



University of Leicester

Archaeological Services

An Archaeological watching brief and recording at
Cadeby Quarry, Cadeby, Leicestershire
(NGR: SK 434 025)

Greg Jones



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For: Tarmac Limited

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An Archaeological Watching Brief and Recording on Land at Cadeby Quarry, Cadeby Leicestershire (NGR: SK 434 025)

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Summary

A watching brief was undertaken during October 2006, October 2007 and September 2008 by ULAS on the Northern Working Area (Area 3) and the Western Working Area (Area 1) at Cadeby Quarry, Cadeby, Leicestershire (SK 434 025) on behalf of Tarmac Limited. A previous geophysical survey undertaken by Stratascan Limited (Donaldson 2005) identified several areas of potential archaeological interest within the proposed development areas. However none of these potential features were found to be of archaeological origin. Topsoil stripping revealed a Bronze Age ring ditch with a series of internal pits and four other possible associated pits in Area 3, the Northern Working Area. One of these features contained middle Bronze Age Deveril-Rimbury Ware pottery sherds and one pit contained a charcoal layer which was Carbon-14 dated to c.1500BC, also suggesting a middle Bronze Age date. Topsoil stripping in Area 1 revealed two more pits which contained Iron Age pottery.

The site archive will be held by Leicestershire County Council, under accession number X.A80.2007.

1. Introduction

1.1 This document constitutes the fourth stage of archaeological investigation to have been carried out for the Cadeby Quarry extension, Leicestershire (centre SK 434 025), following an archaeological desk-based assessment (Meek, 2004), geophysical survey (Donaldson 2005) and an archaeological evaluation (Jones 2007) covering Area 1. The archaeological assessment was undertaken on behalf of Tarmac Limited by University of Leicester Archaeological Services.

1.2 Between October 2006 and September 2008, University of Leicester Archaeological Services (ULAS) were commissioned by Tarmac Limited to carry out a watching brief on land previously subjected to geophysical survey in advance of planning proposals for gravel extraction by Tarmac Limited (Donaldson 2005). This watching brief covers the Northern Working Area (Area 3) and the Western Working Area (Area 1) of the development site (Fig. 2). The previous geophysical survey revealed potential archaeological activity across the site.

1.3 Based on the results of the geophysical survey area 1, (Western Working Area), 2 (Brascote House Area) and the Area 3 (Northern Working Area) were felt to require further archaeological work comprising an archaeological controlled topsoil strip watching brief.

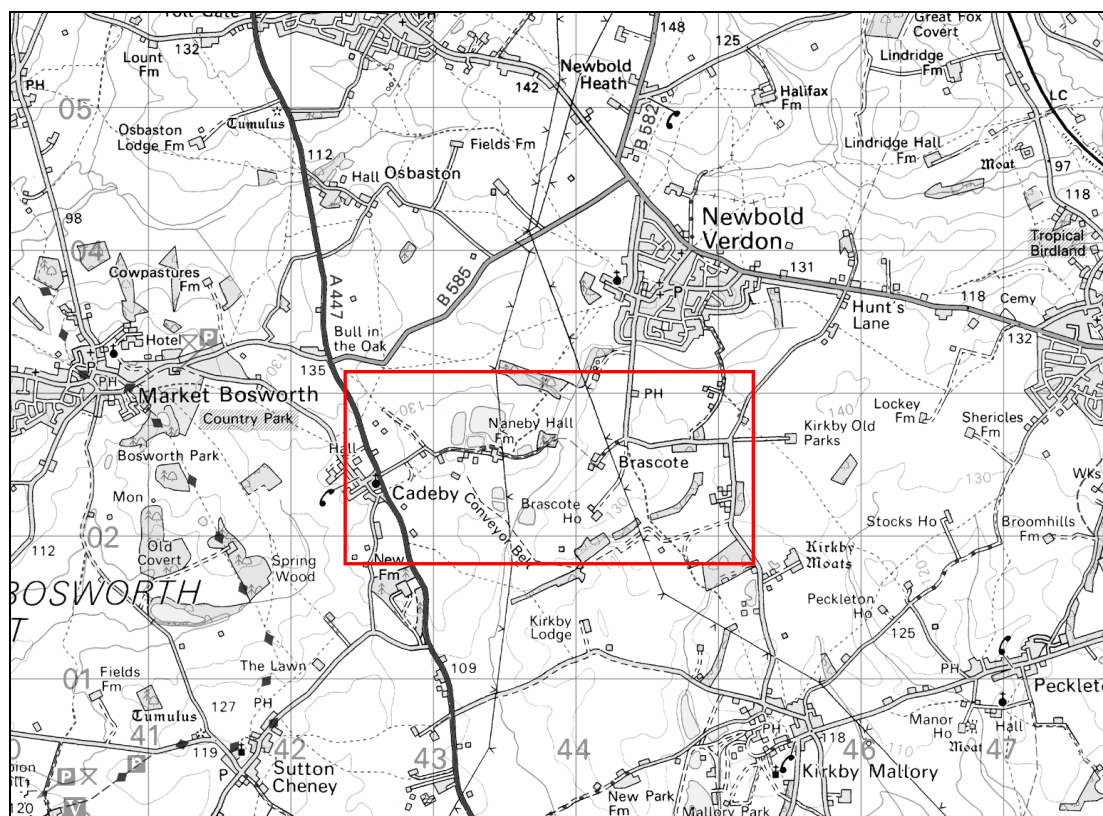


Figure 1. Site location

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2. Site Background and Geology

2.1 Cadeby Quarry lies to the west of Cadeby and south-west of Newbold Verdon in west Leicestershire, centred on national grid reference SK 434 025 (fig. 1). It lies within the parishes of Cadeby and Newbold Verdon.

2.2 The survey area covers approximately 24ha of generally flat agricultural land within three separate areas. Area 1 is immediately east of the village of Cadeby and comprises six predominantly pasture fields totalling approximately 14ha in area. Area 2 is located to the north-east of Brascote House and covers an area of approximately 1.4ha. Area 3 is located immediately north of Brascote Lane and consists of a parcel of land approximately 8ha in area.

2.3 The underlying geology is Triassic mudstone including Mercia Mudstone group (formerly "Keuper Marl") with overlying deposits of glacial sands and gravels (British Geological Survey South Sheet, Fourth Edition Solid, 2001; First Edition Quaternary, 1977). The overlying soils are known as Arrow soils which are gleyic brown earths. These consist of deep permeable coarse loamy soils affected by groundwater (Soil Survey of England and Wales, Sheet 3 Midland and Western England).

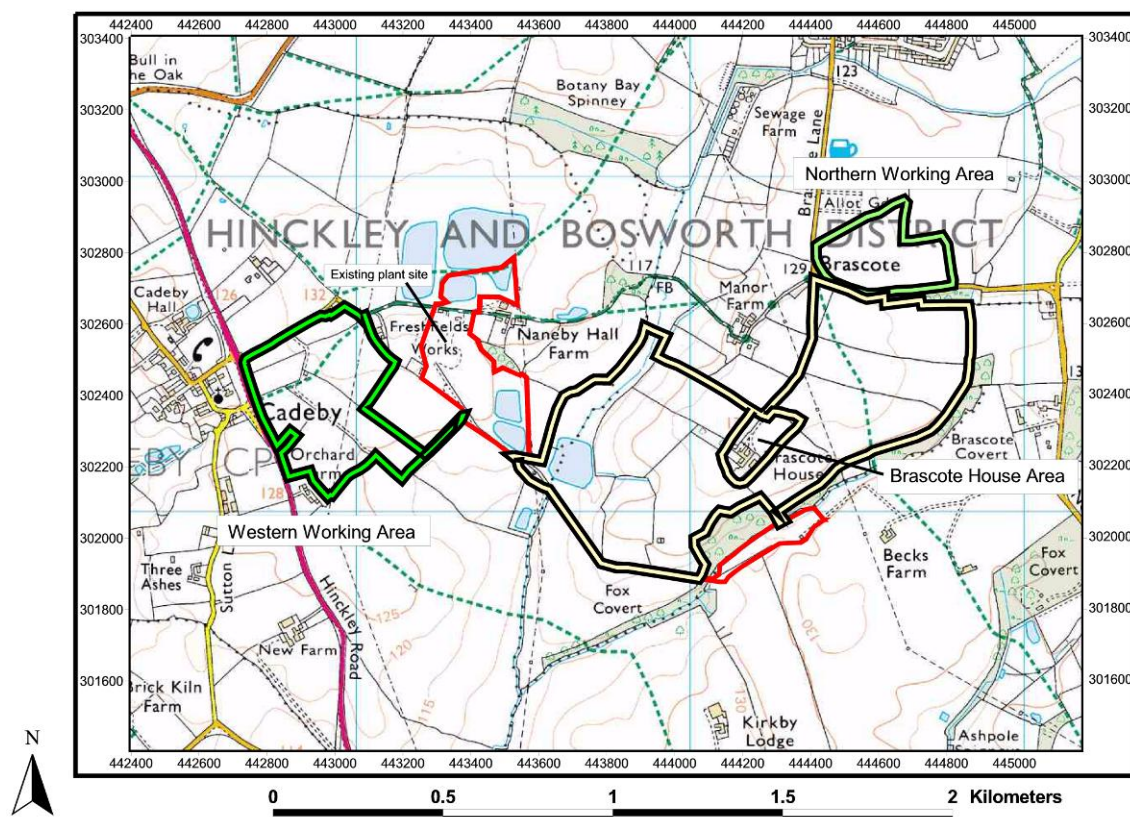


Figure 2 – Location Plan showing areas of Cadeby Quarry.

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3. Archaeological and Historical Background

3.1 The desk-based assessment prepared by ULAS for the proposed extensions to Cadeby Quarry summarised the results as follows:

“The Leicestershire Sites and Monuments Record records numerous archaeological sites in the vicinity of the quarry area, although no sites are known within the two new application areas. The surrounding area contains evidence for Iron Age occupation and land division in the form of rectangular enclosures and numerous pit alignments. Earlier prehistoric finds have also been made within the area. Few recorded Roman sites lie in close vicinity to the site although occupation sites and villas are known slightly further afield. There is no recorded evidence for Anglo-Saxon activity close to the two extraction areas, although it is likely that the surrounding villages all have some element of Saxon origins. Medieval settlements existed at Cadeby, Newbold Verdon, Brascote and Naneby, with the proposed extraction areas lying within the surrounding agricultural lands of these settlements.

Evidence for both proposed extraction areas suggests that the land would have been utilised as agricultural land since at least the medieval period. One field

within the central part of the Western Working Area has been previously quarried and has since been reinstated and is used as pasture land. Apart from this former quarry area the land is likely to have remained relatively undisturbed since the medieval period, save for disturbance from plough activity, and thus any archaeological deposits that may exist within the area would lie close to the present ground surface beneath the existing topsoil.

There is a high potential for archaeological remains of an Iron Age date to exist within both proposed extraction areas. There is a moderate potential for remains of a Bronze Age date to exist and lower potential for archaeological remains of other periods. It should be noted that no previous systematic survey of either proposed extraction area has been carried out and that significant archaeological remains of all periods may conceivably be present. It is likely that initial archaeological evaluation of the site would be necessary prior to a decision being made on planning.”

3.2 The results of the geophysical survey undertaken by Stratascan of the proposed extraction areas

“A detailed magnetic survey was carried out over approximately 24ha within three separate parcels of land to the east of Cadeby in Leicestershire. Within Area 1, immediately east of the village of Cadeby, are several positive linear and rectilinear anomalies that may be responses to the fill of magnetically enhanced material within cut features of an archaeological origin. There is also evidence within Area 1 and possibly Area 3 of former ridge and furrow agricultural systems. Buried pipelines, dumped material and ferrous objects in Area 2 may have obscured more subtle responses in magnetic ‘noise’. The low magnitude of many of the anomalies has made confident interpretation difficult and may partly be related to the magnetic characteristics of the soils in this area.” (Donaldson 2005)

3.3 An additional summary and interpretation report on the geophysical survey was prepared by ULAS to link the results with the known archaeological landscape of the area, and further establish a potential date, character and extent of the deposits (Meek 2005). The results were summarised as follows:

“The geophysical survey revealed evidence for past agricultural activity across the proposed extraction areas, including areas of former medieval ridge and furrow, as well as more modern agricultural activity. Some areas of probable recent disturbance were also noted across all three areas.

Within the Western Working Area potential archaeological deposits were revealed by the geophysical survey lying in an area to the east of Hinckley Road and west of a previously quarried area. The numbers of features present suggest a fairly intensive area of archaeological activity in the form of ditches and enclosures. From the potential for Iron Age archaeology at the site identified in the desk-based assessment, and the layout of the features, it is likely that the potential archaeological remains represent an Iron Age farmstead or small settlement.

