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**ARCHAEOLOGICAL WATCHING BRIEF
OF DEVELOPMENT AT
BASTON CROSS DRAIN,
BASTON FEN,
LINCOLNSHIRE
(BCD 97)**



A P S
ARCHAEOLOGICAL
PROJECT
SERVICES

EVENT 413431
SOURCE 415109 411470
34999 BRONZE AGE

**ARCHAEOLOGICAL WATCHING BRIEF
OF DEVELOPMENT AT
BASTON CROSS DRAIN,
BASTON FEN,
LINCOLNSHIRE
(BCD 97)**

Work Undertaken For
Lapwing Consultants
on behalf of
Mr P.N. Watts.

March 1998

Report Compiled by
Neil Herbert BA (Hons)

National Grid Reference: TF14531581
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1. SUMMARY

An archaeological watching brief was undertaken during development of land east of Cross Drain, Baston, Lincolnshire. Previous archaeological evaluation has recorded prehistoric remains, including Bronze Age pottery (2000-600 BC), flints and animal bone within the area of development.

The watching brief monitored construction of a reservoir. Excavations revealed a sequence of natural deposits and prehistoric archaeological features. The latter included gullies, pits, postholes and hearths. Moreover, traces of buried soil preserved beneath alluvial deposits were present. Cumulatively, these remains probably represent an area of settlement occupied during the middle of the second millennium BC.

Finds recovered during excavations included flint tools, animal bone, pottery and burnt stone concentrated at the southern extent of the development.

2. INTRODUCTION

2.1 Background

Between the 1st August and the 19th September 1997, an archaeological watching brief was undertaken during excavation of a reservoir on land east of Cross Drain, Baston, Lincolnshire (National Grid Reference TF14531581). This work followed a programme of geophysical survey and field evaluation completed during 1996 (Price 1996, Moulis 1996). Previous fieldwalking over the site surface produced negative results (Hayes and Lane 1992).

The archaeological work was commissioned by Lapwing Consultants on

behalf of Mr P.N. Watts and was carried out by Archaeological Project Services. Investigations were completed in accordance with a Proposal for Archaeological Watching Brief prepared by Tom Lane and approved by the Assistant Archaeological Officer LCCAS (Appendix 1).

An archaeological watching brief is defined as 'a formal programme of observation and investigation conducted during any operation carried out for non-archaeological purposes within a specified area, where there is a possibility that archaeological deposits may be disturbed or destroyed' (IFA 1994, 1).

2.2 Topography, Geology and Soils

The site is located approximately 15km northeast of Stamford and 6km northeast of Baston village, on the edge of the south Lincolnshire Fens (Fig.1).

Situated on flat ground, at a height of approximately 2m OD, the development site covers a total area of 4 hectares (Fig.2; Plate 1). The site lies on a broad fan of gravel, at the point which the gravel shelves beneath clastic sediments deposited during the second millennium BC. The current land surface is organic, a degraded remnant of the once more extensive peat cover that has desiccated considerably since the widespread introduction of modern drainage techniques (Lane 1996, 1).

Local soils are the Downholland series, typically clayey humic alluvial gleys (Hodge *et al.* 1984, 166). These soils remain slightly organic, though peat that once covered the area has now largely wasted (Burton and Hodgson 1987, 100).

Natural geological deposits recorded during the watching brief comprised deposits of clay and sandy gravel.

2.3 Archaeological Setting

The development site lies in an area of known archaeological activity dating from the prehistoric (pre AD43) to the Romano-British (AD43-410) period.

A finely worked flint axe, of probable Neolithic date (3500-2000 BC), was retrieved *c.* 750m northeast (SMR33404) of the development. To the southeast, a possible round barrow was observed during fieldwalking (Lane 1992). If correct, this is the most northerly in a dense concentration of barrows, previously recorded on the fen edge (French 1994, 4).

During the middle of the Bronze Age (*c.* 1500 BC) a major marine inundation occurred, depositing silts and clays over a wide area. Following this event peat formed around the edge of the fenland, including the Baston area. These conditions probably mitigated against occupation during the Iron Age, though cropmarks of possible settlements are recorded 1km to the west (SK07.49-50).

Within 150m north of the development runs the course of a Roman road known as the Baston Outgang. Extending from south of Kate's Bridge across the Fenland to Spalding, the course of the road is visible as a linear gravel band crossing the clay fens and continuing as parallel linear cropmarks on the silts nearer to Spalding (Hayes and Lane 1992, 172).

2.4 Previous Work

A programme of fieldwalking, geophysical survey and archaeological field evaluation has previously been conducted across the area of development.

Fieldwalking across the surface of the site, during the Fenland Survey, did not retrieve any artefacts (Lane 1992). Geophysical

Survey, conducted prior to archaeological field evaluation, did not detect any anomalies of archaeological significance (Price 1996, 3).

Archaeological evaluation was conducted using a 'chequerboard' grid of 5m x 5m trenches over the ground previously assessed by geophysical survey. Investigations revealed few firm traces of human activity and most of the recorded features could be attributed to natural processes. However, at the northwestern corner of the site, a buried ancient soil deposit was revealed. This soil yielded fragments of Bronze Age pottery, several flint artefacts and animal bones. A small number of gullies were also identified. Consequently, the evidence suggests that an Early Bronze Age settlement is located in the proximity, though perhaps just to the north or west, of the area of development (Moullis 1996, 1).

3. AIMS

The requirements of the watching brief, set by the specification, were: to excavate and record any archaeological features exposed, remove samples of the fills to assess survival of environmental indicators, and remove artefacts in order to assess the chronological and economic potential (Appendix 1).

In particular the recovery of prehistoric settlement remains, found during previous evaluation, was considered a high possibility. The recording of any further features associated with these remains was a priority.

4. METHODS

The first stage of the watching brief involved the monitoring of groundworks. Deposits and features exposed by development were planned at a scale of 1:200 and excavated where possible (Fig.2; Areas 1 and 2).

Subsequent to this work a small excavation of archaeological features, exposed at the south of the development, was completed (Fig.2; Area 3). These remains were planned at a scale of 1:20 and sections were recorded at a scale of 1:10.

Each deposit or feature revealed during the investigation was allocated a unique reference number (context number) with an individual written description. A photographic record was also compiled.

5. RESULTS

5.1 Description of the Excavation

Records of the deposits and features identified during the watching brief were examined. Grouping was assigned based on the nature of the deposits and recognisable relationships between them, in conjunction with finds retrieved during excavation. A list of all contexts with interpretations appears as Appendix 2. Four groups of activity were recognised:

- Group 1: Natural deposits
- Group 2: Prehistoric deposits
- Group 3: Alluvial deposits
- Group 4: Ploughsoil deposits

The numbers in brackets are the context numbers assigned in the field.

5.2 Group 1: Natural deposits

Area 1 (Fig.3)

The earliest recorded deposits comprised an orange-brown sandy gravel (068), exposed at a depth of approximately 0.4m below the existing ground surface. A layer of friable, greyish-orange sandy clay (064), containing occasional sub-angular flints, overlay (068) within a limited area. Both layers developed as a result of natural deposition.

A thin band of loose, greyish-white sandy gravel (066) was also exposed, overlying (068). This shape, and composition of the deposit, probably represents the position of a water channel. Channel (066) had diffuse boundaries with the underlying geology and its true extent was difficult to define.

Areas 2 and 3 (Figs 4 and 5)

A band of loose, greyish-white gravelly sand (060), overlying (068), was exposed across the southernmost extent of Area 2. Measuring approximately 2m wide and 50m long, this represents the 'ghost' of a water channel.

West of channel (060) was a small sub-rectangular feature (062) measuring 2m long and 1m wide, to a depth of 110mm. This contained a fill of loose, blackish-brown clayey peat (061) and probably represents the position of a tree.

5.3 Group 2: Prehistoric deposits

Area 1 (Fig.3)

Fires: Patches of orangish-red clayey ash (063) containing occasional smooth flint pebbles were recorded within this area. None of these layers were situated within a cut and so they have been interpreted as residue from surface fires, rather than hearths. No artefactual material was contained by either spreads of (063).

Gullies: A curvilinear layer of whitish-yellow gravelly sand (065/067) was exposed in close proximity to (063) and is interpreted as the fill of a gully. A few fragments of cattle bone, displaying evidence of butchery, were found during limited excavation of this feature (Appendix 3).

Area 2 (Fig.4)

Pits: A large sub-circular cut (054) with concave sides and base, was partially excavated by machine within Area 2. This contained a deposit of black silty clay with frequent charcoal and burnt clay inclusions, also assigned context (054) (Plate 2). Cumulatively, these remains may reflect the position of a refuse pit backfilled by burnt material.

Cut (059), interpreted as a pit, truncated (054). The primary fill of pit (059) comprised a greyish-black clay (058) sealed by 0.4m of blackish-brown organic clay (057). No finds were retrieved during the excavation of the pit, though the fills suggest it contained material with high organic content (this feature was not recorded in plan and does not appear on Figure 5).

Occupation Layers: Spreads of yellowish-brown sandy silt (056) were exposed at the southeastern limit of the investigation area and probably represent the remains of buried soil. Several small fragments of probable cattle bone were recovered during selective excavation of this soil. The plan of the buried soil predominantly reflects areas that were not deeply excavated by machine, and does not show the true extent of the deposit (Fig.4).

Area 3 (Figs 5 and 6)

A discrete group of archaeological features was recorded within this area following a small excavation that took place during the watching brief. Several features were recorded in plan but could not be surveyed to a fixed location before they were covered during development of the reservoir, these are shown at the top of Figure 5.

