ARCHAEOLOGICAL WATCHING BRIEF AT WELLAND BANK PIT, Phase I, DEEPING ST. JAMES, LINCOLNSHIRE

Work Undertaken For
Russell Quarry Products

March 1994

A P S
ARCHAEOLOGICAL
PROJECT
SERVICES

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1. SUMMARY

An archaeological watching brief was undertaken during soil stripping at the Welland Bank Pit, Deeping St. James, Lincolnshire.

The site lies in an area of significant archaeological interest. Prehistoric artefacts have been discovered at various locations within 3km of the quarry. Aerial photographs reveal nearby cropmarks of rectangular enclosures of possible Iron Age or Roman date. Roman swords and daggers have been recovered from the Welland, immediately west of the site. North to south through the village passes the Car Dyke Romano-British waterway. An earthwork enclosure and a bird decoy are located just south of the quarry site on the opposite side of the river.

Several ditches, possibly ancient field boundaries, were observed cutting into natural gravels. A pair of narrow, parallel gullies may represent a trackway. An alignment of postholes and a pit were also examined. No dating evidence was retrieved from any of the features However, a tooth of a woolly mammoth of Ice Age date (probably 20,000 to 50,000 years old) and a possible bison vertebra, both probably disturbed from natural deposits, were recovered.

2. INTRODUCTION

2.1 BACKGROUND

Between 2nd and 8th February 1994, an archaeological watching brief was undertaken during the stripping of topsoil and overburden at Welland Bank Pit (National Grid Reference TF107223). The quarry is located in the civil parish of Deeping St. James, South Kesteven District, Lincolnshire (Fig. 1). This work was commissioned by Russell Quarry Products Ltd and carried out by Archaeological Project Services in accordance with a brief set by the Archaeology Section, Lincolnshire County Council.

2.2 TOPOGRAPHY AND GEOLOGY

Deeping St. James is situated approximately 2km southeast of Market Deeping and 10km north of Peterborough (Fig. 2). Welland Bank Pit is located on the north bank of the River Welland, 2km southeast of the town. Locally, the terrain is fairly flat and level, with the quarry and surrounding area being at a height of approximately 4m OD. Local soils are the Fladbury 1 association, pelo-alluvial gley soils (Hodge *et al.* 1984, 194).

2.3 ARCHAEOLOGICAL SETTING

Deeping St James is located in an area of archaeological remains dating from the prehistoric through to the post-medieval period. The areas of extraction are located on the northern flood plain of the lower Welland Valley, one of the most important archaeological landscapes within the British Isles. As in other river valleys, most notably the upper Thames, the Welland's gravel terraces with their rapid drainage of surface water have proved attractive for settlement throughout all archaeological periods. With almost exclusive use of the valley as arable land, the near complete pattern of millennia of cropmarks is visible for the air. Moreover, many of the gaps in the cropmarks are the direct result of episodes of flooding of the main and sub-channels of the river. Alluvial deposition has sealed certain tracts of the landscape. Beneath this alluvium lies archaeology

relatively undisturbed by later cultivation or the erosive effects of weathering.

Prehistoric activity in the area is represented by artefact scatters recovered from locations 2.5km to the north (SK25.37) and *c.* 2.5km to the northwest (SMR33459).

Less than 2km to the north of the quarry quern fragments and tile of Romano-British date (SK25.43) signify a settlement. Aerial photographs reveal cropmarks of a large rectangular enclosure around this site. Nearer still to the investigation area, a number of querns (SK25.10) have been discovered only about 0.5km north of the quarry. Roman weapons, including swords and daggers (SK25.12), have been recovered from the Welland immediately west of the investigation site.

Fragments of bronze crowns have been found *c.* 2km northwest of the quarry. These ritual objects come from a Romano-British site (SMR30047), now a Scheduled Ancient Monument, that has also produced much pottery and a hoard of 3rd century coins.

Passing north-south through Deeping St. James is the Car Dyke Romano-British waterway. This watercourse connected the River Witham near Lincoln with the Nene east of Peterborough (Whitwell 1970, 57).

Just south of the river, in Cambridgeshire, is a sub-circular enclosure of probable Iron Age date and a post-medieval bird decoy.

3. AIMS

The aims of the watching brief were to locate and record archaeological deposits, if present, and to determine their date, function and origin.

