at Prestbury also uncovered the burial of a mature adult male accompanied by a Beaker (Clifford 1938). Beaker pottery has also been recovered from secondary contexts within long barrows at Notgrove and Eyeford (O'Neil & Grinsell 1960, 16) and twenty two sherds of Beaker were found accompanying a skeleton in a grave cut into the long mound at Sale's Lot (O'Neil 1966).

4.4.5 Within Gloucestershire, sites producing Beaker pottery are well known from the Upper Thames Valley, Beaker burials being recorded from Shorncote Quarry (Barclay *et al* 1995) and from Clemenson Memorial Hall, Lechlade. At the latter site two burials, accompanied by late style Beakers, were excavated (Holbrook & Thomas 1998), and returned radiocarbon dates of 3530 ± 50BP (1980-1730 cal BC, BM2980) and 3460 ± 50BP (1920-1630 cal BC, BM2981). These two burials and two pits from Trinity Farm, Bagendon (Mudd *et al* 1999, 26), radiocarbon dated to 3876 ± 57BP (2490 to 2190 cal BC, NZA8673) and 3836 ± 58BP (2470 to 2130 cal BC, NZA8674), are the only radiocarbon dates from Beaker contexts in the county.

4.4.6 A cluster of sites in the Severn Vale have produced Beaker pottery in non-burial contexts. In particular, the area around Tewkesbury has produced a number of sites of Bronze Age date, at least three of which have produced Beaker material from pits. Two phases of Bronze Age activity were recorded at Holme Hill, Tewkesbury (GSMR 4235), including a pennanular enclosure and a ditch. A pit associated with the ditch contained fragments of a vessel of shelly fabric and a rim "with Beaker affinities", together with the remains of an animal interment (Hannan 1976). The site was one on which "about" ten worked flints, including a barbed and tanged arrowhead had been found in the ploughsoil in 1974 (Hannan 1975). A heavily truncated pit containing two Beaker sherds was excavated at Bredon Road, Mitton, Tewkesbury (GSMR 27139, Barrett 2004) and Beaker pottery was also recovered from a residual context at Rudgeway Lane, Tewkesbury (Barber 1993). In the wider Severn Vale, postholes containing flint and Beaker pottery are recorded from Saintbridge, Gloucester (Garrod & Heighway 1984, 22-25) and a single sherd of Beaker was recovered from a Roman layer at Gloucester Business Park Link Road (Thomas *et al* 2003). Beaker sherds were also excavated from the area of a burnt mound at Sandy Lane, Charlton Kings, Cheltenham (Leah & Young 2001, 59-82).

4.4.7 The Upper Thames Valley has produced a number of sites where pits containing Beaker pottery have been excavated. These include Roughground Farm, Lechlade (Allen *et al* 1993) and Totterdown Lane, Horcott (Pine & Preston 2004) and similar pits are known from the Cotswolds. At Trinity Farm, Bagendon (Mudd *et al* 1999) a series of pits were excavated, three of which produced Beaker, flint and burnt stone. Recent archaeological evaluation at Cirencester Polo Club (Nichols 2004) produced a single pit containing at least eight Beakers and animal bone and Beaker has also been recovered from the buried soil sealed below the ramparts of

hillforts at Leckhampton Camp (GSMR 7623), Crickley Hill (Dixon 1994, 220) and Shenbarrow Camp (Fell 1961).

4.4.8 The deposition of Beaker pottery can be seen to have been a diverse practice, including accompanying both cremated and inhumed human remains both under barrows and in flat graves. Beaker was also selected for burial, associated with other aspects of material culture, in pits and has been found in residual contexts and buried soils. Beaker burials below round barrows are rare from Gloucestershire, but the deposition of selected human remains and other material is well documented from round barrows in the county. Only one other Beaker ring ditch has been excavated in Gloucestershire, at Shorncote Quarry in the Upper Thames Valley (Barclay *et al* 1995) which, in contrast to Netherhills Site 1, was small in size and contained an inhumation rather than a cremation.

4.4.9 The ring ditch at Shorncote Quarry measured 9.5m in diameter and was excavated in advance of gravel extraction in 1990 (Barclay *et al* 1995). No mound material survived at the site, the centre of which contained a sub-rectangular grave containing the inhumed remains of an adult male, accompanied by a Beaker, two flint knives, a flint dagger and a flint flake. It was not possible to radiocarbon date the human remains, but the Beaker appears to be of a late form. The example at Shorncote Quarry, is fairly typical of Beaker ring ditches, being relatively small, most excavated examples measuring c.10m in diameter (Case 1986, cited in Barclay *et al* 1995, 48). At c.23m, Site 1 at Netherhills is large for a Beaker date monument, although roughly average for an Early Bronze Age round barrow. The berm between the barrow mound and its surrounding ditch at Site 1 suggests that it is a bell barrow, a specialist form of monument usually associated with the rich graves of the Early Bronze Age "Wessex Culture" of central southern England. Bell barrows are defined in the Monument Protection Programme *Monument Class Description* as "a prehistoric burial site comprising between one and four earthen or stone mounds set within a ditched enclosure, the mounds being separated from the ditch by a berm. The most common type, the single bell barrows, range in size from 10m to over 60m across, the average being about 40m in overall diameter. Bell barrows are found mainly in central southern England but a light scatter of examples have been recorded in other parts of southern and eastern England". Bell barrows have been classified and discussed by Grinsell (1934) and Ashbee (1960), but lack of good dating evidence hinders a full understanding of their development and chronology, existing classification schemes being based on typology alone.

4.4.10 Although bell barrows tend to be associated with the "Wessex Culture" of southern central England (c.1900 to 1500 cal BC), a small number appear to have been associated with Beaker interments (Ozanne 1972, 55-6) and it has been suggested that the construction of bell barrows begins in the Late Beaker period (c.2100 to 2000 cal BC. Bradley 1984, 85). The turf mound above the central grave at Amesbury Barrow 58, Wiltshire (Ashebee 1985) contained Beaker and Grooved Ware pottery and charcoal within this deposit yielded a radiocarbon date of 3310 $\pm$ 80 BP (1780 to 1420 cal BC; HAR 6226). At Amesbury Barrow G.71, Wiltshire (Christie 1967) a similar turf mound above the central burial also contained Beaker sherds, the wooden coffin containing the burial returning a radiocarbon date of 3960$\pm$ 110 BP (2900 to 2100 cal BC; NPL 77). The Beaker at both of these sites is more than likely to be residual, however, being contained within the material utilised for the construction of the turf mound. Beaker from primary deposits within bell barrows is rare, but at the Bincombe Barrow, Dorset (Payne 1943) the primary inhumation was accompanied by a Beaker.

4.4.11 Only a single other bell barrow from the historic county of Gloucestershire, St Oswalds Tump, Marshfield, is recorded by O'Neil And Grinsell (1960). It has, however, been recently suggested that this is a saucer or pond barrow (Darvill & Grinsell 1989, 43). The site at Bevan's Quarry, Temple Guiting, appears to have been overlooked in previous discussions of bell barrows in Gloucestershire. Excavations here in 1964 (O'Neil 1966) revealed a complex sequence of barrow construction, the primary monument consisting of a "token" cremation within a rectangular pit, covered by a turf mound which was retained by a circle of stakes. This structure was subsequently surrounded by a clay bank and covered by a stone cairn, surrounded by a rock-cut ditch which was separated from the cairn by a 3.5m wide berm. The site was used for the deposition of cremation burials in Middle Bronze Age Deverell-Rimbury style pottery and evidence for Roman and Anglo Saxon activity at the barrow was also excavated. Although no dating evidence was recovered from the primary burial at Bevan's Quarry, secondary deposits suggest a construction date in the Early Bronze Age, between 2000 and 1500 cal BC. Like Netherhills Site 1, the barrow at Bevan's Quarry was located within a small group of round barrows.

4.4.12 Although far from certain, it is a possibility that the central area of Netherhills Site 1 was enclosed by a stake circle. Similar features were present at the bell barrows Amesbury G.71 (Christie 1967) and at Clarendon Park, Wiltshire (Fasham 1985) and Ashbee (1960) lists other examples of this practice, which was not uncommon throughout the Early Bronze Age. Indeed, the primary turf mound at Bevan's Quarry (above) was retained by a stake circle. Unfortunately, the method of excavation utilised by many of the early excavators of round barrows was not conducive to the recognition of these features and there is a strong possibility that they are more common than is apparent in the literature.

4.4.13 An alternative interpretation of the sequence at Netherhills Site 1 may be that the bell barrow is, in fact, later in date than the Beaker burial which it covers. An alternative sequence might be that the Beaker, cremated bone, flint and animal tooth were deposited in a pit (in effect a "flat grave") which later became the focus of a possible stake circle with a barrow subsequently constructed over both. It is impossible to assess the time periods which elapsed between these events and there is no stratigraphic evidence to support either alternative interpretation.

4.4.14 Bell barrows in Wessex tend to be associated with other barrows, often forming part of large cemeteries which span reasonably long chronological periods. Site 1 at Netherhills appears to have been located close to at least two other ring ditches (Sites 2 and 3) and may have been part of a cemetery of up to five barrows (although the results of the NMP are awaited to confirm this). St Clair Baddeley (1928) also reported at least two ring ditches from Perryway and another at Park Corner Farm is visible in aerial photographs taken by Cambridge University in 1948. Barrow cemeteries are uncommon within Gloucestershire, with examples known from Hull Plantation, Burn Ground, Colnpen and Cow Common on the Cotswolds (O'Neil & Grinsell 1960). Clusters of round barrows occur around Condicote, Lechlade and at the headwaters of the River Cam, but round barrows more usually occur singly. The group of barrows at Frampton on Severn appears to be isolated (figure 17), with few round barrows recorded from the Severn Vale (O'Neil & Grinsell 1960). The two barrows at Court Hill, Standish (O'Neil & Grinsell 1960, 130) and two ring ditches visible from APs at Slimbridge (GSMR 20395) and Cam (GSMR 20389) are the closest examples to Frampton on Severn, the only other ring ditch in the Severn Vale being that recorded by Gloucestershire SMR at Deerhurst (GSMR 5541).

4.4.15 Although there is evidence for Bronze Age occupation in the Tewkesbury environs (4.4.6, above), the only contemporary material recovered from the Frampton on Severn area is that from the MoD pipeline to the north west of Netherhills (Young 1993). Although the pottery recovered is not highly diagnostic, the thumbnail scraper is broadly contemporary with the Beaker activity at Netherhills (Appendix 4). Other lithic material has been collected within the wider area from Eastington, Alkerton and Arlingham/Frethern (Appendix 3 and 4) and a significant proportion of this material is Mesolithic in date. There are no other recorded contemporary lithic assemblages within the Severn Vale. A mixed date scatter containing microliths was recovered from a gravel island at Leonard Stanley (Gracie 1938) and potentially Mesolithic material from Persh Farm, Maisemore is held in Gloucester Museum (GSMR 5591), but the majority of finds from this date are from the Cotswold uplands and the Forest of Dean. The material from Frampton on Severn illustrates that people were active within the Severn Vale during the Mesolithic period: the presence of waste material and cores suggests the use of the area to create and maintain tools, probably during the exploitation of the rich variety of resources which this part of the Vale would have offered during this period.

4.4.16 Earlier utilisation of this environment is also evident from the Palaeolithic flint and faunal assemblages recorded from Eastington. At least two flint tools have been recovered from the site (Gardiner 1934, Burkitt 1938), as have faunal remains including Woolly Rhino and horse. Woolly Rhino, Ox and Horse remains, as well as Mammoth tusk, has been recovered from Cainscross, Stroud (Clifford 1948, Gardiner 1932, 12) but no other material of this date is known from this part of the Severn Vale. The closest occurring site is that at Barnwood (Clifford 1930, 209-212), where a similar faunal assemblage was found on a site which also produced at least four Upper Palaeolithic flint tools, alongside both earlier and later material. A handaxe is also reported from the gravel at Longlevens (GSMR 4823) and Palaeolithic material was recovered from the site of Hucclecote Roman Villa (Clifford 1930, Clifford 1934). The Palaeolithic archaeology of Gloucestershire, however, remains poorly understood, finds usually being associated with gravel extraction and of poor provenance.

4.4.17 There is no evidence for later prehistoric (Late Bronze Age to Iron Age) activity at Netherhills, but a skeleton appears to have been deposited within the ditch at Site 1 during the Roman period. It is not clear if this was a deliberate deposition within the ring ditch, however, and it is a possibility that the location of the burial is coincidental. Roman interments are recorded from round barrows elsewhere in the county (O'Neil and Grinsell 1960, 28), with a possible Roman extended inhumation at Withington I and Miserden 3. Two large pits were excavated in the Roman period within the interior of Site 3, but these are of uncertain function and their location may relate to activity across the wider landscape. The pottery recovered from Perryway in the 1920s was all of Roman date, and the occurrence of a human burial associated with Roman pottery seems to parallel the burial at Netherhills Site 1. Although there are few clear relationships between the pottery and the burials at Perryway, the interpretation of the site as Anglo Saxon (Baddeley 1928) does not seem to be supported by the finds. Indeed, the only site from which Anglo Saxon material has been recovered is Eastington Gravel pit where the Anglo Saxon spearhead in Stroud Museum (1983.35, Appendix 2) adds to the evidence previously published by Ireland (1984) and the grass tempered pottery found on the line of M5 motorway (Fowler & Walthew 1971, 61). The spearhead may have accompanied a burial, but only a single skeleton from the site could be located, and no contextual information is available for either the pottery, small finds or human bone. No Anglo Saxon pottery was present in the material analysed from Eastington, the majority of which was of Roman date (Appendix 1). Roman brooches and a knife were also amongst the

material analysed from the site (Appendix 2). Roman pottery was recovered from the MoD pipeline between Netherhills and Perryway (Appendix 1).

