

95/5
34910

**EXCAVATION OF A
ROMANO-BRITISH CEMETERY
AT
THE WATER TREATMENT PLANT,
SALTERSFORD,
GRANTHAM,
LINCOLNSHIRE
(STP93)**

Work Undertaken For
Anglian Water Services Ltd

April 1995



A P S
ARCHAEOLOGICAL
PROJECT
SERVICES

CONTENTS

List of Figures

1.	Summary	1
2.	Introduction	1
2.1	Planning Background	1
2.2	Topography and Geology	1
2.3	Archaeological Setting	2
3.	Aims	3
4.	Methods	3
5.	Analysis	3
	Phase 1 Natural deposits	3
	Phase 2 Roman deposits	3
	Phase 3 Modern deposits	5
6.	Discussion	5
7.	Conclusions	8
8.	Acknowledgements	8
9.	Personnel	8
10.	Bibliography	9

Appendices

1a	Assessment of the Roman Pottery from Saltersford Treatment Plant, by B Davies
1b	Samian, by Dr Brenda Dickinson
2	Analysis of Organic Residues from Ceramic Vessels from Human Burials at Saltersford, Grantham, Lincolnshire, by Richard P Evershed
3	Saltersford Romano-British Cemetery: an analysis of the pot fills, by Julie Jones
4	The Human Bone from Saltersford, by T Jackman
5a	Animal bone from Saltersford water treatment plant, by James Rackham
5b	The remains of a chicken from a Roman grave at Saltersford water treatment plant, near Grantham, Lincolnshire, by Keith Dobney and Deborah Jaques
6	Flints from Saltersford Water Treatment Plant, by William Bee
7	Context Summary
8	The Archive

List of Figures

- Figure 1 General Location Plan
- Figure 2 Site Location Plan
- Figure 3 Area of Excavation
- Figure 4 Investigation Area, showing excavated features
- Figure 5 Section of Ditch 2
- Figure 6 Sections of Graves 12 and 14
- Figure 7 Grave 20, with skeleton 25
- Figure 8 Grave 18, with skeleton 31
- Figure 9 Graves 23 and 28
- Figure 10 Grave 20, showing distribution of coffin nails
- Figure 11 Grave 28, showing distribution of coffin nails
- Figure 12 Grave 18, showing distribution of coffin nails
- Figure 13 Saltersford Romano-British settlement and location of burials and cremations
- Figure 14 Finds - Ceramic Grave Goods
- Figure 15 Finds - Ceramic Grave Goods
- Figure 16 Finds - Romano-British Pottery
- Figure 17 Finds - Flints

Plates

- Plate 1 Aerial View of Saltersford
- Plate 2 Section of Large Ditch (2)
- Plate 3 General View
- Plate 4 Skeleton 30

- 1. Plate 5 Skeleton 31
- Plate 6 Bird bones below legs of skeleton 31
- Plate 7 Grave Group 18, 23 (extreme left) and 28
- Plate 8 General View
- Plate 9 Stamped samian base
- Plate 10 Grave Goods

1. SUMMARY

An archaeological excavation was undertaken on land at the water treatment plant, Saltersford, near Grantham, Lincolnshire. Saltersford is the site of a Romano-British small town located where the Salter's Way Roman road crosses the River Witham. It was anticipated, on the basis of previous discoveries, that the area could fall within a zone of Romano-British settlement.

Six burials, part of a Romano-British cemetery, were revealed in the area, just south of the Salter's Way. All the bodies were, apparently, in coffins and three were provided with grave goods. These, in the form of pots and animal remains, indicated a probable date in the early 3rd century for the burials. Three of the graves were closely confined and may constitute a family group.

In accordance with Roman law that forbade burial within towns, the cemetery was probably located outside the early area of occupation. Expansion of the settlement in the 3rd century led to disuse of the graveyard. Construction of a stone building possibly disturbed burials and a detached skull was incorporated in the foundations. Other buildings, perhaps part of the expansion of the town, were located on the north side of the area, close to the Salter's Way Roman road.