4. METHODS

A mechanical excavator was used in the stripping of topsoil and overburden. Following clearance of the topsoil, the exposed surface of alluvium was inspected for archaeological features and deposits. Thereafter, the alluvium was stripped off and the underlying layers were examined for archaeological remains. Each archaeological deposit or feature revealed within the stripped area was allocated a unique reference number with an individual written description. A plan of the entire area, showing the location of recorded archaeological features, was made. A photographic record was compiled and sections were drawn at scale 1:20. All identified archaeological remains were subjected to test excavation to provide profiles of deposits and features and also to recover artefactual and environmental evidence.

5. RESULTS

Records of the deposits and features identified during the watching brief were examined. Phasing was assigned based on the nature of the deposits and recognisable relationships between them. A total of four phases was identified:

Phase 1	Ancient natural deposits
Phase 2	Undated archaeological deposits
Phase 3	Recent natural deposits
Phase 4	Modern deposits

5.1 Phase 1 Ancient natural deposits

Layers of sandy gravel (1) were observed

throughout the area of investigation. These deposits are considered to be natural materials of glacio-fluvial origin.

Towards the east side of the area was a C-shaped indentation (31) in the surface of the gravels. Filled with sand, this is considered to be a natural feature.

5.2 Phase 2 Undated archaeological deposits

Crossing the area from north to south were seven long, linear features (4, 14, 16, 21, 37, 55, 56), interpreted as ditches and gullies (Fig. 4). At the west end of the site, ditch 21 produced the only stratified find, a horse leg bone. One of these ditches (16, 61)) produced evidence that it was a recut of an earlier linear feature (20) on the same alignment (Fig. 5, Section 7).

Near to the east end of the investigation area, two of the gullies (4, 55) described a parallel arrangement 2m wide. In consequence, these gullies are considered to demarcate a track or similar route. This track was crossed by a further linear feature (14), apparently a ditch, that was oriented more to the northwest-southeast (Fig. 4).

Close to the southwest corner of the stripped area was a large, subrectangular feature (66), approximately 6m by 5m in area. This is interpreted as a pit, though no finds were recovered to enable determination of the specific function of the feature.

Less than 10m to the north of this pit were two small circular features (39, 68), explained as postholes. Towards the north end of the site were three further small circular features (29, 33, 35). Similarly interpreted as postholes, each of these occurred in general isolation. South of these, and immediately east of the trackway defined by the gullies (4 and 55), was an east-west alignment of five small circular features (29, 57, 71, 73, 75). Individually considered to be stakeholes, the group is explained as forming a fence or similar boundary.

A further four cut features were observed toward the east end of the northern section. Three of these (8, 10, 12) were between 1.0 - 1.6m wide and averaged 0.3m deep and may represent further ditches. The fourth feature (6) was 0.4m wide and 0.2m deep. On the basis of these dimensions, this could be a gully or possibly a posthole.

5.3 Phase 3 Recent natural deposits

Covering the phase 2 archaeological deposits and observed right across the site, was a deposit of reddish clay (2). This material is considered to be alluvium.

5.4 Phase 4 Modern deposits

Sealing the phase 3 alluvium was a grey brown mixed sandy soil (1), approximately 0.5m deep. This deposit, a ploughsoil, provided the present ground surface across the entire site.

6. DISCUSSION

Natural layers of sandy gravel (phase 1), were observed across the area. A sand filled C-shaped indentation in the surface of the gravels is considered to have been formed naturally. A small assemblage of animal bone, which included a mammoth tooth, was recovered as stray finds on the site. Estimated at 20,000 to 50,000 years old, this tooth almost certainly derived from the natural gravels. Additionally, a vertebra, provisionally identified as from

a bison (Dr Helen Keeley, pers comm), was also retrieved. The tooth, possibly supported by the vertabra, signifies the presence of megafauna in the area during the last Ice Age.

A series of seven linear ditches or gullies (phase 2) traversed the area in an approximately north-south direction. Two of these gullies, arranged as a narrow, parallel pair and located towards the east end of the stripped area, probably represent a track or droveway. Cut across by two later ditches, this droveway is potentially the earliest archaeological feature in the area.

Generally more substantial than the droveway gullies, the other ditches are possibly ancient, though undated, field boundaries. A leg bone from a horse was recovered from one of the ditches. One of these ditches had evidence of recutting.

Spatially related to, though of unclear chronological association with, the ditches were several postholes and a large pit. On the east side of the droveway an alignment of post or stake holes may represent a fence. No artefacts or environmental material were recovered from the pit and, consequently, the function of this feature is unclear. However, the area of the pit is large (*c.* 30m^2), which may suggest that it originated as a quarry pit.