4.4.18 Unlike Perryway, there is evidence for earlier activity at Eastington, as Iron Age pottery and a loom weight have been recovered from the site (Appendix 1). Pits of this period were noted by Gardiner (1932) but it was not possible to correlate material in Stroud Museum with that in the report published in 1932.

4.4.19 Iron Age and Roman material similar to that at Eastington was recovered from alongside Ermine Street at Barnwood (Baddeley 1920, Clifford 1930, Clifford 1934) where an Iron Age pit containing pottery, daub, animal bone and flint was excavated and extensive Roman burials (over 100 in total) occurred across the site. Material was recovered in advance of gravel extraction and recording was, consequently, rather poor, but the site may have been associated with the Hucclecote Roman villa to the south west. Better excavated evidence for Romano-British burial, associated with a settlement, comes from the Gloucester Business Park Link Road (Thomas *et al* 2003), where a total of 12 inhumations dating to the 2nd to 4th centuries were recovered. All of the burials here were within formal grave cuts and contained hobnails, coffin nails, iron objects, animal bone, pottery and a brooch. These burials appear to have been associated with a contemporary settlement and it is suggested that individual Roman farmsteads may have had their own burial grounds. An example of such a settlement and associated cemetery close to Frampton on Severn is that at Frocester (Price 2000, 203-216), where a total of 60 burials dating from the middle Iron Age to Roman periods were recovered during excavation. The burials may have been grouped into small family or period cemeteries and some of these were accompanied by animal bone and Black Burnished Ware pottery.

4.4.20 Cremation was the predominant burial rite during the 1st and 2nd centuries AD and examples are known from across Gloucestershire (McWhirr 1981, 163). Inhumation cemeteries are known in the Gloucester area, 37 skeletons having been recovered during the construction of the Gloucester College of Art in 1966, and other cemeteries are known along the main routes into the town. 125 burials of 2nd to 4th century AD date were also uncovered during work at the Gambier Parry Lodge Estate to the north of Gloucester. A large cemetery of at least 450 burials was excavated at the Bath Gate, Cirencester (McWhirr *et al* 1982), the graves here being aligned on pre-existing tracks and boundaries. Although the material from Bath Gate provides excellent comparative material, the poor quality of recording at Perryway and Eastington and the low numbers of skeletons which survive in the museum archives does not allow ready comparisons between these sites.

4.4.21 The burials from the Frampton on Severn area are difficult to date and may represent the inhumation of individuals over an extended period from the Iron Age through to the Anglo Saxon period. The majority of the pottery recovered from the area is, however, of Roman date and it is likely that at least some of the burials are contemporary with the pottery. At least 33 burials were recovered from Perryway and at least 50 were recovered from Eastington Gravel Pit. These sites are located c.2km apart and probably represent separate cemeteries. The site at Eastington is located alongside the Roman road now utilised as the A38 and that at Perryway is located alongside a minor Roman road which runs from the A38 to Arlingham. Apart from the possible villa at Whitminster, no Roman occupation sites are known from this area and it is likely that the burials at Eastington and Perryway represent either rural cemeteries or small groups of dispersed burials scattered across (as yet undiscovered) settlement sites.

4.4.22 Sinuous linear features, similar to those reported from Perryway and Eastington were also recorded at Barnwood (Baddiley 1920,63). The features at Eastington were described by Russett (1991) as possibly relating to Medieval quarrying, but their origin is uncertain.

4.5 Significance

4.5.1 Netherhills Site 1 is of at least regional importance, as it adds to the small number of bell barrows containing Beaker material in Britain. It is the only example of a bell barrow of Beaker date in Gloucestershire, and one of only two monuments of this form from the county. The burial rite at Site 1 is an unusual example of Beaker cremation and the inclusion of flint and *bos* teeth with the human bone may represent a local practise, also seen at Horsley (O'Neil & Grinsell 1960, 119). In both cases, the Beaker and cremated remains were deposited in pits and subsequently covered by barrows, but it is impossible to assess if there were immediately subsequent events or if the Beaker pits remained as flat graves for a period. Netherhills Site 1 is located within a round barrow cemetery, few of which are recorded from Gloucestershire, Netherhills being the only such site located within the Severn Vale (figure 17). The analysis of the excavation archive has enabled a fuller understanding of Early Bronze Age burial practice in Gloucestershire and deserves to be brought to publication.

4.5.2 The lithic material recovered from the MoD pipeline and Eastington Gravel Pit is the only known material of Mesolithic date in the Severn Vale. Although similar material is known from the Cotswolds and the Forest of Dean, that from the Frampton on Severn area allows a greater understanding of the exploitation of the wider landscape during this period. Similarly, the Palaeolithic material from Eastington is of high significance, being one of very few sites of this date from the county.

4.5.3 The Roman exploitation of the Severn wetlands has been widely discussed and Roman reclamation of wetland areas at Slimbridge, Elmore and Longney has been suggested (Allen 1986, 1990a, 1990b). The material from Frampton on Severn adds depth of understanding to the variety of ways in which this area was exploited and suggests settlement in this area during the Roman period. It is difficult, however, to relate this activity to that at the Whitminster "villa" both in terms of chronology and function.

4.5.4 An Anglo Saxon presence in the area can also be implied from the material analysed during Phase I of the project. Anglo Saxon material in the Severn Vale is rare and that from Frampton on Severn adds to the national understanding of the extent of the distribution of Anglo Saxon material culture in England.

4.6 Potential

4.6.1 Although there is no material which could be scientifically dated from primary contexts at Netherhills Site 1, a single radiocarbon date from the articulated skeleton from the ditch would enable the absolute date of this deposit to be assessed. As this skeleton is presently housed within a box containing another skeleton, it is suggested that both be sampled, in order to distinguish the individual dates of each. Similarly, the human remains held in Stroud and the Natural History museums should be sampled and submitted for radiocarbon determination to allow a better understanding of the chronology of their deposition.

4.6.2 The assessment of the small finds (Appendix 2) suggests that further work, including XRF analysis, should be carried out on the statuette fragment (1960.33) and pendant (1981.81) from Stroud Museum and that the material is of intrinsic interest and deserves to be more widely known.

4.6.3 Both the lithic material and pottery from the sites analysed here allow an understanding of the exploitation of the wider landscape, but have little potential for further work and none is recommended.

5 Post excavation aims and objectives

5.1 Stage III of the project was intended to target palaeochannels identified from lidar and aerial photographs for environmental assessment. Unfortunately the Environment Agency has no lidar coverage for the Frampton on Severn area and this analysis was not possible. Staff carrying out the NMP survey for the study area were asked to identify palaeochannels from aerial photographs, but apart from old channels relating to the River Frome which was straightened in the recent past, no palaeochannels were present on the vertical photographs. A single feature is visible as subtle cropmarks at SO 7796 0582, but these appear to relate to an abortive attempt to make the River Frome navigable in 1759. As such they have low potential to yield environmental data for any period beyond the recent past.

5.2 Although there are no palaeochannels present in the Frome valley, the river runs through an alluviated channel, which may have potential for the preservation of proxy environmental data. This deposit could be sampled to assess the potential for preservation of such material. A similar project undertaken in the Forest of Dean (Hoyle 2005 Chapter 5) was successful in locating pollen and plant macrofossils relating to the late Saxon period and a sampling strategy for the Frome valley should be a priority for future work.

5.3 Stage IV of the project was intended to commission full specialist reports, combining these with site plans and photographs from the results of Stage I, and the results of Stages II and III into a written report, prepared to full MAP2 standards. This report was intended to include a Research Framework for archaeological work in this area of the Severn Vale. This phase is still feasible and, although full specialist reports will not be necessary, bringing the site to publication remains an achievable and important objective. It is anticipated that the final deliverables will be a narrative report, to be published in the *Transactions of the Bristol and Gloucestershire Archaeological Society*, accompanied by a supporting archive which will be lodged with a relevant museum and a digital copy supplied to the Archaeological Data Service (ADS).

The further work will therefore consist of undertaking Stage IV of the original Project Design, details of which are given in Section 6, below:

Stage IV:

- The radiocarbon dating of the human remains from Netherhills, Eastington Gravel Pit and Perryway.
- XRF analysis and further work on the statuette fragment and pendant held by Stroud Museum.
- Ordering of the Netherhills archive for deposition at Gloucester Museum.
- Completion of a supporting archive and deposition with ADS
- Completion of a publication report for *Transactions of the Bristol and Gloucestershire Archaeological Society*.

6 Methods Statement

6.1 Stage IV

6.2.1 The human remains held by Gloucester, Stroud and the Natural History Museum will be assessed for their suitability for radiocarbon dating by a specialist in the field. If the material is suitable, and each museum agrees to the sampling, samples will be taken from each individual for dating purposes. A total of 15 dates will be sought.

6.2.3 The assessment report for the small finds (Appendix 2) recommends that a descriptive catalogue for all of the items should be prepared, including reference to dated parallels and short discussion of intrinsically interesting items. The statuette fragment (1960.33) should be viewed by specialists (Catherine Johns) more familiar in objects of this nature, to confirm the provisional identification. All items should be drawn for publication and X-ray fluorescence (XRF) analysis is recommended for two items: statuette fragment (1960.33) and pendant (1981.81). Analysis of the former may in determining the composition of the alloy and help rule out the possibility of this object being of more modern date. XRF analysis of the harness pendant (1981.81) would be intended to confirm use of silver wire inlay.

6.2.4 All of the specialists who prepared assessment reports will be given the opportunity to edit reports for inclusion in the final publication and supporting archive and material which warrants illustration will be identified and illustrated by a qualified specialist.

6.2.5 The results of preceding phases, will be drawn together into a suitably illustrated publication and supporting archive. The published report will be prepared in accordance with the relevant “Notes for Contributors” and a synopsis is given at 6.3, below. Due to the multi-period nature of the sites examined, and their regional significance, *Transactions of the Bristol and Gloucestershire Archaeological Society* will be the journal of choice for the publication report. The editor of the *Proceedings* has accepted that the paper could, in principle, be published in the 2009 edition.

6.2.6 The supporting archive for the published report will consist of an edited version of the information contained within this UPD in both paper and digital formats. The National History Museum has requested a copy of the final report in digital format and digital material will also be lodged with the ADS.

6.2.7 The archive material held by Gloucestershire County Council Archaeology Service, which consists of the Atkinson Netherhills archive and the MoD pipeline archive, will be prepared for deposition with a relevant museum.

6.3 Report Synopsis

The publication report will take the following structure:

Introduction

- Background to the project.
- Objectives of the project.

Methods

- Description of the methods used during the project.
- Appraisal of the success of the methodologies used in fulfilling the project objectives.
- Recommendations for methodologies to be adopted in future projects of this nature.

Results of the Atkinson excavation at Netherhills

- Atkinson's methods and results.

Netherhills in its wider archaeological setting

- Results of the analysis of material from Eastington Gravel Pit, Perryway, Park Corner Farm and the MoD Pipeline.

Discussion

- The significance and potential of the archaeology of the Frampton on Severn area.

Further work

- Research Agenda for future work in the Frampton on Severn area.
- Recommendations for future work.

Bibliography

Illustrations

The report will be submitted for in the *Proceedings of the Bristol and Gloucestershire Archaeology Society* in the first instance. The manuscript for publication will be prepared in accordance to the relevant *Notes for Contributors*.

Digital copies of the supporting archive and all of the specialist reports will be prepared for submission to the ADS as a digital archive. Digital and paper copies of all reports will also be supplied to the Natural History Museum, Gloucester City Museum and Stroud Museum.

7 Resources and Programming

The staffing of this project as outlined below assumes that the project is commissioned to be carried out in the financial year 2006/7.

7.1 Personnel and project team structure

7.1.1 Toby Catchpole: Senior Project Officer (SPO).

Toby Catchpole will manage the project under the direction of Jan Wills, the County Archaeologist.

7.1.2 David Mullin: Project Officer (PO).

David Mullin will be responsible for the day-to-day running of the project, under the supervision of Toby Catchpole.

7.1.3 Finds Specialists (SPEC)

The finds specialists will be required to revise and edit their assessment reports for final publication. Environmental specialists will undertake the coring and analysis of material from the Frome valley. Radiocarbon dating and XRF analysis will be undertaken by relevant specialists, under advice from English Heritage. An illustrator will be required to prepare artefact drawings for publication.

Material	**Specialist**
Lithics	David Mullin (project staff)
Ceramics	Jane Timby
Metalwork/Small Finds	Ed McSloy (Cotswold Archaeology)
Human remains	Christie Cox (OsteoTeam, Sheffield)
Radiocarbon dating	Derek Hamilton (English Heritage)
Illustrator	Jo Richards

7.2 Funding and other resources

The tasks outlined below are to be funded by English Heritage through the Aggregates Levy Sustainability Fund.

Gloucestershire County Council will provide the following at no cost to the project:

- Jan Wills (County Archaeologist) will have overall responsibility for the project, including reviewing and editing project outputs.
- Technical support for GIS and the SMR database and the digital base maps of geology sheets and OS County Series plans will be provided by Vivista as part of their contract with GCC.

7.3 Project tasks: Stage IV

The following table summarises tasks to be undertaken during Stage IV of the project.

