

Worlington Quarry, 2011 Phase, Worlington WGN 038

Archaeological Monitoring Report

SCCAS Report No. 2011/068

Client: Frimstone Ltd

Author: Rob Brooks

July/2011

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HER Information

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Disclaimer

Any opinions expressed in this report about the need for further archaeological work are those of the Field Projects Team alone. Ultimately the need for further work will be determined by the Local Planning Authority and its Archaeological Advisors when a planning application is registered. Suffolk County Council's archaeological contracting services cannot accept responsibility for inconvenience caused to the clients should the Planning Authority take a different view to that expressed in the report.

Prepared By: Rob Brooks

Date:

Approved By:

Position:

Date:

Signed:

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Summary

An archaeological monitoring was carried out during the 2011 phase of topsoil stripping prior to quarrying at Worlington Quarry, Worlington, Suffolk. These works revealed evidence of two pits and one hearth, believed to be of later prehistoric date, which between them contained two struck flints, several heated flints and charcoal. Four large modern pits were also recorded and partially excavated and are believed to relate to farming or quarrying activities.

Despite some disturbance, the geological levels were largely undisturbed, with archaeological features clearly visible.

1. Introduction

A monitoring was carried out at Worlington Quarry, Worlington (Fig. 1) during topsoil stripping in advance of an ongoing programme of sand and gravel extraction (Planning Application F/2004/0227/CCA) by the client Frimstone Ltd. The work was carried out from 13th April to 6th May 2011 and was undertaken in accordance with a Brief and Specification produced by Edward Martin (Suffolk County Council Archaeology Service, Conservation Team (SCCAS/CT), Appendix 1).

Worlington Quarry is located in West Suffolk, just north of Red Lodge and south of Worlington village, fewer than three miles south-west from Mildenhall. Two previous phases of monitoring have occurred in this phase of quarrying, in 2009 and 2010 (Fig.1).

2. Geology and topography

The site's geology is made up of superficial river terrace deposits overlying Holywell nodular chalk formation and new pit chalk formation bedrock (BGS, 2011). On site this comprised mid yellow-orange sand and gravel deposits, beneath which was chalk that was only occasionally uncovered during the topsoil stripping.

The site lies close to the 15m contour and was fairly level, although there was a slight slope from both the east and west, leading to the lowest point near the southern end of Plot 1, which was recorded as 13.1m OD.

3. Archaeology and historical background

The development area has been previously identified as having potential for widespread Bronze Age occupation. A Bronze Age barrow (WGN 003) lies to the east of Site WGN 034 (Fig. 1), and a further four barrows (BTM 012, BTM 013, BTM 027 and BTM 028) are recorded 1.2 km to the east on Chalk Hill. Saxon burials (WGN 013) and a possible Roman villa (BTM 026) are also recorded on this raised area. The evaluation of Phases 1 and 2 of the quarry (WGN 028), carried out in 2004, identified a scatter of pits dating

to the Bronze and Iron Age (Everett, 2004). Site WGN 032, lying immediately to the north-west of site WGN 034, was evaluated in early 2008 and encountered no archaeological remains.

The Phase 3 Extraction area had been evaluated in 2008 (WGN 034, Fig. 1) and two stages of monitoring followed this in 2009 and 2010. The evaluation revealed sparse archaeological remains of probable prehistoric date and a small quantity of later Bronze Age flints. The findings indicated a lack of settlement-related activity and suggested that use of the land was low-level and infrequent (Muldowney and Muldowney, 2009). The 2009 monitoring revealed a single, shallow and undated pit, whilst the 2010 monitoring uncovered a small Late Neolithic/Early Bronze Age flint-working hollow with sherds of three separate Beaker vessels and a large quantity of worked and burnt flints (Muldowney, 2009 and 2010).

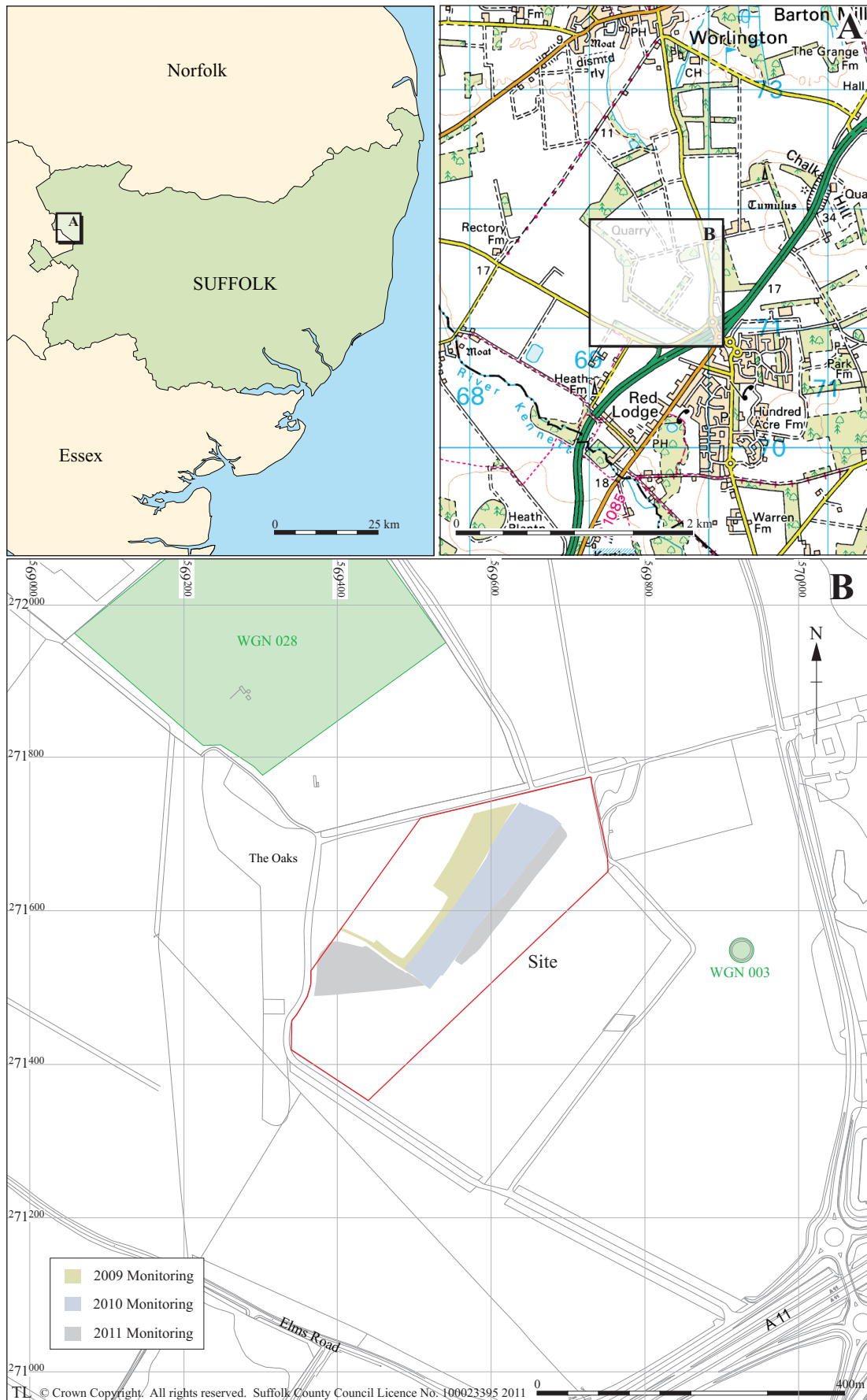


Figure 1. Location of site, showing the development area/WGN 034 (red), three monitoring areas and the Historic Environment Record entries as mentioned in the text