Aligned east-west, a large ditch cut across all bar one of the north-south oriented linear features. Representing a field boundary, this feature probably constitutes the latest activity in the area.

Clearly, several sub-phases of activity are evident in this area and there is a relative chronology of at least three tiers. However, in the absence of dating evidence, all observed archaeological remains have been associated on structural grounds and consigned to the same phase of activity.

Sealing the archaeological deposits was a layer of alluvium (phase 3). This period of alluviation is, like the archaeological features buried beneath it, undated. However, parallels drawn from elsewhere provide indications of possible chronology. For example, only 3km to the north at Tye's Drove, Deeping St. James and 4km to the northwest of the present investigation area on Deeping Common, the alluvium was shown to be Late or early post-Roman (Lane 1992). Similarly, on the west side of the country, in the Lugg Valley, north of Hereford, alluvium seals an extensive Roman landscape (Clarke *et al.* 1988).

A small quantity of 18th and 19th century pottery and clay pipe fragments was recovered from the recently ploughed topsoil (phase 4) that constituted the modern ground surface.

7. CONCLUSIONS

Archaeological investigation at Welland Bank Pit, Deeping St. James, established that natural deposits consisting of sandy gravels occur within 0.9m of the present ground surface. Although disturbed, a tooth of a Woolly Mammoth of Ice Age date almost certainly came from the gravels. This object is estimated as 20,000 to 50,000 years old.

Cutting the surface of the gravels were a number of ditches, postholes and a pit. With the exception of a droveway defined by two parallel gullies, the ditches could all be field boundaries or other land divisions. Similarly, the posthole alignment may represent a fence or other demarcator. However, the pit may imply

that habitation activity is located nearby, although no occupation evidence was retrieved from the feature.

The series of ditches is aligned predominantly north-south. However, cross-cutting most of these and, apparently, the latest in the sequence, was an east-west ditch. Although a bone from a horse was found in one of the ditches, no dating evidence was recovered from any of the features. Incidences of cross-cutting do, however, indicate an extended, though not necessarily continuous, period of use of the area.

Alluvium sealed the archaeological deposits. This sequence of natural activity is undated. Relatively recent agricultural usage of the site was represented by a ploughed topsoil that was developed on the alluvial deposits.

8. ACKNOWLEDGEMENTS

Archaeological Project Services wish to thank Owen Batham of Russell Quarry Products Ltd for funding the fieldwork and analysis. Steve Haynes coordinated the work and Dave Start edited this report. Gordon Chancellor of Peterborough Museum kindly identified the mammoth tooth and horse tibia. Dr Helen Keeley commented on the other bones. Ruth Waller, the South Kesteven Community Archaeologist, permitted access to the relevant parish files.

9. PERSONNEL

Project Manager: Steve Haynes
Supervisor: David Brown
Site Assistants: Aaron Chapman, Mike Jarvis
Illustration: Denise Buckley, Paul Cope-Faulkner
Finds Processing: Denise Buckley
Post-excavation Analyst: Gary Taylor

10. BIBLIOGRAPHY

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Hodge, C A H, Burton, R G O, Corbett, W M, Evans, R, and Seale, R S, 1984 *Soils and their Use in Eastern England*, Soil Survey of England and Wales Bulletin No. **13**

Lane, T, 1992 Excavation and Evaluation on a Roman and Iron Age Site at Market Deeping, Lincolnshire, *Fenland Research* **7**