Postholes: Several shallow sub-circular

features were recorded within Area 3 (006, 025, 027, 029, 031, 033, 035, 037, 039, 046, 048, 050) and are interpreted as postholes. Typically, these features have a depth of between 50mm and 100mm, with an average diameter of 0.34m. Much of the upper surface of these features is likely to have been degraded and lost within the ploughsoil horizon. In plan they could form alignments and may represent the position of small structures (Fig.5).

Post-pipe (014) within posthole (006) contained two sherds of pottery dateable to the Bronze Age (Appendix 3).

Pits: Associated with the postholes was a smaller number of more substantial features (001, 005, 018 and 041) that are interpreted as pits. Pit (001) measured approximately 0.56m deep, the deepest recorded feature within Area 3. A deposit of dark grey sandy silt (004) formed the primary fill of this feature. Deposit (003) sealed (004) and was also of dark grey hue.

A second pit (018) with a shallower profile was recorded between postholes (035) and (037). This contained deposits (015) and (017) which were composed of sands and silts of a light hue. Situated between these deposits was fill (016), comprising a very dark grey silty sand. The dark colouration of these deposits probably reflects the former presence of organic materials. Several flint flakes, cattle bone and a thumbnail scraper, of probable Bronze Age date, were deposited within (015) (Fig.8).

Further south, in close proximity to postholes (006), (019) and (025), was pit (005). This probably functioned as a refuse pit, an interpretation based upon deposits contained within the feature. Primary fill (010) is likely to have formed as a result of natural sedimentation, suggesting that the pit (005) lay open for a period of time, immediately following its inception. Overlying (010) was

a layer of ashy sand containing frequent charcoal flecks and fragments (008), representing the remains of re-deposited hearth sweepings. Lenses of burnt sand (011) were interspersed with these sweepings and reflect continued episodes of dumping. Deposit (009) formed the uppermost fill of pit (005), the presence of frequent charcoal flecks and fragments within this layer suggest that it also represents a phase of dumping. Pottery, cattle bone, bird bone, burnt flints and stone was found within pit (005), reinforcing this interpretation (Appendix 3).

Hearths: Cut (019) is likely to be the remains of a small hearth. The primary fill of the hearth contained occasional flecks and fragments of charcoal (020), though the overall impression is that it formed predominantly as a result of natural sedimentation. A deposit of silty ash (021) containing frequent charcoal flecks represents the earliest firing of the hearth. Sealing (021) was a reddish-brown burnt silty sand (022) that attests a later period of burning. The presence of burnt gravel and flint inclusions within (022) resulted from the accidental or deliberate heating of these stones. Deposit (022) was overlain by a layer of ashy sand (023) that probably resulted from the burning of wood or organic materials. Both (021) and (022) contained fragments of pottery dateable to the Bronze Age (Appendix 3).

A second hearth (052) was recorded north of (019), containing a fill of ashy silt with frequent inclusions of burnt stone (053).

5.4 Group 3: Alluvial deposits

Area 2 (Fig.4)

Deposits of greyish-blue clay (055) recorded during the watching brief represent alluvial deposition. The alluvium was recorded sealing buried soil (056)

within a limited area of the site. The recorded distribution of (055) is unlikely to reflect the true extent of alluviation and more probably shows areas that were not so heavily disturbed by machine excavation. Alluvial deposits recorded during previous archaeological evaluation are shown on Figure 2 (Moulis 1996).

5.5 Phase 4: Ploughsoil deposits

All Areas

Covering the surface of the area of development was a 0.15m thick layer of greyish-brown sandy silt (069). This formed as a result of ploughing and sealed the deposit of alluvium.

6. DISCUSSION

A sequence of natural, prehistoric, alluvial and ploughsoil deposits were recorded during construction of a reservoir on land east of Cross Drain, Baston, Lincolnshire. Fragments of animal bone, pottery, flint and burnt stone were recovered from several features that probably represent an area of occupation concentrated at the southern extent of the development.

Geological and Environmental Setting

Natural deposits, comprising sandy gravels, are typical of those expected from the area of development. These probably developed as a result of riverine deposition. Irregular curvilinear features recorded crossing the surface of these gravels represent positions of former stream channels, possibly the watershed of larger roddons (*Lane pers comm*).

The remains of tree boles (hollows created by root action) were recorded within the area of investigation. Deposit (061), within Area 2, represents the former position of a tree.

Chronology

Pottery and flint artefacts of probable Bronze Age date were recovered from several features excavated during a small excavation at the southernmost extent of the development. Previous archaeological evaluation recorded the remains of Bronze Age occupation (Moulis 1996). On this basis it is assumed that undated features are of similar prehistoric date.

Occupation (Areas 1&2)

Deposit (065/067) in Area 1 represents a gully and contained a few fragments of butchered cattle bone, suggesting human occupation in near proximity (Fig.3). The fill of these gullies was not dissimilar to the underlying natural, making definition of the feature difficult. Nevertheless, they provide a glimpse of hitherto unknown occupation within a field that produced negative results from both fieldwalking and geophysical evaluation.

Further evidence of human activity in Area 1 is represented by the presence of small, irregular spreads of ashy materials (063). It is probable that these are remains of fires. These are located in close proximity to gully (065/067) and may be contemporary.

Small patches of buried soil (056) were preserved at the southeastern limit of investigation within Area 2 (Fig.4). This soil contained several fragments of animal bone and most probably represents part of an occupation surface. The survival of buried soil was enhanced by overlying deposits of thin alluvium, allowing a greater depth of protection against ploughing of the site. No physical or stratigraphical relationships between the buried soil and surviving archaeological features was determined.

Occupation (Area 3)

In the southern corner of the site were the remains of postholes, pits and hearths (Figs. 2 and 5). Finds retrieved from pits (005 and 018), posthole (006) and hearth (019) suggest these date to the Bronze Age. Many of the features were shallow and it is possible that some had been removed during machining of the site, alternatively the deposit surfaces may have been lost within the ploughsoil horizon.

An area of burning immediately southeast of a group of structural postholes incorporated a small hearth (019) and adjacent pit (005), the latter containing debris and sweepings of ash, presumably from the hearth. Artefacts recovered from both (005) and (019) represent remains of domestic, rather than industrial activity. Hearth (052), recorded further north, was similar to (019) but also contained a large quantity of burnt stones. These stones are typical features of prehistoric sites and were probably deliberately heated to a high temperature for use in 'oven-style' cooking or baking. Burnt stones were dispersed over the surface of Area 3 and probably reflect occasional disposal.

Outlying postholes may represent the remains of boundary fences. Examination of their distribution appears to show varying alignments, though the limited number of postholes mitigates against more detailed interpretation. Alternatively, the postholes may represent the positions of tethering posts, stands or racks.

Two features (001 and 018) dug within Area 3 contained a similar sequence of fills and probably reflect the position of pits (Figs. 5 and 6). Pit (001) was located some distance from the main group of recorded postholes and may represent a refuse pit, deliberately situated away from the main area of structural remains. The dark colour of the

fills contained by pit (001) tend to support this interpretation, though environmental analysis would be required to substantiate this. Pit (018) is in closer proximity to the postholes and has also been interpreted as a refuse pit. However, the shallow nature of the pit suggests it is unlikely to have held significant amounts of debris.

Cultural Remains

Cultural objects and artefacts were typically concentrated within Area 3, though the total amount of finds recovered was small. This warrants further discussion because it is these finds that provide dating evidence and enhance the interpretation of recorded archaeological features. Generally, the dearth of finds suggests that the inhabitants of the site had either a restricted material culture or, their culture was dependent upon organic materials, such as leather and wood, that have not survived to the present.

A small collection of flint flakes within pit (015) may represent waste from flint knapping. If so, this suggests that tools were being manufactured by the inhabitants. The flint thumbnail scrapers found during excavation probably formed an important part of the occupants material culture and could be used for the cleaning and scraping of animal hides.

Animal bone found during site excavation is useful because it suggests that occupants had access to livestock that they either hunted themselves, 'bought' (through exchange networks) or reared. Each of these explanations presents a dramatically different picture of the inhabitants. A fragment of bird bone within pit (005) suggests that hunting or trapping also formed part of their economy.

Moreover, the depositional context of the animal bones provides an insight into how they processed and disposed of this

material. The more fragmented pieces of bone were contained within deposits of buried soil (056), whilst larger pieces were recovered from the uppermost fill of a gully (065). This suggests that larger pieces were deliberately disposed of within larger features. Smaller fragments of bone, probably representing the residue of processing or consumption, were not formally disposed and were probably dropped wherever the meat was consumed. Such interpretation provides insight into the occupants attitude to refuse, whereby large items were deliberately removed and smaller items were more randomly disposed within an occupation area.

Alluvial Deposits

Alluvial deposits (002) were recorded within Area 2, though their sporadic distribution reflects the depth and extent of machine excavation during development. No finds were recovered from the alluvium and so the context remains undated. Nonetheless, the alluvium does represent a period of flooding that has sealed an earlier (probably Bronze Age) sequence of occupation. These alluvial deposits are similarly composed to those recorded during previous archaeological evaluation and represent part of a distinct horizon that probably dates to around 1500 BC (Lane *pers comm*). The extent of alluvium recorded during previous evaluation, and the watching brief, has been plotted on Figure 2.

Modern Deposits

Ploughsoil had developed over the natural, prehistoric and alluvial deposits to a thickness of 0.15m. The presence of organic material within the ploughsoil suggest it contains elements of degraded peat, a common feature of agricultural soils following post-medieval drainage and intensive cultivation of former fens.