The area of the potential Iron Age features, some 2ha in size, would require archaeological evaluation to confirm the date, character, extent and state of preservation of the archaeological remains. (Meek 2005)

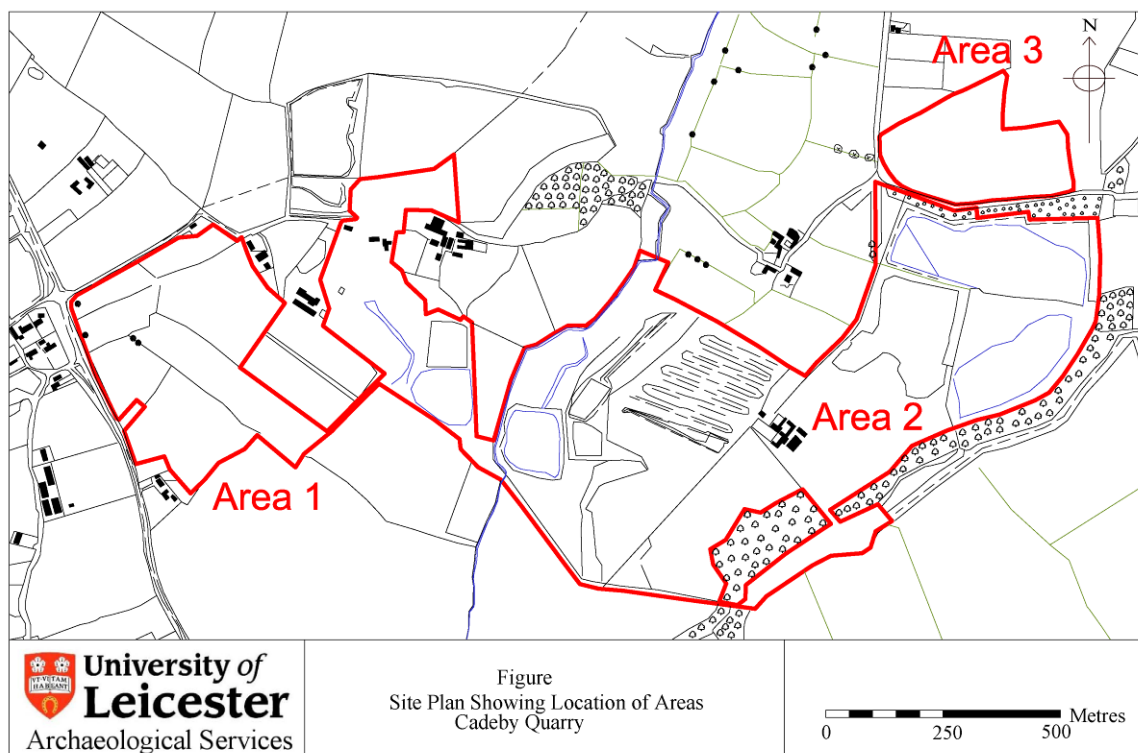


Figure 3 Area plan location

4. Aims and Objectives

The principal aims of the watching brief were:

- To identify the presence/absence of any archaeological deposits.
- To establish the nature, extent, date, and significance of any archaeological deposits.
- To excavate and record any archaeological deposits affected by the groundworks.
- To produce an archive and report of any results.

5. Methodology

5.1 The four areas identified as requiring controlled stripping had topsoil and overburden removed using large 360° excavators with dumper trucks to transport the spoil. At least one archaeologist was on site at all times to monitor the machines during the controlled strip. Archaeological features were sample excavated by hand and fully recorded onto permatrace drawings, photographs and paper records and all features and grids were located using an EDM or GPS.

5.2 All work follows the Institute for Archaeologists (IfA) Code of Conduct and adheres to their *Standard and Guidance for Archaeological Watching Briefs*.

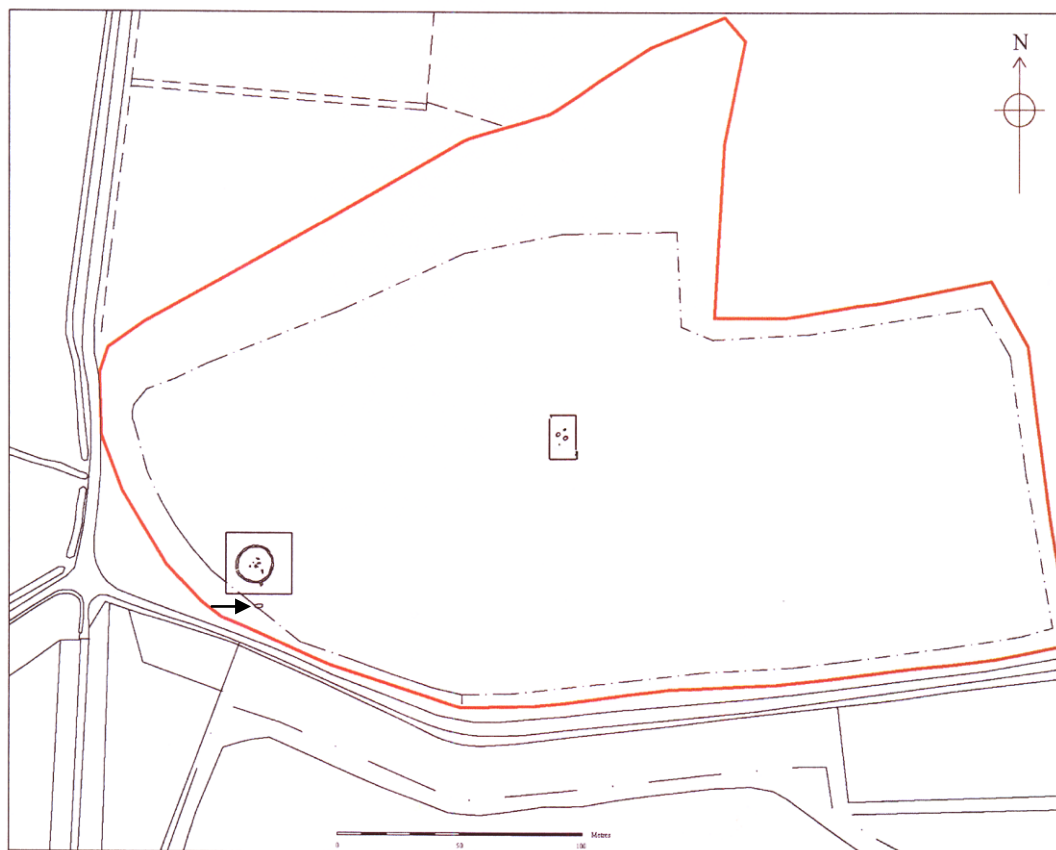


Figure 4 Area 3 showing location of archaeological features. Insets (left) Fig. 5 and (right) Fig 20. [24] arrowed.

6. Results

The first area to be observed during the archaeologically controlled stripping was the Northern Working Area (Area 3; Fig.4). This work took place during October 2006.

6.1 Area 3 (the Northern Working Area)

The Northern Working Area 3 covered an area of *c.*7.2ha. It had previously be used as agricultural land and appeared to be relatively undisturbed. The ploughsoil across the whole of Area 3 was approximately *c.*0.3m deep and overlay mixed subsoil comprising orange brown sands and gravels, down to a further depth of *c.*0.3m. Further machining revealed the natural substratum, which consisted of orange brown sandy clay, with patches of gravel.

During the controlled subsoil strip, archaeological features were uncovered. In the south-western corner of Area 3 a ring ditch [01] was located, measuring *c.*6m in diameter with the ditch itself measuring *c.*0.2m – 0.4m in width with a depth *c.*0.4m (figs. 4-15). The fill (02) consisted of light greyish brown silty sand with occasional charcoal flecks and abundant large rounded pebbles. No finds were located within the fill. Located within the enclosure of the ring ditch were five shallow pits: [12], [13], [17], [19] and [25] (fig.5). Pit [12] was circular and measured *c.*0.45m in diameter and *c.*0.2m in depth with straight sides. The fill (11) consisted of grey/dark-grey silty sand with traces of charcoal and burnt bone fragments. Pit [13] was also roughly circular in shape (fig.5) with a diameter of *c.*0.7m and a depth of *c.*0.32m. The sides were also

vertical. Pit [13] contained three fills (15), (14) and (16). The upper fill (15) consisted of dark orangey brown silty sand with occasional charcoal flecks which overlay a quantity of rounded river turned pebbles (14) (average size 100x80x50mm) (fig.5). Underlying (14) was a layer of dark grey charcoal which covered the majority of the sides and base of cut [13], and may have been a possible cremation/ritual deposition. Located approximately 1.5m to the south of (14) was located pit [17] which was roughly circular and measured *c.*0.45m in diameter, and *c.*0.25m deep, with slightly sloping sides and a flat base (figs.5, 14-17). The fill (18) consisted of dark grey/brown silty sand with charcoal inclusions making up around 20%, and burnt bone making up around 5%. Pit [19] was located *c.*0.15m to the west of [17], and was roughly circular/slightly irregular in shape, with a diameter of *c.*0.55-0.6m, and a depth of *c.*0.5-0.15m (fig.5, 15-17). The cut was uncertain as the feature had been disturbed by animal burrows. The fill (20) consisted of soft black/grey charcoal with 40% silty sand, with occasional small to medium pebbles. No bone or finds were uncovered from within the fill. Located to the west of [19] was pit [25], which was oval in shape with a length of 0.5m and a width of 0.3m. The feature was however very shallow, measuring only 0.05m in depth. The fill (26) consisted of grey brown silty sand and did not contain any finds.

Located 8m directly to the south of ring ditch [01], was a large pit [24] which measured >3m in length (excavated depth into the baulk), 2.5m wide and 0.62m deep (figs.5, 18 & 21), with gradual 45 degree sloping sides. The pit fill (23) consisted of soft, mid orangey grey brown, slightly clayey silty sand, with occasional rounded stones (0.06m³ average size) and occasional charcoal flecks. No finds were uncovered within pit fill (23).

Machining in the middle of the Northern Working Area 1, approximately 130m east of the ring ditch, uncovered four closely grouped features comprising pits and post-holes [03], [05], [07] and [10] (figs.5, 20-28). Pit [03] was slightly oval in shape with rounded sides and a slightly concave flat base (fig.28). It measured 0.95m in length, 0.45m in width and was 0.14m deep. The fill of [03], (04), consisted of dark greyish brown slightly sandy silty clay, with 50% charcoal content. Contained within the fill were seven conjoining Bronze Age pottery sherd fragments (154g), of the Deverel-Rimbury tradition of a Middle Bronze Age date (below p.23). Pit [05] was circular with sloping sides and a rounded concave base. The pit fill (06) consisted of soft, grey-brown silty sand, with small sub-angular pebbles, pea grit and charcoal flecks. No finds were uncovered from (06). Pit [07] was sub-circular in plan with shallow non-discernable sides and a flat base. The pit fill (08) consisted of dark brown-grey silty sand containing common charcoal material which was recovered from the fill (08), but no other finds were uncovered. This charcoal was carbon-14 dated to *c.*1500BC which puts the date of the fill to the Middle Bronze Age (below p.24). A possible post-hole [10], located with the other features (figs.26 & 27), was heart-shaped with rounded edges in plan, with slightly sloping sides and a flat base. The pit fill (09) consisted of grey-brown silty sand, with small rounded and angular pebbles and patches of charcoal but with no finds.