Whitwell, J B, 1970 *Roman Lincolnshire*, History of Lincolnshire **II**

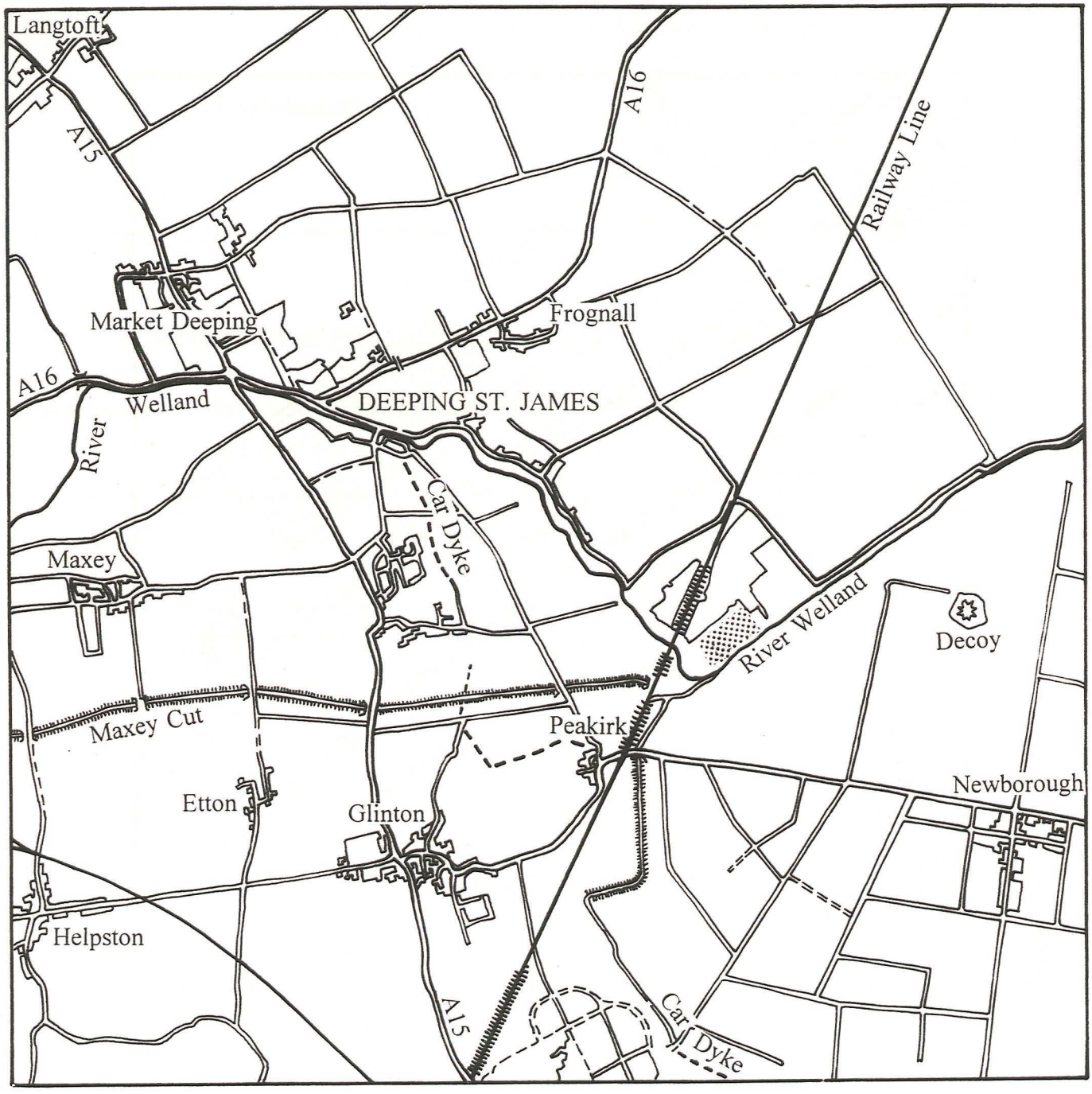
11. ABBREVIATIONS

Numbers prefixed with 'SMR' are the primary reference numbers used by the City and County Museum, Lincoln, Sites and Monuments Record.

Numbers prefixed by 'SK' are the reference numbers used by the South Kesteven Community Archaeologist.