7. CONCLUSIONS

Archaeological investigations on land east of Cross Drain, Baston, Lincolnshire were undertaken because the area lies in close proximity to known prehistoric remains.

Archaeological features recorded during development comprised structural remains, pits, hearths, gullies and a buried soil deposit. Pottery, flint tools, burnt stone and animal bone were found during excavation of these features and probably date to the middle of the second millennium BC.

In conjunction with material recorded during previous evaluation, it is probable that remains encountered during the watching brief represent a small area of occupation, suggesting that more extensive prehistoric occupation exists than was previously recognised.

Fragments of wood and peat survived in several features. Ashy deposits and charred remains, probably of firewood, was also evident. Palaeoenvironmental evidence is therefore likely to survive to a good degree on or near the site, either intact or preserved due to charring.

8. ACKNOWLEDGEMENTS

Archaeological Project Services wish to acknowledge the assistance of Mr P.N. Watts for commissioning the fieldwork and post-excavation analysis. Gary Taylor coordinated the work and Gary Taylor and Tom Lane edited this report. Jenny Sevens, the Community Archaeologist for South Kesteven District Council, permitted examination of the relevant parish files maintained by the Heritage Trust of Lincolnshire.

9. PERSONNEL

Project Coordinator: Tom Lane
Site Supervisors: Darren Pullen and Gary Trimble
Site Assistant: Ian MacGregor
Finds Processing: Denise Buckley
Illustration: Neil Herbert
Post-excavation Analyst: Neil Herbert

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11. ABBREVIATIONS

- | | |
|-------|---|
| APS | Archaeological Project Services |
| GSB | Geophysical Surveys of Bradford |
| LCCAS | Lincolnshire County Council Archaeology Section |

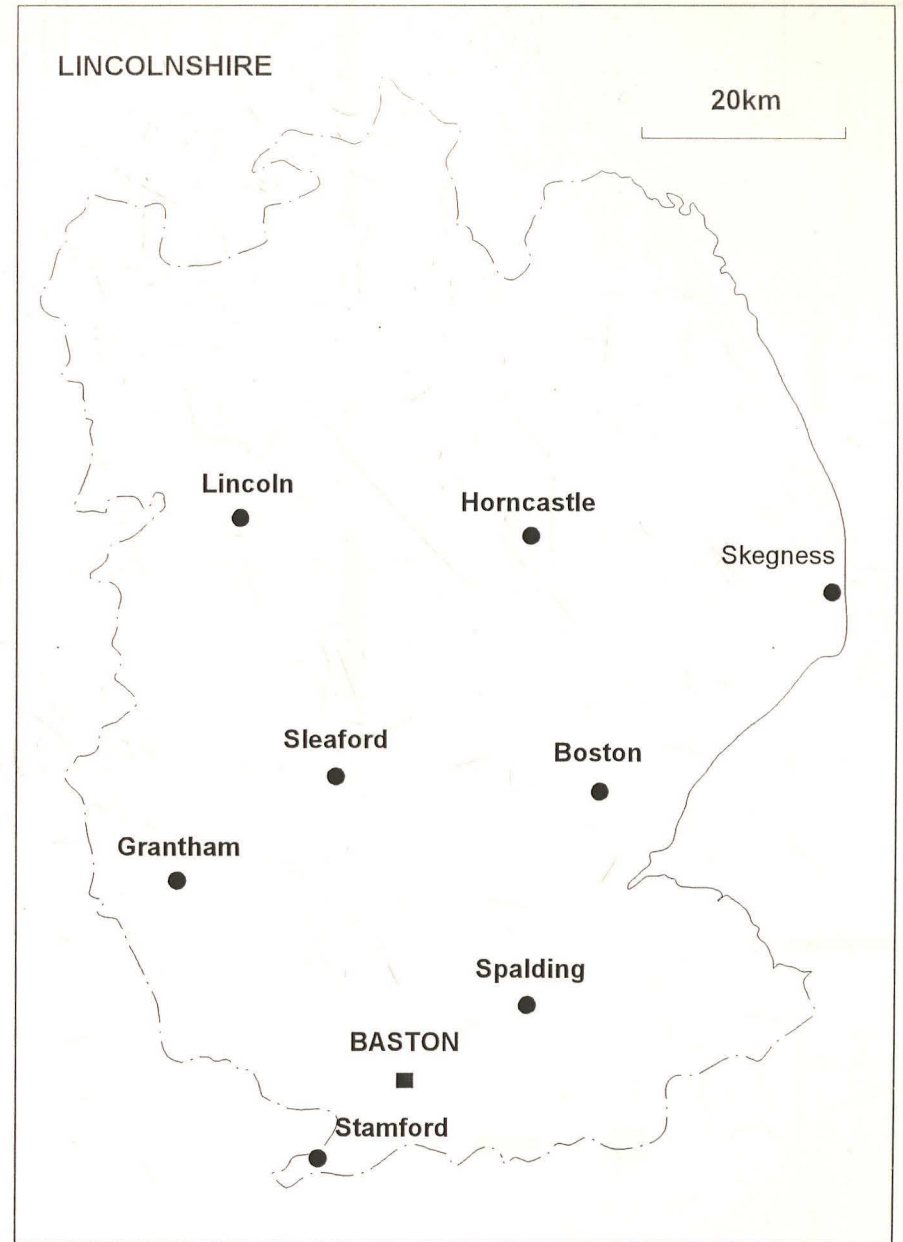


Figure 1: General location map

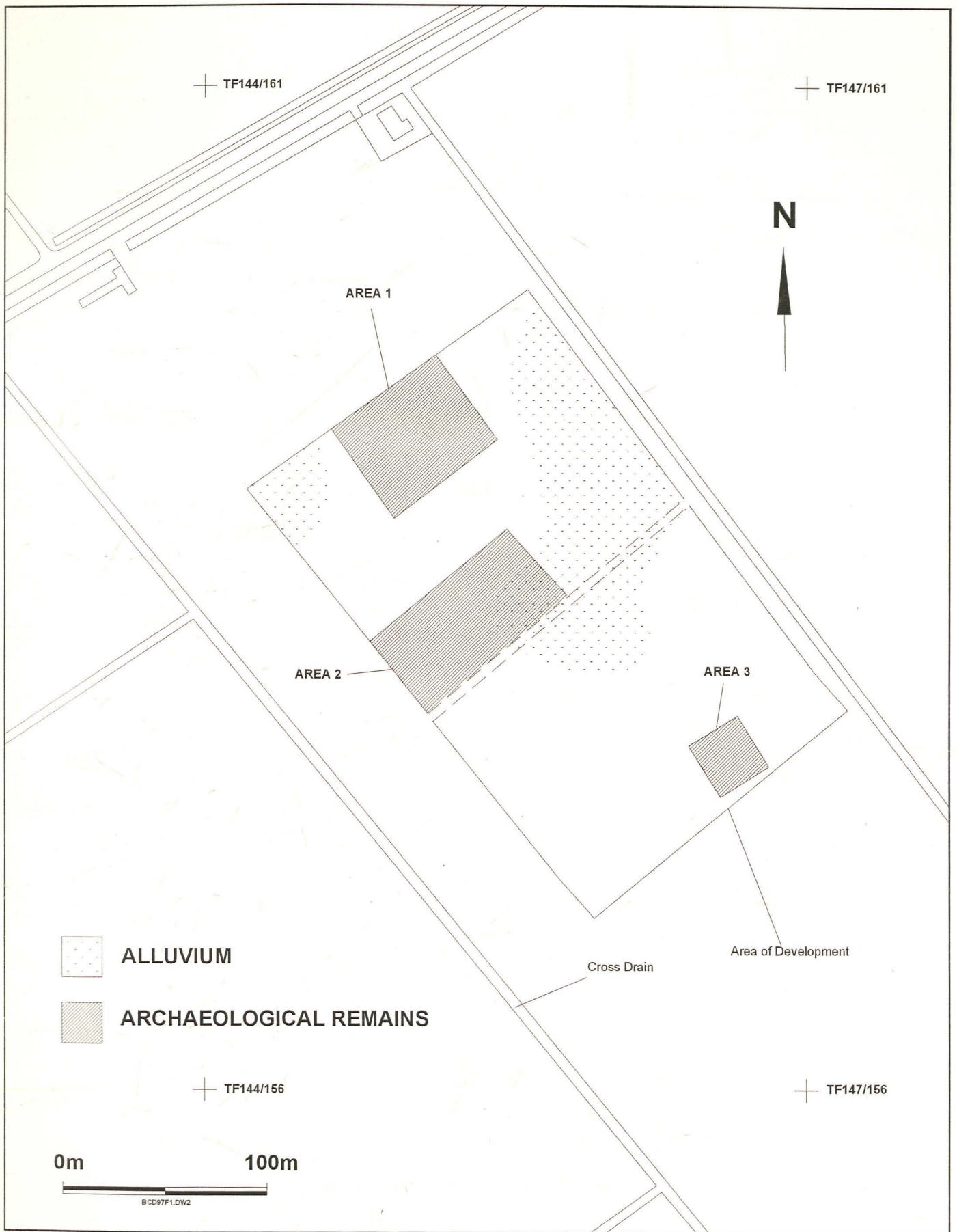


Figure 2: Plan of development showing locations of recorded archaeological remains