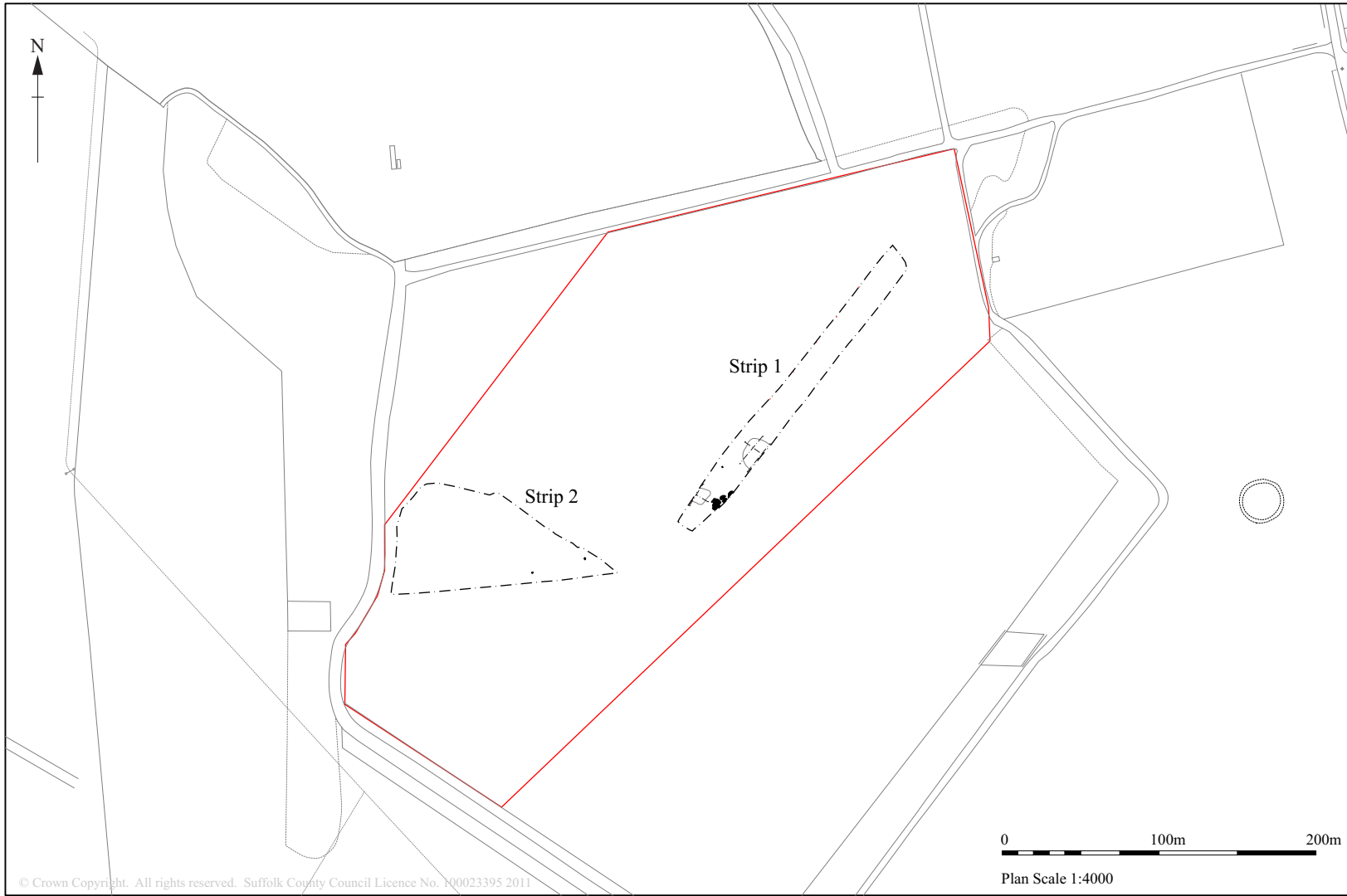


Figure 2. Site plan

4. Methodology

A rectangular area (Strip 1) and a triangular area (Strip 2) were stripped of topsoil to the underlying geology using a machine equipped with a toothless bucket (Fig. 2). The features that were then uncovered were excavated by hand and recorded in a single continuous numbering system, starting from 0300 to avoid any overlap with previous fieldwork phases. Features 0300, 0319 and 0321 were 50% then 100% excavated, whilst being drawn in section and plan at varying scales between 1:10 and 1:50 as necessary. Environmental bulk samples were taken from these features. Pits 0302/0304 and 0310 were only partially excavated as they were evidently modern. Two natural hollows were encountered during the monitoring. These were excavated by machine as the fill was naturally derived and they contained no finds, following which several transects were surveyed across them. Digital photographs were taken of the features at 72 x 72dpi.

The boundaries of the site and the location of features were plotted using a Leica GPS1200 Rover system. This was set to be accurate to under 0.05m. Processing of these results was carried out off-site using a combination of LisCAD, MapInfo and AutoCAD 2009.

The site archive is stored in the SCCAS main store at Bury St Edmunds under HER no. WGN 038 and a digital copy of the report has been submitted to the Archaeological Data Service at: <http://ads.ahds.ac.uk/catalogue/library/greylit>

5. Results

5.1 Introduction

During the monitoring seven features were recorded, of which five were excavated (Figs. 3, 4 and 5). Three of the features are thought to be probably prehistoric, whilst the others are probably modern. Two of the modern features were not excavated. A further two natural hollows were recorded in one of the strips. Several transects were surveyed across the hollows in order to record their depths and profiles. The three prehistoric features are dated as such by similarity to other dated features in the area. They are also consistent with a prehistoric landscape that was not intensively occupied. Further details of the contexts are given in Appendix 2.

5.2 Prehistoric features

Two small pits, 0300 and 0321, and hearth 0319 were found on the site (Fig. 5). Pit 0300 was found in Strip 1 and was oval in plan (0.8m by 0.65m by 0.18m deep), with a mid-dark orangish-grey sand fill with charcoal lenses, which contained one struck flint. This was a long thin blade of Neolithic or Early Bronze Age date, which may be redeposited. This pit appeared to mainly contain redeposited hearth waste.

Hearth 0319 and pit 0321 were found in Strip 2. The hearth feature was oval in plan (1.44m by 1.1m by 0.31m deep) and had poorly defined edges. It was filled with brownish-orangish-red sand 0320, with frequent charcoal flecks. Several charcoal pieces, measuring c.0.2m long, were found within the central area of the hearth and are the remains of branches. It is thought that this feature represents a hearth, rather than a pit with redeposited hearth waste, because the fill blended imperceptibly with the surrounding geology, suggesting that it was actually heated natural rather than a separately derived deposit. Also, the survival of the intact fragile charcoal branches suggests that the embers were not redeposited.