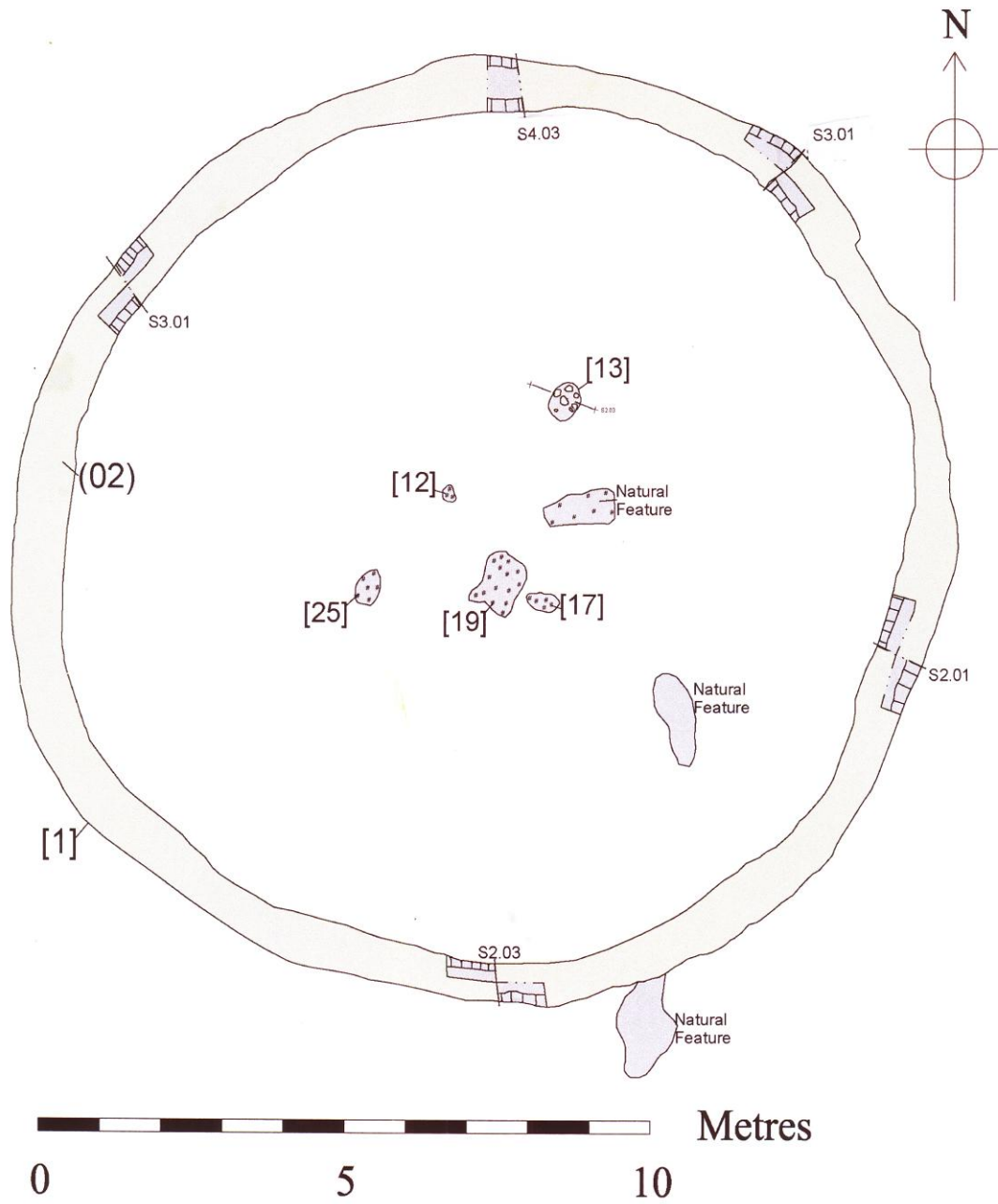


Fig. 5 Ring Ditch [1] and associated features

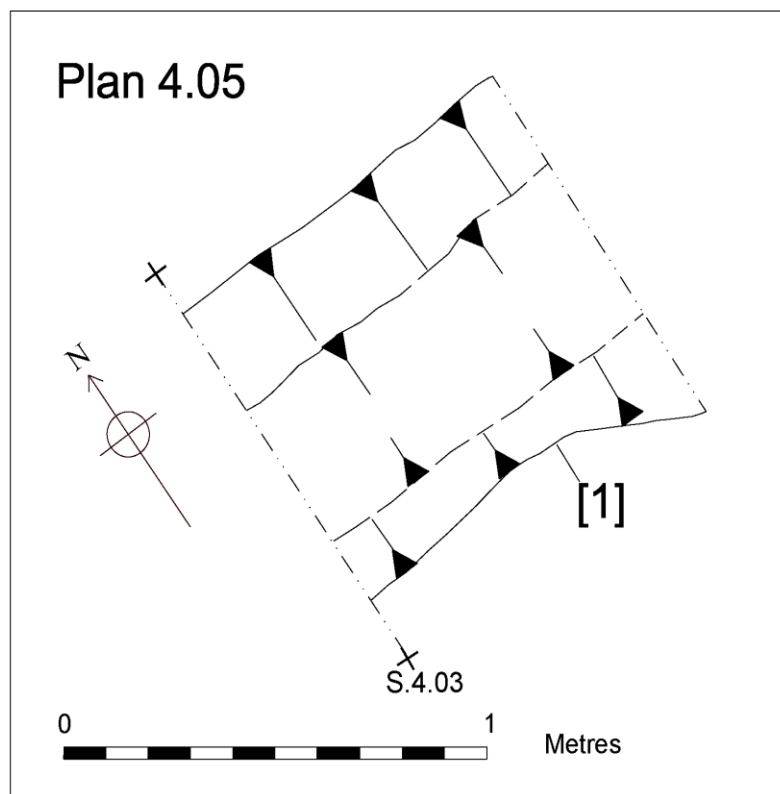
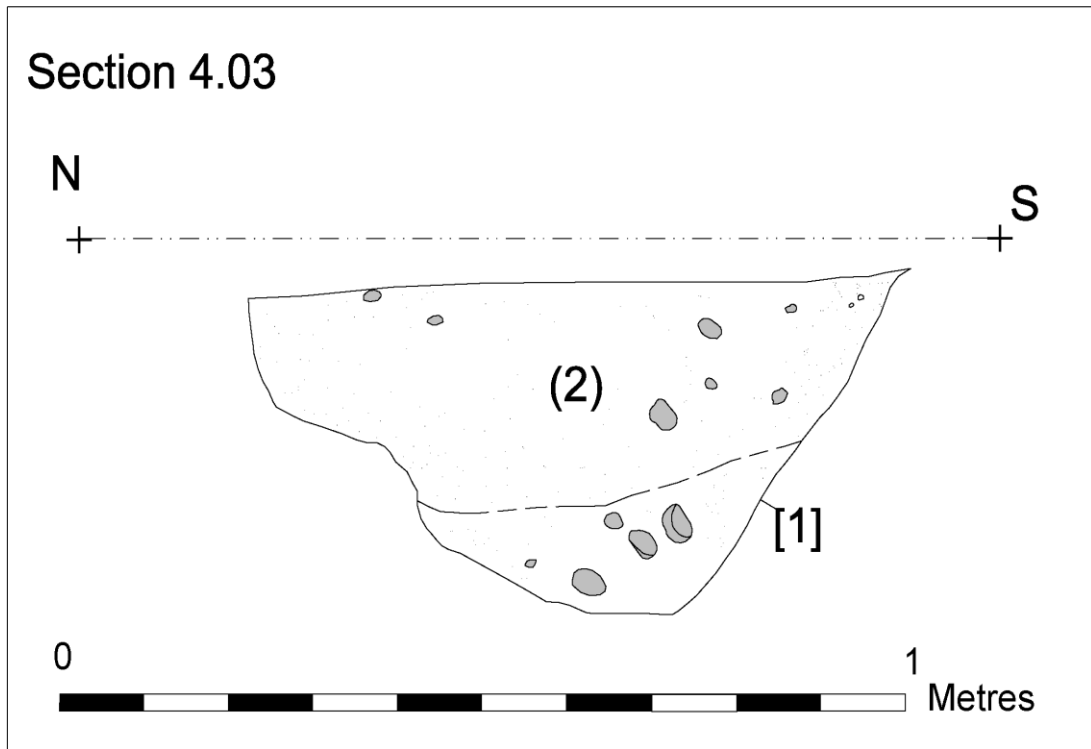


Fig. 6 (above) S-N Section 4.05 through [1]
Fig. 7 Plan of Section 4.05 through [1]

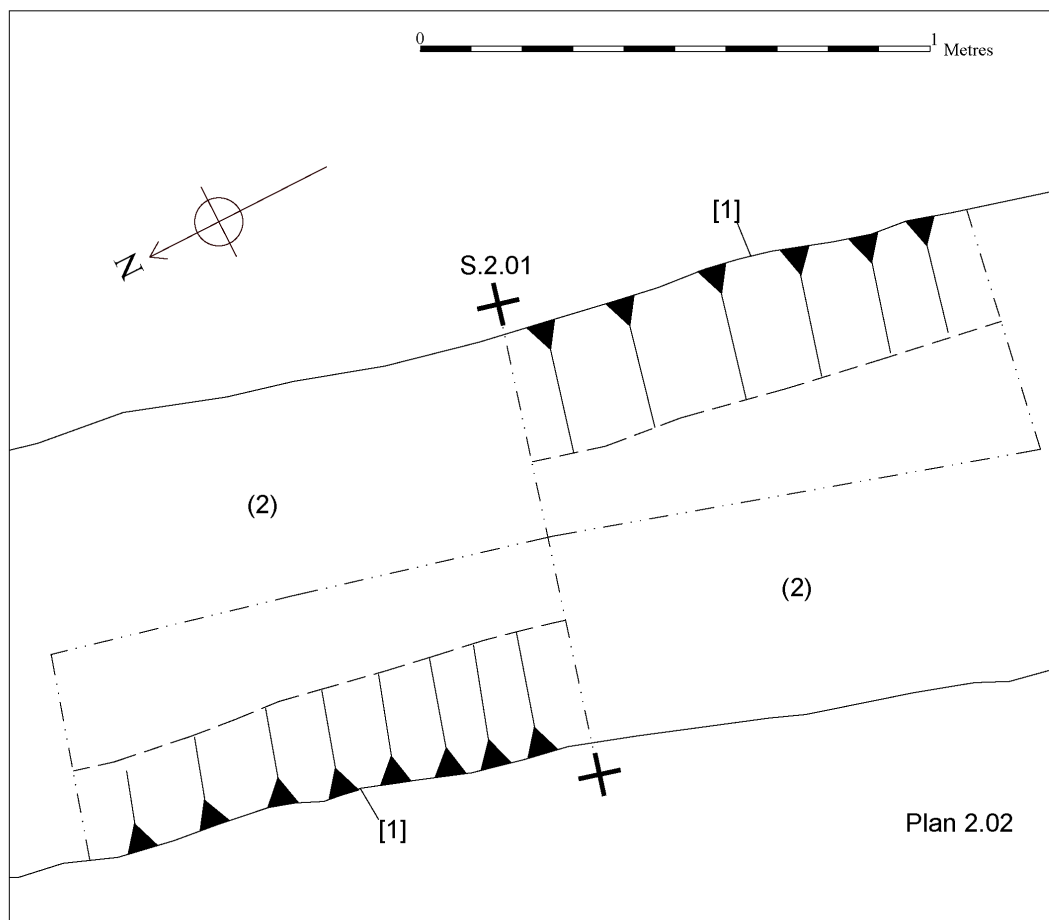
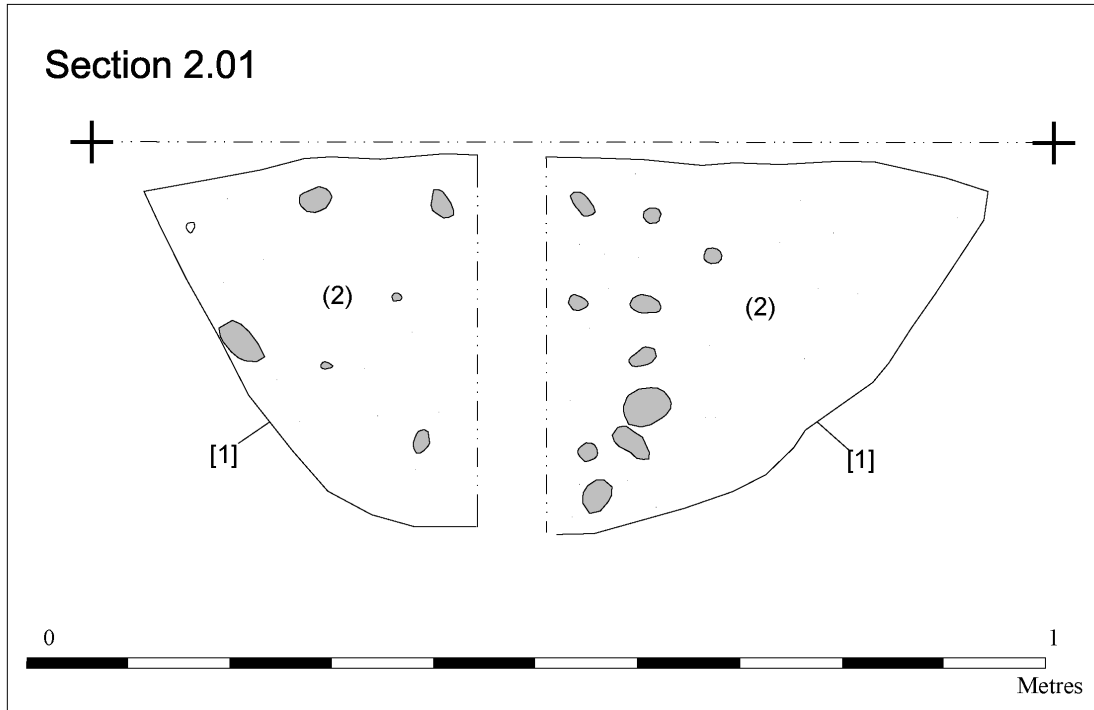


Fig 8 (top) Section S2.01 across [1] orientated E-W
Fig. 9 (below) plan of sectioned ring ditch [1] to ESE

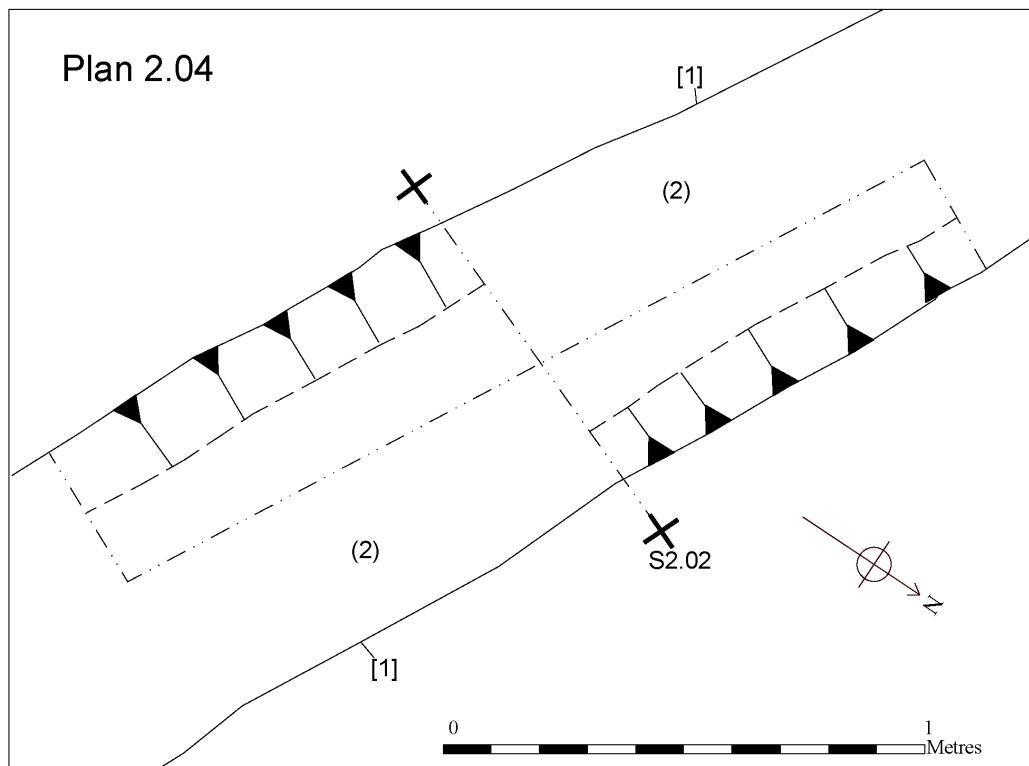
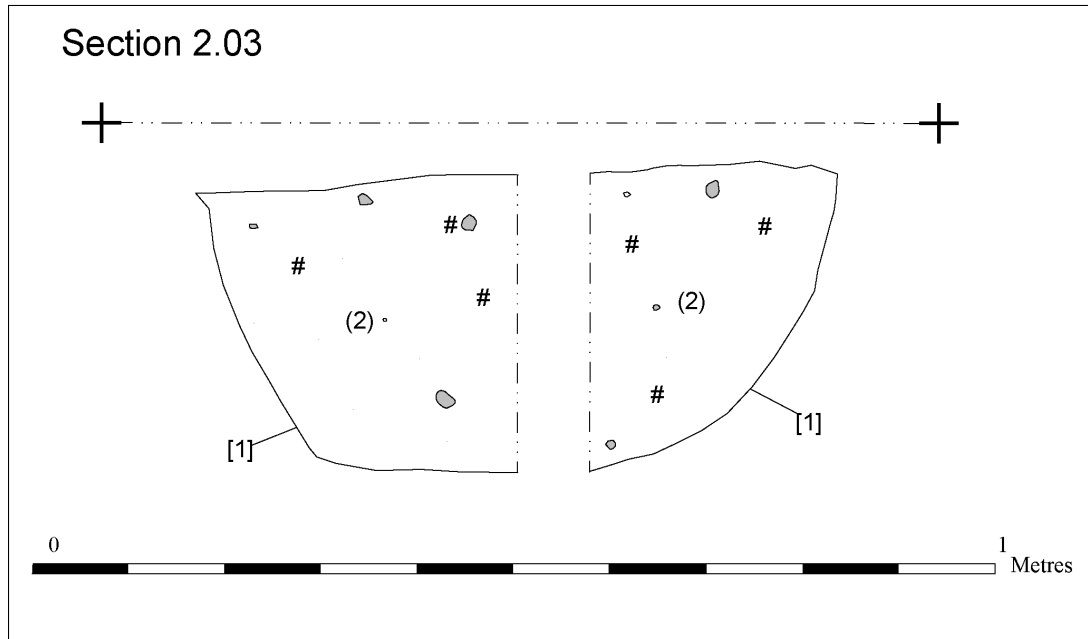