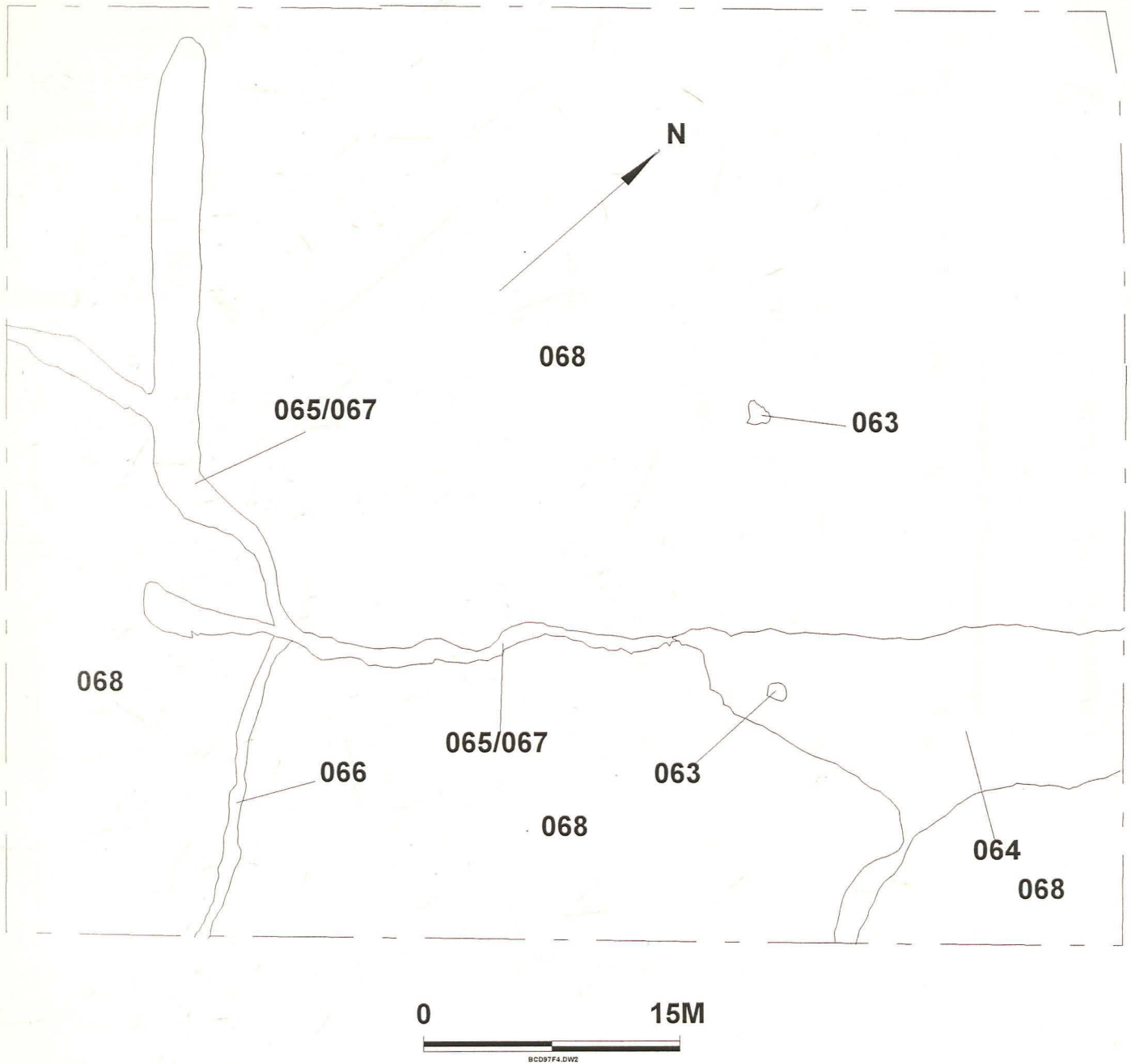


Figure 3: Plan of features within Area 1

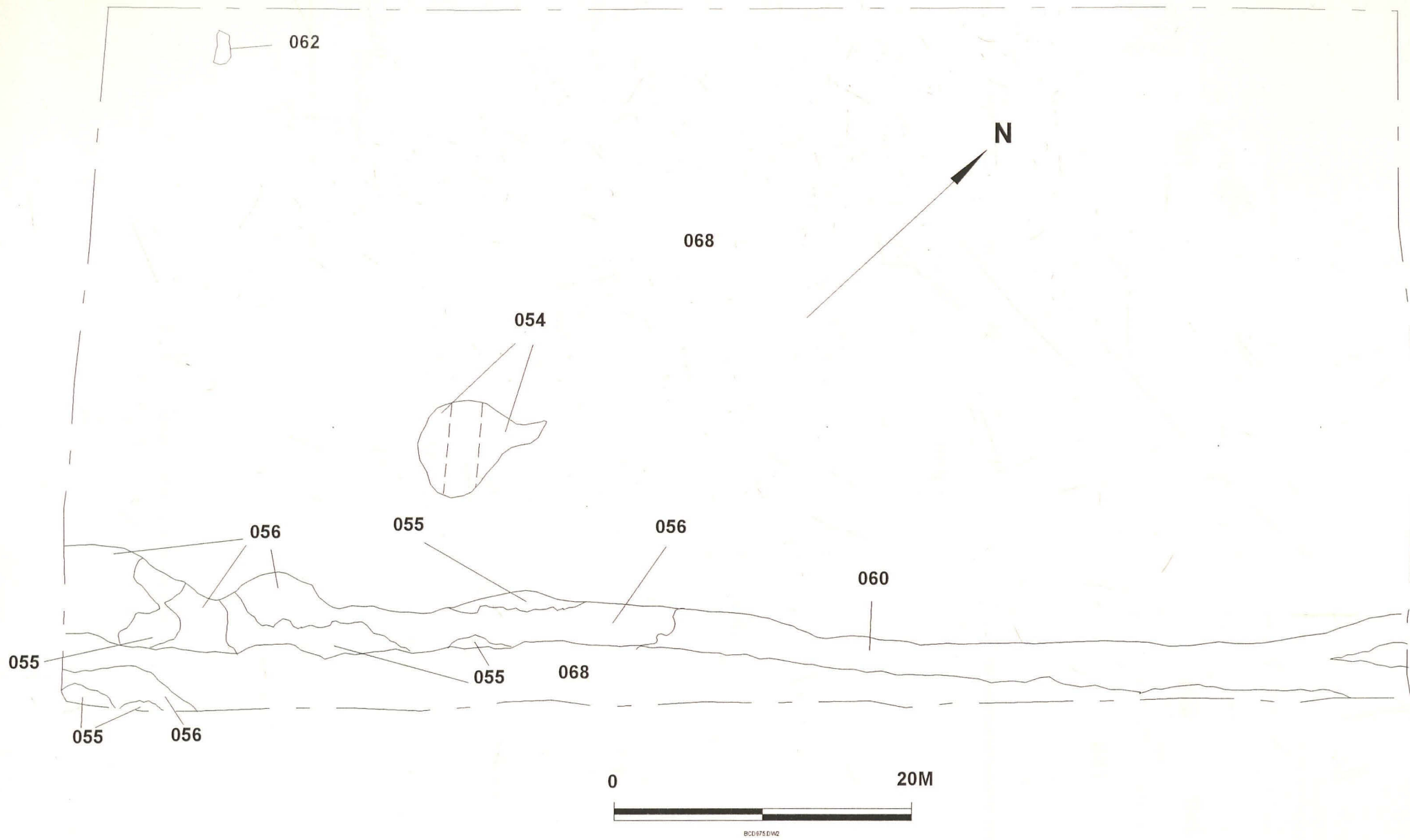


Figure 4: Plan of features within Area 2

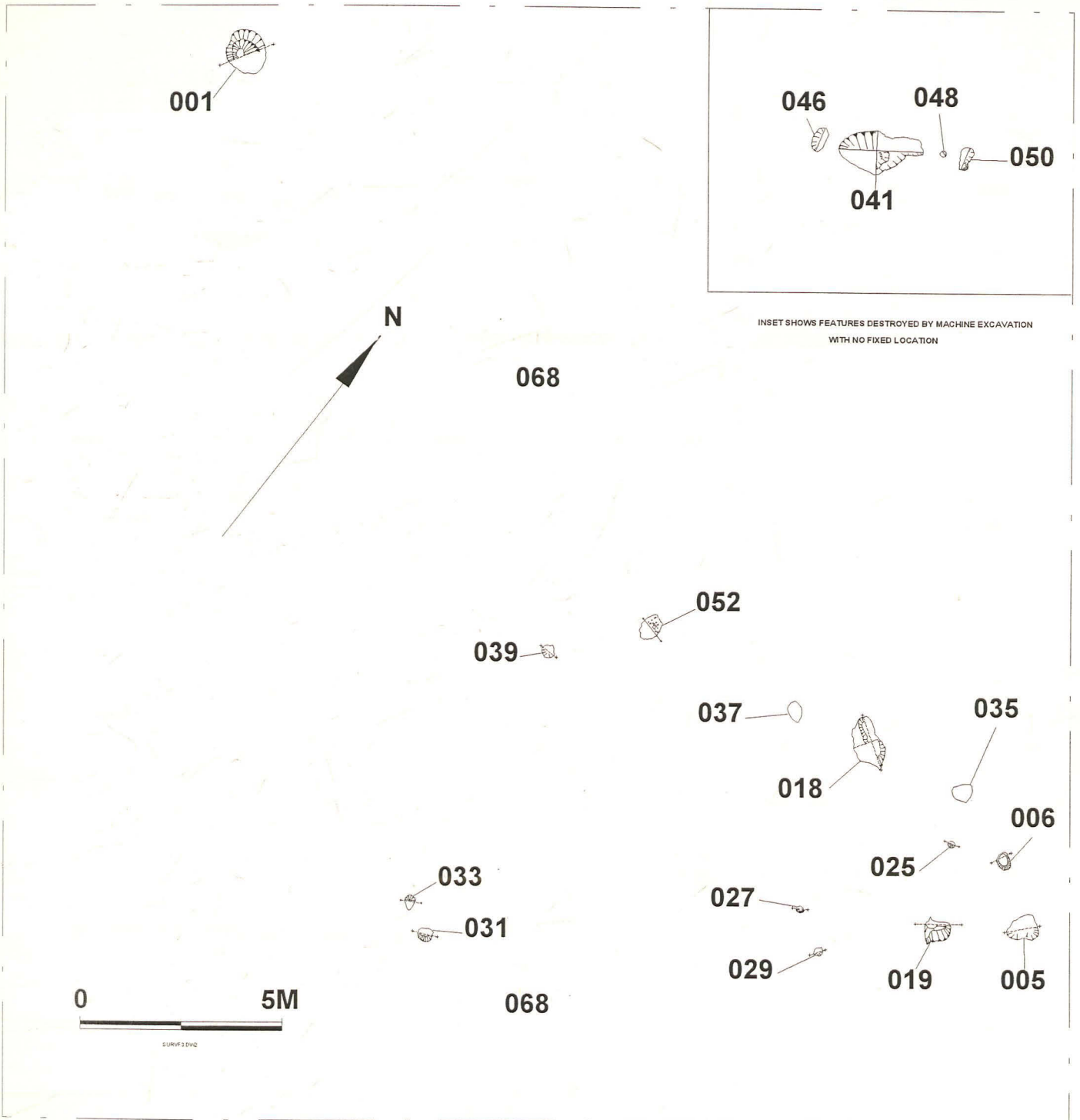


Figure 5: Plan of features within Area 3

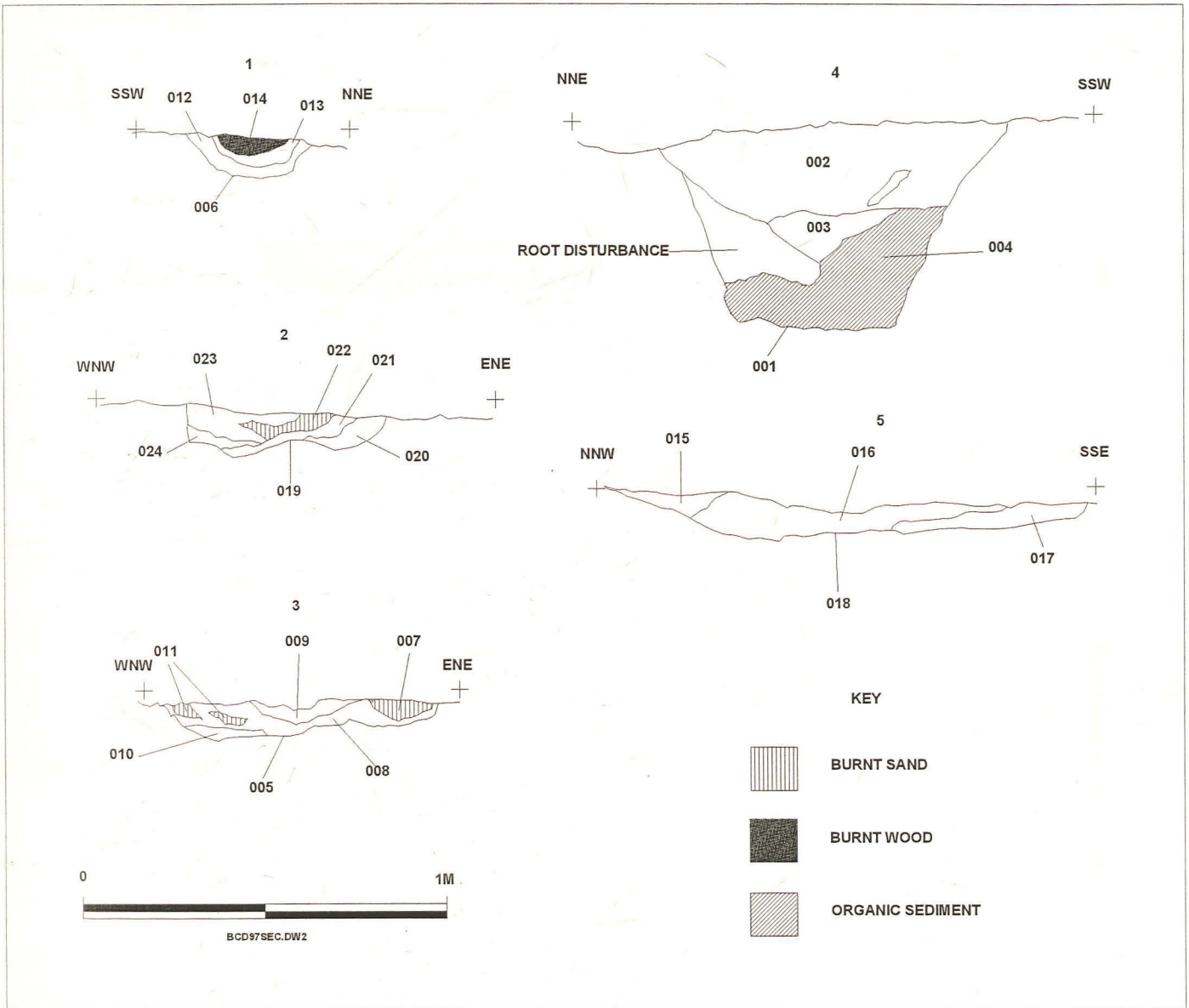


Figure 6: Sections showing profiles of selected pits, hearths and postholes from Area 3