Task No.	Task	Staff member	Days	Total Days
1	**Preliminary tasks**			
	Seeking permission to radiocarbon date material held by Gloucester, Stroud and the Natural History Museums	PO	1	
	Seeking copyright permissions for CUCAP photographs/NMR data	PO	1	
	TOTAL			PO 2
2	**Further work on archive material**			
	Specialists to edit their reports for publication			
	Pottery specialist	SPEC	1.5	
	Small finds specialist	SPEC	6	
	Human remains specialist	SPEC	2	
	Lithics specialist	SPEC	1.5	
	Detailed analysis of statuette	SPEC	1	
	Illustration of suitable material	ILL	3	
	XRF analysis of material in Stroud Museum	SPEC	1	
	Assessing and sampling human remains for radiocarbon dating	SPEC	3	
	Project Management	SPO	1	
	TOTAL			SPEC 16 ILL 3 SPO 1
3	**Production of Publication Report and Supporting Archive**			
	Liaison with specialists	PO	2	
	Printing and dissemination of supporting archive	PO	3	
	Preparation of Publication Report	PO	15	
	Editing report/project management	SPO	3	
	Revising Publication Report	PO	2	
	TOTAL			PO 22 SPO 3

4	**Dissemination** Preparing the supporting archive and specialist reports in digital formats for deposition with ADS and the relevant museums **TOTAL**	 PO	 2	 PO 2
5	**Archiving** Preparation of Netherhills and MoD pipeline archives for deposition Project Management **TOTAL**	 PO SPO	 5 1	 PO 5 SPO 1
6	**Monitoring meetings** English Heritage (Estimated 1 meeting) **TOTAL**	 PO SPO	 1 1	 PO 1 SPO 1

For detailed costing see Appendix 10

7.4 Equipment

The project will be externally funded as will the staff involved, with the exception of the support detailed at 7.2 above.

7.5 Timetable and basis of cost

7.5.1 Staff costs are based on the figures detailed in Appendix A. Figures are for the financial year 2006/7 and it is anticipated that the project will be completed by the end of this period. An increment of 2.5% (compound) is added for each financial year in line with current English Heritage guidelines on inflation calculations on *Historic Environment Enabling Programme* Grants (EH 2002).

7.5.2 The identified key tasks for the project are tabulated at 7.3. A Gantt Chart of proposed progress is presented as Appendix 8. Within the detailed work programme there is a time allowance of 1 calendar week per 5 calendar weeks per person for annual leave/sickness and sundry absences.

7.5.3 The project will total 35 days. The Gantt chart has been drawn up with the assumption that the project commences in September 2006. An allowance of 12 weeks has been made in the Gannt chart for the turn-around of the radiocarbon dates, on the advice of Derek Hamilton at English Heritage.

7.6 Project monitoring

Jan Wills, County Archaeologist, will monitor progress of the project on a bi-weekly basis. Monitoring meetings will be held with English Heritage as required to review the progress of the projects against the timescale presented in the Gantt chart (Appendix 8). Formal monitoring meetings will arranged at mutually convenient dates.

8 Health and safety

Health and Safety, within Shire Hall, the project base, and any other places where project work is undertaken, is covered by Gloucestershire County Council, Environment Department Health and Safety policies. Copies of the Archaeology Service's *Summary of Policy, Procedures and Generic Risk Assessments* and *Lone Worker Health and Safety Policy* have been submitted to English Heritage most recently with the Project Design for the ALSF funded The Scowles and Associated Iron Industry Survey (Hoyle 2002). Those documents will also apply to this project; further copies can be provided on request.

9 Copyright

Copyright of all written, graphic, photographic, and digital records remains that of the originator unless otherwise agreed with English Heritage.

All material copied from other sources will be fully acknowledged and relevant copyright conditions observed.

10 Data Protection Act 1998

Information regarding the contact details of organisations and individuals is collected for the administration of archaeological projects by Gloucestershire County Council Archaeology Service. It may be passed to others who are involved in the project. It

will also be passed to the County Sites and Monuments Record as part of the archive resulting from the archaeological project. Any queries or concerns regarding this should be notified to the Archaeology Service on Gloucester 01452 425681.

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Appendix 1: Pottery Assessment

Jane Timby

Introduction

The following assessment has been undertaken on pottery recovered from various previous archaeological and other interventions in the Frampton-on- Severn area.

The material studied is housed at Gloucester and Stroud Museums and with the GCC Archaeological Service. All the finds, which could be located, were viewed and catalogued at the two museums.

A catalogue has been compiled (Table 1) listing the location of the material; any details of site as written on the sherds or packing material or the museum Accession code, a description of the material seen, and an approximate sherd count and a date. Where relevant for the Roman wares the National Roman fabric reference code has been used (Tomber and Dore 1998); other wares are relate to the Gloucester type fabric (TF) series housed at Gloucester Museum.

The chronological range was quite large including prehistoric, Roman, Saxon, medieval and post-medieval finds.

In some cases vessels had been completely reconstructed from single or multiple sherds; these were counted as one.

In the following assessment the material is discussed chronologically by intervention.

1 Netherhills gravel pit

This site was dug by R J C Atkinson in 1948 and consisted of five sites (Sites 1-5). The pottery, which has survived, was located from just Sites 1 and 3 (or III).

Site 1 was a ring ditch, which is noted as having a few sherds of probably at least two Beakers of type Bi (O'Neil and Grinsell 1960, 114). No primary interment was located but a secondary crouched skeleton without grave-goods was found in the ditch.

The Beakers from Site 1 are also mentioned in Clarke's corpus (1970, no. 280-1) and the material is described as fragmentary and destroyed or lost. It is clear that these Beaker sherds are not present amongst the material recently viewed although there is a black and white photograph with the site archive showing detail of horizontal lines of impressed decoration, which would be typical of such material.

The pottery that has been located from Site 1 comprises some eight very small sherds. One of these from the old turf line (Table 1, cat. no. 6) has the very faint single line of comb-impressed decoration and comes from a Beaker. The sherd is oxidised with a grey core. The only other potentially prehistoric finds are two very small crumbs (Table 1, cat. no. 4), too small to identify.

The other five pieces comprise three definite and two probable Roman sherds. Amongst these are three rimsherds, one from a Severn Valley ware (SVW OX) storage jar and two from greyware jars. The two bodysherds include one greyware and one sherd of SVW OX. None of the pieces can be dated more closely.

The other potsherds that could be located all came from Site 3. O'Neil and Grinsell (1960, 114) note that this site enclosed by a ditch was probably not a barrow but of Roman date. The extant pottery comprises four sherds of probable Bronze Age date, eleven Roman sherds and three crumbs which may be fired clay rather than pottery and of indeterminate date.

Three thick-walled sherds came from one cutting (Table 1, cat. no. 8). The fabric and firing pattern is characteristic of Bronze Age material and may be urn. A fourth small bodysherd with an oxidised exterior and black interior came from the outer ditch (Table 1, cat. no. 15).

The Roman sherds comprise two sherds of South Gaulish samian bowl (Dragendorff type 29) of 1st century AD date; a ring necked flagon (late 1st-2nd century), and seven sherds of SVW OX, which included two storage jar rimsherds.

2 Modern pipeline

A collection of pottery was recovered from a pipeline running between Tewkesbury and Frampton on Severn by the MoD in 1991.

Some 44 sherds were located in Gloucester Museum under various accession numbers, three of which gave OS grid nos.

The viewed assemblage comprised two Bronze Age sherds, twenty-two Roman pieces, one ?late Saxon-early Medieval, thirteen medieval and three post-medieval sherds. In addition four fragments of ceramic building material (CBM) of probably modern origin were present.

The two Bronze Age sherds (Table 1, cat. 24) are unfeatured handmade bodysherds dated on the basis of the typical firing characteristics displayed with an oxidised exterior and black interior.

The Roman sherds are dominated by SVW OX, which accounts for 20 of the 22 sherds. Featured sherds include a cordoned jar and a tankard handle. The remaining two sherds are grey local wares. Unfortunately the SVW pottery industry is a long-lived one spanning the 1st to 4th centuries and there are insufficient featured sherds present to intimate a closer date, although the two featured sherds are probably earlier rather than later Roman.

A single sharply everted rim jar rim in a limestone-tempered oxidised fabric is either late Saxon or early medieval in date (Table 1, cat. no. 30).

Medieval wares proper include sherds of Malverian ware, Gloucester limestone-tempered ware and Minety ware from North Wiltshire. Most, or all, the sherds are

from jars/ cooking pots. A sherd of Malvernian Border ware is probably post-medieval (Table 1, cat. no. 22).

3 Other material Gloucester Museum: Whitminster

A small collection of unstratified material labelled 'Clifford Temp. 732-37' was also recorded. This comprised 15 sherds all of Roman date.

The group includes material spanning the 1st/2nd to 4th centuries with sherds of SVW OX, early charcoal-tempered SVW Dorset black burnished ware, Malvernian ware and unprovenanced greyware.

4 Gloucester Museum: stray finds from Frampton

A total 111 sherds of pottery were accessioned as from Frampton but with no further details.

Apart from three medieval pieces all the sherds are Roman in date spanning the 1st to 4th centuries.

The assemblage includes 31 sherds of handmade native wares, which could date to the pre or post-conquest period. Such wares continue to feature in assemblages in the area up to the 2nd century AD and without associations cannot be closer dated. Most of the wares are in grog-tempered fabrics but there are four sherds of Malvernian ware (Gloucester TF 18, 33, 216).

Severn Valley wares account for 35% of the groups, some 38 sherds, amongst which are dishes, tankards, cordoned jars and bowls. There are some 1st-2nd century forms alongside some, which potentially could be later.

Both Dorset black burnished ware and South-west black burnished wares are present, 10% of the total, some 11 sherds. Forms include plain-rimmed dishes and jars. The latter exhibit both acute and oblique burnished line latticing demonstrating the presence of 2nd to 4th-century products.

The other main ware present in a micaceous greyware (Gloucester type fabric 5), of local but unknown provenance. This accounts for 18% (20 sherds) and includes copies of DOR BB1 and SVW forms. The industry dates from the later 2nd to 4th centuries.

Present in smaller amounts are a few other wares the most distinctive of which are from the Oxfordshire kilns and include a white ware mortaria (Young 1977, type M17 dated 240-300), and at least two bowls/ dishes of later 3rd-4th century date.

5 Stroud Museum: Eastington

Some 178 sherds of pottery were catalogued from the collections at Stroud Museum all of which are from Eastington but essentially unprovenanced. Many finds had been donated by a Miss Hopkins.

A number of vessels have been restored from one or more sherds for display purposes.

The finds ranged in date from the later Iron Age and Roman periods to the medieval and post-medieval periods.

The earliest finds in the group include a three restored handmade jars in Malvernian limestone-tempered ware (Table 1, cat. no. 104, 135 and 137). One vessel is particularly large (104), one a smaller more standard jar (135) and one with two looped handled (137). In addition a collection of 60 sherds most of which are native handmade wares in grog (TF 2) or Malvernian fabrics (TF 18, TF 33) was donated by Miss Hopkins (Table 1, cat. no. 124) and a single sherd in a similar fabric (cat. no. 109). The corner of a triangular fired clay loomweight was accessioned in 1971 (Table 1, cat. no. 122).

Some 89 sherds/ vessels were present dating to the Roman period, the greater proportion belonging to the earlier Roman period. These include a rusticated greyware jar (Table 1, cat. no. 99), a greyware bowl (no. 100) and a pale pink ware decorated with red painted circles possibly from North Wiltshire (cat. no. 126). Continental imports include Central Gaulish samian (cat. nos 106, 110, 117) and a possible *terra nigra* bowl (Camulodunum type 46) with a broken potter's stamp (cat. no. 133). This latter vessel has been restored and it is difficult to determine whether it is a genuine import or a very good copy.

Many of the other catalogued wares are Severn Valley wares, both oxidised and reduced varieties including a restored black tankard and carinated bowl (cat. nos 130-1). An almost complete small rounded bowl in SVWOX is probably also of early Roman date (cat. no. 134). The Dorset black burnished wares also appear to be early types with jars decorated with acute burnished line lattice (cat. nos. 129).

Later Roman products (late 2nd century onwards) include some micaceous grey wares (TF 5) (cat nos 111 and 118), South west white-slipped ware (SOW WS) (cat. no. 125) and a wheelmade copy of a DOR BB1 jar in a fine black micaceous ware (cat. no. 138).

Other finds of Roman date include one piece of combed box-flue tile (cat. no. 105) and piece of plain box-flue (cat. no. 121) suggestive of a well-appointed building in the vicinity.

A single annular loomweight (cat. no. 136) also appears to have come from the gravel workings at Eastington. This item along with part of a bone comb and a bone pin beater were published by Ireland (1984) as possible evidence for post-Roman occupation in the vicinity. She also drew attention to several sherds of organic-tempered pottery recovered from an area north of the Claypits in Eastington (c SO 773060) recovered during the construction of the M5 (Travell and Fowler 1971). This pottery, although purported to be at Stroud Museum was not amongst the material extracted for viewing. Similar pottery has been found in the general locality at Frocester and Slimbridge reinforcing the probability of post-Roman activity in the immediate area.

The collection of material from Eastington includes four medieval sherds and four of post-medieval date. The former includes a glazed jug (no. 102), Malvernian border ware and a Cotswold-type jar sherd. The post-medieval sherds appear to be Herefordshire Border wares (Glos TF 54).

6 Summary

The pottery reviewed for this assessment was diverse in date ranging from Beaker through to post-medieval.

The earliest finds date back to Atkinson's excavations but it is clear from the records that much of this material must be missing or lost. The extant material is extremely fragmentary and apart from one tiny decorated fragment, unfeatured precluding closer dating.