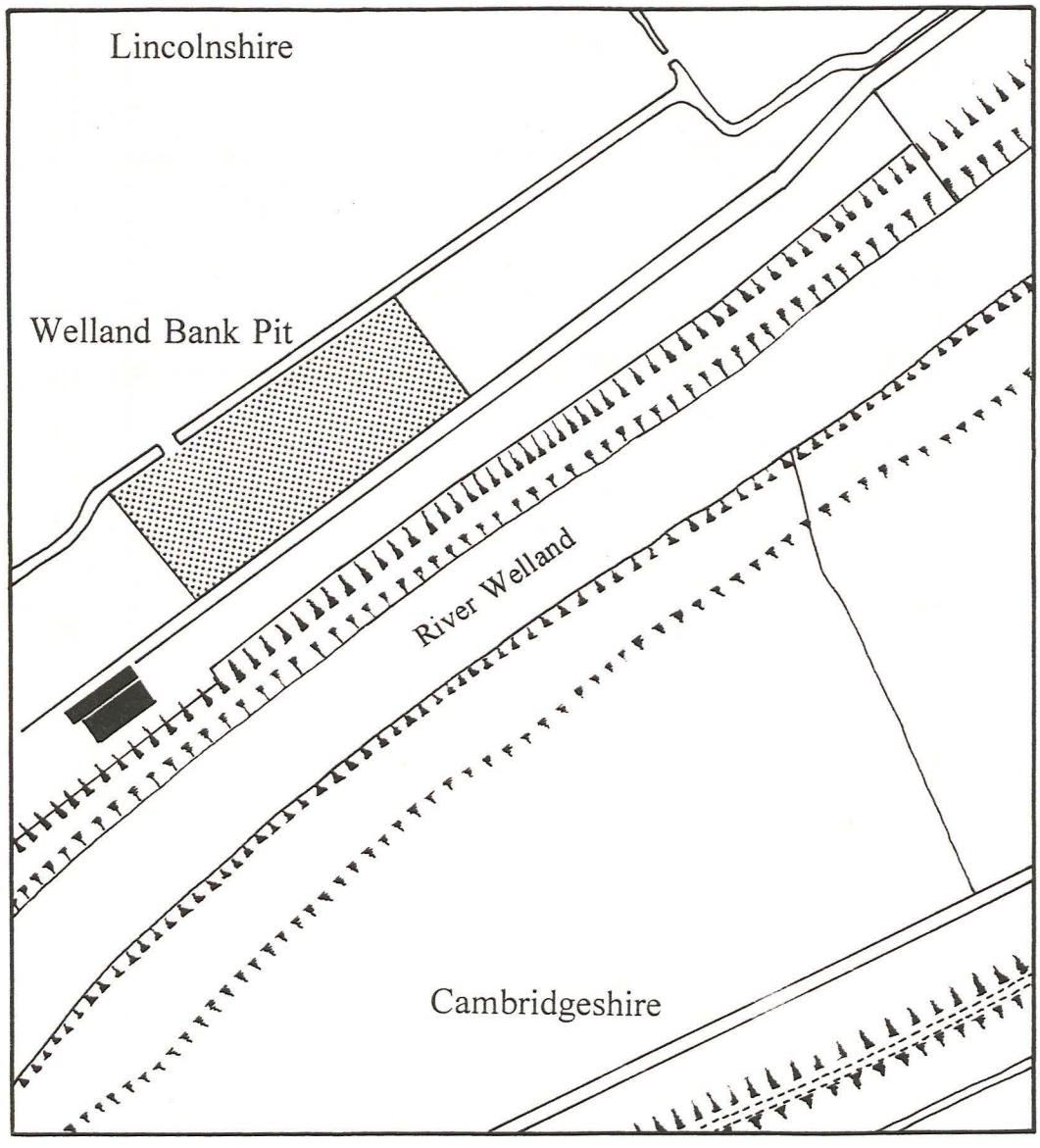
Fig. 1 General Location Plan

Fig. 2 Site Location Plan



AREA OF INVESTIGATION