Pit 0320 measured 0.56m by 0.44m by 0.16m deep. It was filled with 0321, a mid orange-dark grey mottled sand mixture, which produced one Neolithic or Early Bronze Age flint flake or blade. It was moderately root disturbed and the edges were somewhat poorly defined as a result. This was thought to be another pit containing redeposited hearth waste and probably represented only the very base of the original feature.

Environmental samples were taken from each of these features with broadly similar results. They showed that the fills largely contained, or had only preserved, charcoal. There was also some evidence for combustion of other organic material and it was clear that this combustion was at a high temperature.

5.3 Modern features

Four large pit type features were recorded in Strip 1. Two were irregularly shaped with squared off edges and corners, with the largest measuring 7m (NE-SW) by >6.45m (SE-NW). They had had parallel bands of natural running through them, which were c.0.9m apart and the fills were indicative of machine excavation (see Plate 1 and Appendix 2). One was partially excavated in two segments and recorded under cuts 0302 and 0304. The other two pits were circular/oval and were filled with multiple grey, brown and orange silty-sand fills, containing varying degrees of gravel. One of these pits ran under the baulk and was excavated as 0310.



Plate 1. Modern pit cut 0304

5.4 Natural features

Two large natural hollows were found in Strip 1. They were slightly irregular, sub-square/sub-circular in plan, measuring 20.3m (SW-NE) by >12m (SE-NW) and 10.95m (SW-NE) by >8.2m (SE-NW). Both were c.0.5-0.6m deep. These were filled with coarse sand of a very dark bluish-grey colour and very pale (but not heat-altered) flints, with no finds. They were thought to be natural due to their size, their shallow and gently sloping profiles and because the fills were inorganic and produced no finds.