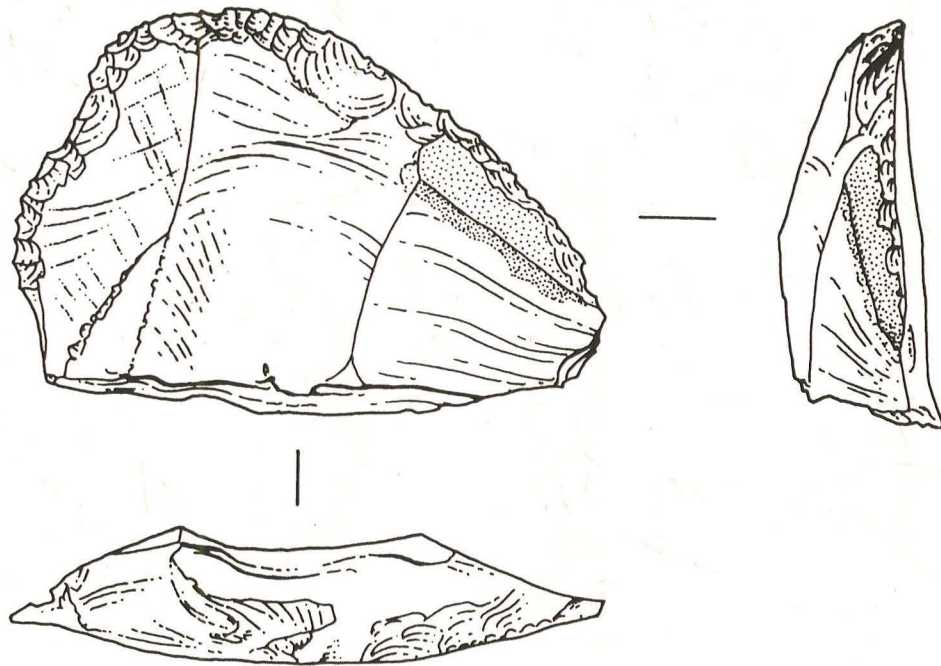


Figure 7: Probable Bronze Age thumbnail scraper (Scale 2:1) By David Hopkins

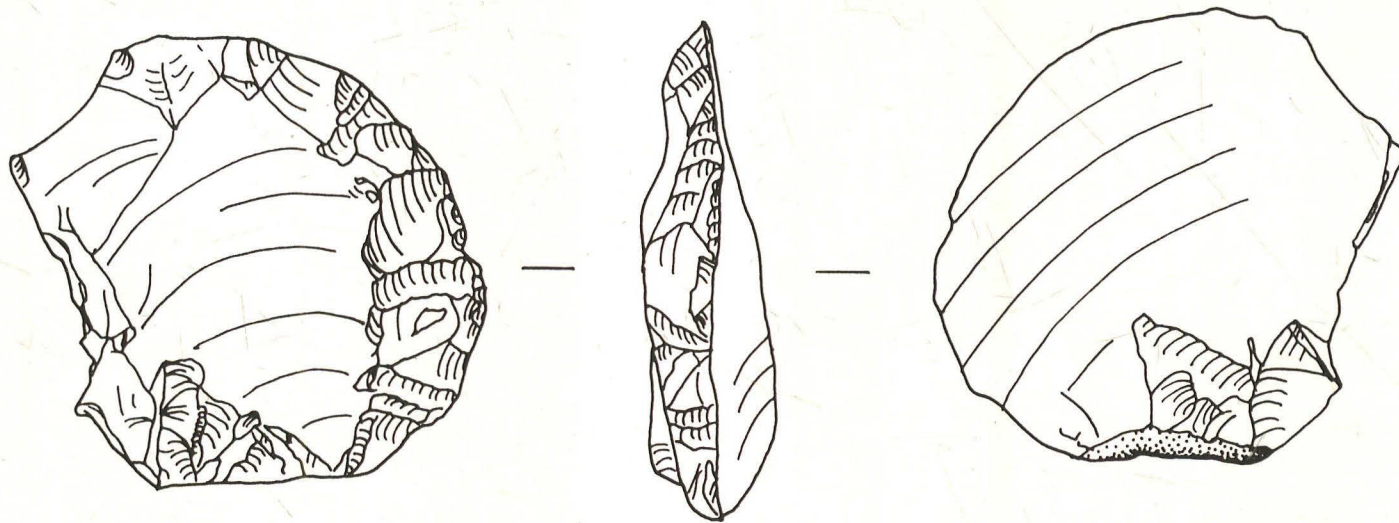


Figure 8: Probable Bronze Age thumbnail scraper (015) (Scale 2:1) By Ros Smith



Plate1: General View of the development; looking East.