There is no clear indication of later Bronze Age or Iron Age occupation from the available finds with the next clear evidence of activity dating to the later Iron Age or early Roman period. A number of handmade native wares have been recovered, some restored, which indicate 1st century AD occupation. Such wares are quite common in the immediate area and have been documented, for example, at Standish (Time Team 2004), Kingsholm (before the establishment of the legionary fortress) and Frocester (Price 2000), as well as slightly further afield in the Tewkesbury area and in small amounts at many other sites.

The bulk of the pottery recorded in this assessment is Roman in origin. This material is harder, more robust and often brightly coloured which may bias any random collection. The range of wares is completely typical of that which might be expected from this area and reflects a period of occupation spanning the entire Roman period. Three fabrics tend to dominate, Severn Valley wares, Dorset black burnished wares and grey micaceous ware which reflects exactly that which would come from any controlled excavation in this locality. The same repertoire of material, albeit on a larger scale, has been documented for example, at Frocester (Timby 2000), Oldbury Flats (Allen and Fulford 1992) and recent work between Aust and Oldbury (Timby 2005).

A Roman site at Whitminster, previously interpreted as a villa, is located c 3.5 km to the east of Frampton village. A salvage excavation was undertaken here and the finds documented by Fowler and Walthew (1971, 57). Some of the material looked at in Stroud (Table 1, cat nos 105-23) probably relates to this work. This includes Roman pottery ranging from 1st to 4th century and the two box flue tile fragments. The finds of sandstone tiles and tesserae from this work would also indicate a later Roman building.

Perhaps the most unusual vessel is the stamped fine grey ware dish, possibly *terra nigra* but also potentially a Kingsholm fine ware. The restoration work makes close identification difficult. It is a form that would normally be associated with the army and dating to the post-conquest period. *Terra nigra* has been found at Frocester and Kingsholm so was clearly reaching the area in small amounts.

A single loomweight, two bone artefacts and the handmade pottery from the M5 work (Travell and Fowler 1971) hint at potential post-Roman activity in the area.

Later finds are sparse and not indicative or any focus of occupation but would be expected as a background scatter in any such situation. It is likely that few such finds would end up in a museum.

7 Potential and further work

The material has limited value in that it comprises a discrete group of unassociated finds only loosely provenanced. In effect it simply hints at a complex and long history of occupation but one that cannot be tied down in detail.

It is clear from published notes and other records that some material has been lost. The finds in the museums must represent a very small fraction of what was found or was exposed, and it is more than likely that many finds stayed in private hands.

The conclusion based on the above would suggest that no further work is required on the pottery assemblage at present and that other than showing there was considerable activity along the Severn as various points in time it cannot provide any further reliable information.

Abbreviations

DOR BB1 – Dorset black burnished ware
OXF RS – Oxfordshire colour-coated ware
OXF WHM – Oxfordshire whiteware mortaria
SOW BB1 – South-west black burnished ware
SOW WS- Southwest white slipped ware - Roman
SVW OX – Severn Valley ware (oxidised) - Roman
SVW RE – Severn Valley ware (reduced) - Roman
TF 2A-C – handmade grog-tempered ware – 1st century AD
TF 5 – micaceous grey ware - Roman
TF 18 – Malvernian rock-tempered ware - late Iron Age -Roman
TF 33; TF 216 – Malvernian limestone tempered wares- late Iron Age -Roman
TF 52 – Malvernian wares (medieval)
TF 54 – Herefordshire Border ware (late medieval-post-medieval)

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Appendix 2: Assessment of 'Small Finds' from Frampton-on-Severn

Ed McSloy

Introduction

Ten items of various materials were examined. Further items listed as within Stroud District Museum and an item thought to be at Gloucester City Museum could not be located by museum staff. Objects examined and those listed, but not found are summarised in Table 1.

All objects were examined and recorded at Stroud museum. Sketches and digital photographic record shots were made of each object. The condition of all items appears to be stable. As far as can be determined, two objects (nos. 1983.35 and 2068/1) have received conservation treatment, undertaken to enhance qualities of display, rather than for investigative reasons.

A single object, (nos. 2068/2 and 2069/2, which are elements of the same bone comb) can be positively identified with archaeological investigations undertaken at Eastington Gravel pit (Gardiner 1932). This item, together with loomweight no. 2798 and an unlocated bone pin-beater have been previously published as a note in which Saxon date is suggested (Ireland 1984, 241-3). Provenance for the remaining items is described in the museum accessions register as 'Eastington parish'. Although the circumstances of recovery are unclear, it seems likely that all items were found as the result of gravel working. Further details are sometimes included with the objects themselves: spearhead 1983.35 includes the information 'probably dug up at Bloody Vernal, Eastington'; spindlewhorl DP101 is described as from 'Whitminster pit'.

Range and variety

The objects examined constitute a very disparate group in terms of materials, function and dating (Table 1). Eight items can be dated on the basis of form, with the two remaining objects insufficiently diagnostic. Items are grouped and described below chronologically.

Roman objects

Roman objects include two brooches, both of copper alloy: no. 1971.20, a Polden Hill form with cast decoration in the form of lenticular bosses. The Polden Hill in this particular form is characteristic of the Severn Vale/valley region and probably dates to the period *c*. AD75-150.

Penannular brooch no. 1971.21 is more difficult to classify: its terminals are crudely formed and not easily matched against the typology established by Fowler (1960). A broadly Roman date for this item is likely, although penannulars do carry on in use into the post-Roman centuries and such a date cannot be ruled out.

Knife 2068/1 is typically Roman. The waisted, cylindrical form and construction of the handle is characteristic, held between two washers and secured by hammering flat the tang end (MacGregor 1985, 168-9). Similarly the decoration, in the form of zones of incised 'criss-cross' is a feature of knives of this period. The blade form corresponds to Manning's type 14 (Manning 1985, 115), characterised by mid-line tang, arched back and slightly convex edge. This form is common throughout the Roman period.

Most unusual among the Roman items is a hand (no. 1960.33), cast in copper alloy, which would appear to represent a broken fragment from a statuette of approximately one third life-size. The hand, which is modelled grasping a now missing, separately formed and unknown object, is cast naturalistically in the classical style. The identity of the figure cannot be determined, although in terms of projected size and overall style it probably belongs to a series of statuettes in bronze known from Britain (and doubtless other provinces), depicting imperial subjects, mythical figures and gods of the classical pantheon.

Anglo-Saxon objects

Spearhead no. 1983.35 conforms to Swanton's H2 form characterised by an angular form blade with concave curve above the angle (Swanton 1973, 107-11). This form of spearhead is among the commonest and geographically widespread from the pagan Anglo-Saxon centuries. Most examples date to the late 5th and 6th centuries, with a small number known extending into the 7th. The presence of mineral-preserved wood in the (largely absent) socket may be significant, suggesting it was deposited with its shaft in place – most plausibly within a burial.

Objects 2068/2069 are identifiable as bone side plates from a double-sided composite form comb. Although the ring and dot decoration to each plate differs in detail, their corresponding dimensions and arrangement of iron rivets indicate that these belong to the same comb. To date no chronological study of Anglo-Saxon bone combs has been undertaken, although characteristics of form are described by MacGregor (1985, 73-95). The form of 2068/2069 is very close to a complete comb from a burial from Ford, Wiltshire (Musty 1969, 108). This burial is dated to the 7th century through association with items of metalwork.

The annular form of 2798 is typical of clay weights used with vertical looms which are common finds from eastern English Anglo-Saxon domestic sites of the 6th and 7th centuries, and frequently associated with sunken featured buildings. Finds from the west of England are far less common, but include examples from Sherbourne House, Lechlade, Gloucestershire (Timby 2003, 63-4) and Ryall, Worcestershire (Blinkhorn and McSloy forthcoming).

Medieval objects

A single object, a shield-shaped harness pendant 1981.81 is dateable by form to the later medieval period, almost certainly the 14th century (Griffiths 1986). This object features a heraldic design composed of two oblique lines executed in enamel (of which only the recesses survive), overlain by a rectilinear design, probably of inlaid silver wire. No attempt has been made at this stage to identify the design with any particular armorial.

Undated

Two items cannot be dated by form and in view of the known periods of settlement attested in the area speculation is not attempted. Object DP101 is a spindlewhorl of conical form made from a fairly soft (?liassic) limestone, which is likely fairly readily available from the area. Object 1971.22 is a copper-alloy ring of a size appropriate for, but by no means certain to be, a finger ring. The condition of this item is poor, with much of its original surface lost.

Discussion

The objects examined as part of this assessment lend support the past interpretation (Gardiner 1932; Ireland 1984) of the area as one of activity in the Romano-British and earlier Anglo-Saxon periods. A single medieval object can be regarded as a casual loss.

Due to the circumstances of recovery, the potential interpretive value of the objects beyond this is minimal. Of the Roman group, objects such as the knife and brooches would be consistent with the evidence for domestic activity described by Gardiner. In the absence of a firm provenance, some caution should be exercised with regard to statuette fragment no. 1960.33: the possibility exists that this is a genuinely antique object collected and brought to Britain in relatively recent times then subsequently lost, or part of a post-medieval/modern statuette executed in the classical style.

The Anglo-Saxon objects, particularly with the inclusion of the bone pin beater, are of perhaps greater interpretive value, suggestive of both domestic (craft) activity and more

tenuously on the basis of the spearhead, burial from during pagan Saxon period. The better dateable objects, the spearhead, clay weight and comb probably indicate activity in the 6th to 7th centuries.

Statement of Potential and recommendations for further work

The objects assessed here are of greatest significance as chronological indicators relating (however loosely) to poorly recorded and destroyed sites. In particular, the Anglo-Saxon items are of importance for an area where evidence for domestic activity in this period is rare. In addition, items such as the Roman knife, which is unusually complete, and a fragment of Roman statuette are of intrinsic interest and deserve to be more widely known.

It is recommended that a descriptive catalogue for all items should be prepared to include reference to dated parallels and short discussion of intrinsically interesting items. Statuette fragment no. 1960.33 should be viewed by specialists (Catherine Johns) more familiar in objects of this nature, to confirm provisional identification. All items should be drawn for publication (it is unlikely that the drawings reproduced in Ireland's note survive).

X-ray fluorescence (XRF) analysis is recommended for two items: statuette fragment 1960.33 and pendant 1981.81. Analysis of the former may in determining the composition of the alloy, help rule out the possibility of this object being of more modern date. XRF analysis with harness pendant 1981.81 would be intended to confirm use of silver wire inlay.

As a contingency, it is recommended that some time is set aside for the recording of the currently unlocated artefacts, which may result from ongoing reorganisation at Stroud District Museum.

Time estimates/costing

Completion of catalogue including research	4 days
Visit/consult British Museum	1 day
Drawing of 10 objects	3 days
Contingency	1 day
Contingency (drawing time)	0.5 day

(nb. XRF analysis of two items at Centre for Archaeology should be free of charge for ALSF funded projects)

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Table 1: Summary of objects assessed

Museum	*Acc. No./ identifier*	*Provenance*	*Material*	*Description*	*Date*	*notes*
Stroud	1960.33	Eastington	copper alloy	statuette fragment	RB	
	1971.20	Eastington	copper alloy	brooch, Polden Hill type	RB	
	1971.21	Eastington	copper alloy	brooch, penannular	RB	
	1971.22	Eastington	copper alloy	ring	uncertain	
	1981.81	Eastington	copper alloy	shield-shaped pendant	Med.	
	1983.35	Eastington	iron	spearhead	Sax.	
	2025*	'Eastington'	?	'bone, pins, blade'	?	Not located
	2068/1	Eastington	Iron/bone	knife	RB	
	2068/2069	Eastington	bone	comb side plates	Sax.	prev. pub. in Ireland 1984
	2069*	'Eastington'	bone	Pin-beater	Sax	Not located (prev. pub. in Ireland 1984)
	2780*	'Frampton'	?fired clay	'loomweight'	?	Not located
	2798	Eastington	Fired clay	annular loomweight	Sax.	prev. pub. in Ireland 1984
	DP101	Eastington	stone	spindlewhorl	uncertain	
Gloucester	?	Frampton	?iron	spearhead	?	Not located

* objects recorded in accessions register from Eastington/Frampton, but not located by curator.

Appendix 3: Lithic Assessment for the collections held by Stroud Museum

David Mullin

A total of 67 flints were recorded from the archives held by Stroud Museum for sites located in Eastington and Frampton on Severn. The collection contains a proportion of Mesolithic material, with a low proportion of later material. Two Palaeolithic implements from Eastington Gravel Pit are also held by the Museum.

Introduction

The material in the collection has been quantified and assessed using standard descriptions of lithic material outlined in Andrefsky (1998), Saville (1990) and Clark (1960). Descriptions follow the form: type, length/width, raw material, description/date.

Cores were divided by Clark (1960) into three categories: single platform, bi-polar and multi-platform, with core maintenance pieces including core rejuvenation flakes and core trimming flakes. The width and breadth of flakes removed from a core can be indicative of date, but this is usually only on very broad terms, with a change from narrow to broad flakes noted from the Neolithic to the Bronze Age (Pitts 1978 a, 1978b). Young and Humphrey (1999) suggest the continuation of flint use into the Iron Age, with a noticeable decline in knapping skills, increased use in local raw materials and a restricted range of tool types through time.

Waste material can be divided into three classes, depending upon its stage in the core reduction process, following Saville (1990:155) and further sub-divided into those flakes which retain a bulb of percussion and those that do not, the latter are classified here as shatter (Andrefsky 1998: 81-3). Chips are defined as pieces of waste less than 10mm by 10mm.