Fig. 3 Location of Investigation Site



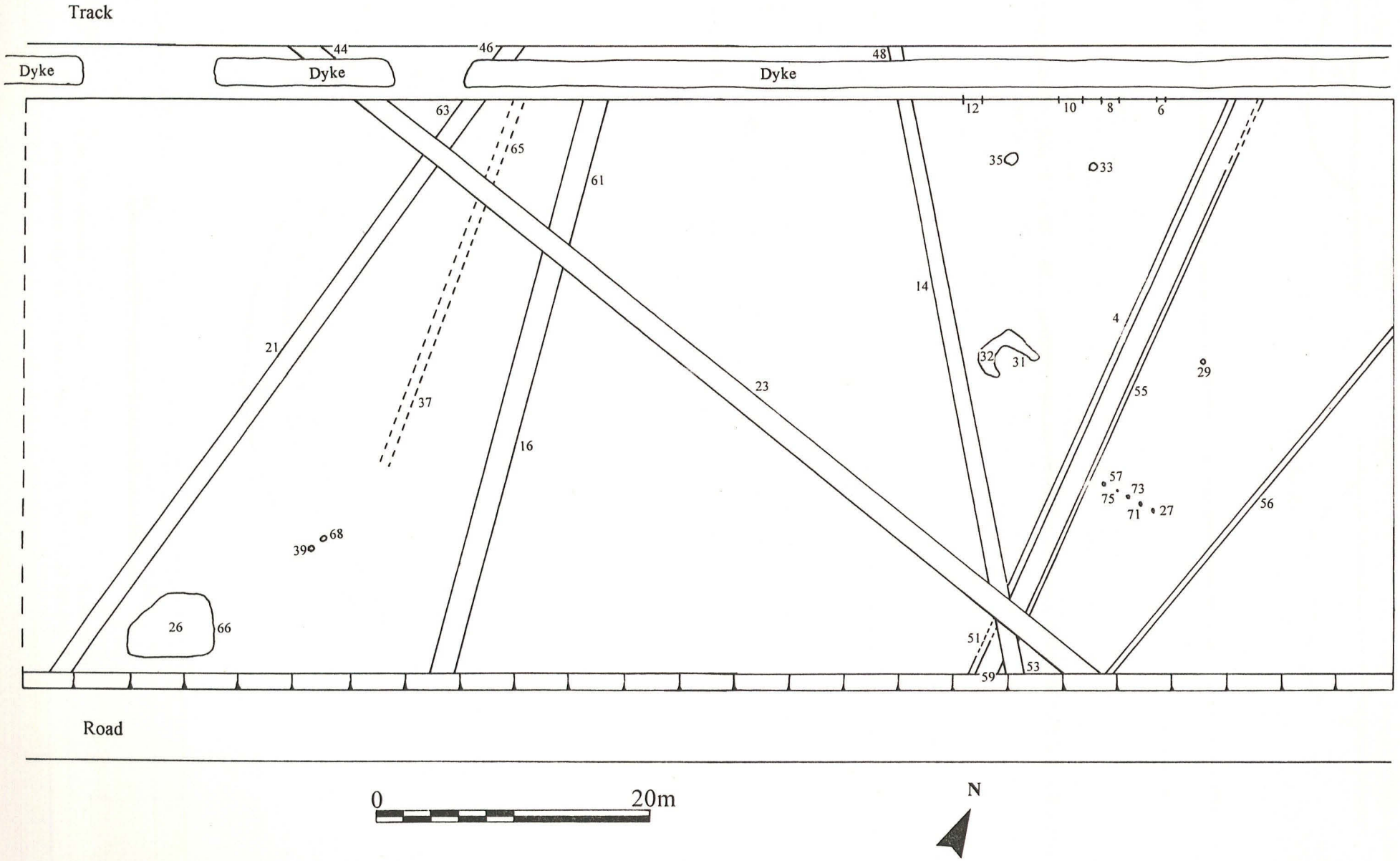
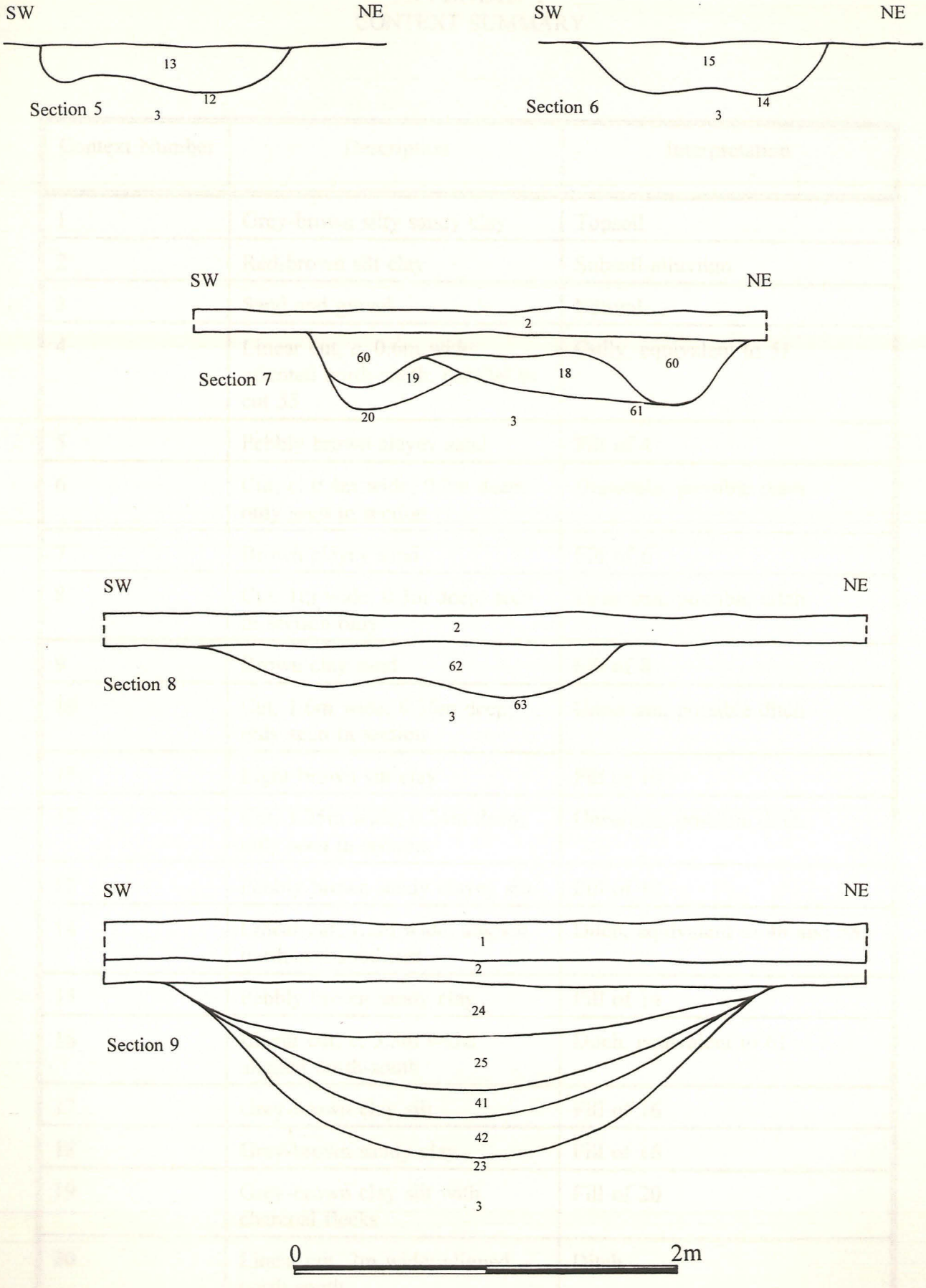