Fig. 10 (top) Section S2.03 across [1] orientated NNE-SSW

Fig. 11 (below) plan of sectioned ring ditch [1] to S

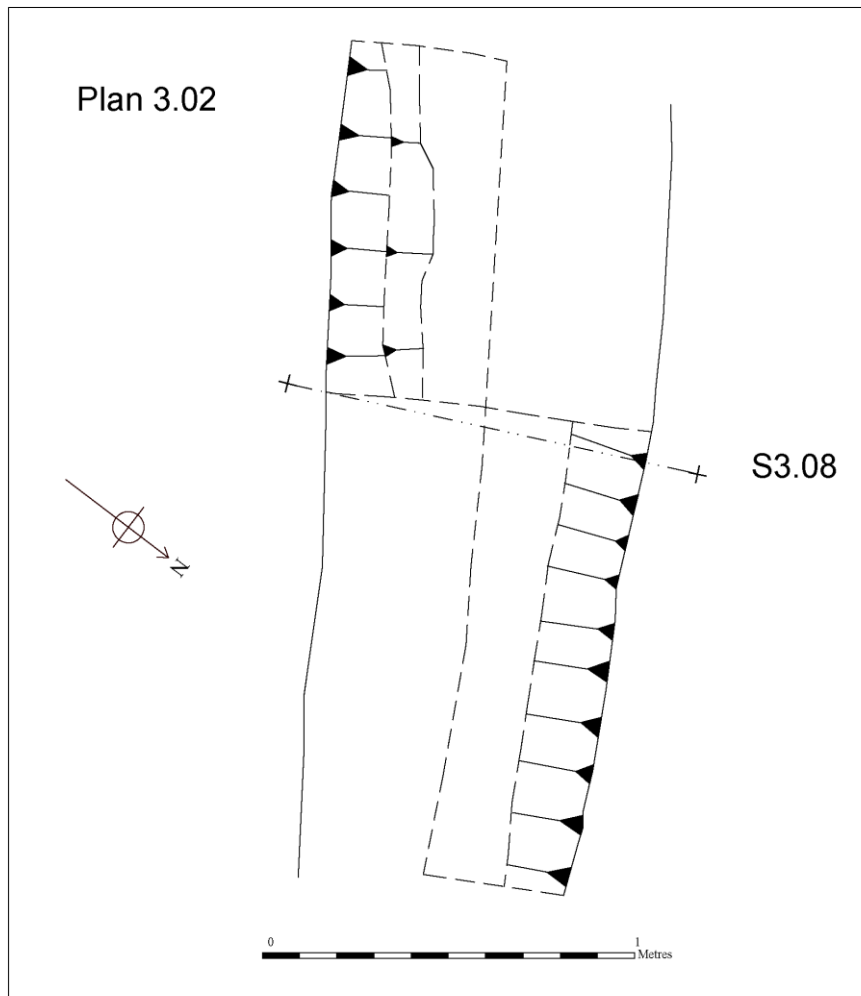
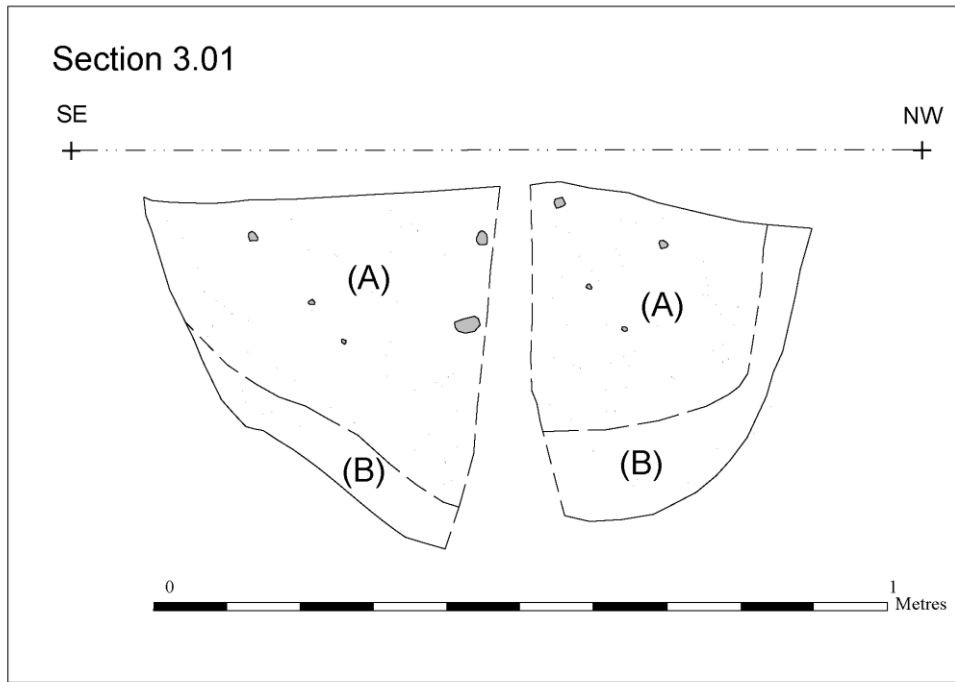


Fig. 12 (top) Section S3.01 across [1] orientated N-S
Fig. 13 (below) plan of sectioned ring ditch [1] to NW

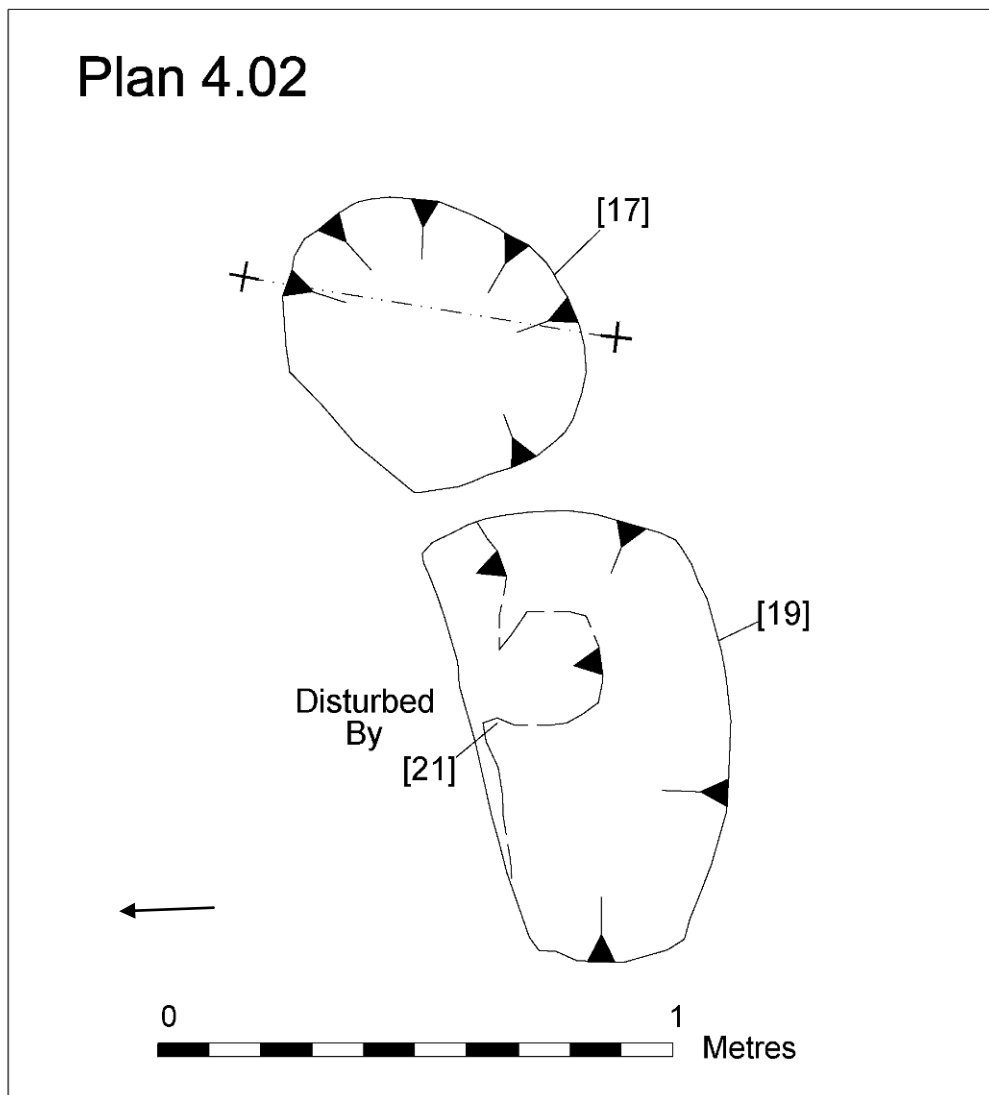
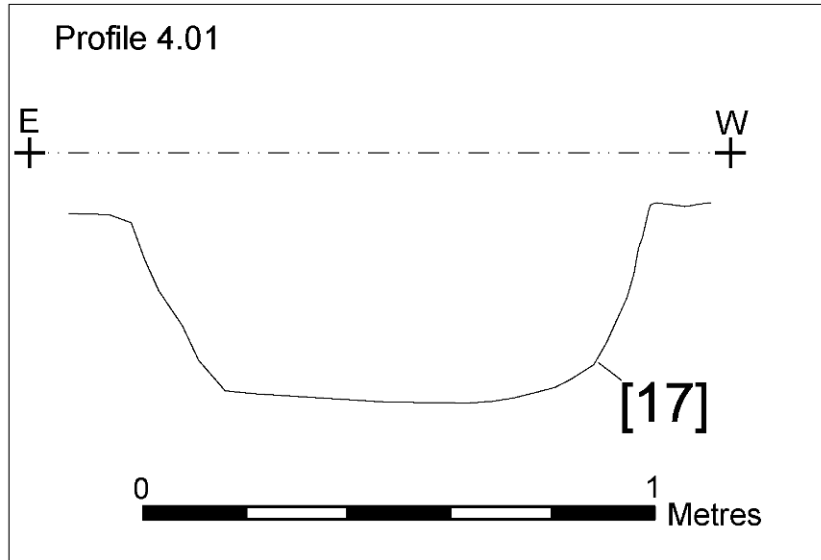


Fig. 14 (above) Profile through [17]
Fig. 15 (below) Plan of [17] and [19]; North arrowed to left

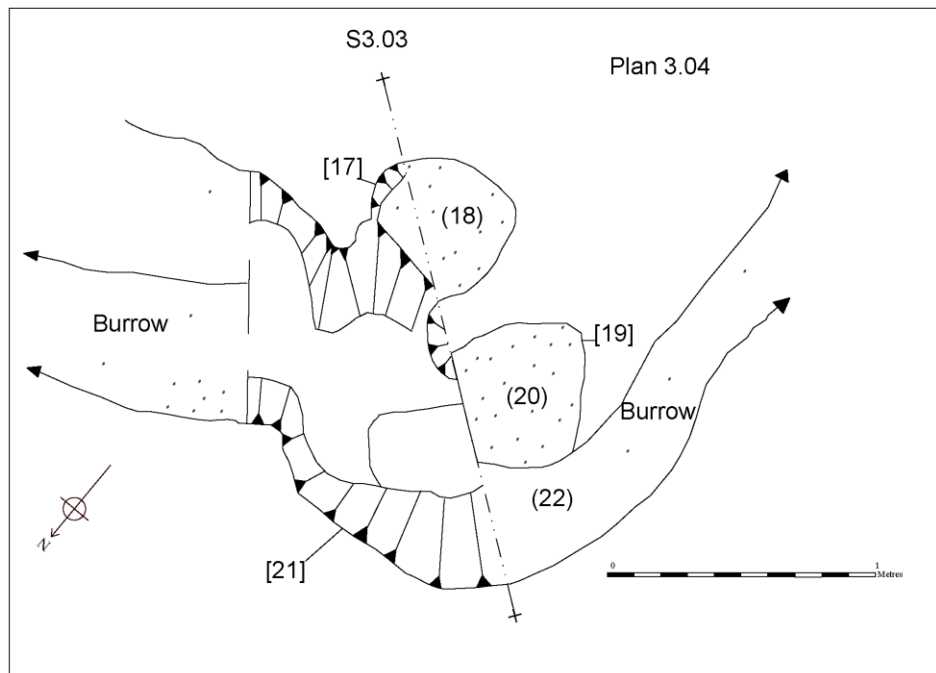
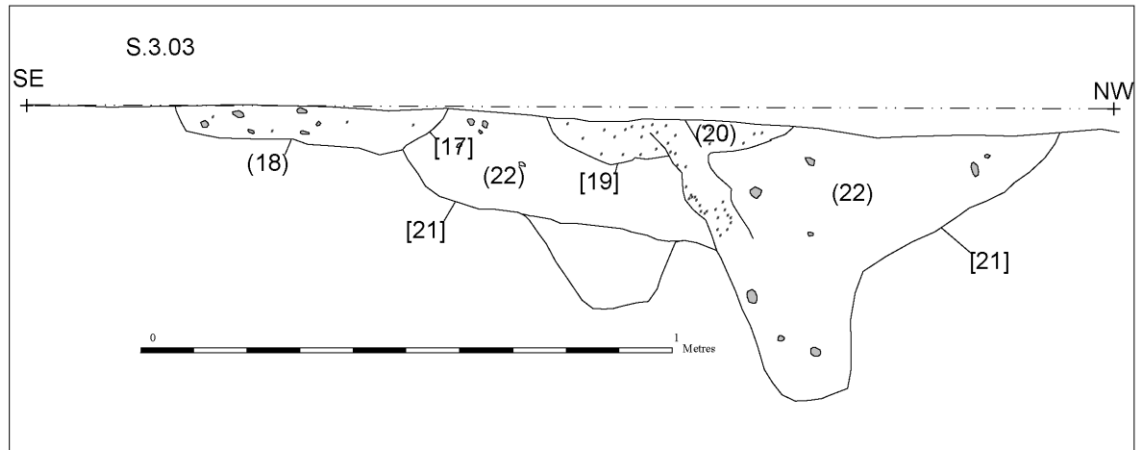