Accession No.	Description
2012	Palaeolithic ?knife. Mounted on display board.
3079	Palaeolithic blade. ?graver. Mounted on display board
1969.136/2	Tertiary flake 32x14x11mm. Light grey flint. Narrow blade scars on dorsal surface.
1969.136/3	?End scraper 32x20x4mm. Light grey flint. Battered.
1969.136/4	Core trimming flake 33x25x8mm. Light grey flint. Narrow blade scars on dorsal surface.
1969.136/6	Blade shatter 21x18x5mm. Light grey flint.
1969.136/12	Tertiary flake 18x13x2mm. Light grey flint.
1969.136/16	Distal blade shatter 17x9x2mm. Light grey flint. Utilisation along one lateral margin.
1969.136/19	Distal bladelet shatter 21x7x1mm. Light grey flint. Mesolithic.
1946.26/1	Thumbnail scraper 27x22x9mm. Light grey flint.
1946.26/3	Core trimming flake 45x16x12mm. Patinated flint.

1946.26/4	Core rejuvenation flake 25x22x17mm. Light grey flint ?Mesolithic.
1946.26/5	?Knife 62x25x8mm. Translucent brown flint. Bilateral retouch along one lateral margin.
1946.26/6	Single Platform Core 31x31x22mm. Dark grey flint with patch of thin, smooth cortex.
1946.26/7	Backed bladelet 24x7x3mm. Patinated flint. “Eastington Pit. Dr Whitley”
1946.26/7	Rod microlith 24x4x2mm. Patinated flint.
1946.26/8	Rod microlith 24x4x2mm. Patinated flint. Retouched along one lateral margin.
1946.27/1-10	1x Tertiary flake 32x27x4mm. ?Portland chert.
	1x Tertiary flake 42x21x12mm. Burnt flint.
	1x Blade 83x27x6mm. Patinated flint.
	1x Blade fragment 29x21x5mm. Narrow blade scars on dorsal surface. Patinated flint. Mesolithic
	1x Bladelet shatter 24x9x2mm. Light grey flint. Mesolithic
	1 x Core trimming flake 27x10x7mm. Light grey flint. Mesolithic
	1x Core trimming flake 39x40x10mm. Patinated flint. Utilisation along one lateral margin.
	1x Core trimming flake 25x16x4mm. Patinated flint. Narrow blade scars on dorsal surface.
	1x Core trimming flake 51x26x14mm. Patinated flint.
	1 x Core trimming flake 44x22x5mm. . Patinated flint. Narrow blade scars on dorsal surface.
1946.27/11	Tertiary flake 54x35x15mm. Gravel flint
1971.223	7x chips. Patinated and light grey flint.
	1x Tertiary flake22x14x4mm. Patinated flint.
	1x Tertiary flint 20x24x4mm. Patinated flint. Hinged terminal.
	1x Tertiary flake 25x9x5mm. Patinated flint.
	1x Tertiary flake 21x21x10mm. Burnt flint.
	1x Tertiary flake 25x15x6mm. Light grey flint.
	1x Tertiary flake 27x42x7mm. Light grey flint.
	1x Tertiary flake 24x31x8mm. Light grey flint.

	1x Secondary flake 27x20x6mm. Light grey cherty flint with thin, uneven cortex.
	1x Secondary flake 26x18x3mm. Light grey flint.
	1x Secondary flake 31x18x7mm. Light brown flint with thin, smooth cortex.
	1x Blade shatter 22x8x4mm. Patinated flint.
	1x Blade shatter 24x9x4mm. Light grey flint.
	1x Blade shatter 10x11x3mm. Light grey flint.
	1x Blade shatter 17x11x3mm. Dark brown flint.
	1x Blade shatter 19x12x3mm. Light grey flint.
	1x Blade shatter 15x15x6mm. Light grey flint.
	1x Core trimming flake 32x14x5mm. Light grey flint. Narrow blade scars on dorsal surface.
	1x Core trimming flake 40x24x14mm. Light grey flint. Narrow blade scars on dorsal surface.
	1x Core rejuvenation flake 17x34x30mm. Dark brown flint. Possibly utilised as a scraper.
	1x ?Single platform core 34x19x11mm. Patinated flint. Narrow blade scars present.
	1x ?Core fragment 52x34x20mm. Dark brown flint. Heavily battered, many flake scars present.
1983.37	1x Flint nodule 39x30x10mm. Gravel flint
	1x Tertiary flake 40x30x7mm. Patinated flint.
	1x Tertiary flake 25x26x8mm. Burnt flint.
	1x Tertiary flake 28x18x6mm. Patinated flint.
	1x Tertiary flake 31x14x6mm. Patinated flint.
	1x blade shatter 30x14x4mm. Patinated flint.
	1x blade 27x11x4mm. Patinated flint.
	1x Core trimming flake 32x20x8mm. Patinated flint. Narrow blade scars on dorsal surface.
	1x Core trimming flake 44x16x6mm. Patinated flint. Narrow blade scars on dorsal surface.
	1x Core rejuvenation flake 8x17x24mm. Patinated flint.

Discussion

The two Palaeolithic implements (2012 and 3079) were previously reported and illustrated by Gardiner (1934) and Burkitt (1938), although only 3079 is listed by Wymer & Bonsall (1977: 420). Both were recovered from Eastington Gravel Pit.

1946.26/7, a Mesolithic backed bladelet, was recovered by Dr Whitley from Eastington Gravel Pit. The other material with a 1946.26 prefix is of uncertain origin, but held with the material from Eastington.

1971.223 is described by a label in the museum archive box in which it is housed as having been recovered from "Lying on the gravel subsoil on the N. face of ridge on E. side of M5". This is probably from the region of OS NGR SO 775 058. The material consists of cores, waste and blades, probably of Mesolithic/Early Neolithic date.

1969.136/3, 1969.136/4, 1969.136/6, 1969.136/12, 1969.136/16 and 1969.136/19 are described in the Museum register as having been recovered from Middlehall Farm, Eastington and consist a mixed assemblage of core maintenance pieces and waste, although at least one of the bladelets is of Mesolithic date. 1983.37 was recovered from Cress Green, Eastington, immediately to the north of Middlehall Farm, by Mr H.A Brinkworth in 1929. The material consists of cores and waste, most of which is patinated. Both sites lie outside of the study area of the project.

1946.27 is described in the Museum register as from Alkerton and consists of Mesolithic blades and cores. Alkerton is located to the south west of Eastington, beyond the eastern boundary of the study area.

1969.136/2 is a single waste flake, recovered from Hock Cliff, Frethern, 2.5km to the north west of Frampton on Severn. Although this lies outside the study area, lithic material including cores, scrapers and flakes has been recovered from the Arlingham/Frethern area (Curtis 1998) and are held by Gloucester Museum (Accession Number 52-1995 and recorded as GSMR 18300 to 18304, 20405 and 20422).

The majority of the material analysed in Stroud Museum consists of waste, cores and blade fragments. The diagnostic material includes an Early Bronze Age thumbnail scraper, but the majority of this material is probably of Mesolithic or Early Neolithic date. Although Mesolithic material was recovered from the MoD pipeline which ran to the west of Eastington Gravel Pit (Young 1993), material of this date is extremely rare from the Severn Vale. There is a high degree of similarity between the assemblages reported on here and that from the MoD Pipeline, suggesting a diffuse spread of Mesolithic material across this area.

Although the lithic material in Stroud Museum is of intrinsic interest, provenance is poor and the material is derived from unstratified contexts. No future work is recommended on this material.

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Appendix 4: Lithic Assessment for the MoD Pipeline (GSMR 12440)

David Mullin

A total of 91 flints were recorded from the archive for the watching brief along the line of the MoD Pipeline between Tewkesbury and Frampton on Severn , carried out by Andy Young in 1991. All of the flint was recovered from three areas, assigned the numbers GSMR 12480, 12481 and 12484. The collection contains a significant proportion of Mesolithic material, the first recorded material of this date from the Severn Vale.

Introduction

The material in the collection has been quantified and assessed using standard descriptions of lithic material outlined in Andrefsky (1998), Saville (1990) and Clark (1960). Descriptions follow the form: type, length/width, raw material, description/date.

Cores were divided by Clark (1960) into three categories: single platform, bi-polar and multi-platform, with core maintenance pieces including core rejuvenation flakes and core trimming flakes. The width and breadth of flakes removed from a core can be indicative of date, but this is usually only on very broad terms, with a change from narrow to broad flakes noted from the Neolithic to the Bronze Age (Pitts 1978 a, 1978b). Young and Humphrey (1999) suggest the continuation of flint use into the Iron Age, with a noticeable decline in knapping skills, increased use in local raw materials and a restricted range of tool types through time.

Waste material can be divided into three classes, depending upon its stage in the core reduction process, following Saville (1990:155) and further sub-divided into those flakes which retain a bulb of percussion and those that do not, the latter are classified here as shatter (Andrefsky 1998: 81-3). Chips are defined as pieces of waste less than 10mm by 10mm.

GSMR No.	Context Description	**Description**
12480	**u/s**	19x Chips
		Secondary flake 39x19x9mm. Patinated
		Secondary flake 29x19x7mm. Utilisation along one lateral margin.
		Secondary flake 32x42x10mm. Black flint. Utilisation along one lateral margin.
		Tertiary flake 34x18x12mm. Patinated
		Tertiary flake 33x13x9mm. Patinated
		Tertiary flake 36x17x16mm. Patinated
		Tertiary falke 26x17x11mm. Black flint.
		Tertiary flake 28x21x4mm. Gravel flint
		Tertiary flake 51x42x8mm. Gravel flint

		Tertiary flake 20x17x4mm. Light grey flint.
		Tertiary flake 17x17x5mm. Black flint.
		Tertiary flake 37x22x9mm. Light grey flint. Retouch along one lateral margin, others show utilisation.
		Tertiary flake 27x17x3mm. Black flint. Utilisation along one lateral margin.
		Tertiary flake 22x27x6mm. Dark brown flint with retouch at distal end.
		Blade shatter 32x13x3mm. Light grey flint.
		Blade shatter 10x15x1mm. Fine retouch along one lateral margin ?Mesolithic bladelet.
		14 x narrow blade shatter, both distal and midsections. Light grey flint, some patinated, 4 burnt.
		8 x wider blade shatter. Light grey flint, some patinated.
		Core rejuvenation flake 26x26x11mm. Dark grey flint. From a bi-polar core.
		Core trimming flake 42x22x7mm. Patinated. Subsequent retouched as long end and side scraper ?Mesolithic.
		Side Scraper 34x28x9mm. Dark grey flint. On primary flake.
		Thumbnail scraper 21x19x6mm. Dark grey flint.
12481	u/s	Primary flake 18x16x12mm. Black flint.
		Primary flake 21x12x6mm. Dark grey flint.
		Secondary flake 25x24x6mm. Black flint. Utilisation along one lateral margin.
		Secondary flake 26x16x5mm. Dark grey flint. Utilisation along both lateral margins.
		Secondary flake 38x29x9mm. Patinated.
		Tertiary flake 17x17x8mm. Light grey flint.
		Tertiary flake 22x11x6mm. Light grey flint.
		Narrow blade shatter 14x8x1mm. Light grey flint.
		4 x narrow blade shatter. Light grey flint.
		Blade shatter 22x26x5mm. Black flint. Subsequent retouch along one lateral margin.
		4 x blade shatter Light grey flint.

		Blade shatter 16x14x4mm. Burnt.
		Blade shatter 12x19x2mm. Light grey flint.
		Narrow blade 23x9x4mm. Light grey flint. Subsequent retouch along one lateral margin.
		Narrow blade 33x12x4mm. Patinated.
		Backed bladelet 27x8x1mm. Light grey flint.
		Bi-polar core 22x25x17mm. Dark grey flint. Narrow blade scars present.
		Core rejuvenation flake 32x15x10mm. Dark grey flint.
		Core rejuvenation flake 35x20x14mm. Patinated.
		Core rejuvenation flake 36x28x18mm. Light brown flint.
		Core trimming flake 32x25x9mm. Light brown flint. Utilisation along both lateral margins.
		Core trimming flake 27x22x5mm. Brown flint. Utilisation along one lateral margin.
12484	**u/s**	Secondary flake 49x15x10mm. Light grey flint.
		Tertiary flake 30x14x6mm. Patinated. Hinged termination.

Discussion

Although the lithic material from the MoD pipeline was recovered from three locations, that from GSMR 12480 and 12481 were considered to form part of the same assemblage (Young 1993: 18). The two flakes from GSMR 12484 were recovered from c.600m to the south west of this group, although the low numbers and undiagnostic nature of the material make the nature of this site impossible to interpret.

More than half of the material from GSMR 12480 and 12481 is comprised of waste, with some cores and core maintenance pieces represented. Primary waste is rare, suggesting the importation of pre-prepared flint nodules into the area, probably from Wiltshire (Saville 1982). The raw materials utilised are certainly homogenous, with gravel flint very rare in the assemblage.

There is a significant number of narrow blades and blade fragments, probably of Late Mesolithic date from this assemblage. The backed bladelet from GSMR 12481 and the long end and side scraper from GSMR 12480 are also of Late Mesolithic date. The amount of Mesolithic flint from the site make this collection significant in that no other assemblages have been recovered from the Severn Vale. A mixed date scatter containing microlithis was recovered from a gravel island at Leonard Stanley (Gracie 1938) and Mesolithic material from Persh Farm, Maisemore is held in Gloucester Museum (GSMR 5591), but the majority of finds from this date are from the Cotswold uplands and the Forest of Dean.