Fig. 4 Investigation Area, showing Archaeological Features

Fig. 5 Sections of Features



Note: All reproduced sections were drawn where features observed in northwestern edge of site, see contexts 12, 14, 61, 63, 23 on Fig. 4

APPENDIX 1
CONTEXT SUMMARY

Context Number	Description	Interpretation
1	Grey-brown silty sandy clay	Topsoil
2	Red-brown silt clay	Subsoil-alluvium
3	Sand and gravel	Natural
4	Linear cut, *c.* 0.6m wide; oriented north-south, parallel to cut 55	Gully, equivalent to 51
5	Pebbly brown clayey sand	Fill of 4
6	Cut, *c.* 0.4m wide, 0.2m deep; only seen in section	Uncertain, possible ditch
7	Brown clayey sand	Fill of 6
8	Cut, 1m wide, 0.3m deep; seen in section only	Uncertain, possible ditch
9	Brown clay sand	Fill of 8
10	Cut, 1.6m wide, 0.36m deep; only seen in section	Uncertain, possible ditch
11	Light brown silt clay	Fill of 10
12	Cut, 1.35m wide, 0.24m deep; only seen in section	Uncertain, possible ditch
13	Pebbly brown sandy clayey silt	Fill of 12
14	Linear cut, 1.2m wide; aligned northwest-southeast	Ditch, equivalent to 48 and 53
15	Pebbly brown sandy clay	Fill of 14
16	Linear cut, *c.* 3.5m wide; aligned north-south	Ditch, equivalent to 61
17	Grey-brown clay silt	Fill of 16
18	Grey-brown sandy clay	Fill of 16
19	Grey-brown clay silt with charcoal flecks	Fill of 20
20	Linear cut, 2m wide; aligned north-south	Ditch