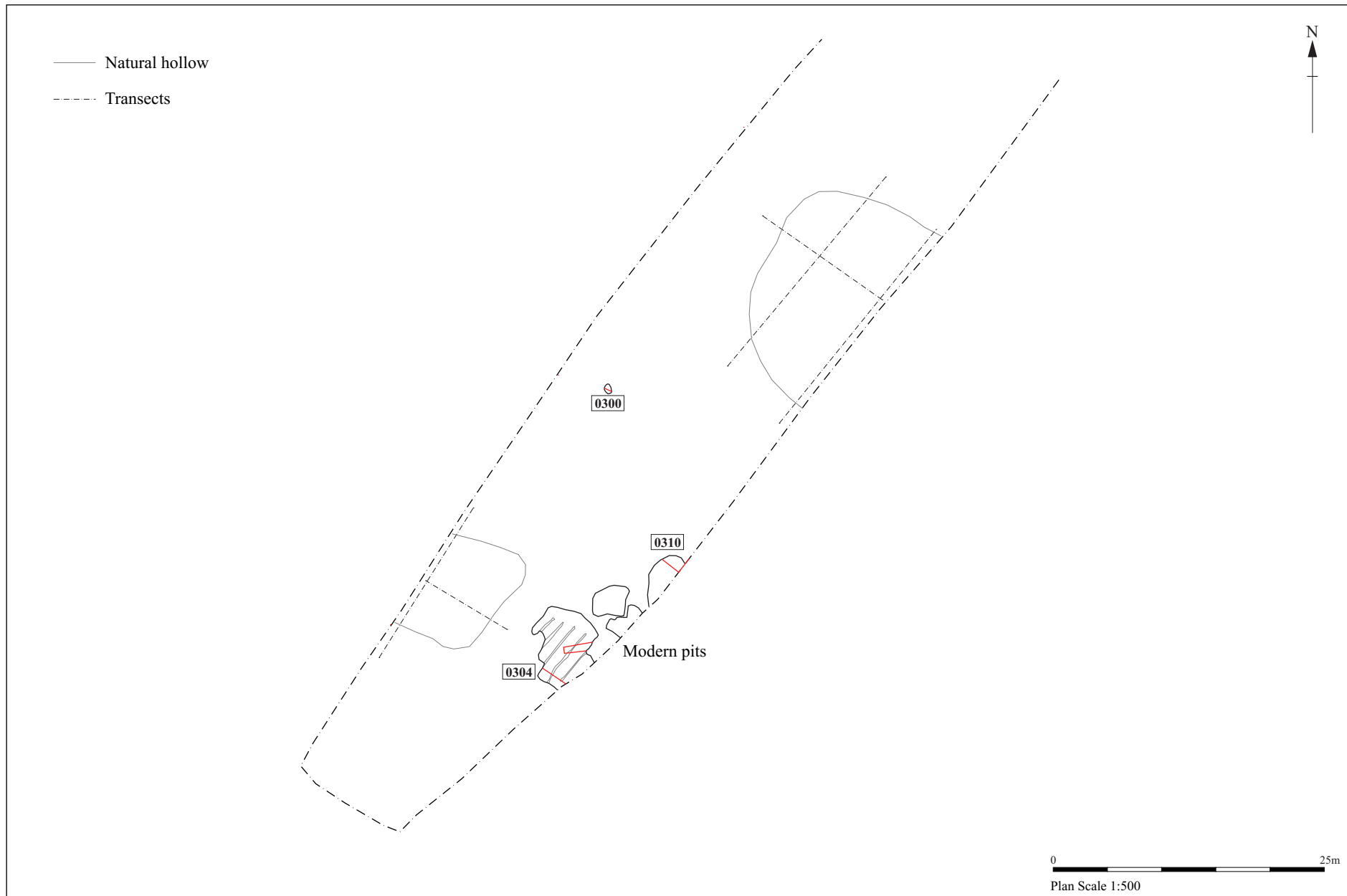


Figure 3. South-west end of Strip 1

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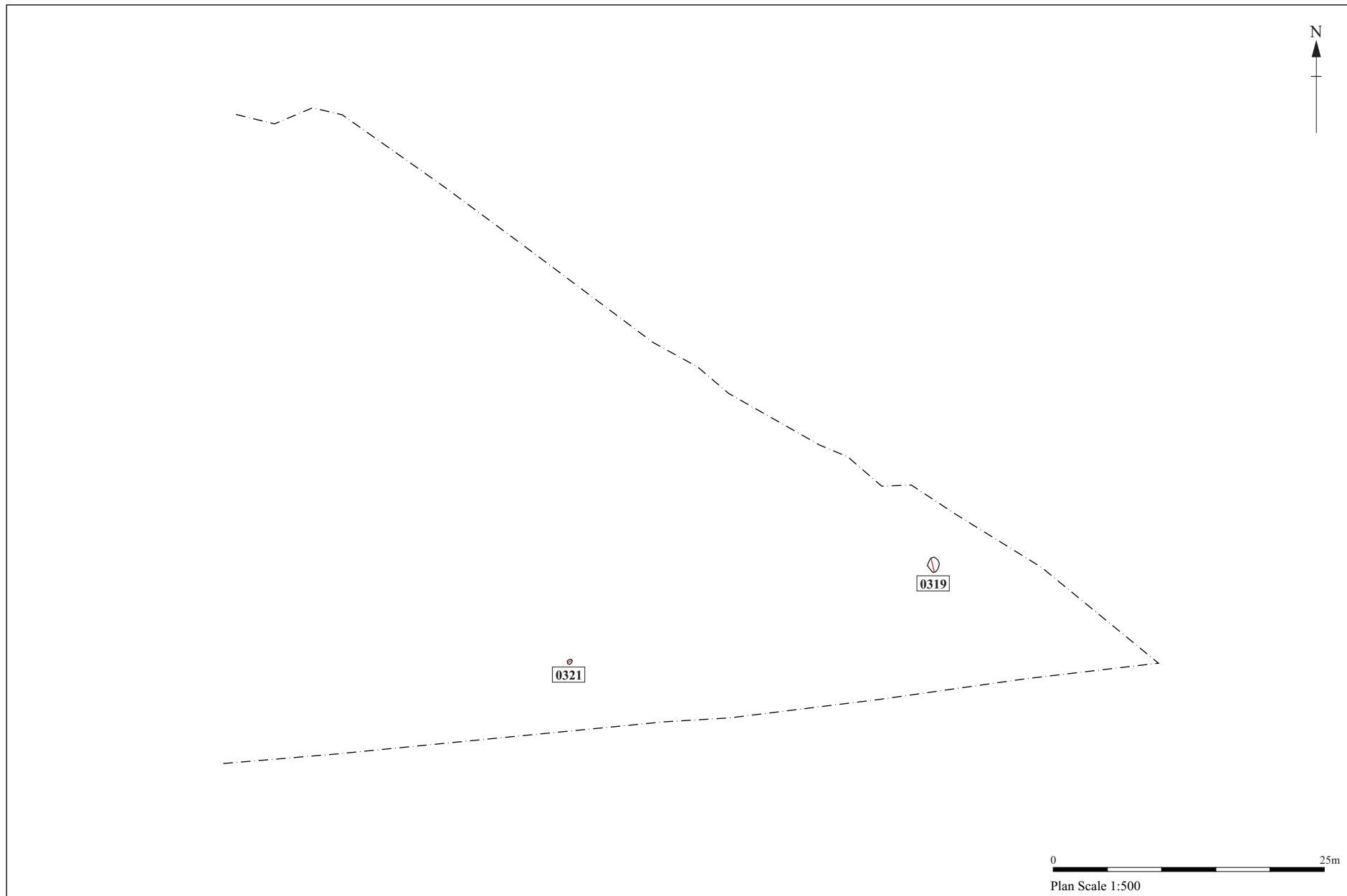


Figure 4. East end of Strip 2

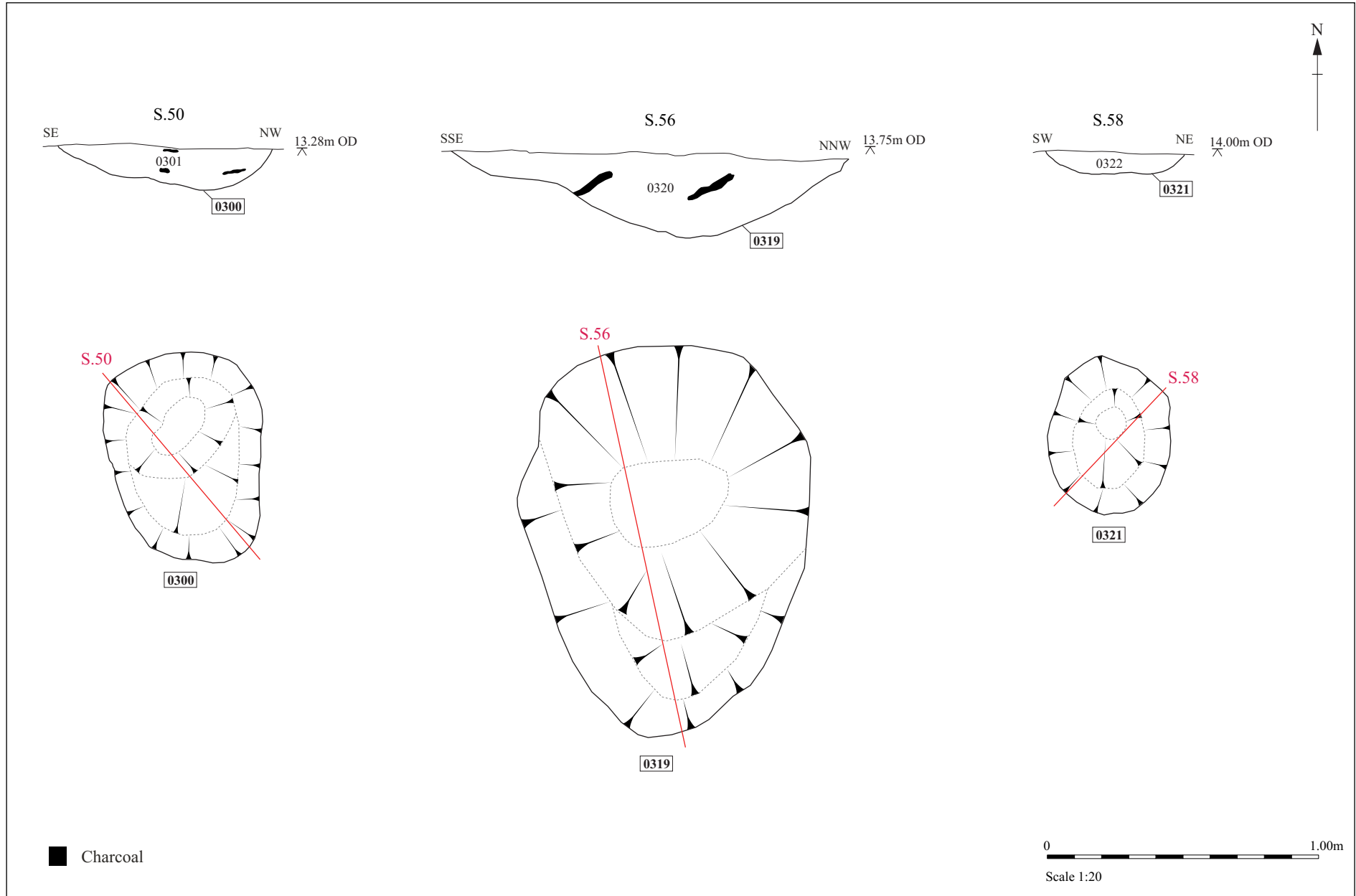


Figure 5. Plans and sections of prehistoric features

6. Finds and environmental evidence

Cathy Tester

6.1 Introduction

Finds were collected from three contexts, as shown in the table below.

Context	Flint		Burnt flint/stone		Spotdate
	No.	Wt/g	No.	Wt/g	
0301	1	6	18	38	Neo or EBA
0320			22	36	
0322	1	1	26	44	Neo or EBA
Total	2	7	66	118	

Table 1. Finds quantities by context

6.2 Flint

Colin Pendleton

Two fragments of struck flint were collected from two contexts. Both are unpatinated and of probable Neolithic or Early Bronze Age date. The first, from pit 0300 (0301) is a snapped thin long flake with a retouched notch and parallel flake scars on the dorsal face which suggest relatively careful working. The other, from pit 0321 (0322), is a small snapped flake or blade with one cortical edge.

6.3 Burnt flint/stone

Sixty-six small fragments of burnt flint and stone with an average weight of 1.8g were recovered from within the non-floating residues from environmental Samples 1, 2 and 4.