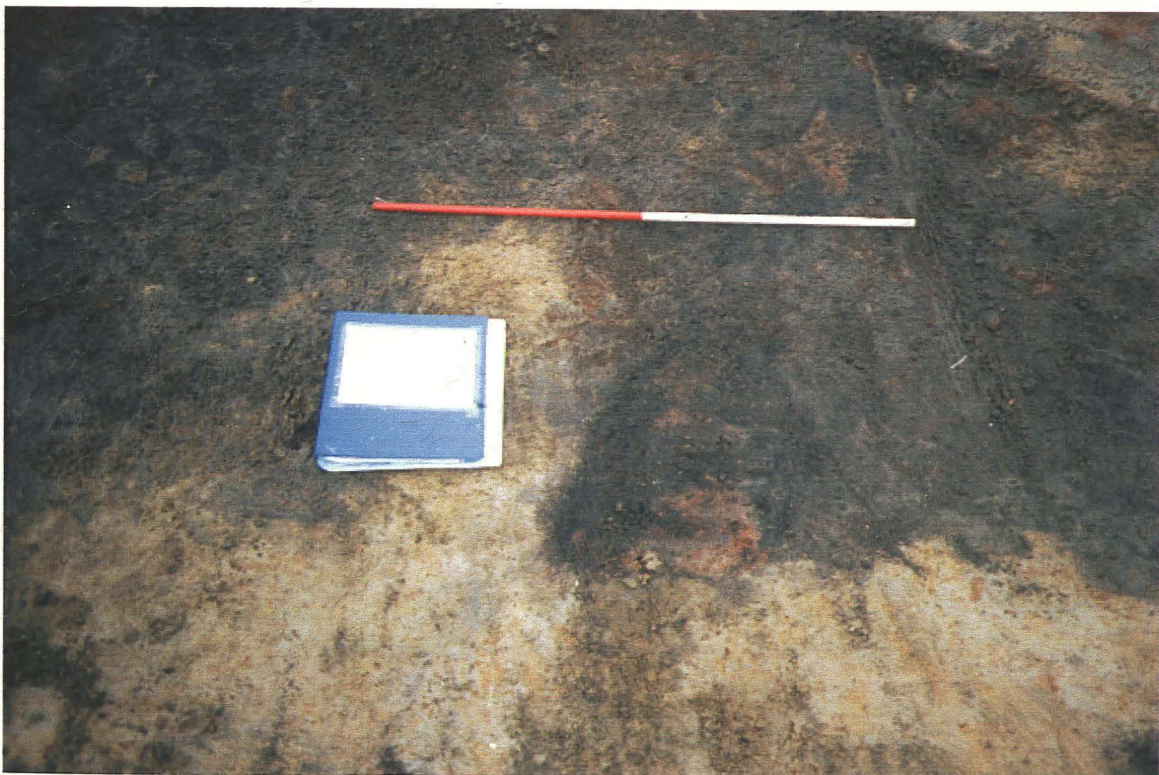


Plate 2: Deposit (054) showing area of burnt soil and charcoal.

APPENDIX 1

**Proposal for Archaeological Watching Brief
By Tom Lane MIFA**

Baston Common, Lincolnshire

Proposal for Archaeological Watching Brief

1 Introduction

- 1.1 This document proposes an appropriate archaeological mitigation strategy for land adjacent to the junction of Cross Drain and Baston Outgang Road, Baston Common, Lincolnshire.
- 1.2 The proposal is for a Watching Brief to monitor the removal of the topsoil in advance of quarrying and to excavate/investigate a proportion of any archaeological features identified.

2. The site and its setting

- 2.1 The site under consideration is centred on NGR TF 1453 1581, on Baston Common, 3.5km northeast of Baston village and 5.5km northeast of Market Deeping (Figures 1 and 2). The site lies on a broad fan of gravel, at the point which the gravel shelves beneath clastic sediments deposited during the second millennium BC, at a time when the marine influence had reached its most westerly extent. The current land surface is organic, a degraded remnant of the once more extensive peat cover that has desiccated considerably since the widespread introduction of modern drainage techniques.

3. The archaeological background

- 3.1 Despite extensive mineral extraction in the Baston-Langtoft region comparative little is known of the archaeology. Most of the extraction took place pre-PPG 16 and without any archaeological intervention. Nevertheless, some archaeology is known from the areas already extracted or those with permissions. Most notable is the Iron Age saltern at Langtoft Common, some 1.8km to the southwest, which underwent excavation in 1993/4. Near to the saltern, the site known as Langtoft Crossroads yielded features including a number of 'four post' structures. Evaluation of a proposed site 1.3km to the west of the Cross Drain site revealed ditches and an intriguing pit, apparently of Bronze Age date, set within a ring ditch.
- 3.2 Some 4.4km south of the site, in Market Deeping parish, an Iron Age/Romano-British settlement underwent excavation as part of the Fenland Management Project (Lane 1992). Finds included wooden structures set within a waterlogged palaeochannel, along with vast quantities of cultural and environmental remains. Approximately 1.4km northwest from there, a site of undetermined function was discovered during evaluation along the route of the Market Deeping By-pass. It consisted of numerous pits, those excavated containing copious charcoal and fired clay. Charcoal for one pit produced a radiocarbon date of 3780 ± 70 BP (2450 to 1975 Cal BC).
- 3.3 Little was walked of Baston and Langtoft Commons during the Fenland Survey, due to problems of access. However, the field that is the subject of this proposal was walked in 30m lines whilst ground conditions were good. No finds were recorded on the part of the field to be excavated but just to the south, at NGR TF1478 1560, a ploughed down mound was observed

and interpreted as a possible round barrow. Assuming the interpretation is correct the barrow is the most northerly in a group of up to 50 aligned on the Fen edge either side of the river Welland (French 1994, 4)

- 3.4 The site also lies adjacent to the Baston Outgang road, the origins of which are believed to be Roman. A continuation of the modern road eastwards across the fen can be plotted by means of a linear band of gravel, once capping for what is assumed to have been a timber causeway, and, nearer Spalding, by means of cropmarks of linear parallel ditches. It is generally believed that the Roman precursor lies beneath the modern road surface but 1.4km to the west the Roman course can be seen to deviate from the modern line (Fig.3).
- 3.5 One further significant 'site' is centred some 1.6km west of the proposed quarry. This takes the form of dense cropmarks of ditches, presumably farms within an associated field system. The plot of the cropmarks (Fig. 3) suggests two superimposed systems. The northernmost continues north of the modern course of the Glen and, from the results of Fenland Project fieldwork and excavation, is believed to be Roman (Lane, forthcoming). The system nearer to Baston Common is on a different orientation and may well date to the Iron Age. The cropmarks peter out to the east but that may be a result of differential ground conditions as the land becomes more peaty. Nevertheless, an outlier from the ?Iron Age part of the system has been plotted within a kilometre northwest of proposed extraction site.
- 3.6 An archaeological evaluation of the land was conducted in the autumn of 1966 (Moulis 1996). Few archaeological features were identified other than an east-west aligned ditch, believed to be relatively modern and a palaeosol in the northwestern corner of the site. Within the palaeosol were sherds of early Bronze Age pottery and lithics. Following the evaluation it was concluded that a settlement of this period probably adjacent to this part of the proposed quarry.

4 Aims and Objectives

- 4.1 The proposed investigations at Cross Drain have the single aim of monitoring and recording any archaeological features exposed during excavation of the quarry.

The investigation has the following objectives

- * to excavate and record any archaeological features exposed
- * to remove samples of the excavated feature fills in order to assess the potential for survival of environmental indicators
- * to remove artefacts including bone in order to assess the potential of the material to provide chronological and economic data
- * to produce a report outlining the major results of the investigations.

5. Methodologies

- 5.1 It is proposed to monitor the stripping of the topsoil and underlying alluvium where present in order to identify any archaeological features.
- 5.2 Stripping will be undertaken by a Hymac-type back actor machine using a toothless ditching bucket under the supervision of a trained and competent archaeologist.
- 5.3 One section will be machine dug through the ?modern ditch identified during the evaluation.
- 5.4 A representative sample of all other feature-types encountered will be hand-excavated.
- 5.5 Finds recovered from the investigation will be bagged and labelled according to the individual layer from which they were recovered prior to processing and analysis.
- 5.6 Sections of features will be drawn at 1:10.
- 5.7 Throughout the duration of the investigation a photographic record consisting of monochrome prints (reproduced as contact sheets) and colour slides will be produced.
- 5.8 Samples of any appropriate feature fills will be taken for assessment of the potential for survival of environmental indicators.
- 5.9 Should human remains be encountered, they will be left *in situ* until the appropriate Home Office licences have been obtained and the local Environmental Health Officer and police informed.
- 5.10 Recording will be based on the single context system devised by the Museum of London with appropriate modifications for rural application.
- 5.11 All the work will be undertaken following statutory Health and Safety requirements in operation at the time of the excavation
- 5.12 The work will be undertaken according to the relevant codes of practise issued by the Institute of Field Archaeologists

6. Post Excavation Analyses

- 6.1 On completion of site operations, the records and schedules produced will be checked and ordered to ensure that they form a uniform sequence constituting a Level II archive. A stratigraphic matrix of archaeological deposits and features on the site will be prepared.
- 6.2 All finds recovered during the fieldwork will be washed, marked, bagged and labelled according to the individual context from which they were recovered. Any finds requiring specialist treatment will be sent to the conservation laboratory at the City and County Museum, Lincoln.