Fig. 16 (above) Section S303 through [17], [19] and [21]
Fig. 17 (below) Plan of [17], [19] and [21]

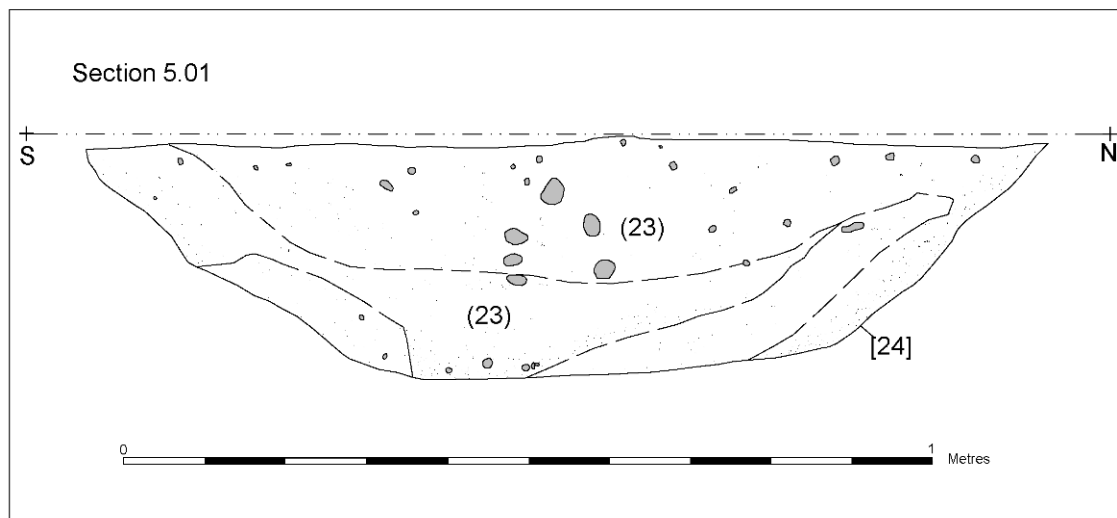


Fig. 18 (above) S-N Section S501 through [24]



Fig.19 Ring ditch [01] during excavation viewed from the south

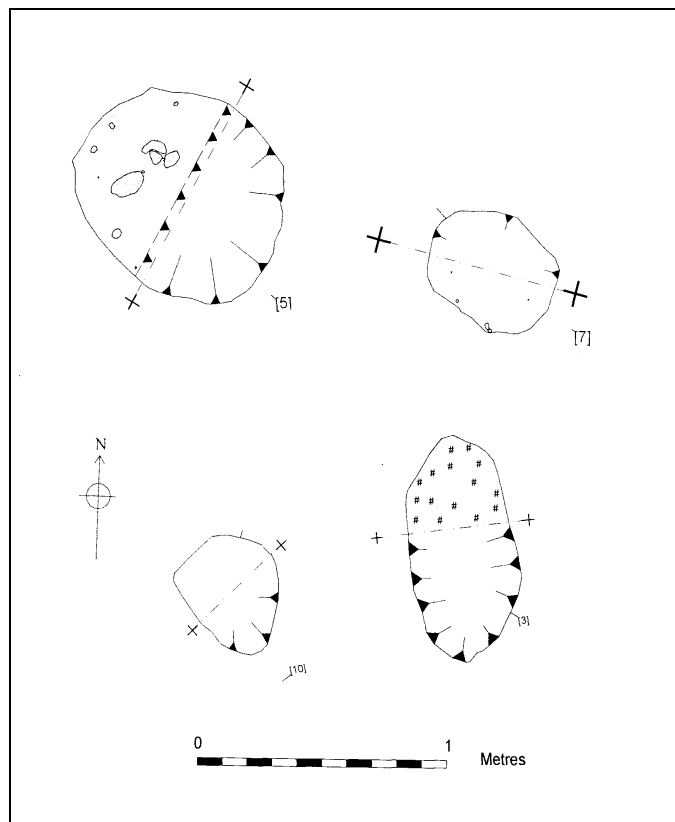


Fig.20 Pit group [3], [5], [7] and [10] (see figs 4 and 21-28).

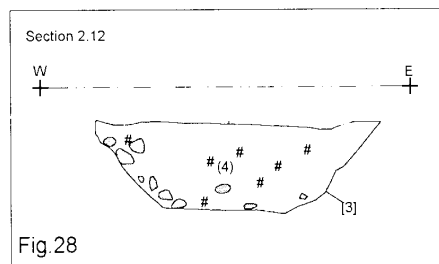
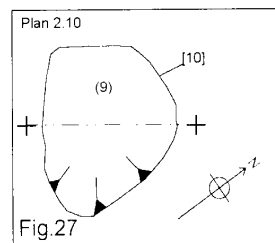
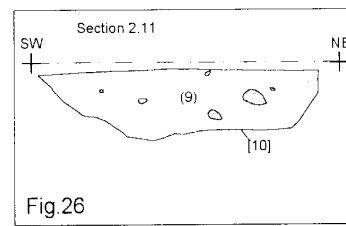
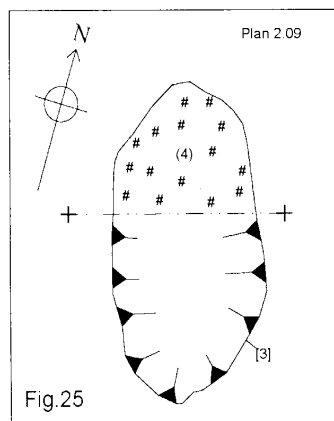
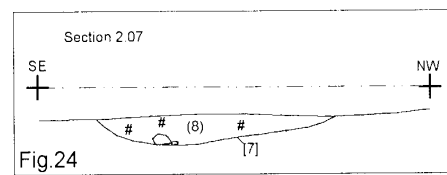
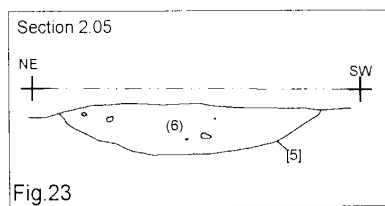
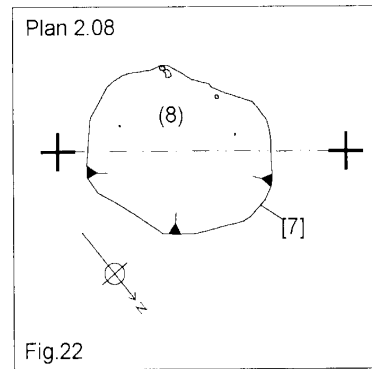
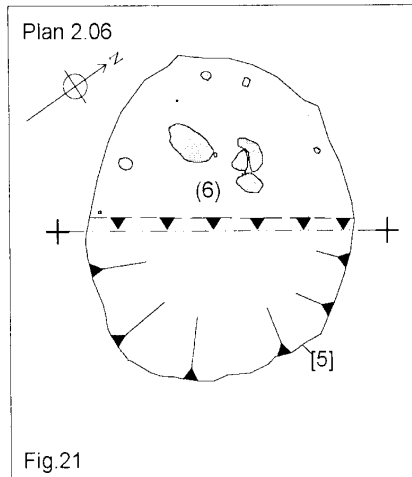


Fig 21 Plan 2.06 of [5]; Fig. 22 Plan 2.08 of [7]; Fig 23 NE-SW Section 2.05 through [5];
 Fig.24 SE-NW Section 2.06 through [7]; Fig.25 Plan 2.09 of [3];
 Fig.26 SW-NE Section 2.11 through [10]; Fig. 27 Plan 2.10 of [10];
 Fig. 28 W-E Section 2.12 through [3]



Fig.29 Ring ditch [01] viewed from the west



Fig.30 Section S.203 through Ring ditch [01] viewed from the east



Fig.31 Section through Pit [24] from the east



Fig.32 Pit [13] from the south

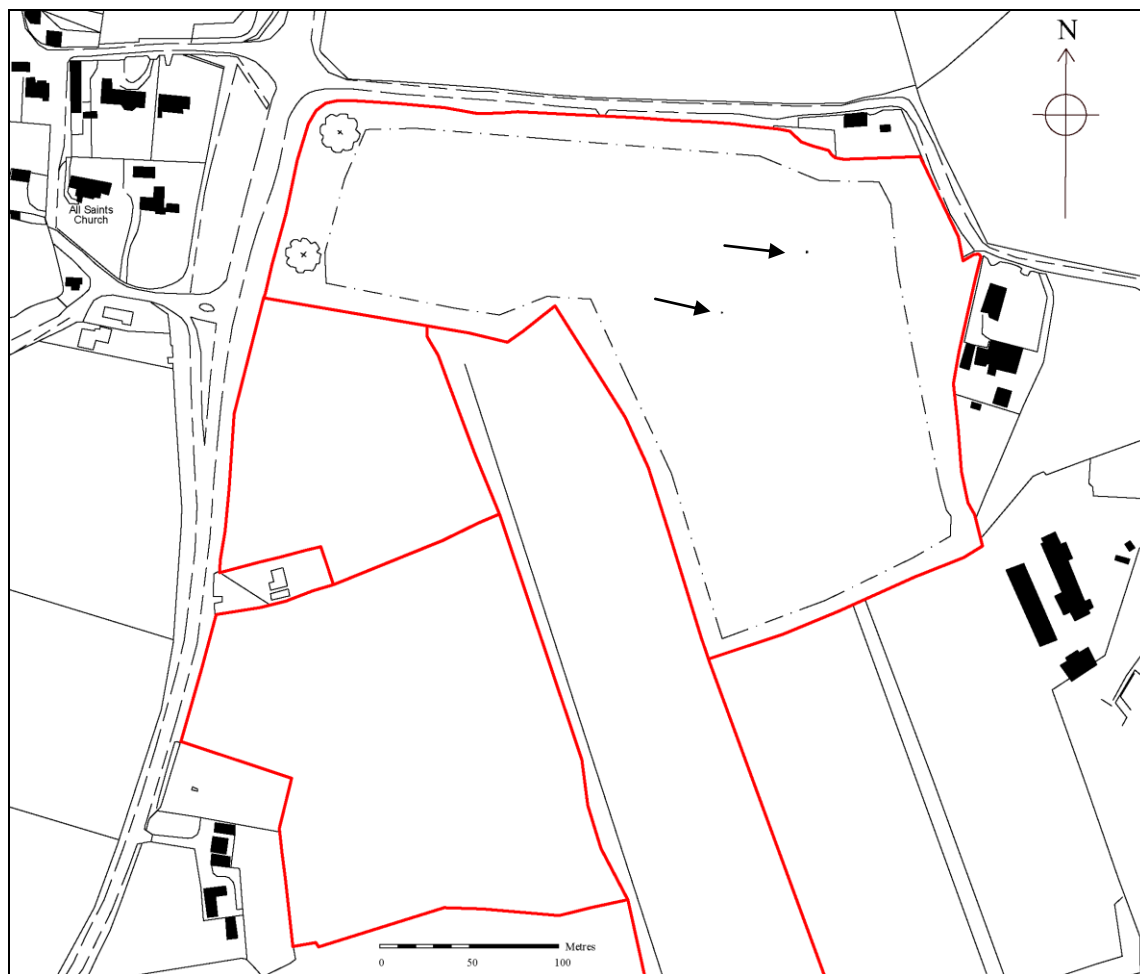


Fig.33 Area 1 Western Working Area showing the location of Pits (arrowed); [101] to the west and [102] to the north-east

6.2 Area 1 (Western Working Area)

The Western Working Area covered an area of *c.*17.0ha and had previously been used for pasture land. One of the fields within the central part of the Western Working Area had been quarried but afterwards had been reinstated to be used as pasture (Meek 2004). The remainder of Area 1 was undisturbed. The ploughsoil across the whole of Area 1 was approximately *c.*0.3m deep and overlay mixed subsoil comprising orange brown sands and gravels, down to a further depth of *c.*0.3m. Further machining revealed the natural substratum, which consisted of orange brown sandy clay, with patches of gravel. The north-eastern corner of the Western Working Area was excavated in October 2007. Thin patchy areas of alluvium were visible within Area 1 and along the eastern edge thicker visible deposits ran in an east to west orientation for *> c.* 20m.

Located approximately in the centre of the north-eastern field of Area 1, and situated approximately 60m apart were two pits, [101] and [103] (Figs.34-38). Pit [101] measured *c.*2m x 1m and was 0.3m deep. The fill (102) consisted of soft dark grey brown sandy clay silt with *>*10% charcoal flecks and *>*5% burnt sand and stone. Fill (102) also contained eight Iron Age pottery sherds (22g), at least six of which belong to a single vessel in a granitic fabric (Q2; Marsden 2000, 171). Pit [103] measured 2.5m x

1.6m and was 0.4m deep. Fill (104) consisted of soft dark-grey clay-silt with >30% charcoal and burnt material, but contained no finds. No other features were located in the north-eastern field of Area 1.

The north-western field of Area 1 was also excavated in a controlled strip during October 2007. However no archaeological deposits were located during this phase of work.