6.4 Plant macrofossils and other remains

Val Fryer

Introduction and method statement

Samples for the retrieval of plant macrofossil assemblages were taken from three features and were submitted for assessment of their content and preservation. The samples were bulk floated by SCCAS staff and the flots were collected in a 300 micron mesh sieve. The dried flots were scanned under a binocular microscope at magnifications up to x 16 and the plant macrofossils and other remains noted are listed in Table 2. Nomenclature within the table follows Stace (1997). All plant remains were charred. Modern seeds and fungal sclerotia were present throughout.

Results

Although the flots were relatively large (0.1 – 0.8 litres in volume), all three were primarily composed of charcoal/charred wood fragments, with other remains being very scarce. The charcoal was mostly flaked (possibly indicative of high temperatures of combustion) and some fragments within Sample 1 were also fringed with small tarry globules. A single sedge (*Carex* sp.) fruit was also recovered from Sample 1 and Samples 1 and 2 contained small pieces of charred root/stem. All three assemblages included fragments of black porous and tarry material, possibly derived from the combustion of organic remains at very high temperatures. Although the small pieces of 'iron pan', which were common within the assemblage from Sample 1, were probably present as part of the natural geology of the site, it should be noted that such material was occasionally exploited as a source of low- grade iron ore.

Sample No.	1	2	4
Context No.	301	320	322
Cut No.	300	319	321
Plant macrofossils			
<i>Carex</i> sp.	x		
Charcoal <2mm	xxxx	xxxx	xxxx
Charcoal >2mm	xxx	xxxx	xxxx
Charcoal >5mm		xxx	x
Charcoal >10mm		xxx	
Charred root/stem	x	x	
Indet.seeds	x		
Other remains			
Black porous 'cokey' material	xxx	x	x
Black tarry material	x		
Iron pan	xx		
Mineralised soil concretions	xxx		
Sample volume (litres)	28	12	6
Volume of flot (litres)	0.3	0.8	0.1
% flot sorted	50%	12.50%	100%

Table 2. Plant macrofossils and other remains

Key: x = 1-10 specimens, xx = 11-50 specimens, xxx = 51-100 specimens, xxxx = 100+ specimens

Conclusions and recommendations for further work

In summary, it would appear that the assemblages are partly or wholly derived from waste generated during one or more episodes of intense, high temperature combustion, although it is currently unclear why such burning occurred. As the assemblages are so limited in composition, further quantification is not required at this stage. However, it should be noted that identification and analysis of the charcoal/charred wood may provide useful data regarding the status of the local environment and the utilisation of natural resources.

Although the current assemblages are somewhat sparse, it is strongly recommended that if further interventions are planned within the quarry area, additional plant macrofossil samples of approximately 20-40 litres in volume should be taken from all well-sealed and dated contexts recorded during excavation.

6.5 Discussion of material evidence

The finds assemblage is sparse, suggesting limited prehistoric activity in the area of site covered by this stage of monitoring. The assemblage consists of single struck flints from two features and very small amounts of burnt flint and stone recovered from the three environmental samples. The macrofossil assemblages are limited in composition, consisting mainly of charcoal/charred wood fragments. These may be suitable for species identification and C14/AMS analysis if required.

Beaker pottery and contemporary flint as well as earlier Iron Age pottery and possible contemporary flint were recovered from previous phases of work, most notably the evaluation and excavation at WGN 028 (Everett, 2004 and Sommers, 2006). Later Neolithic or Early Bronze Age Beaker pottery as well as a homogenous assemblage of earlier Iron Age post Deverel-Rimbury decorated ware dating from around the 6th century BC were present (Percival, 2006). The struck flint included pieces which are characteristic of later Neolithic or Early Bronze Age to earlier Iron Age assemblages. These were found in close vicinity, possibly contemporary to pottery within that date range (Bates, 2006).

7. Discussion

Monitoring of the topsoil strip for the quarrying revealed three archaeological features, which, from finds evidence and similarity to other features found in the vicinity, are probably of later prehistoric date. The function of the two pits seems to have been for depositing material, largely ash/fire residue, whilst the third feature seems to have been a hearth or an area of isolated burning. The evidence identified suggests a continuation of the low-level, dispersed occupation seen in previous stages of work.

Several pits have been identified as modern from the size and irregularity of the cuts, as well as the nature of their fills. These may be a result of activity relating to the pig farm which was based on the site, other agricultural activity, or testing for quarry aggregate.

8. Conclusions and recommendations for further work

The prehistoric features uncovered on the site have confirmed the wider spread of later prehistoric activity in the area. Whilst the occupation was probably not intensive, or was perhaps ephemeral, it hints at human occupation in the wider area, perhaps with a focus towards the sites to the east. The nature of the activity is unclear at the moment, with evidence only indicating localised fires and use of flint tools. Any further works in the quarry and wider area may provide more evidence on the nature and extent of the prehistoric activity.

9. Archive deposition

Paper and photographic archive: SCCAS Bury St Edmunds T:arc\ARCHIVE FIELD PROJ\Worlington\WGN 038 Monitoring

Finds and environmental archive: SCCAS Bury St Edmunds. Store Location: H / 86 / 3 in the box which also contains finds from WGN 034, WGN 038 and WGN 028

10. Acknowledgements

The monitoring was carried out by Rob Brooks and Jo Caruth from Suffolk County Council Archaeological Service, Field Team. The project was directed by Rob Brooks, and managed by Jo Caruth.

The post-excavation was managed by Richenda Goffin. Finds processing was carried out by Jonathan Van Jennians, and the production of site plans and sections by Gemma Adams. Soil samples were processed by Anna West and analysed by Val Fryer. The specialist finds report was written by Cathy Tester, with a description on the flint by Colin Pendleton. The report was checked by Richenda Goffin.

11. Bibliography

BGS, 2011, Information obtained from http://www.bgs.ac.uk/products/digitalmaps/data_625k.html and reproduced with the permission of the British Geological Survey ©NERC. All rights Reserved.

Bates, S., 2006, 'Worked Flint from Worlington Quarry (WGN 028) Phases 1 and 2 (unpublished finds report for SCCAS)

Everett, L., 2004, *Phases 1 & 2, Bay Farm, Worlington. WGN 028*, SCCAS Report No. 2004/147

Muldowney, E. and Muldowney, M., 2008, *Worlington Quarry: Completion of Phase 3, Part of Phase 5 and the entirety of Phase 7, Bay Farm, Worlington. WGN 034 & WGN 035*. SCCAS Report No. 2008/222

Muldowney, E., 2009, *Worlington Quarry, Worlington WGN 038*, 2009 Phase, SCCAS Report No. 2009/231

Muldowney, M., 2010, *Worlington Quarry, Worlington WGN 038*, 2010 Phase, SCCAS Report No. 2010/162

Percival, S., 'Prehistoric pottery from Worlington Quarry (WGN 028) Phases 1 and 2 (unpublished finds report for SCCAS)

Sommers, M., *Worlington Quarry Phases 1 and 2 Excavation Report (Unpublished SCCAS report)*

Stace, C., 1997, *New Flora of the British Isles*. Second edition. Cambridge University Press

Appendix 1. Brief and specification

SUFFOLK COUNTY COUNCIL ARCHAEOLOGICAL SERVICE CONSERVATION TEAM

Brief and Specification for Archaeological Monitoring (continuous observation of soil-stripping operations)

MINERAL EXTRACTION SITE, BAY FARM, WORLINGTON Phases 3, 5 and 7

Although this document sets out the work that will need to be done by an archaeological contractor, the developer should be aware that some of its provisions may impinge upon the general working practices of the development and may have financial implications. The commissioning body may also have Health & Safety responsibilities, see para 1.7

1. Background

- 1.1 Planning permission has been given for mineral extraction to take place on the above site (F/2004/0227/CCA).
- 1.2 The area lies adjacent to a known archaeological site: a Neolithic and Bronze Age burial mound called Swale's Tumulus (Suffolk Historic Environment Record no. WGN 003).
- 1.3 A desk-top assessment of the area was carried out by the Archaeological Service of Suffolk County Council in 2003 (report no. 2003/3) followed by a field evaluation in 2004 (report no. 2004/147). This demonstrated that there was a scattered presence of features of Bronze Age and Iron Age date. Subsequent evaluations (reports 2008/93 and 2008/222) have shown a low level of prehistoric activity. The scattered nature of the prehistoric features means that activity areas could be missed by the evaluation trenches and there is therefore a need to monitor the topsoil-stripping operations.
- 1.4 As the next stage in complying with the planning condition the developer has requested a brief and specification for the archaeological monitoring of the soil-stripping operations.