The assemblage should be considered of mixed date, however, and the presence of a thumbnail scraper (12480), a piece generally associated with the Beaker period, ties in nicely with the possible Beaker presence at Netherhills, c.500m to the south east.

The lithic material from the MoD pipeline is from entirely unstratified contexts and, although the proximity to the Netherhill ring ditches is interesting, the material does not warrant future work.

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Appendix 5: Lithic Assessment for Netherhills Archive

David Mullin

A total of 49 flints were recorded from the archive for the excavations at Frampton on Severn/Whitminster, carried out by R.J.C Atkinson in 1948. All of the flint was recovered from Site I and comprised mainly waste material.

Introduction

The material in the collection has been quantified and assessed using standard descriptions of lithic material outlined in Andrefsky (1998), Saville (1990) and Clark (1960). Descriptions follow the form: type, length/width, raw material, description/date.

Cores were divided by Clark (1960) into three categories: single platform, bi-polar and multi-platform, with core maintenance pieces including core rejuvenation flakes and core trimming flakes. The width and breadth of flakes removed from a core can be indicative of date, but this is usually only on very broad terms, with a change from narrow to broad flakes noted from the Neolithic to the Bronze Age (Pitts 1978 a, 1978b). Young and Humphrey (1999) suggest the continuation of flint use into the Iron Age, with a noticeable decline in knapping skills, increased use in local raw materials and a restricted range of tool types through time.

Waste material can be divided into three classes, depending upon its stage in the core reduction process, following Saville (1990:155) and further sub-divided into those flakes which retain a bulb of percussion and those that do not, the latter are classified here as shatter (Andrefsky 1998: 81-3). Chips are defined as pieces of waste less than 10mm by 10mm.

Small Find No.	Context Description	Description
2	**Body Level: NE Cutting**	5 x chips
		Secondary flake 14x19x5mm. Light grey flint, partially burnt.
		Secondary flake15x24x8mm. Light grey flint.
		Secondary flake 26x13x7mm. Light grey flint.
		Secondary flake 20x19x9mm. Light grey flint.
		Tertiary flake19x18x3mm. Burnt.
		Tertiary flake23x17x9mm. Light grey flint.
		Tertiary flake24x26x6mm. Light grey flint.
		Distal blade shatter 23x18x5mm. Light grey flint.
		Blade shatter 36x27x7mm. Wide platform and pronounced bulb. Light grey flint.
		Distal blade shatter 28x23x8mm. Serrations along one lateral margin.

		Light grey flint.
		Core rejuvenation flake 36x21x8mm. Retouch along one lateral margin. Light grey flint.
4	**NE Extension, Below Skeleton**	2 x chips, one burnt
		Tertiary flake30x22x4mm. Light grey flint.
		Tertiary flake44x40x5mm. Light grey flint.
11	Label obscure	Bi Polar Core. Platforms at right angles 25x25x21mm. Good quality dark grey flint.
12	East Cutting	Core trimming flake 45x19x14mm. Thin cortex over much of dorsal surface and retouch along one lateral margin and distal end, ?point. Light grey flint.
		Flint lump 41x22x14mm. Heavily burnt.
15	**Cutting C Over Black Soil**	? broken knife 35x28x9mm. Large platform. Blade-like flake with retouch along one lateral margin. Banded light grey flint.
		Levallois flake. 62x51x18mm. Light grey flint.
16	**Cuttings B&C. Outer level of daub**	3 x chips
		Tertiary flake 24x11x3mm. Light brown flint.
		Tertiary flake 33x17x6mm. Black flint. Partially burnt.
		Tertiary flake 25x19x8mm. Burnt.
		Tertiary flake 23x21x3mm. Light grey flint. Hinged termination.
		Tertiary flake 25x25x9mm. Light grey flint. Utilisation along one lateral margin.
		Tertiary flake 19x27x6mm. Light brown flint.
		Tertiary flake 22x35x4mm. Light brown flint.
		Tertiary flake 28x25x6mm. Light grey flint. Partially burnt.
		Core trimming flake 37x27x11mm. Light brown flint.
		Core trimming flake 47x24x14mm. Light grey flint.
		Core 35x37x28mm. Dark grey flint. Heavily battered.
		Narrow blade 33x11x3mm. Light brown flint.
18	**Cutting C Topsoil**	Broken end scraper 24x35x8mm. Dark grey flint. Some bi-facial retouch.

19	**Cutting B. Cremation Pit Upper Layer**	1 x chip. Burnt
		Core 33x24x23mm. Heavily burnt.
		Broken scraper 30x34x14mm. Slightly burnt.
20	**Cuttings A&B Shallow Depression**	1 x chip
		Tertiary flake 25x27x8mm. Light grey flint.
		Blade shatter 33x29x6mm. Utilisation along one lateral margin.
25	**Cutting B. Cremation Pit/Lower Layer**	2 x chips. One burnt.
		Tertiary flake 30x20x5. Dark grey flint.
		Tertiary flake 36x22x10. Dark grey flint. Partially burnt.
		Burnt flake 30x16x4mm.
		Burnt flake 19x33x8mm.
		Burnt flake 32x23x6mm.
		Burnt flake 38x36x8mm.
		Burnt chunk 25x15x12mm
		Blade shatter 24x23x7mm. Burnt.
31	**Cutting D Extension. Top of old turf line.**	Burnt chunk 27x25x14mm.
		Burnt flake 20x19x7mm.

Discussion

The majority of the material in the archive consists of waste material, although few primary flakes are represented, suggesting either a late stage in the reduction process, or a selected portion of material from a larger waste assemblage, the majority of which was disposed of elsewhere. The material from the cremation pit certainly seems to be a selected assemblage, with waste material deposited in the lower level (SF 25) and a chip, core and scraper deposited in the upper level (SF 19). Only material from the upper level is heavily burnt, suggesting that it passed through the pyre in which the cremation took place. Flint also seems to have been deposited with the skeleton recovered from the ditch (SF 2 and SF 4). The assemblage here is fairly homogenous, consisting of waste and blade shatter of light grey flint, although the one or two burnt items may represent material retained from the primary cremation.

The cores in the assemblage are all worked-out, suggesting a paucity of good quality flint, which is not native to the Frampton area and would have had to be imported from over 50km

to the east. The core rejuvenation and trimming flakes suggest careful utilisation of this resource. Gravel flint seems not to have been used in this assemblage, the majority being good quality light grey flint, with better quality, black flint rare.

The retouched items in the assemblage are fairly typical Late Neolithic/Early Bronze Age scrapers and a possible knife (SF 15). Cutting C (SF 15 and SF 18) appear to have an unusually high representation of retouched items. Of note is the large Levallois flake (SF 15), a technique which seems to have been re-introduced in the Late Neolithic period.

The Netherhills lithics are the only stratified lithic material recovered from this part of the Severn Vale. As such they form an important and significant assemblage, particularly those recovered from the cremation pit which were associated with human remains and Beaker pottery. The small numbers of lithic items recovered and their incomplete nature means that the potential for further work is extremely limited and not recommended.

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Appendix 6: Human Bone Report

Christie Cox MSc, AIFA

INTRODUCTION

This osteological assessment describes the human remains excavated near Frampton on Severn, Gloucestershire by R. J. C. Atkinson during the 1930s and 1940s. Funded by English Heritage's Aggregates Levy Sustainability Fund, this specialist report is part of a larger project which encompasses the analysis of the ring ditches and various other finds from Atkinson's initial excavations.

The collection of human remains were acquired by the Natural History Museum of London (through the Royal College of Surgeons Collection), the Stroud Museum, the Gloucester Museum and the Netherhills Archives. All skeletal numbers used within this report refer directly to their accession number of that particular museum (Table 1).

Table 1: Acquisition numbers in relation to the museum which holds the skeletal remains.

Acquisition Number	Museum
PA SK261	Natural History Museum
PA SK262	Natural History Museum
PA SK263	Natural History Museum
PA SK264	Natural History Museum
PA SK265	Natural History Museum
PA SK266	Natural History Museum
PA SK267	Natural History Museum
PA SK268	Natural History Museum
PA SK269	Natural History Museum
50.257	Stroud Museum
Site I: 34	Netherhills Archive
Site I: 26	Netherhills Archive
Site I: 27	Netherhills Archive
TEMP 735	Gloucester Museum
A.446	Gloucester Museum

The first section of this report is the osteological assessment on the inhumations which were examined in order to determine the minimum number of individuals, age at death, biological sex, and pathological/dental health followed by a section on the cremated remains.

The second section is the assessment on the cremated material. Due to the limited amount of cremated remains, it was only possible to determine human versus animal remains, the minimum number of individuals, a possible age estimation, total weight, efficiency of cremation, and pyre debris.

The purpose of any osteological assessment is to produce factual data and to evaluate potential research agendas which would broaden archaeological and scientific

knowledge (Mays, 2002). Additionally, all osteological examinations follow the current English Heritage Guidelines (Mays, 2002) and the recommendations published by the British Association for British Anthropology and Osteology [BABAO] and the Institute of Field Archaeologists [IFA] (Brickley and McKinley, 2004). All digital photographs have been copied onto a CD-R for archival purposes at Gloucester County Council Archaeological Service, Gloucestershire.

THE INHUMATIONS: DEMOGRAPHY

MINIMUM NUMBER OF INDIVIDUALS

The minimum number of individuals was derived by counting the most frequently represented skeletal element recovered from each of the inhumations or by an age/sex differential. Of the twelve separate inhumations, fourteen individuals were identified. TEMP 735 clearly contained a badly preserved skeleton of a male and a well preserved skeleton of a female, while PA SK262 (an inhumation of an older child) contained several adult bones.

For purposes of clarification, the male skeleton of TEMP 735 will be labelled as TEMP 735-A while the female skeleton will be TEMP 735-B. Moreover, there was not enough adult bones from PA SK262 to determine any further demographic data and is therefore not used within this osteological report.

COMPLETENESS

Completeness of an individual skeleton is generally assessed by recording the quantity of recovered skeletal elements and expressing this as a category of completeness, e.g., 0-24%, 25-49%, 50-74% and 75-100% [complete] respectively (Mays, 2002). The vast majority of the skeletons are incomplete as they are only represented by a skull and the odd post-cranial skeletal element (Figure 1). This is likely due to selective curation rather than the completeness of the skeleton at the time of excavation.

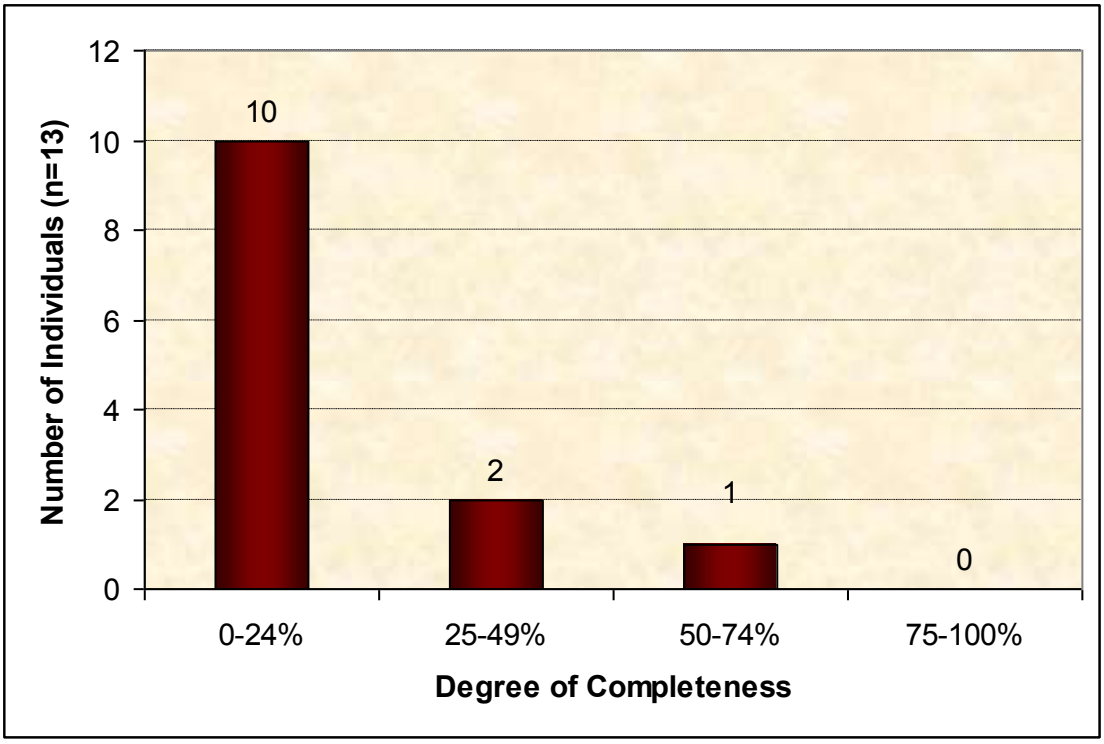

Figure 1: Degree of completeness in relation to the number of individuals (after Mays, 2002).

SKELETAL PRESERVATION

The state of preservation of bone surfaces for each of the articulated skeletons was assessed according to the weathering stages recommended by Brickley and McKinley (2004). The majority of the skeletal remains were graded between '0' and '1' (Figure 2) indicating that the surface morphology was clearly visible with little to no modification of the bone surface from roots, soil acidity or erosion.

One skeleton, TEMP 735-A, was graded at '5+' indicating that there was extensive erosion which resulted in severe modification of the bone surface.