Before the controlled strip was undertaken on the western field of the Western Working Area (Area 1) The Senior Planning Archaeologist had requested that a *c.* 2 % sample of the area identified as having archaeological potential within the Western Working Area by trial trench. The area sampled comprised four 30m x 1.6m trenches totalling 192 sq metres. Topsoil/modern overburden was removed in level spits, under continuous archaeological supervision, down to the uppermost archaeological deposits by JCB 3C using a toothless ditching bucket. No archaeological deposits were observed during the evaluation phase in the Western Working Area of Cadeby Quarry (Jones 2007). In view of the negative results in the westernmost field, it was decided, following consultation with the Senior Planning Archaeologist at LCC as advisor to the Minerals planning authority that the further five evaluation planned trenches were unnecessary and the Area could be stripped subject to further archaeological controlled observation.

In September 2008 work commenced on continuing topsoil stripping in Area 1. This work concentrated upon stripping the western field of Area 1 (fig.35). No archaeological finds or features were observed during this phase.



Fig.34 Pit [101], (102) which contained Iron Age pottery

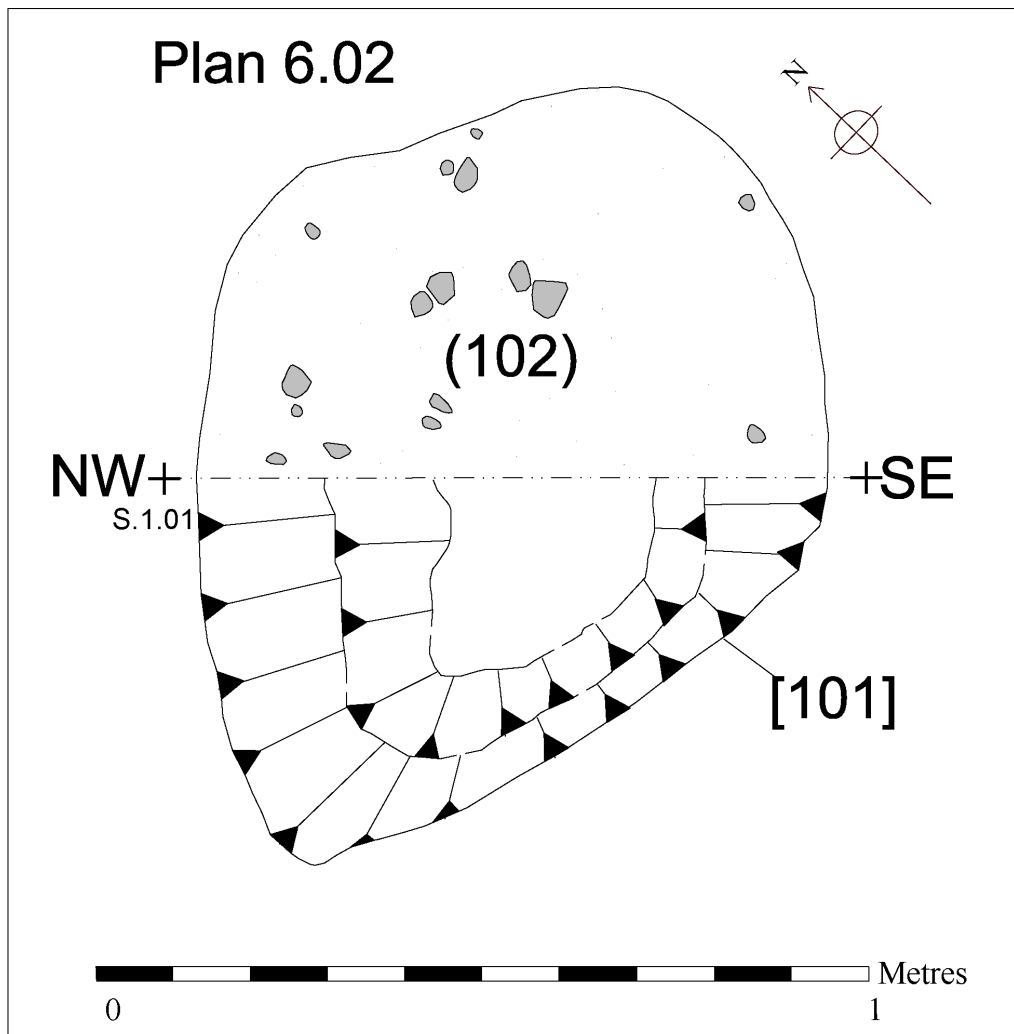
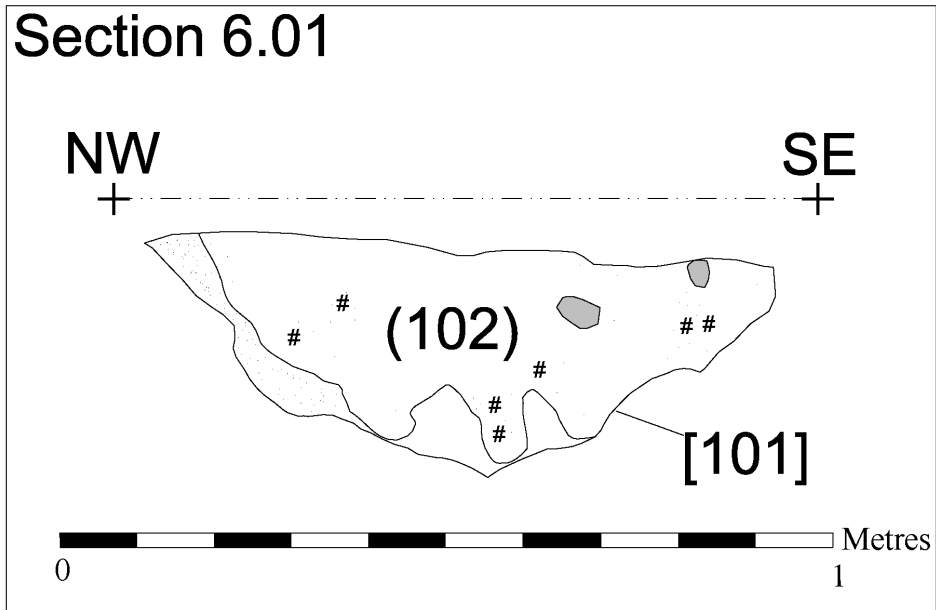
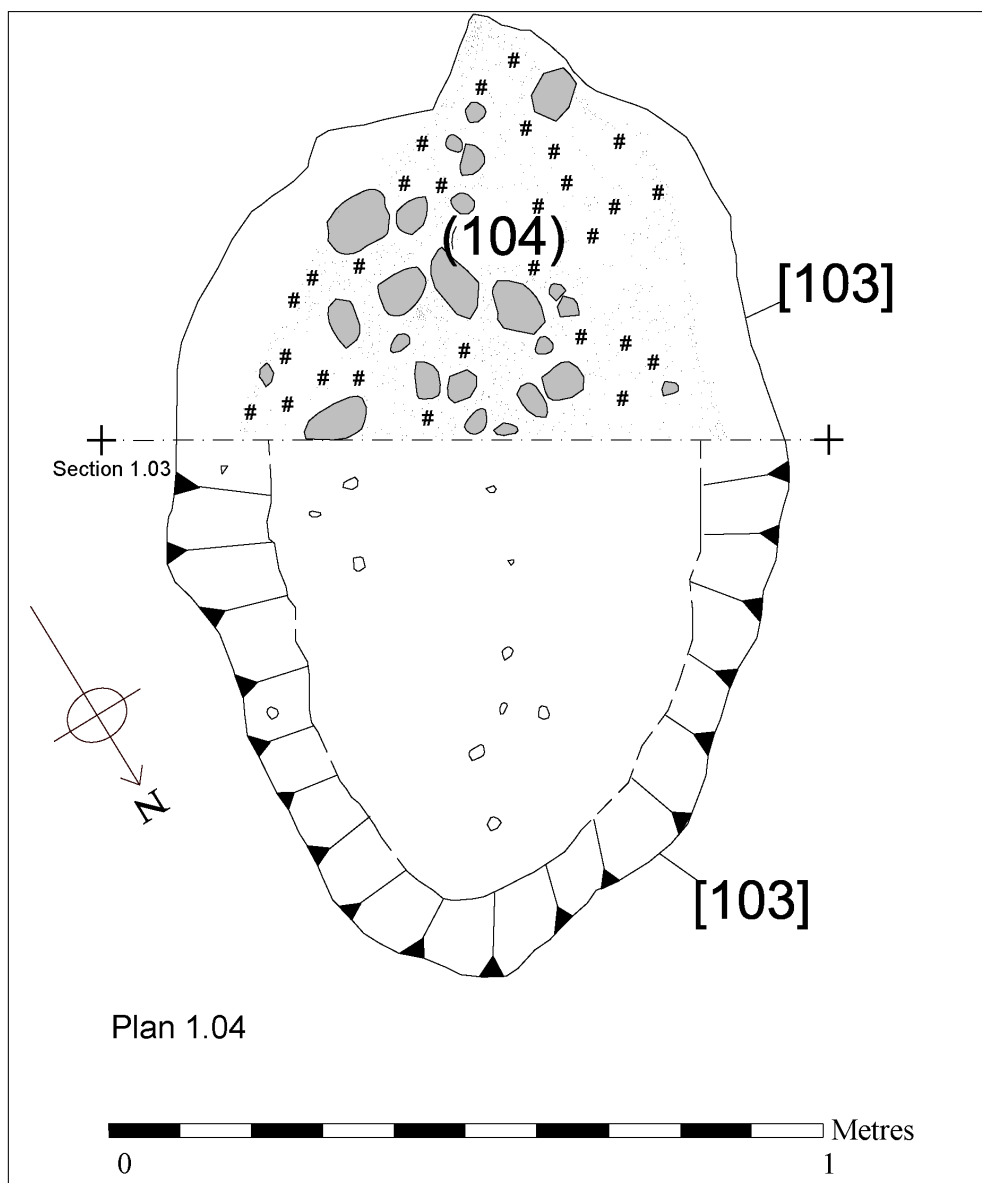
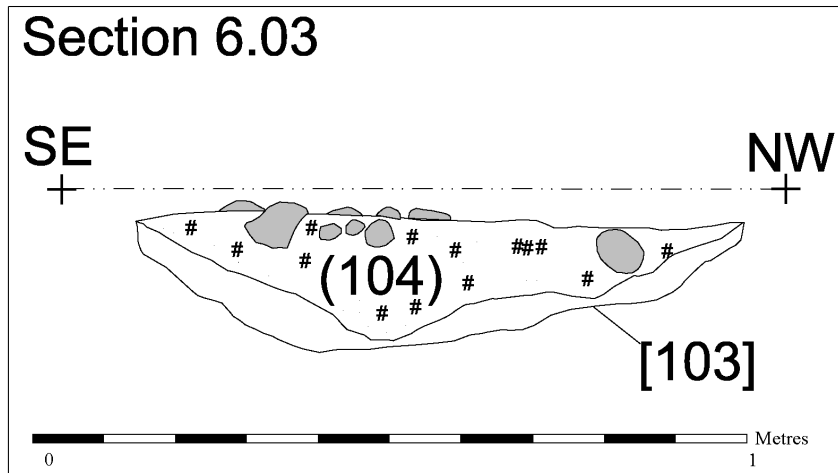


Fig 35 (above) NW-SE section through [101];
Fig 36 Plan of [101]



Figs.37 (above) SE-NW Section through [103]

Fig. 38 (below) Plan of [103]

7. Prehistoric Pottery

Nicholas J. Cooper and Patrick Marsden

Deverel-Rimbury Tradition

A total of seven joining sherds (154g) from the rim and upper body of a bucket urn in the Deverel-Rimbury tradition of Middle Bronze Age date, and a separate sherd from the flat base of the same vessel were retrieved from fill (4) of cut [3] in Area 3, associated with burnt human bone and charcoal. Charcoal also came from context (8).

The vessel, which is about 30cm in diameter, has a bucket-shaped profile with a plain, slightly flattened, rim which flares slightly about 3cm below the top. A single line of thumb impressions runs horizontally around the circumference about 8cm below the rim (Fig. 39). The wall thickness is up to 13mm and the base thickness up to 19mm. The fabric belongs to the broad category employing granitic opening materials deriving from the Charnwood district of north-west Leicestershire, similar to Fabric Q2 (now ULAS fabric code R2) used during the Iron Age (Marsden 2000, 171). The open materials comprise abundant irregular lumps (weathered and/or crushed) of granodiorite, containing quartz, feldspar and biotite mica, ranging from 1-8mm in size within a ground mass of abundant fine, rounded quartz grains or 0.1 to 0.5mm which are probably naturally occurring within the clay. The external and internal surfaces and margins are oxidised to a buff through to orange colour with a darker reduced grey core, probably containing unburned carbonaceous material.

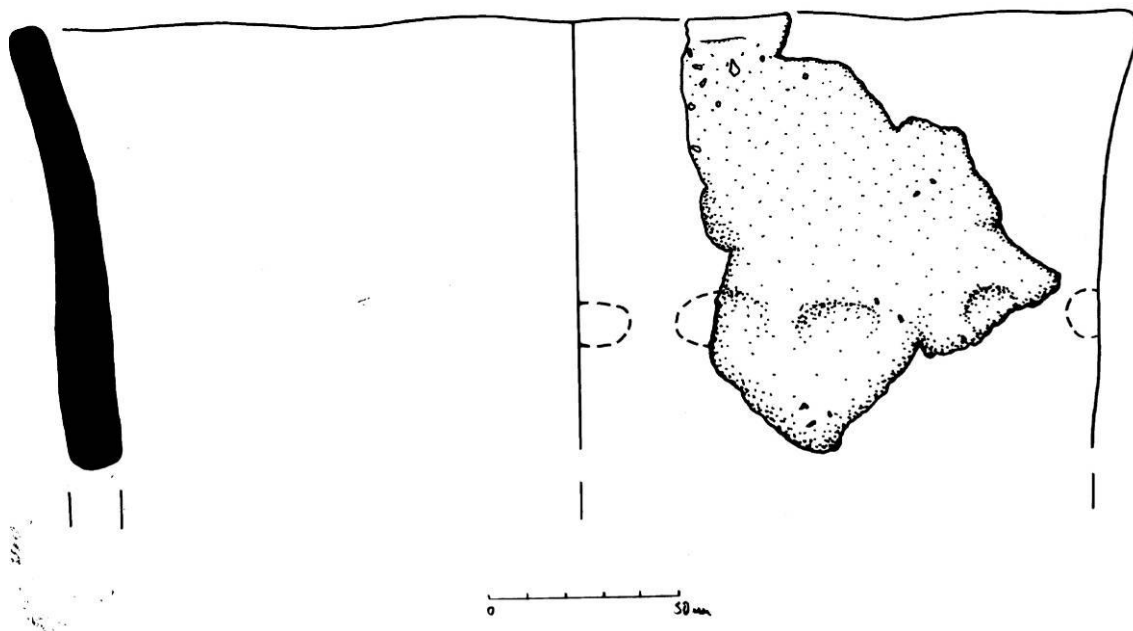


Fig.39 Deverel-Rimbury sherd and reconstructed urn.