- 1.5 There is a presumption that the archaeological work specified for the whole area will be undertaken by the same body, whether the fieldwork takes place in phases or not. There is similarly a presumption that further analysis and post-excavation work to final report stage will be carried through by the excavating body. Any variation from this principle would require justification.
- 1.6 All arrangements for field excavation of the site, the timing of the work, and access to the site, are to be negotiated with the commissioning body.
- 1.7 Before any archaeological site work can commence it is the responsibility of the developer to provide the archaeological contractor with either the contaminated land report for the site or a written statement that there is no contamination.

2. **Brief for the Archaeological Project**

- 2.1 In the area defined on the attached map, archaeological monitoring, as specified in Section 3, is to be carried out prior to any extraction of minerals or other development works. With prior agreement, this work may be carried out phased sections.
- 2.2 The objective of the monitoring will be :
- a) to enable the identification and evaluation of potentially significant archaeological features or deposits (see Section 3);
 - b) to identify, excavate and record features and deposits of lesser archaeological significance (see Section 4).
- 2.3 The academic objective will centre upon the high potential for this site to produce evidence for prehistoric settlement evidence.
- 2.4 This project will be carried through in a manner broadly consistent with English Heritage's *Management of Archaeological Projects*, 1991 (MAP2). Excavation is to be followed by the preparation of a full archive, and an assessment of potential for analysis. Analysis and final report preparation will follow assessment and will be the subject of a further brief and updated project design.
- 2.5 In accordance with the standards and guidance produced by the Institute of Field Archaeologists this brief should not be considered sufficient to enable the total execution of the project. A Project Design or Written Scheme of Investigation (PD/WSI) based upon this brief and the accompanying outline specification of minimum requirements, is an essential requirement. This must be submitted by the developers, or their agent, to the Conservation Team of the Archaeological Service of Suffolk County Council (Shire Hall, Bury St Edmunds IP33 2AR; telephone/fax: 01284 352443) for approval. The work must not commence until this office has approved both the archaeological contractor as suitable to undertake the work, and the PD/WSI as satisfactory. The PD/WSI will *provide the basis for measurable standards* and will be used to establish whether the requirements of the planning condition will be adequately met; an important aspect of the PD/WSI

will be an assessment of the project in relation to the Regional Research Framework (*East Anglian Archaeology Occasional Papers* 3, 1997, 'Research and Archaeology: A Framework for the Eastern Counties, 1. resource assessment', and 8, 2000, 'Research and Archaeology: A Framework for the Eastern Counties, 2. research agenda and strategy').

2.6 The developer or his archaeologist will give the Conservation Team of Suffolk County Council's Archaeological Service five working days notice of the commencement of ground works on the site, in order that the work of the archaeological contractor may be monitored. The method and form of development will also be monitored to ensure that it conforms to previously agreed locations and techniques upon which this brief is based.

3. **Brief for Archaeological Monitoring of Topsoil-Stripping**

3.1 To carry out the monitoring work the developer will appoint an archaeologist (the archaeological contractor) who must be approved by the Conservation Team of Suffolk County Council's Archaeological Service (SCCAS) - see 2.5 above.

3.2 The developer will give the appointed archaeological contractor three weeks notice (or any other mutually agreed period of notice) of the commencement of site works.

3.3 The topsoil-stripping operations (by the developer or the archaeological contractor) will be carried out using a back-acting machine with a toothless bucket. The depth and method of stripping will need to be agreed in advance with the Conservation Team of SCCAS. Machinery will not cross the stripped area until any possible archaeology has been assessed and fully recorded. Any variation from this will need to be agreed with the Conservation Team.

3.4 As areas are stripped, they will be assessed for further archaeological work. The options will include:

1. A need for further stripping of subsoil layers such hill-wash or other masking deposits.
2. Evaluation of potentially significant archaeological features or deposits. The scope of this work is to be agreed between the Conservation Team of SCCAS and the developer (or his consultant).

N.B. Further archaeological work arising from this evaluation may require a new Brief and Specification from the Conservation Team of SCCAS.

3. Small-scale archaeological excavation to clear features and deposits of lesser significance (e.g. isolated features or small clusters of features). **The minimum standards for this work are set out below in Section 4.**

4. Consideration by the developer of a redesign of the development to avoid major archaeological features.

The decision regarding further work will need to be approved by the Conservation Team of SCCAS.

4. Specification for Small-scale Archaeological Excavation

(See Section 3.4.3)

The excavation methodology is to be agreed in detail before the project commences, certain minimum criteria will be required

- 4.1 Fully excavate all features that are, or could be interpreted as, structural. Post-holes, and pits that may be interpreted as post-holes, must be examined in section and then fully excavated. Fabricated surfaces within the excavation area (e.g. yards & floors) must be fully exposed and cleaned.
Any variation from this practice will need to be agreed with the Conservation Team of SCCAS.
- 4.2 All other features must be sufficiently examined to establish, where possible, their date and function. For guidance:
- a) A minimum of 50% of the fills of the general features is to be excavated. Note that it is likely that prehistoric features e.g. especially pits, are likely to require full excavation.
 - b) Between 10% and 20% of the fills of substantial linear features (ditches etc) are to be excavated, the samples must be representative of the available length of the feature and must take into account any variations in the shape or fill of the feature and any concentrations of artefacts.

Any variations from these practices will need to be agreed with the Conservation Team of SCCAS.

- 4.3 Collect and prepare environmental samples (by sieving or flotation as appropriate). The Project Design must provide details of the sampling strategies for retrieving artefacts, biological remains (for palaeoenvironmental and palaeoeconomic investigations), and samples of sediments and/or soils (for micromorphological and other pedological/sedimentological analyses. Advice on the appropriateness of the proposed strategies will be sought from the English Heritage Regional Adviser for Archaeological Science (East of England). A guide to sampling archaeological deposits (Murphy and Wiltshire 1994) is available from the Conservation Team of SCCAS.
- 4.4 A finds recovery policy is to be agreed before the project commences and should form part of the Project Design. The use of a metal detector will form an essential part of the finds recovery strategy. The sieving of occupation levels and building fills will be expected.
- 4.5 All finds will be collected and processed. No discard policy will be considered until the whole body of finds has been evaluated.
- 4.6 All artefacts to be cleaned and processed concurrently with the excavation, so that the results can inform decision-making on the excavation.