- 6.3 Finds (including environmental samples) will be forwarded to appropriate specialists. Following assessment of the nature, current condition, significance and potential of the material, reports will be prepared by the individual specialists.
- 6.4 A full report detailing the findings of the investigation will be prepared. Included will be:-
- * a description of the archaeological setting of the study area
 - * a description of the local geology/topography
 - * a description of the methodologies used during the excavation and discussion of their effectiveness in the light of the findings of the excavation
 - * a text describing the findings of the investigation
 - * plans of any archaeological features exposed. If a sequence of deposits is encountered separate plans for each phase will be produced
 - * sections of the archaeological features
 - * interpretation of the archaeological features exposed and their context within the surrounding landscape
 - * specialist reports on the finds from the site
 - * appropriate photographs
 - * a summary of the findings
- 6.5 It is proposed to use the following specialists if required
- | | |
|-----------------------------|--|
| Prehistoric pottery - | Trent and Peak Archaeological Trust |
| Romano-British pottery - | City of Lincoln Archaeology Unit
or
Maggie Darling |
| Saxon pottery - | City of Lincoln Archaeology Unit |
| Post Saxon pottery - | Hilary Healey |
| Lithics - | Mark Edmonds |
| Soils - | Charly French |
| Environmental archaeology - | Peter Murphy
or
James Rackham |

7. Archive

- 7.1 The documentation, finds, photographs and other records and material generated during the investigation will be sorted and ordered into the format acceptable to the City and County Museum, Lincoln. This sorting will be undertaken according to the document entitled *Conditions for the Acceptance of Project Archives* for long-term storage and curation.

8. Programme of work

It is estimated that the fieldwork will take a maximum of 5 days for one or two persons.

9. Publication

- 9.1 A report of the findings of the Watching Brief will be published in Heritage Lincolnshire's forthcoming Annual Report and the journal for the Society of Lincolnshire History and Archaeology.

10. Bibliography

French, C.A.I., 1994 'Excavations of the Deeping St. Nicholas Barrow Complex, South Lincolnshire' *Lincolnshire Archaeology and Heritage Reports Series 1*

Lane, T., 1992 'Excavation and Evaluation of an Iron Age and Romano-British Waterlogged site at Market Deeping'. *Fenland Research 7*, 43-7

Lane, T., forthcoming 'Thurlby' in Crowson, A., Lane, T. and Reeve, R. (eds) Fenland Management Project Excavations Summary Volume

Moulis, C., 1996 'An Archaeological Evaluation of Land Adjacent to Cross Drain, Baston, Lincolnshire (BCD 96). Unpublished APS Report 41/96

Appendix 2

Context Summary

Context Number	Description	Interpretation
001	Circular cut. Approximately 0.67m wide x 1.02m long x 0.56m deep.	Pit, cutting natural.
002	Soft, light-grey silty sand containing moderate small stones. Approximately 0.25m thick.	Fill of (001), overlying (003).
003	Loose, dark-grey silt containing occasional gravel. Approximately 0.13m thick.	Fill of (001), overlying (004).
004	Soft, very dark-grey sandy silt containing occasional gravel. Approximately 0.33m thick.	Primary fill of (001).
005	Ovoid cut. Approximately 0.64m wide x 0.79m long x 90mm deep (max).	?Refuse pit, cutting natural.
006	Ovoid cut. Approximately 0.5m wide x 0.5m long x 105mm deep (max).	Posthole, cutting natural.
007	Firm, burnt light reddish-brown fine sand containing occasional shell fragments and small stones. Approximately 40mm thick.	Redeposited burnt soil, fill of (005), overlying (008).
008	Firm, very dark-grey ashy silty sand containing frequent charcoal flecks. Approximately 90mm thick.	Redeposited ash, fill of (005), overlying (010).
009	Firm, mid to dark-grey sandy silt containing frequent charcoal flecks and fragments. Approximately 30mm thick.	Fill of (005), overlying (008).
010	Firm, light yellow-grey fine sand. Approximately 30mm thick.	Primary fill of (005).
011	Firm, burnt light reddish-brown fine sand. Approximately 30mm thick.	Redeposited burnt sand, fill of (005), overlying (010).
012	Firm, light-grey fine sand containing occasional gravel and flecks of charcoal. Approximately 40mm thick.	Primary fill of (006).
013	Firm, light to mid-grey sand containing frequent charcoal flecks. Approximately 40mm thick.	Fill of (006), overlying (012).
014	Firm, very dark-grey ashy sand containing occasional small stones. Approximately 30mm thick.	Post-pipe, fill of (006), overlying (013).
015	Firm, light-grey sandy silt containing occasional charcoal. Approximately 50mm thick.	Fill of (018), overlying (016).
016	Firm, very dark-grey silty sand containing occasional small stones. Approximately 0.13m thick.	Fill of (018), overlying (017).
017	Firm, light-grey sandy silt containing occasional flecks of charcoal and stones. Approximately 50mm thick.	Primary fill of (018).
018	Irregular cut. Approximately 0.83m wide x 1.4m long x 0.11m deep.	Pit, cutting natural.
019	Irregular cut. Approximately 0.52m wide x 0.62m long x 0.14m deep.	Hearth, cutting natural.
020	Firm, light-grey silty sand containing occasional flecks of charcoal and stones. Approximately 90mm thick.	Primary fill of (019).
021	Firm, very dark-grey silty ash containing frequent charcoal flecks and small stones. Approximately 10mm thick.	Redeposited ash, fill of (019), overlying (020).

Context Number	Description	Interpretation
022	Firm, mottled burnt reddish-brown silty sand containing occasional charcoal flecks and burnt flint. Approximately 50mm thick.	Redeposited burnt soil, fill of (019), overlying (021).
023	Firm, dark-grey silty ashy sand containing moderate charcoal flecks and burnt flint. Approximately 80mm thick.	Redeposited burnt material, fill of (019), overlying (022).
024	Firm, light-grey silty sand containing occasional flecks of charcoal and stones. Approximately 30mm thick.	Primary fill of (019).
025	Circular cut. Approximately 0.2m diameter x 55mm deep.	?Posthole, cutting natural.
026	Firm, light-grey sand containing occasional flecks of charcoal. Approximately 55mm thick.	Primary fill of (025).
027	Circular cut. Approximately 0.2m diameter x 60mm deep.	Posthole, cutting natural.
028	Loose, very light-grey sand. Approximately 60mm thick.	Fill of (027).
029	Circular cut. Approximately 0.2m diameter x 45mm deep.	?Posthole, cutting natural.
030	Firm, light brownish-grey silty sand. Approximately 40mm thick.	Fill of (029).
031	Circular cut. Approximately 0.42m diameter x 90mm deep.	Posthole, cutting natural.
032	Firm, light to mid blue-grey silty sand containing frequent charcoal and moderate stones. Approximately 90mm thick.	Fill of (031).
033	Ovoid cut. Approximately 0.29m wide x 0.5m long x 0.12m deep.	?Posthole, cutting natural.
034	Firm, light-grey sandy silt. Approximately 0.12m thick.	Fill of (033).
035	Circular cut. Approximately 0.42m diameter x 20mm deep.	?Posthole, cutting natural.
036	Firm, very dark-grey sandy silt. Approximately 20mm deep.	Fill of (035).
037	Amorphous cut. Approximately 0.41m diameter x 40mm deep.	?Posthole, cutting natural.
038	Firm, light-grey sand. Approximately 40mm thick.	Fill of (037).
039	Circular cut. Approximately 0.28m diameter x 10mm deep.	?Posthole, cutting natural.
040	Firm, light-grey silty sand. Approximately 10mm thick.	Fill of (039).
041	Ovoid cut. Approximately 1.08m wide x 2.1m long x 0.29m deep.	Pit, cutting natural.
042	Firm, dark-grey sandy silty ash containing frequent charcoal flecks. Approximately 0.16m thick.	Primary fill of (041).
043	Soft, very dark-grey silty ash. Approximately 0.16m thick.	Fill of (041), overlying (042).
044	Soft, very dark-grey silty ash. Approximately 80mm thick.	Fill of (041), overlying (042).
045	Firm, light-grey sandy silt containing occasional small stones and charcoal. Approximately 0.2m thick.	Fill of (041), overlying (043).
046	Ovoid cut. Approximately 0.4m wide x 0.65m long x 70mm deep.	?Posthole, cutting (068).
047	Firm, light-grey sandy silt. Approximately 70mm thick.	Fill of (046).
048	Circular cut. Approximately 0.15m diameter x 90mm deep.	Posthole, cutting (068).
049	Firm, light-grey sandy silt. Approximately 90mm deep.	Fill of (048).
050	Rectangular cut. Approximately 0.26m wide x 0.58m long x 0.12m deep.	Posthole, cutting (068).
051	Firm, light-grey sandy silt. Approximately 0.12m thick.	Fill of (050).