The Deverel-Rimbury tradition of large, thick-bodied vessels of the Middle Bronze Age dates to the end of the Second Millennium BC and they were used both as cremation

urns and in domestic contexts across southern Britain. A vessel with a similar bucket-shaped profile came from Pokesdown, Dorset (Gibson 2002, 104-5 and fig.51.1)

Iron Age Pottery

A total of eight sherds (22g), at least six of which belong to a single vessel, was retrieved from fill (102) of context [101] in Area 3. The fabric is granitic as above corresponding to Fabric Q2 (Marsden 2000, 171). All the sherds are undecorated with an oxidised external margin and surface and a reduced core, internal margin and surface. Given the body thickness of 7mm for the joining sherds, which come from the wall of a jar, and the relative fineness of the granitic inclusions (up to 3mm), an Iron Age date is probably applicable to this material.

8. Result of ¹⁴C dating of charcoal samples. Göran Possnert/Maud Söderman

There was insufficient charred material for C14 dating of the ring ditch and associated features. Samples were submitted for pit [8]

Methodology

Pre-treatment of charcoal and similar materials:

1. Visible root-fibres are removed.
2. 1 % HCl is added, the mixture is heated and kept for 8-10 hours just below the boiling point (carbonates are removed).
3. 1 % NaOH is added, the mixture is heated and kept for 8-10 hours just below the boiling point. The insoluble fraction, referred to as INS, is mainly consisting of the original organic material, and should therefore give the most reliable age. The soluble part is precipitated by addition of concentrated HCl. The precipitate, which mainly consists of humics, is washed, dried and referred to as fraction SOL. Influence of contaminants could be obtained from the SOL fraction.

Prior to the accelerator measurement, the washed and dried material pH 4, is combusted to CO₂ and converted to graphite using a Fe-catalyst reaction.

The age of fraction INS has been measured in the present investigation.

Results

Lab number	Sample	δ ¹³ C‰ PDB	¹⁴ C age BP
Ua-38087	Cadeby Quarry, Leicestershire xA80.07 #3-16	-23,9	3 531 ± 34
Ua-38088	Cadeby Quarry, Leicestershire xA80.07 #5-20	-24,9	3 538 ± 41

9. Discussion

Area 1 (Western Working Area)

The archaeological evaluation undertaken in the Western Working Area (Area 1), failed to uncover any archaeological features despite targeting the apparent possible magnetometry anomalies, highlighted in the geophysical survey. The possible reason for this may well be due to geological changes within the natural substratum which may have produced the geophysical anomalies. The controlled topsoil strip in this area of the site confirmed the absence of archaeology along the western side of Area 1.

The archaeologically controlled supervision of topsoil stripping in the Western Working Area (Area 1) revealed two pits and, located in the north-eastern corner. These two pits [101] and [103] contained very similar fills (102) and (104), and pit fill (102) contained a total of eight pottery sherds (22g), at least six of which belong to a single Iron Age vessel (Marsden 2008).

Area 3 (Northern Working Area)

The watching brief in the Northern Working Area (Area 3) revealed a ring ditch [01], (02), with associated internal pits. Ring ditches are usually the only surviving evidence of former round barrows (burial mounds) which have been plough eroded. They are the most abundant form of later Neolithic-earlier Bronze Age monument, numbering over 800 in the East Midlands (Clay 2006, 80). Many of these features form parts of cemetery groups and monument complexes although in this case no evidence of other burials or ring ditches was present in the area examined. Even with hindsight a re-examination of the greyscale plots of the Northern working area showed no evidence for the ring ditch from the geophysical survey (Donaldson 2005, Fig 30). This may be due to the absence of magnetically enhanced material within the fill of the ring ditch.

The five pits located within the ring ditch enclosure all appear to have contained burnt material and fragments of burnt bone which suggest that they may well have originally contained cremations or ritual burning residues. Unfortunately the features had suffered from significant degrees of plough erosion and the samples taken failed to provide sufficient material for environmental or carbon-14 dating evidence. There were no ceramic finds recovered either from any of these features so accurate dating becomes problematic. However a Bronze Age can be postulated for the ring ditch feature which may have originally surrounded a small barrow. They may be evidence of successive burials being placed within the mound through to the natural substratum although their similarity of depth may also suggest that they may have been inserted from the ground surface and that a mound may have been added later. There is no obvious candidate for a primary burial based on the centrality of a particular feature although [19] is a possibility. This had suffered disturbance from later animal burrowing. If the features are contemporary this may be paralleled at Cossington Barrow 2 (Thomas 2008, 21) where several burials were located within a central area surrounded by a double ring ditch, albeit of much larger diameter. This may suggest that the area may have remained open to receive these prior to any mound being constructed.

The four pits located approximately 130m to the east of the ring ditch contained similar fills to the other pit features and pit [03], (04) contained a total of seven joining sherds

(154g) from the rim and upper body of a bucket urn and a separate sherd from the flat base of the same vessel, in the Deverel-Rimbury tradition of Middle Bronze Age date (above p.23). Pit fill (08) contained charcoal material which was carbon-14 dated to c.1800-1900 cal BC which puts the date of the fill to the Middle Bronze Age (above p.24).

10. Acknowledgements

I would like to thank the clients, Tarmac Limited and Phil Lee, the quarry manager, for their assistance and co-operation on site. Patrick Clay managed the project and the fieldwork was carried out by the author with the assistance of James Harvey and Sebastian Jones all of ULAS.

11. Archive and Publication

The archive comprising of an unbound copy of this report, 6 watching brief recording sheets, 40 black and white negatives, 181 digital photographs, 26 context sheets and 5 permatrace drawing sheets will be deposited with Leicestershire County Council, Accession Number X.A80.2007.

12. Oasis Record

INFORMATION REQUIRED	EXAMPLE
Project Name	Archaeological recording at Cadeby Quarry, Cadeby, Leicestershire.
Project Type	Watching brief and recording
Project Manager	Patrick Clay
Project Supervisor	Greg Jones
Previous/Future work	Gravel quarrying
Current Land Use	Pasture land
Development Type	Gravel quarrying
Reason for Investigation	PPG16
Position in the Planning Process	Condition of planning permission
Site Co ordinates	SK 434 025
Start/end dates of field work	October 2006 – September 2008
Archive Recipient	Leicestershire County Council
Study Area *	c. 23.4ha

13. Bibliography

Clay, P., 2006 'The Neolithic to Middle Bronze Age' In N.J. Cooper (ed.) *The Archaeology of the East Midlands: An Archaeological Resource Assessment and Research Agenda*, 69-88.

Donaldson, K. T., 2005 *Geophysical Survey Report: Cadeby Quarry, Leicestershire*, Stratascan Limited Report, Job No. J1975, February 2005

- Gibson, A.M., 2002 *Prehistoric Pottery in Britain and Ireland*. Stroud: Tempus
- Marsden, P., 2000 'The prehistoric pottery' in B. M. Charles, A. Parkinson and S. Foreman 'A Bronze Age Ditch and Iron Age Settlement at Elms farm, Leicester', 170-186, *TLAHS* 74, 113-220.
- Meek, J., 2004 *An Archaeological Desk-based Assessment for the Proposed Cadeby Quarry Extension, Leicestershire (centre SK 434 025)*, ULAS Ref. Report No. 2004-201
- Thomas, J., 2008 *Monument, Memory and Myth. Use and Re-use of Three Bronze Age Barrows at Cossington, Leicestershire*. Leicester: Leicester Archaeology Monograph 14.

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15.09.2009

Appendix 1 Summary of archaeological contexts

Context	Type	Category	Short Description	Plan	Section
1	Cut	Ring Ditch	Ring Ditch/Gulley Cut	1.01	2.01
2	Fill	Ring Ditch	Ring Ditch/Gulley Fill	1.01	2.01
3	Cut	Pit	Pit Cut	2.09	2.10
4	Fill	Pit	Pit Fill	2.09	2.10
5	Cut	Pit	Pit Cut	2.06	2.05
6	Fill	Pit	Pit Fill	2.06	2.05
7	Cut	Cremation?	Pit/Cremation Cut	2.08	2.07
8	Fill	Cremation?	Pit/Cremation Fill	2.08	2.07
9	Fill	Pit	Pit Fill	2.10	2.11
10	Cut	Pit	Pit Cut	2.10	2.11
11	Fill	Cremation?	Cremation Fill	1.05	1.06
12	Cut	Cremation?	Cremation Cut	1.05	1.06
13	Cut	Cremation?	Cremation/Posthole Cut	1.02	1.04
14	Fill	Other	Stones Within [13]	1.02	1.04
15	Fill	Cremation?	Cremation/- Fill	1.02	1.04
16	Fill	Cremation?	Charcoal in Base of (15)	1.02	1.04
17	Cut	Cremation?	Cremation Cut	3.04	3.03
18	Fill	Cremation?	Cremation Fill	3.04	3.03
19	Cut	Cremation?	Pit/Cremation Cut	3.04	3.03
20	Fill	Cremation?	Pit/Cremation Fill	3.03	3.04
21	Cut	Other	Natural Cut	3.04	3.03
22	Fill	Other	Natural Fill	NA	NA
23	Fill	Ditch	Ditch Fill	NA	5.01
24	Cut	Ditch	Ditch Cut	NA	5.01
25	Cut	Cremation?	Pit/Cremation Cut	NA	NA
26	Fill	Cremation?	Pit/Cremation Cut	NA	NA
101	Cut	Pit	Pit Fill	6.02	6.01
102	Fill	Pit	Pit Fill	6.02	6.04
103	Cut	Pit	Pit Fill	6.03	6.04
104	Fill	Pit	Pit Fill	6.03	6.04

Appendix 2

Design Specification for archaeological work

*Cadeby Quarry extension
Cadeby, Leicestershire (SK 438 025).*

Planning Application: P.A. 2005/0893/04

For: Tarmac Ltd

1 Introduction

1.1 This document outlines a scheme for archaeological watching brief during overburden removal at Cadeby Quarry extension, Cadeby, Leicestershire (SK 438 025; Figs 1-2) by Tarmac Ltd (P.A. 2005/0893/4). Planning permission has been granted for the extension to Cadeby quarry. It addresses the requirements for a written scheme of information to cover initial archaeological work from Leicestershire County Council, Community Services Dept as archaeological advisers to Leicestershire County Council. Further written schemes of information will be provided to cover other requirements of the planning authority for this application.

1.2 An archaeological desk-based assessment and geophysical survey has been undertaken for the application area (ULAS Report 2005; Stratascan report J1975 2005). The planning officers report to committee states:

For those areas where a geophysical survey has failed to identify significant coherent archaeological deposits (the Northern Working Area and Brascote House), a programme of archaeological attendance for inspection and recording (a watching brief) during soil stripping will be required.

2 Aims

2.1 The aims of the control and supervision of the topsoil stripping and watching brief are :

- 1) To ascertain whether any archaeological deposits are present.
- 2) To establish the extent, character, date and quality of these deposits, if present, to enable a mitigation strategy to be formulated.

3 Methodology

3.1. All work will follow the Institute of Field Archaeologists (IFA) Code of Conduct and adhere to their *Standard and Guidance for Archaeological watching briefs* and Leicestershire County Council's *Guidelines for Archaeological Work in Leicestershire and Rutland*.

3.2 Staffing, Recording systems, Health and Safety provisions and Insurance details are provided.

3.3 Internal monitoring procedures will be undertaken including visits to the sites from the project manager. These will ensure that project targets are being met and professional standards are being maintained. Provision will be made for external monitoring meetings with representatives of Leicestershire County Council, and Tarmac Ltd, if required.

3.4 The topsoil and subsoil will be removed separately by machine with toothless bucket under full supervision, until archaeological deposits or undisturbed substrata are encountered.

3.5 The area will be examined by hand cleaning of any archaeological deposits. These will be planned and samples of any archaeological deposits located will be hand excavated.

3.6 Measured drawings of all archaeological features will be prepared at a scale of 1:20 and tied into an overall site plan of 1:100. All plans will be tied into the National Grid using a Total Station Electronic Distance Measurer (EDM).

3.7 The location of the archaeological deposits will be surveyed using a Total Station Electronic Distance Measurer (EDM) linked to a hand held computer.

3.8 Archaeological deposits will be excavated and recorded as appropriate to fulfilling the aims (2). All excavated sections will be recorded and drawn at 1:10 or 1:20 scale, levelled and tied into the Ordnance Survey datum. Spot heights will be taken as appropriate.

3.9 Any human remains encountered will only be removed if necessary under a Home Office Licence and in compliance with relevant environmental health regulations.

3.10 In the event of significant archaeological deposits being located this may necessitate additional contingency time and resources. In this event Leicestershire County Council will be consulted.

4 Health and Safety

4.1 ULAS is covered by and adheres to the University of Leicester Statement of Safety Policy and uses the ULAS Health and Safety Manual (revised 2005) with appropriate risks assessments for all archaeological work. A draft Health and Safety statement for this project is in the Appendix. The relevant Health and Safety Executive guidelines will be adhered to as appropriate.