- 4.7 Metal artefacts must be stored and managed in accordance with *UK Institute of Conservators Guidelines* and evaluated for significant dating and cultural implications before despatch to a conservation laboratory within 4 weeks of excavation.
- 4.8 Human remains are to be treated at all stages with care and respect, and are to be dealt with in accordance with the law. They must be recorded *in situ* and subsequently lifted, packed and marked to standards compatible with those described in the Institute of Field Archaeologists' Technical Paper 13 *Excavation and post-excavation treatment of Cremated and Inhumed Human Remains*, by McKinley & Roberts. Proposals for the final disposition of remains following study and analysis will be required in the Project Design.
- 4.9 Plans of the archaeological features on the site should normally be drawn at 1:20 or 1:50, depending on the complexity of the data to be recorded. Sections should be drawn at 1:10 or 1:20 again depending on the complexity to be recorded. Any variations from this must be agreed with the Conservation Team of SCCAS.
- 4.10 A photographic record of the work is to be made, consisting of both monochrome photographs and colour transparencies.
- 4.11 Excavation record keeping is to be consistent with the requirements of Suffolk County Council's Sites and Monuments Record (SMR) and be compatible with its archive. Methods must be agreed with the Conservation Team of SCCAS.

5. **General Management**

- 5.1 A timetable for all stages of the project must be agreed before the first stage of work commences.
- 5.2 Monitoring of the archaeological work will be undertaken by the Conservation Team of SCCAS.
- Where projects require an unusual amount of monitoring, the Conservation Team reserve the right to make an 'at-cost' charge for monitoring (currently at a daily rate of £150). A decision on the monitoring required will be made by the Conservation Team on submission of the accepted Project Design and will be reviewed during the course of the project. Any decision to charge for monitoring will be notified to the developer or his agent(s).
- 5.3 The composition of the project staff must be detailed and agreed (this is to include any subcontractors). For the site director and other staff likely to have a major responsibility for the post-excavation processing of this site there must be a statement of their responsibilities for post-excavation work on other archaeological sites.
- 5.4 A general Health and Safety Policy must be provided, with a detailed risk assessment and management strategy for this particular site.

- 5.5 The Project Design must include proposed security measures to protect the site and both excavated and unexcavated finds from vandalism and theft.
- 5.6 Provision for the reinstatement of the ground and the filling of dangerous holes must be detailed in the Project Design.
- 5.7 No initial survey to detect public utility or other services has taken place. The responsibility for this rests with the archaeological contractor.
- 5.8 The Institute of Field Archaeologists' *Standard and Guidance for Archaeological Watching Briefs* and for *Excavations* should be used for additional guidance in the execution of the project and in the drawing up of the report.

6. **Archive Requirements**

- 6.1 Within four weeks of the end of field-work a timetable for post-excavation work must be produced. Following this a written statement of progress on post -excavation work whether archive, assessment, analysis or final report writing will be required at three monthly intervals.
- 6.2 An archive of all records and finds is to be prepared consistent with the principles of English Heritage's *Management of Archaeological Projects*, 1991 (MAP2), particularly Appendix 3. However, the detail of the archive is to be fuller than that implied in MAP2 Appendix 3.2.1. The archive is to be sufficiently detailed to allow comprehension and further interpretation of the site should the project not proceed to detailed analysis and final report preparation. It must be adequate to perform the function of a final archive for lodgement in the County SMR or museum.
- 6.3 A clear statement of the form, intended content, and standards of the archive is to be submitted for approval as an essential requirement of the Project Design (see 2.5).
- 6.4 The site archive quoted at MAP2 Appendix 3, must satisfy the standard set by the *Guideline for the preparation of site archives and assessments of all finds other than fired clay vessels* of the Roman Finds Group and the Finds Research Group AD700-1700 (1993).
- 6.5 Pottery should be recorded and archived to a standard comparable with 6.3 above, i.e. *The Study of Later Prehistoric Pottery: General Policies and Guidelines for Analysis and Publication*, Prehistoric Ceramics Research Group Occasional Paper 1 (1991, rev 1997), the *Guidelines for the archiving of Roman Pottery*, Study Group for Roman Pottery (ed. M G Darling 1994) and the *Minimum Standards for the Processing, Recording, Analysis and Publication of Post-Roman Ceramics*, Medieval Pottery Research Group Occasional Paper 2 (2001).
- 6.6 All coins must be identified and listed as a minimum archive requirement.

- 6.7 The data recording methods and conventions used must be consistent with, and approved by, the County SMR. All record drawings of excavated evidence are to be presented in drawn up form, with overall site plans. All records must be on an archivally stable and suitable base.
- 6.8 A complete copy of the site record archive must be deposited with the County SMR within twelve months of the completion of fieldwork. It will then become publicly accessible.
- 6.9 Finds must be appropriately conserved and stored in accordance with the UK Institute of Conservators Guidelines.
- 6.10 The finds, as an indissoluble part of the full site archive, should be deposited with the County SMR or a museum in Suffolk which satisfies the requirements of the Museum and Galleries Commission. If this is not achievable for all or parts of the finds archive, then provision must be made for additional recording (e.g. photography, illustration and analysis) as appropriate. If the County SMR is the repository for finds there will be a charge made for storage, and it is presumed that this will also be true for storage of the archive in a museum.
A statement regarding the final destination of the finds must be included in the Project Design.
- 6.11 Where positive conclusions are drawn from a project, a summary report in the established format, suitable for inclusion in the annual 'Archaeology in Suffolk' section of the *Proceedings of the Suffolk Institute for Archaeology* must be prepared and included in the project report, or submitted to the Conservation Team by the end of the calendar year in which the evaluation work takes place, whichever is the sooner.

7. **Report Requirements**

- 7.1 A report on the fieldwork and archive must be provided consistent with the principle of *MAP2*, particularly Appendix 4. The report must be integrated with the archive.
- 7.2 The objective account of the archaeological evidence must be clearly distinguished from its archaeological interpretation.
- 7.3 An important element of the report will be a description of the methodology.
- 7.4 Reports on specific areas of specialist study must include sufficient detail to permit assessment of potential for analysis, including tabulation of data by context, and must include non-technical summaries.
- 7.5 The report will give an opinion as to the potential and necessity for further analysis of the excavation data beyond the archive stage, and the suggested requirement for publication; it will refer to the Regional Research Framework (see above, 2.6). Further analysis will not be

embarked upon until the primary fieldwork results are assessed and the need for further work is established. Analysis and publication can be neither developed in detail nor costed in detail until this brief and specification is satisfied.

- 7.6 The assessment report must be presented within six months of the completion of fieldwork unless other arrangements are negotiated with the project sponsor and the Conservation Team of SCCAS.
- 7.7 At the start of work (immediately before fieldwork commences) an OASIS online record <http://ads.ahds.ac.uk/project/oasis/> must be initiated and key fields completed on Details, Location and Creators forms.
- 7.8 All parts of the OASIS online form must be completed for submission to the SMR. This should include an uploaded pdf version of the entire report (a paper copy should also be included with the archive).

Specification by: Edward Martin

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Date: 24th April 2009

Tel: 01284 352442
Reference: SpecMonWorlington4.doc

This brief and specification remains valid for 12 months from the above date. If work is not carried out in full within that time this document will lapse; the authority should be notified and a revised brief and specification may be issued.