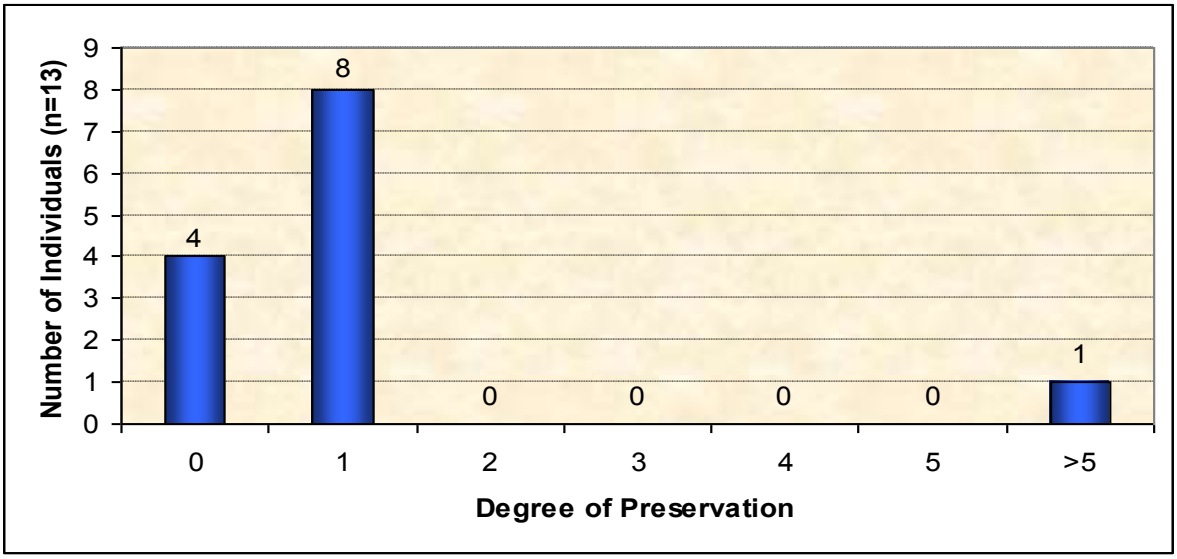

Figure 2: Degree of Preservation in relation to the number of individuals (after Brickley and McKinley, 2004).

STATURE

Stature was estimated based on measurements of complete long bone lengths using the regression equations of Trotter and Gleser (1952). Only five of the total inhumations contained the post-cranial elements necessary to estimate stature (Figure 3). The males ranged from 175 cm to 166 cm, while the females range from 166 to 160 cm. In general there is a distinct dimorphism between male and female stature, however there is not enough measurements to accurately discuss population stature.

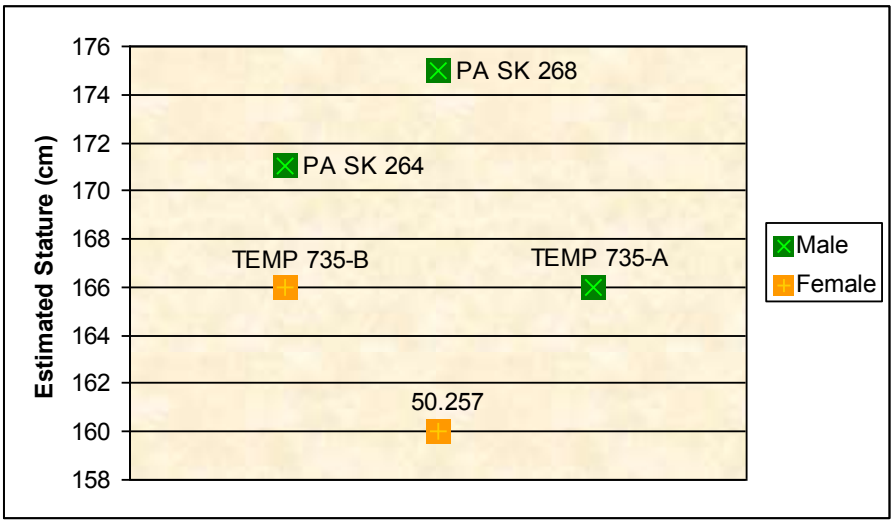

Figure 3: Stature estimation in relation to biological sex (after Trotter and Gleser, 1952).

AGE AT DEATH

The skeletons were divided into age categories (Table 1) based on dental eruption and development (Smith, 1984; Moorrees, Fanning and Hunt 1963; Ubelaker, 1978), auricular surface morphology (Lovejoy *et al,* 1985), cranial suture closure (Meindl and Lovejoy 1985), epiphyseal union (Schwartz, 1995), pubic symphysis (Suchey and Brooks, 1990) and the long bone length of subadults (Scheuer and Black, 2000).

Table 1: Definitions of age categories

Age Category	Age Range
Foetal	Conception to 40 weeks
Infant	Birth to 1 year
Young Child	1 year to 5 years
Old Child	5 years to 12 years
Juvenile	12 years to 20 years
Young Adult	20 years to 35 years
Mature Adult	35 years to 50 years
Old Adult	50+ years

As illustrated in Figure 4, the majority of the skeletal remains were adults at the time of death (n=11). Nearly half (45%) of these are young adults, followed closely by old

adults (36%). There were only 2 subadults, represented as older children, in this skeletal collection.

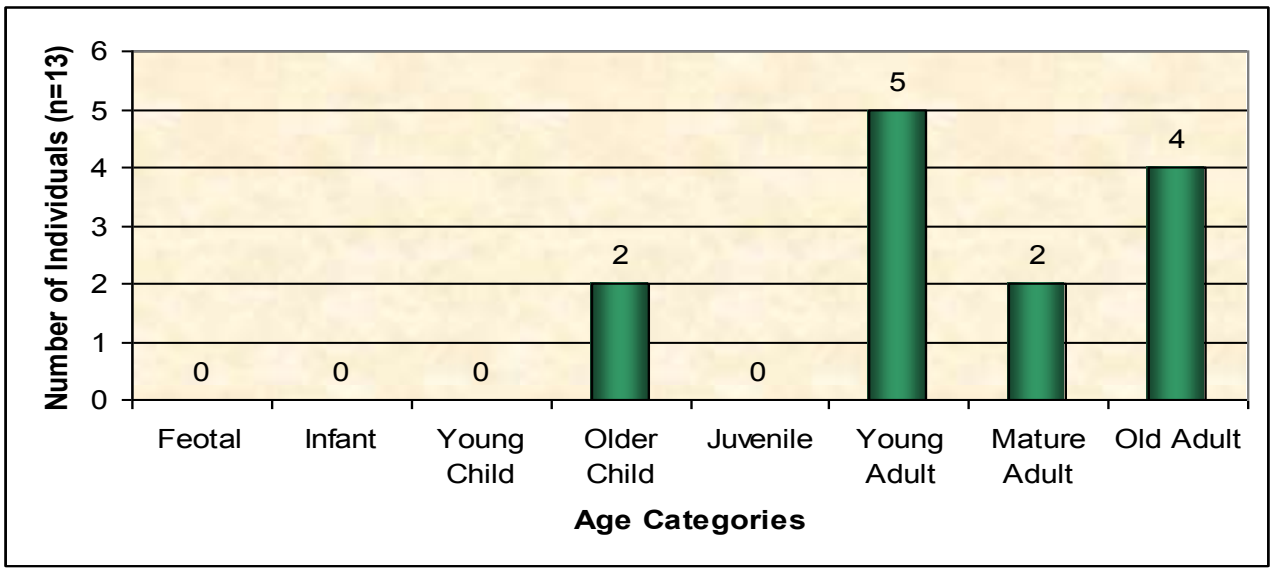

Figure 4: Number of individuals as distributed into age categories.

BIOLOGICAL SEX

Sex was determined through the morphological characteristics of the adult pelvis (Schwartz, 1995; Ferembach *et al*, 1980; Phenice, 1969) and skull (Schwartz, 1995; Ferembach *et al*, 1980). As shown in Figure 5 (page 9), there was an even distribution between male and female skeletons. Three individuals did not contain the necessary diagnostic features to determine their sex.

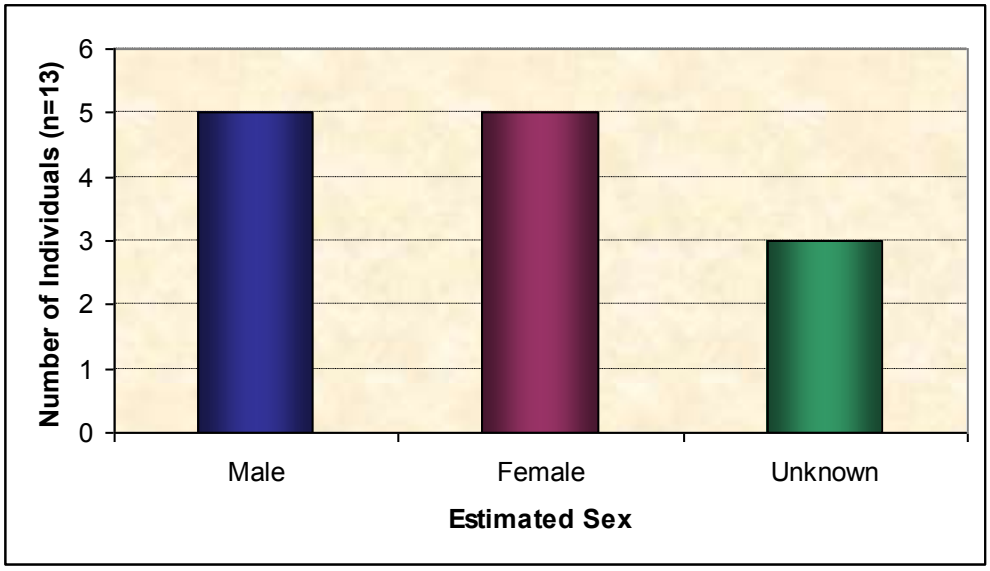

Figure 5: Distribution of male and female individuals.

DENTAL HEALTH

ALVEOLAR RESORPTION/ANTE-MORTEM TOOTH LOSS

All the adult mandibular and maxillary teeth from the assemblage were assessed (n=6 mandibles, n=6 maxillae). Resorption of various alveolar sockets as a result of ante-mortem tooth loss (AMTL) was noted in 5 adult mandibles (83%) and in 5 adult maxillae (83%). The mandible of PA SK263 (Figure 5) was noted to have total alveolar resorption.

Figure 5: Total alveolar resorption due to ante-mortem tooth loss of PASK263 (Photo C. Cox, 2006).

ABSCESSES

Abscesses were noted on 4 (67%) maxillae and 1 mandible (17%). One individual, PASK264, exhibited a total of 6 different abscesses (Figures 6 and 7).

Figures 6 and 7: Abscesses noted on the maxilla and mandible of PASK264 (Photos C. Cox, 2006).

PERIODONTAL DISEASE

Periodontal disease was noted on 3 individuals (21%) and was probably associated with ante-mortem tooth loss and/or abscess formation.

CARIOUS LESIONS/CALCULUS

Dental caries were observed on 2 maxillae (33%) with one individual, PASK264, containing two carious lesions on the left and right upper first molars (Figure 8). Calculus was noted on 4 maxillae (67%) and 5 mandibles (83%). Additionally, one of the older children PASK262, also exhibited severe calculus.

Figure 8: Carious lesions on the left and right M^1 of PASK264 (Photo C. Cox, 2006).

ENAMEL HYPOPLASIAS

One older child, PASK262, displayed 3 enamel hypoplasias on a right upper first incisor and a left lower canine.

OTHER DENTAL ANOMELIES

It was noted in one adult, PASK265, that there was a sideways eruption of the lower right third premolar while another individual, PASK266, contained impacted upper canines (Figure 9). PASK265 had severe occlusal wear and TEMP 735-A has a slight overcrowding of the lower left premolars.

Figure 9: Impacted adult canine of the upper right maxilla from PASK266. The upper left maxilla is also impacted, however it is not visible as it is still within the maxillary bone (Photo C. Cox, 2006).

PATHOLOGY

A small amount of pathological lesions were noted throughout the osteological examination, however it must be stressed that the vast majority of the post-skeletal bones were absent. As a consequence, it is impossible to determine the percentage of 'healthy' individuals versus 'unhealthy' individuals and therefore, only the observable pathologies will be discussed.

One individual had slight lipping of the joint surfaces on the left and right distal tibiae, another individual had slight lipping of the right glenoid while an additional skeleton contained lipping on the left lesser trochanter of the femur.

PASK263 exhibited a healed fracture of the left radius (Figure 10) and a probable small button osteoma on the left parietal (Figure 11). Also noted was slight morphological changes in the eye orbits of PASK267 as a consequence of iron deficiency known as cribra orbitalia.

Figure 10: Healed fracture of the left radius from PASK263 (Photo C. Cox, 2006).

Figure 11: Probable small button osteoma on the left parietal (Photo C. Cox, 2006).

RECOMMENDATIONS FOR FUTURE RESEARCH

Information regarding grave description, position and location is available on microfiche at the Natural History Museum in London. It would be advantageous to photocopy such information in order to reconstruct the location of the graves in relation to each other. This may explain the miscellaneous bones and the additional individuals recovered in the separate inhumations; especially in the case of the bones from TEMP 735-B which are not part of the original TEMP 735-A excavation photograph.

The vast majority of missing post-cranial skeletal elements should also be considered. Given the excellent state of preservation, it is possible that the entire skeleton was recovered during the original excavation. Indeed, it is highly unlikely that the bones are missing due to soil acidity. It appears that only a selection of bones were kept for curation purposes and it is thus recommended that an attempt to determine the original state of skeletal completeness be conducted. Any further findings should be given to an osteologist for incorporation into the final report.