5 Insurance

5.1 All ULAS work is covered by the University of Leicester's Public Liability and Professional Indemnity Insurance. The Public Liability Insurance is with St Pauls Travellers Policy No. UCPOP3651237 while the Professional Indemnity Insurance is with Lloyds Underwriters (50%) and Brit Insurances (50%) Policy No. FUNK3605.

6 Recording Systems

6.1 Individual descriptions of all archaeological strata and features excavated or exposed will be entered onto prepared pro-forma recording sheets. If the complexity of the archaeology warrants it these will be computerised using the ULAS integrated system.

6.2 A site location plan based on the current Ordnance Survey 1:1250 map (reproduced with the permission of the Controller of HMSO) will be prepared. This will be supplemented by a plan at 1:200 (or 1:100), which will show the location of the areas investigated in relationship to the investigation area and OS grid.

6.3 Some record of the full extent in plan of all archaeological deposits encountered will be made on drawing film, related to the OS grid and be at a scale of 1:10 or 1:20. Sections including the half-sections of individual layers of features will be drawn as appropriate. The OD height of all principal strata and features will be calculated and indicated on the appropriate plans.

6.4 An adequate photographic record of the investigations will be prepared. This will include black and white prints and colour transparencies illustrating in both detail and general context the principal features and finds discovered. The photographic record will also include 'working shots' to illustrate more generally the nature of the archaeological operation mounted.

6.5 This record will be compiled and fully checked during the course of the excavations.

7 Finds and Samples

7.1 The IFA *Guidelines for Finds Work* will be adhered to.

7.2 All items of archaeological significance from the excavation will be examined and recorded to form part of the site archive. All identified finds and artefacts are to be retained, although certain classes of building material may, in some circumstances, be discarded after recording.

7.3 All finds and samples will be treated in a proper manner. Where appropriate they will be cleaned, marked and receive remedial conservation in accordance with recognised best-practice. This will include the Site code number, finds number and context number. Bulk finds will be bagged in clear self sealing plastic bags, again marked with Site code, finds and context numbers and boxed by material in standard storage boxes (340mm x 270mm x 195mm). All metal objects will be x-rayed and then selected for conservation. All materials will be fully labelled, catalogued and stored in appropriate containers.

8. Report and Archive

8.1 On completion of the fieldwork the site archive will be prepared to ensure accessibility and an interim report prepared. All records will be updated and all plans sections and photographs indexed. An activity matrix and sequence plans site will be prepared.

8.2 The data and material will be critically examined in the light of their potential to answer the research aims resulting from the fieldwork including local, regional and national priorities.

8.3 A full copy of the archive as defined in MAP 2; MGC 1992; SMA 1993 and RFG/FRG 1993 will be presented to Leicestershire County Council within six months of the completion of the analysis stage. This archive will include all written, drawn, disk based and photographic records relating directly to the investigations undertaken.

9 Timetable

9.1 The topsoil stripping under supervision is scheduled for Autumn 2006.

10. Bibliography

MAP 2, *The management of archaeological projects* 2nd edition English Heritage 1991

MGC 1992, *Standards in the Museum Care of Archaeological Collections* (Museums and Galleries Commission)

RFG/FRG 1993, *Guidelines for the preparation of site archives* (Roman Finds Group and Finds Research Group AD 700-1700)

SMA 1993, *Selection, retention and Dispersal of Archaeological Collections. Guidelines for use in England, Wales and Northern Ireland* (Society of Museum Archaeologists)

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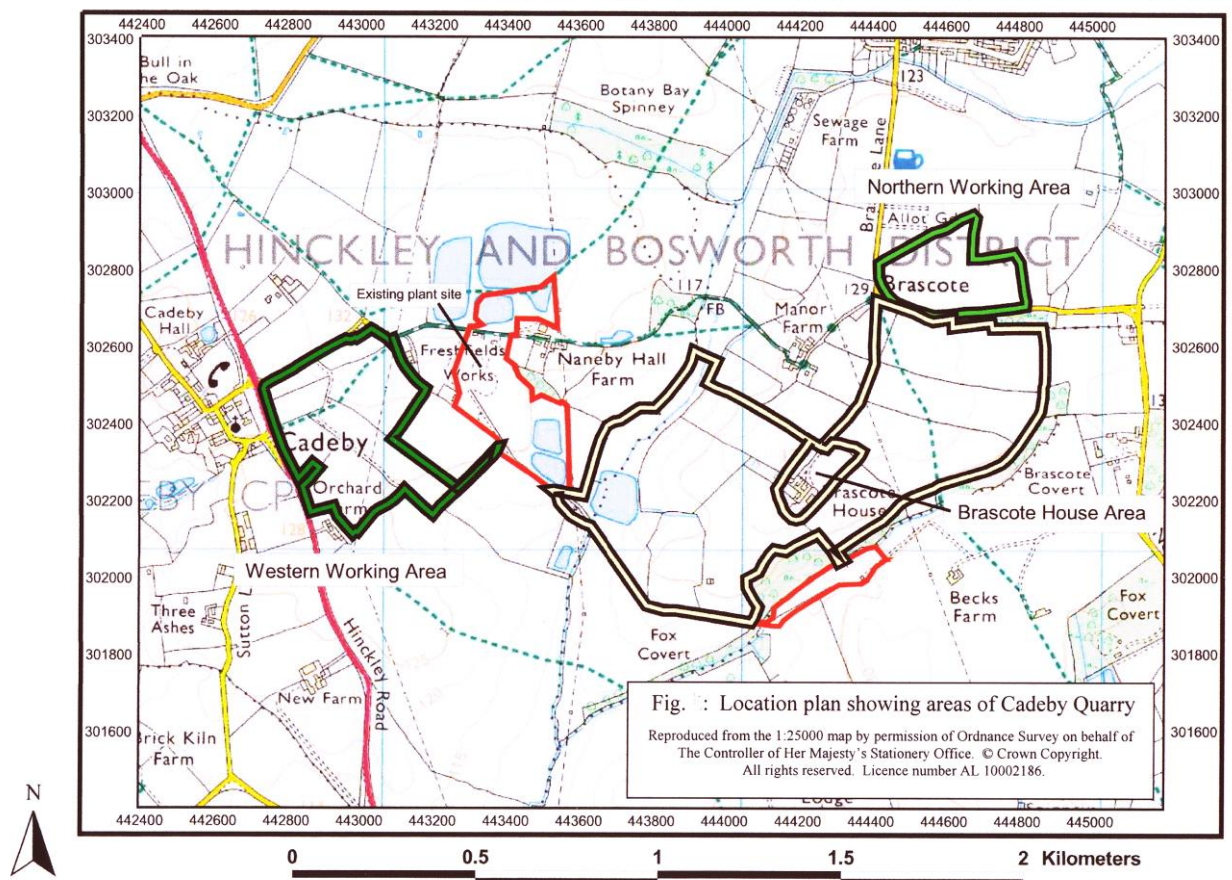


Figure 1 Location of the working areas.

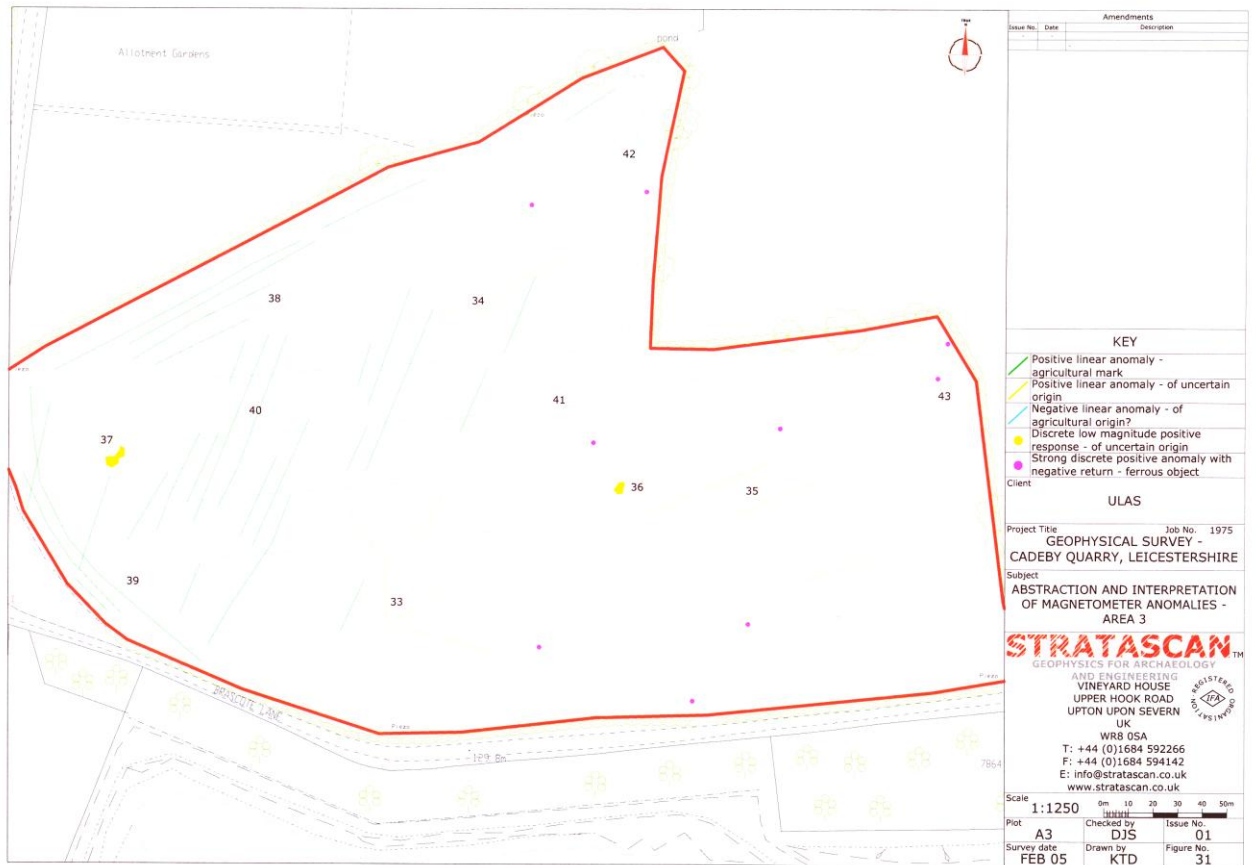


Figure 2 Interpretation plan of the results from the geophysical survey in the Northern Working area.

Appendix

Draft Project Health and Safety Policy Statement

***Cadeby Quarry extension
Cadeby, Leicestershire (SK 438 025).***

Planning Application: P.A. 2005/0893/04

For: Tarmac Ltd

1 Nature of the work

1.1 This statement is for the supervision of topsoil and overburden removal.

1.2 The work will involve machine excavation by Hymac or equivalent during daylight hours to reveal underlying archaeological deposits. Overall depth is likely to be c. 0.5 m with possible features to a depth of 1.5m.. Remaining works will involve the examination of the exposed surface with hand tools (shovels, trowels etc) and excavation of archaeological features. Deeper features will be fenced with lamp irons and hazard tape.

1.3 All work will adhere to the University of Leicester and Tarmac Ltd Health and Safety Policy and follow the guidance in the Standing Committee of Archaeological Unit Managers manual, as revised in 1997, together with the following relevant Health and Safety guidelines.

HSE Construction Information Sheet CS8 Safety in excavations.

HSE Industry Advisory leaflet IND (G)143 (L): Getting to grips with manual handling.

HSE Industry Advisory leaflet IND (G)145 (L): Watch Your back.

CIRIA R97 Trenching practice.

CIRIA TN95 Proprietary Trench Support Systems.

HSE Guidance Note HS(G) 47 Avoiding danger to underground services. HSE Guidance Note GS7 Accidents to children on construction sites

2 Risks Assessment

2.1 Access to a public highway.

Precautions. Experienced drivers used trained in vehicle in use. Staff will be on hand to guide machines and cabins on to and off site. Hazard jackets will be worn.

2.2 Access through and working within private property

Precautions. Experienced drivers used trained in vehicle in use. Staff will be on hand to guide machines and cabins on to and off site. Hazard jackets will be worn. Temporary entrance will be clearly marked. Mud will be cleaned off vehicle wheels as far as is practically possible. Mud on tarmac will be cleared. No trenches will be excavated close to public footpaths.

2.3 Working on an excavation site.

Precautions. Excavations of deep features to be stepped to ensure that the depth does not exceed 1.2m. Spoil will be kept 1.5m away from the edge of the excavated area to prevent falls of loose debris. No excavation will be undertaken within 5m of the existing pipeline. Loose spoil heaps will not be walked on. Hard hats, hazard jackets and protective footwear will be worn at all

times. A member of staff qualified in First Aid will be present at all times. First aid kit to be kept in site accommodation. Vehicle and mobile phone to be kept on site in case of emergency. Staff will keep a safe distance from working plant at all times.

2.4 Working with plant.

Precautions. Two people experienced in working with machines will supervise topsoil stripping at all times. Hard hats, protective footwear and hazard jackets will be worn at all times. If services or wells are encountered machining will be halted until extent has been established by hand excavation or areas where it is safe to machine have been established.

2.5 Working within areas prone to waterlogging.

If waterlogging occurs on site preventing work to continue it is proposed to excavate a sump, suitably fenced and clearly marked to the south of the site to enable the water to drain away. If this is insufficient a pump will be used. The sump will be covered when not in use and backfilled if no longer required. Protective clothing will be worn at all times and precautions taken to prevent contact with stagnant water which may carry Weils disease or similar.

2.6 Working with chemicals.

If chemicals are used to conserve or help lift archaeological material these will only be used by qualified personnel with protective clothing (i.e a trained conservator) and will be removed from site immediately after use.

2.7 Other risks

Precautions. If there is any suspicion of unforeseen hazards being encountered e.g chemical contaminants, unexploded bombs, hazardous gases work will cease immediately. The client and relevant public authorities will be informed immediately.

2.8 No constraints are recognised over the nature of the soil, water, type of excavation, proximity of structures, sources of vibration and contamination.

Patrick Clay
Director ULAS
7.8.2006

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