If the work defined by this brief forms a part of a programme of archaeological work required by a Planning Condition, the results must be considered by the Conservation Team of the Archaeological Service of Suffolk County Council, who have the responsibility for advising the appropriate Planning Authority.

Appendix 2. Context List

Context Number	Feature	Feature Type	Category	Description and Interpretation
0300	0300	Pit	Cut	<p>Irregular Oval. Aligned NW-SE. 35-45° slightly concave sides. Imperceptible break of slope to base. Base irregular, concave in places. Filled by 0301.</p> <p>Small pit with redeposited hearth waste. Probably prehistoric judging by leaching and presence of one flint tool.</p>
0301	0300	Pit	Fill	<p>Mid-dark orangish-grey sand. Friable compaction. Common small angular stones, occasional heated flints and common charcoal/black sand lenses. Fill of 0300. Clear-diffuse horizon clarity.</p> <p>Redeposited hearth waste with one (Bronze Age?) struck flint. Bulk sample taken.</p>
0302	0302	Pit	Cut	<p>Irregular squared-off series of joined shapes. Alignment unclear. 30-40° sides, concave, with gradual break of slope to base (here same profile seen in two adjoining gullies). Base - concave. Made up of a series of parallel gullies of approximately the same depth and with the same profiles. Filled with 0303.</p> <p>Regularity and squared off shape suggests modern features of unknown function- see 0304. Could be quarry test pits, i.e. dug to ascertain quality of localised aggregate.</p>
0303	0302	Pit	Layer	<p>Dark brownish-grey silty-sand. Friable compaction. Occasional small stones. Fill of 0302. Sharp horizon clarity.</p> <p>Recent fill, hence sharp soil horizon.</p>

Context Number	Feature	Feature Type	Category	Description and Interpretation
0304	0308	Pit	Cut	<p>Irregular squared-off series of connected shapes, consisting of a series of gullies with 30-80° concave sides, with gradual breaks of slope to the bases. Bases are all concave. Filled with 0305 and 0306.</p> <p>Modern pit, hence the regular and unusual (machine-created?) patterning of the fills, their sharp horizons and the shape of the gullies in plan. The two fills formed contemporaneously and presumably as a result of some mechanical process because whilst 0306 was above 0305, a small spur of 0306 was consistently found emerging into 0305 on the south-eastern side of each gully.</p>
0305	0304	Pit	Fill	<p>Mid orangish-brown sand. Friable compaction. Common gravel-type stones. Fill of 0304 gullies. Sharp horizon clarity.</p> <p>Contemporarily generated with 0306, hence regular lens of 0306 that runs into 0305 in the section of both gullies.</p>
0306	0304	Pit	Fill	<p>Dark brownish-grey silty-sand. Friable compaction. Occasional small stones. Fill of 0304 gullies. Clear-sharp horizon clarities.</p> <p>Contemporarily generated with 0305, hence regular lens of 0306 that runs into 0305 in the section of both gullies.</p>
0307			Layer	<p>Pale-dark yellowish-orange to brownish-orange sand. Friable compaction. Large common patches of gravel.</p> <p>Natural - superficial geological deposit overlying chalk bedrock.</p>
0308			Layer	<p>Dark grey silty-sandy topsoil. Loose-friable compaction. Occasional small gravel-type stones. Diffuse-sharp soil horizon.</p> <p>Topsoil. Recently worked as overlies quarry pit 0310, which is probably quite modern.</p>
0309			Layer	<p>Dark grey silty-sandy topsoil. Loose compaction. Occasional small gravel-type stones. Diffuse horizon clarity.</p> <p>Redeposited topsoil- redeposited by quarry company in last two years.</p>

Context Number	Feature	Feature Type	Category	Description and Interpretation
0310	0310	Pit	Cut	<p>Rounded shape in plan (partially under baulk). 45-80° sides, slightly concave. Gradual break of slope to base. Base slightly concave and somewhat irregular.</p> <p>Modern feature judging by the sharp edges, the number of clearly defined fills and its proximity to other probably modern features. The fills appear to be a mixture of redeposited natural sand and gravel, topsoil, and a mixture of both. Whilst on site, one of the quarry workers suggested that these features may well have been a test pit dug by the quarry in order to ascertain the quality of the aggregate in the area.</p>
0311	0310	Pit	Fill	<p>Dark greyish-brown silty-sand. Friable compaction. Common gravel-type stones. Clear horizon clarity. Basal fill.</p> <p>Redeposited topsoil.</p>
0312	0310	Pit	Fill	<p>Mid orange sand. Friable compaction. Frequent gravel-type stones. Clear horizon clarity.</p> <p>Subsoil/topsoil mix?</p>
0313	0310	Pit	Fill	<p>Mid-dark greyish-brown silty-sand. Friable compaction. Common gravel-type stones. Clear horizon clarity.</p> <p>Redeposited topsoil.</p>
0314	0310	Pit	Fill	<p>Mid brown silty-sand. Friable compaction. Common gravel-type stones. Clear horizon clarity.</p> <p>Topsoil/subsoil mix.</p>
0315	0310	Pit	Fill	<p>Brownish-orange sand. Friable compaction. Frequent gravel-type stones. Clear horizon clarity.</p> <p>Topsoil/subsoil mix?</p>

Context Number	Feature	Feature Type	Category	Description and Interpretation
0316	0310	Pit	Fill	<p>Dark brown silty-sand. Friable compaction. Occasional gravel-type stones. Clear horizon clarity.</p> <p>Fairly pure redeposited topsoil.</p>
0317	0310	Pit	Fill	<p>Mid brown sand. Friable compaction. Common gravel-type stones. Clear horizon clarity.</p> <p>Topsoil-subsoil mix?</p>
0318	0310	Pit	Fill	<p>Dark greyish-brown silty-sand. Friable compaction. Occasional gravel-type stones. Clear horizon clarity. Top fill of 0310.</p> <p>Redeposited topsoil.</p>
0319	0319	Hearth	Cut	<p>Oval, aligned N-S. NNW side = 40° slope, slightly concave. SSE side = 40°, then flat/stepping in, then 40° again and slightly concave. Gradual breaks of slope to base. Base = concave.</p> <p>Hearth pit. Sides blend imperceptibly into natural, suggesting burning in-situ. Also, several small charcoal branches, which were too fragile to have been redeposited, were found.</p>
0320	0319	Hearth	Fill	<p>Mid brown-orange-red sand. Firm compaction. Common small charcoal lumps and occasional intact (very fragile) charcoal branches. Diffuse horizon clarity that blended imperceptibly into the natural sand. Basal/only fill.</p> <p>Mixture of hearth waste and heated natural sand. Extensively sampled with high C14 dating potential.</p>
0321	0321	Pit	Cut	<p>Oval in plan, aligned N-S. 40° concave sides. Gradual break of slope to base. Base = flat/slightly irregular.</p> <p>Pit with redeposited hearth waste.</p>

Context Number	Feature	Feature Type	Category	Description and Interpretation
0322	0321	Pit	Fill	<p>Mid orange-dark grey mottled sand. Friable compaction. Common gravel-type stones.</p> <p>Diffuse-clear horizon clarity. Basal/only fill.</p> <p>Redeposited hearth waste. Good charcoal content for C14 dating?</p>

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