It was also noted during the osteological assessment that there is a high percentage of dental pathologies and any future study should attempt to explain the lesions in terms of frequency rates and diet within the British Bronze Age.

Finally, attention should be addressed towards the lack of children within this collection. According to the survivorship curves from the model life tables (Coale and Demeny, 1983) the average Bronze Age childhood mortality rate was approximately 44%. Thus, the recovered older children are far below expected levels. Differential burial treatment to the younger children is considered to be a viable option and must be considered in the final report.

CREMATED REMAINS: DEMOGRAPHY

INTRODUCTION

Three cremation layers were assessed from Frampton on Severn. In the absence of the original excavation report and for the purposes of this osteological assessment, all three layers were considered as having come from the same cremation deposit.

Following the English Heritage, IFA and BABAO recommended guidelines (Mays, 2002; Brickley and McKinley, 2004) the cremated remains were assessed in order to determine human versus animal material, the minimum number of individuals, possible age estimation, total weight, efficiency of cremation, and pyre debris. It was not possible to estimate sex or observe any pathological data.

HUMAN AND FAUNAL REMAINS

Due to the shape and width of the bone cortex, cremated human remains were identified in contexts 34 and 26. Charred *bos* teeth were identified in context 27 and a small amount of charred tooth fragments, probably *bos*, in context 26. The *bos* teeth were complete, including the enamel layer, which is usually burned away through the extreme heat of the pyre. This indicates that the teeth were introduced into the pyre during its later stages, when the temperature was significantly reduced.

WEIGHT AND FRAGMENT SIZE

The amount and weight of cremated bone acts a guide since it relates to the number of individuals represented in the assemblage. British archaeological cremations of human adults produce between 0.2-2 kg of cremated bone with an overall average of 0.8 kg (McKinley, 1994). The small amount of cremated remains from Frampton on Severn were roughly estimated to weight 0.5 g in total and are thus below the expected weight ratios.

Additionally, all the cremated human remains were less than 2mm in length. On average 50% of cremated bones, once excavated from an archaeological site, are less than 10mm in size with the average maximum size being 45.2mm (McKinley, 1994). Thus, the Frampton cremated remains are far below expected fragment sizes.

COMPLETENESS/PRESERVATION

Cremated bone is not subjected to the same destructive forces in acidic soil when compared to inhumed bone. This is due to the reduction of organic components and its subsequent dehydration which leaves a fully mineralized skeleton after the cremation (McKinley, 1994 and 1989). McKinley (1997) asserts that 50% or less of the remaining bone after a cremation is recovered for burial and of that, only 30-50% may be identifiable as a particular fragment of bone. Only a few cremated fragments of long bone, one vertebral body and the charred *bos* teeth were identified from the Frampton remains. This information, added with the low weight and fragment length, indicate that this is not a complete cremation burial.

EFFICIENCY OF CREMATION

The effectiveness of the cremation process is reflected primarily in the colour of the bones (Shipman *et al.,* 1984). Full oxidization is when the bones have been fully burnt on the pyre and will become buff-white in colour; while colours of blue, grey, brown, and black indicate varying degrees leading towards complete oxidization. The colour of the cremated remains from Frampton on Severn ranged from greys to whites indicating that the remains were efficiently cremated in a pyre which temperatures reaching 645°C to 940°C.

AGE AT DEATH

The estimation of age at death relies largely on the size of bone since the majority of the diagnostic features are burnt off during the cremation process. As such, age at death is placed into broad age categories (i.e., infant, juvenile, and adult). The only identifiable human bone fragment was a small vertebral body fragment. This indicates that the cremated remains belong to a young child.

PYRE DEBRIS

Context 34 contained a small amount of slag and no other material normally associated with pyre debris (i.e., charcoal, pebbles, sooty soil etc). This again supports the idea that this is not the complete cremation burial.

RECOMMENDATIONS FOR FUTURE RESEARCH

All osteological examinations indicate that this sample of cremated human remains come from a much larger cremation deposit. Unfortunately, the material was excavated during an era in which academics commonly held a misconception that nothing could be gleaned from their analysis (McKinley, 1997). Indeed, in August 1930, a Swedish anthropologist and anatomist, Dr. C. M. Fürst made the following statement in response to an inquiry from the Chief Inspector of Antiquities in Stockholm:

> "I would straight away place on record my considered opinion, based on experience, that cremated remains of human bones in burial urns are almost always devoid of any anthropological interest, especially in cases of such in a mass cemetery. From an anthropological point of view, therefore, these bones are of no scientific value, and I consider that nothing is lost if they are neither submitted to nor preserved in the Museums" (Gejvall, 1963)

As such, it is entirely possible that the excavated cremated remains were discarded either at the site or at the museum. However, it is still recommended that any further research into the original excavation records consider the fate of the cremated remains and be discussed in the final report.

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Appendix 7: Contents of the Atkinson Archive
(information from Matt Livers)

Whitminster I round barrow was excavated in 1948, for the Ministry of Works. The surviving archive consists of 21 small finds boxes, mostly labelled with context and finds numbers, and containing Early Bronze Age pot sherds, flint, cremated bone fragments, animal bone and charcoal; one large sheet of section drawings; and two processed reels of monochrome print film. A crouched inhumation from the site is not among this material.

Whitminster III round barrow was also excavated in 1948 for the Ministry of Works. The surviving archive consists of 12 small finds boxes, mostly labeled with context and finds numbers, containing Roman coarse pottery, decorated Samian ware, charcoal and some prehistoric pottery; the drawn and photographic record for the two sites were shared.

WHITMINSTER I

Date	No	Cutting	Level	Depth	Item
18.9.48	2	NE	Body level	3'2"	15 flints 1 non-flint
18.9.48	3	NE extension	Body level	3'5"	3 pot frags
18.9.48	4	NE extension	Below skel		4 flints
18.9.48	5	East 25'10"	Otl		1 sherd
19.9.48	8	East	41'10"/2'5"/1'11"		3 pot frags
19.9.48	10	East	44"/1'5"/2'6"		1 sherd
19.9.48	11				Core
19.9.48	12	East	66'/4'6"/5'6"		2 flints
20.9.48	15	C	Over black soil	1'2"	1 flint
20.9.48	16	B+C	Outer level daub		14 flints
20.9.48	17	B	Crem pit outer layer daub		"Charcoal" [pot sherd]
20.9.48	18	C	Topsoil		Flint
21.9.48	19	B	Crem pit upper layer		Flint
21.9.48	20	A+B	Shallow depression	2'2"	Stone + flint
22.9.48	25	B	Crem pit lower layer	2'4"	Flint
22.9.48	26	B	Crem pit lower layer	2'4"	Bone frags
21.9.48	27	B	Crem pit lower layer	2'4"	Tooth
22.9.48	28	B	Crem pit lower layer	2'4"	Nut
22.9.48	31	D extension	Top of otl		Burnt flint
24.9.48	32	B/C (wall)	Crem pit	1'8"	Charcoal
24.9.48	34	B/C (wall)	Crem pit	1'8"	Bone frags
24.9.48	35	B/C (wall)	Crem pit	1'8"	Pot [?]

WHITMINSTER III

23.9.48	37	Circular pit		3"	Charcoal
24.9.48	38	Pit		2"	2 samian
25.9.48	40	Pit A	Gravel silting on E side	4'2"	Wood
25.4.48	42	B	Gravel fill	1'4"	Pottery
25.9.48	43	B		3'1"	Pottery
25.9.48	44	L	Soil ditch fill	2'	Pottery
26.9.48	45	Pit A	Earthy fill	4'1"	Sherd
26.9.48	47	Pit B		8"	Pottery
27.9.48	49	Outer ditch		1'1"	Pottery
25.9.48	69	Ditch SSW	Gravelly silt		Pottery
26.9.48	-	Pit B		11"	pottery

Appendix 8: Gantt chart

Dates shown as week beginning (Monday). Based on commencement date of 18th September 2006. Lighter shading indicates tasks on-going throughout the project.

Indicative only: dependent on availability of specialists. Gap in gantt allows for turn around for radiocarbon dates, estimated as c. 12 weeks from mid-September by English Heritage. Later phases could be brought forward if dates have been completed.

Task	Who	Days	S E P			O C T					J A N			F E B				M	A
				18	25	02	09	16	23	30			29	05	12	19	26	05	12
1	PO	2		2															
2	SPEC	16							1										
	III	3							3										
	SPO	1							1										
3	PO	22																2	
	SPO	3																3	
4	PO	2																2	
5	PO	5																1	4
	SPO	1																	1
6	PO	1																	
	SPO	1																	

Appendix 9: NMP Analysis of Frampton-On-Severn (SO70NE)

Compiled from notes by Amanda Dickson

Analysis and recording of this OS quarter sheet is not yet complete and this Appendix should not be considered to represent the full report for the work carried out by the NMP.

The quarter sheet is characterised by almost blanket coverage of Ridge and Furrow, with much of it remaining extant into the late 20th century.

There are noticeable gaps however, e.g. areas of meadows, woodland, urban centres, gravel extraction and those already levelled by modern agricultural ploughing. Much of the earthworks seen in the 1940's, has been lost, due to modern agriculture, updated transport infrastructure, modern industrial sites and increased housing development. However there are a few notable sites which may have survived in some form.

The first is at **(SO 78500950)** in the village of **Putloe**, a ditched enclosure surrounding a platform. There are various features visible on the vertical photographs, including a ring ditch, pits, banks and a possible building platform. The ridge and furrow slightly overlaps the ditch on the East side of the enclosure, giving this site a possible early medieval date. Below is a section from the Victoria County History Vol 10, which may give some ideas to the interpretation of this site.

> "Putloe hamlet lies on the Gloucester-Bristol road and to some extent owes its growth to the presence of the road. The hamlet existed by 1221; in 1403 it was large and notable enough for Moreton Valence to be distinguished as Moreton by Putloe; in 1675 it contained c. 20 houses, including an inn, but in or before 1717 it suffered from a fire." (pp 203-33)
>
> "A water-mill at Putloe was recorded in the 1840s and apparently in 1808, but has not been found earlier or later; it was presumably connected with the iron-works there. The surviving house was built of brick in the early 19th century with a mansard roof."
>
> "A forge at the north end of Putloe village in 1810 (fn. 54) was on the site of iron-works recorded in 1824. (fn. 55) The site was later that of Putloe Mill, which in the 1840s was owned by Thomas Barnard and occupied by Edwin Orchard; (fn. 56) the mill is said to have been last used as a pin-mill by one Barnard, (fn. 57) and Edwin Orchard was an edge tool maker in Putloe in the 1870s." (pp 236-38)

The second site is at **Whitminster House/Wheatenhurst (SO 76100900).** This is really two sites. In the field to the north of Whitminster House is a ditched enclosure, at the centre of which was a possible mound in 1947, with a clump of trees covering it. In 1971, it appears as if the trees have been uprooted and and there now exists a hollow. During a brief field visit, the ditched enclosure, although only showing as a slight earthwork, appeared to respect the natural drainage of the field, which was low-lying at this point; the land gently sloping downwards on all sides. (SMR site No. 4643)

The other is to the east of Whitminster House, in the grounds itself. Various earthworks have been identified. The first is to the north of the possible fishpond, to the north of this is a rectilinear bank, (only the visible scarp has been drawn). Further to the south is what appears to be a fairly large L-shaped ditch which may in fact have continued to form a rectangle. (SMR site no. 13037).

A third site is located in the field to the west of Bond's Mill, were some possible archaeological features have been identified. In the NW corner is a large pit, to the south of which along the western field boundary are what appear to be enclosures, certainly there is some ground disturbance.

(SMR site No. 13163 "This field is called "Brick Kiln Ground" on the Stonehouse Tithe Map of 1839 (SW 3352).")

New Second World War structures have also been identified. Three new pillbox sites along the Stroudwater Canal (SO 77670659), (SO 79210530) and (SO 79710510), along with other structures and buildings which surrounded the Moreton Valence/Harsefield Airfield; Searchlight Battery (SMR site No.27071; SO 77540878); camouflaged ball bearing factory (SO 79600550) and a camp or barracks (SO 79400530).

Brief analysis of Cropmark Formation in and around Frampton on Severn (SO70NE)

The formation of cropmarks, appears to be limited in this area. The majority of those that have been noted or recorded, have been destroyed by gravel extraction. These are unfortunately the precise areas where one would expect cropmark formation.

The area is characterised by inliers of gravel terraces surrounded by clays, with alluvium confined to the valley of the River Frome. These areas of gravels are where one would expect past settlement due to the good drainage of the soils. And excavations in and around these areas has yielded exactly that from prehistoric to medieval remains. So, along with numerous spot finds, this would suggest a high level of past activity, especially sites at Frampton-On-Severn and Fromebridge. Indeed cropmarks have been photographed in these areas, some have been excavated but most have been lost to the large sand and gravel pits.

The main photographic source for the cropmarks has been oblique CUCAP photography from the 1950's, and remains the only record of cropmarks seen at Fromebridge and at Frampton. Although Vertical photography exists spanning the last 50 years, they are not under the optimum conditions for viewing cropmark formation. Along with the large coverage of medieval ridge and furrow, much of which still remains as earthworks, the conditions for producing cropmarks are not ideal.

Having said that the area covering SO70NE has the potential to yield more cropmarks, as the ridge and furrow is levelled and the possible underlying archaeology revealed. Specific sites will benefit from revisits, and hopefully targeting those areas where extraction is still taking place will help to record any potential new sites before they too are lost.