Context Number	Description	Interpretation
052	Circular cut. Approximately 0.56m wide x 0.8m long x 60mm deep.	Hearth, cutting (068).
053	Soft, very dark-grey ashy silt containing frequent charcoal flecks and burnt stone. Approximately 60mm thick.	Fill of (052).
054	Loose, black with orange/yellow mottle clayey silt containing occasional iron nodules, roots wood and charcoal.	Refuse pit, cutting (068)
055	Firm, greyish-blue clay. Approximately 0.4m thick.	Alluvium, overlying (056).
056	Loose, greyish yellow-brown sandy silt.	Buried soil, overlying (068)
057	Friable, blackish-brown organic silty clay. Approximately 0.56m thick.	Fill of (059), overlying (058)
058	Loose, greyish-black clay. Approximately 0.15m thick.	Primary fill of (059)
059	Linear cut.	Pit, cutting (054)
060	Loose, greyish-white gravelly sand.	Remnant channel, overlying (068)
061	Loose, blackish-brown peaty clay. Approximately 0.11m thick.	Primary fill of (062)
062	Rectangular cut. Approximately 2m long x 1m wide x 0.11m deep.	Tree bole, cutting (068)
063	Loose, orangish-red clayey ash containing pebbles. Approximately 30mm thick.	Pyres, overlying (064) and (068)
064	Friable, mixed greyish-orange sandy clay containing occasional flints. Approximately 0.1m thick.	Natural deposit, overlying (068)
065	Very loose, whitish-yellow sandy gravel. Approximately 0.1m thick.	Fill of gully, same as (067)
066	Very loose, greyish-white sandy gravel. Approximately 30mm thick.	Remnant channel, overlying (068)
067	Loose, yellowish-white sandy gravel. Approximately 80mm thick.	Fill of gully, same as (065)
068	Loose, orange sandy gravel containing frequent rounded pebbles and angular flints. Approximately 4m thick (to the limit of excavation).	Natural deposit, recorded at the limit of excavation
069	Loose, mid-brown silty sand containing occasional rounded pebbles and angular flints. Approximately 0.4m thick.	Ploughsoil, overlying (055)

Appendix 3

The Finds,

by Tom Lane, Paul Cope-Faulkner and Neil Herbert

Provenance

Animal bone was found in all of the recorded areas (Fig.2) within a variety of contexts incorporating buried soil, gullies, pits and a hearth. The pottery and flint was recovered during excavation within Area 3 from pits, a posthole and a hearth. A single unstratified flint 'thumbnail' scraper was retrieved during the watching brief.

Range

The range of material is detailed in the tables below.

Table 1: The Animal Bone

CONTEXT	SPECIES/IDENTIFICATION	NOTES
Unstratified	1 horse molar	
008	1 unidentifiable bird limb bone	
009	1 possibly cattle-sized fragment	
015	1 possibly cattle-sized fragment	
021	6 unidentifiable fragments	
056	3 fragments of cattle-sized limb bones 1 other fragment of cattle-sized limb bone	
065/067	a. 1 cattle scapula b. 2 fragments of cattle clavicle	a. Butchered/Sawn end b. Butchered

Table 2: The Pottery

CONTEXT	IDENTIFICATION	NOTES
007	1 very fragmented sherd	Brown exterior and black interior
008	1 body sherd	Brown exterior and black interior
014	2 body sherds	Brown exterior and black interior
021	2 body sherds, 1 fine grog	Brown exterior and black interior
022	1 body sherd	Brown exterior and black interior

All the sherds are similar in character, hand made with brown/buff exteriors and black interiors. Inclusions of fine grog are common. No surface decoration is apparent on any of the sherds; all are body sherds and small in size (maximum dimensions 35mm x 35mm).

Whilst no date can be ascertained with certainty the sherds are similar to those found in Phase 1 at Billingborough and, as such, are likely to date sometime within the second millenium BC.

Table 3: The Worked Flint

CONTEXT	IDENTIFICATION	NOTES
+	1 thumbnail scraper	Dark brown-black flint
015	1 thumbnail scraper 6 waste flakes 1 flint core 1 partly worked blade	Mid black-brown flint with occasional patina

The unstratified scraper (Fig.7) and that recovered from (015) are most likely of Bronze Age date. The complete assemblage from (015) reflects debris from flint knapping and incorporates several disgarded flakes and a partly worked blade, the inclusion of a completed scraper within this deposit is unusual and it may never have been used.

Table 4: The Burnt Stone and Flint

CONTEXT	IDENTIFICATION	DOMINANT COLOUR
+ Area 3 north	22 fragments very angular stone (50mm) 3 rounded stones (80mm) 1 fragment sub-angular flint (60mm)	Light pink-grey Light pink-grey Mid red-brown
+ Area 3 southeast	17 fragments very angular stone (50mm) 3 rounded stones (80mm) 1 fragment angular stone (35mm)	Light pink-grey Light pink-grey Mid red
008	4 fragments sub-angular flint (40mm) 3 fragments sub-rounded stone (25mm)	Mid brown-red
009	8 fragments sub-angular flint (35mm)	Mid brown-red
053	11 fragments very angular stone (45mm) 2 rounded stones (40mm)	Light grey-pink

The majority of stone comprises granular sandstone or quartzite. Less common were pieces of millstone grit and marble. Most of the stone was very angular, though commonly displayed a smooth rounded exterior. Consequently, the origin of the material is likely to be an alluvial deposit such as the natural geological gravel or, alternatively, from the bed of a stream or river. All of the material was well-sorted and had a typical average length of between 40mm and 50mm.

It is very probable that granular stone was deliberately selected and heated, due to the conductive properties of the material. Flint was not common and is probably incidental to the burning of the stones, as this occurs naturally within the geology of the site.

Summary

Previous investigations at the site recovered a similarly composed assemblage. That earlier collection consisted of animal (predominantly cattle) bone, prehistoric flint tools, Bronze Age pottery and a single fragment of post-medieval ceramic tile. In consequence, it is probable that the assemblage is virtually all prehistoric in date, with minor modern contamination.

Condition

The bone is in extremely poor condition (as was that recovered during the earlier investigations at the site). Pottery is very fragmented and typically comprises small body sherds. Both flint and stone are well preserved and in good condition.

Documentation

The site has previously been the subject of evaluation excavations which produced a similar, but more extensive assemblage and which has been reported (Moullis 1996). Additionally, the general area has been the subject of reported surveys which have revealed a variety of prehistoric remains in the vicinity (Hayes and Lane 1992).

Potential

The assemblage has limited-moderate potential, mainly due to the small size of the collection and poor condition of the bone. However, the material supplements the previous discoveries at the site and forms a coherent assemblage with those earlier finds. As a total site collection, the material has moderate potential to enhance the significance and understanding of any other contemporary prehistoric discoveries in the vicinity.

References

Hayes, P. P. and Lane, T. W., 1992 *The Fenland Project Number 5: Lincolnshire Survey, The South-West Fens*, East Anglian Archaeology **55**

Moulis, C., 1996 *An Archaeological Evaluation of land adjacent to Cross Drain, Baston, Lincolnshire*, Unpublished Archaeological Project Services Report No. **41/96**

Appendix 4

The Archive

The archive consists of:

69	Context records
14	Drawing Sheets
1	Photographic Sheet
1	Stratigraphic matrix
1	Box of finds

All primary records and finds are currently kept at:

Archaeological Project Services
The Old School
Cameron Street
Heckington
Sleaford
Lincolnshire
NG34 9RW

The ultimate destination of the project archive is:

Lincolnshire City and County Museum
12 Friars Lane
Lincoln
LN2 1HQ

The archive will be deposited in accordance with the document entitled *Conditions for the Acceptance of Project Archives*, produced by the Lincolnshire City and County Museum.

Archaeological Project Services project code: BCD97
City and County Museum, Lincoln Accession Number: 136.96

The discussion and comments provided in this report are based on the archaeology revealed during the site investigations. Other archaeological finds and features may exist on the proposed development site but away from those areas exposed during the course of this fieldwork. *Archaeological Project Services* cannot confirm that those areas unexposed are free from archaeology nor that any archaeology present there is of a similar character to that revealed during the current investigation.

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Appendix 5

Glossary of Terms

Bronze Age	Period dating between 2000 and 600 BC, characterised by the introduction and use of copper alloy tools and objects.
Context	An archaeological context represents a distinct archaeological event or process. For example, the action of digging a pit creates a context (the cut) as does the process of its subsequent backfill (the fill). Each context encountered during an archaeological investigation is allocated a unique number by the archaeologist and a record sheet detailing the description and interpretation of the context (the context sheet) is created and placed in the site archive. Context numbers are identified within the report text by brackets, <i>e.g.</i> (4).
Cut	A cut refers to the physical action of digging a posthole, pit, ditch, foundation trench, <i>etc.</i> Once the fills of these features are removed during an archaeological investigation the original 'cut' is therefore exposed and subsequently recorded.
Dumped deposits	These are deposits, often laid down intentionally, that raise a land surface. They may be the result of casual waste disposal or may be deliberate attempts to raise the ground surface.
Fill	Once a feature has been dug it begins to silt up (either slowly or rapidly) or it can be back-filled manually. The soil(s) which become contained by the 'cut' are referred to as its fill(s).
Iron Age	Period dating from 600 BC to AD 43, characterised by the development of iron-working and more complex sedentary agricultural tribes and chiefdoms.
Layer	A layer is a term used to describe an accumulation of soil or other material that is not contained within a cut.
Medieval	The Middle Ages, dating from approximately AD 1066-1500.
Natural	Undisturbed deposit(s) of soil or rock which have accumulated without the influence of human activity.
Post-medieval	The period following the Middle Ages, dating from approximately AD 1500-1800.
Romano-British	Period dating between AD 43 and 410, when Britain formed part of the Roman Empire