21	Linear cut, *c.* 2.2 m wide; oriented north-south	Ditch, equivalent to 46 and 63
22	Grey, charcoal-rich clay-silt, with frequent organic matter	Fill of 21
23	Linear cut, *c.*1.6 m wide; oriented east-west	Ditch, equivalent to 44
24	Gravelly brown silty sand	Fill of 23
25	Brown sandy clayey silt	Fill of 23
26	Dark grey sandy gravel with frequent pieces of wood	Fill of 66
27	Circular cut, 70mm diameter	Stakehole
28	Brown-grey sandy silt	Fill of 27
29	Circular cut *c.* 0.4m diameter	Posthole
30	Grey-brown sandy silt	Fill of 29
31	C-shaped indentation in surface of gravel	Natural feature
32	Brown silty sand	Fill of 31
33	Circular cut, *c.* 0.4m across	Posthole
34	Brown-grey silt sand	Fill of 33
35	Sub-circular cut, *c.* 0.6m across	Posthole
36	Brown-grey sandy silt	Fill of 35
37	Linear cut, *c.* 1.1m wide; aligned north-south	Ditch, equivalent to 65
38	Grey silty clay	Fill of 37
39	Circular cut, *c.* 0.4m diameter	Posthole
40	Dark grey-brown sandy silt	Fill of 39
41	Dark grey sandy silt	Fill of 23
42	Mid grey clay	Fill of 23
43	Gravelly brown silty sand	Fill of 44
44	Linear cut, *c.* 1.6m wide, oriented east-west	Ditch, equivalent to 23
45	Grey, charcoal-rich clay-silt, with frequent organic matter	Fill of 46

46	Linear cut, *c.* 2.2 m wide; oriented north-south	Ditch, equivalent to 21 and 63
47	Pebbly brown sandy clay	Fill of 48
48	Linear cut, 1.2m wide; aligned northwest-southeast	Ditch, equivalent to 14 and 53
49	Not Described	Fill of 56
50	Pebbly brown clayey sand	Fill of 51
51	Linear cut, *c.* 0.6m wide; oriented north-south, parallel to cut 59	Gully, equivalent to 4
52	Pebbly brown sandy clay	Fill of 53
53	Linear cut, 1.2m wide; aligned northwest-southeast	Ditch, equivalent to 14 and 48
54	Pebbly brown clayey sand	Fill of 55
55	Linear cut, *c.* 0.6m wide; oriented north-south, parallel to cut 5	Gully, equivalent to 59
56	Linear cut, *c.* 0.4m wide; oriented north-south	Gully
57	Circular cut, 60mm diameter	Stakehole
58	Pebbly brown clayey sand	Fill of 59
59	Linear cut, *c.* 0.6m wide; oriented north-south, parallel to cut 51	Gully, equivalent to 55
60	Grey-brown clay silt	Fill of 61
61	Linear cut, *c.* 3.5m wide; aligned north-south	Ditch, equivalent to 16
62	Grey, charcoal-rich clay-silt, with frequent organic matter	Fill of 63
63	Linear cut, *c.* 2.2 m wide; oriented north-south	Ditch, equivalent to 21 and 46
64	Grey silty clay	Fill of 65
65	Linear cut, *c.* 1.1m wide; aligned north-south	Ditch, equivalent to 37
66	Subrectangular cut, *c.* 6 x 5m	Pit
67	Dark grey-brown sandy silt	Fill of 68

68	Circular cut, *c.* 0.4m diameter	Posthole
69	Brown-grey sandy silt	Fill of 57
70	Brown-grey sandy silt	Fill of 71
71	Circular cut, 60mm diameter	Stakehole
72	Brown-grey sandy silt	Fill of 73
73	Circular cut, 60mm diameter	Stakehole
74	Brown-grey sandy silt	Fill of 75
75	Circular cut, 20mm diameter	Stakehole

APPENDIX 2

Faunal Remains from Welland Bank Pit,
by G. R. Chancellor,
First Assistant Curator, Peterborough Museum and Art Gallery

A leg bone from a large mammal and a large tooth were recovered during archaeological reconnaissance at the Welland Bank Pit, Deeping St. James, and brought to Peterborough Museum for identification.

The tooth, a molar, is that of a fairly mature Woolly Mammoth. It is from the skull (maxilla), as opposed to the jaw (mandible). With regard to age it cannot be less than 10,000 years old and is most probably more like 20,000 to 50,000 years old.

The leg bone, a tibia (shin bone), is that of a more or less mature horse/pony (left side). It is distinguishable from cow or deer by the grooves for the astralagus at the distal end being diagonally arranged.

APPENDIX 3
The Archive

The archive consists of:

75 Context records
4 Photographic records
15 Scale drawings
1 Stratigraphic matrix

All primary records and finds are currently kept at:

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

City and County Museum, Lincoln Accession Number: 135.94

Archaeological Project Services project code: WBP94