2. INTRODUCTION

2.1 Planning Background

Heritage Lincolnshire were commissioned by Anglian Water Services Ltd to undertake an archaeological watching brief during development works at Saltersford Water Treatment plant, Grantham, Lincolnshire. This was in order to record

archaeological remains revealed during development at the site, as detailed in planning application SK1282/92/53/51. This archaeological monitoring was carried out in accordance with a brief set by the Community Archaeologist for South Kesteven District Council.

In the course of the watching brief, several human burials were revealed. As a result, and following negotiations with Anglian Water Services engineers and the South Kesteven Community Archaeologist, a salvage excavation was mounted to record and recover the human skeletons and other remains associated with them.

2.2 Topography and Geology

Saltersford is located 2km south of Grantham at the junction of the parishes of Little Ponton and Stroxtun, Grantham and Londonthorpe and Harrowby Without, in South Kesteven District, Lincolnshire (Fig. 1). Modern physical boundaries confine Saltersford to east and west. These limits are provided by the Great North Road, approximately 600m to the west of the bridging point, and the London to Scotland mainline railway track on the east bank of the river.

Saltersford lies at the foot of the Kesteven plateau in the valley of the River Witham which flows south to north through the area. At this point the river cuts through Jurassic limestone. The valley sides are relatively steep, dipping from c. 90m OD to c. 45m OD within 600m of the river and the valley bottom is covered by alluvium exceeding 5m in depth (Preston 1917, 35).

The new water treatment plant (Plate 1), the site of the excavation, is located 200m southwest of the bridge over the river at a height of c. 70m OD (Fig. 2). Centred on National Grid Reference SK92523334, the investigation site covers approximately

0.07 hectares (Fig. 3).

Local soils are the Elmtun 1 Association brown rendzinas developed on the oolitic limestone (Hodge *et al.* 1984, 179).

2.3 Archaeological Setting

Evidence of prehistoric activity at Saltersford is limited, though the Salter's Way is generally considered to have been used in the pre-Roman period (Whitwell 1970, 64). Remains of a neolithic hut, with contemporary pottery and flints, have been revealed during previous developments at the water works (Phillips 1934, 121-2).

Prehistoric artefacts, including a neolithic polished stone axe, a fragment of a Bronze Age dagger and flint tools, have been found in the vicinity. Approximately 1km to the southwest is a tumulus of probable Bronze Age date. Iron Age pottery has also been retrieved from the area, but away from the present channel of the Witham (Heritage Lincolnshire 1993a).

Significantly greater evidence is available for use of the area in the Roman period. In the 18th century, the antiquary Stukeley referred to extensive remains of Roman inhabitation of the area.

Previous discoveries have identified Saltersford as a Romano-British small town located where the Salter's Way Roman road crossed the River Witham. From the fording point, the Salter's Way continued eastwards to join with the major north-south Roman road, Ermine Street, approximately 2km to the east (Margary 1973, 223). Saltersford is potentially the settlement referred to in the Antonine Itinerary as *Causennae* (Rivet and Smith 1981, 305), though there are other candidates for this identification.

Much of the detail of the nature and status

of the Romano-British settlement was recovered in the late 19th and early 20th centuries during construction of Grantham Water Works. Remains of stone buildings, a ford and a metalled road leading southeast from the ford were recorded. Some degree of opulence is indicated by the discovery of a stone column capital, fragments of tessellated pavement, roof and box flue tiles and painted wall plaster. Coins recovered from the site commence with issues of Claudius (AD 41-54) and continue through to those of Arcadius (AD 395-408) and Honorius (AD 393-423).

Agricultural activities are denoted by a number of corn driers found at the site (Lane *nd*, 5). Metallurgy, apparently the casting of copper alloys, was also practiced (Dable 1983, 98). Infant burials, beneath building remains, have been found at the western limit of the Romano-British settlement (Heritage Lincolnshire 1993b) and approximately 400m northeast of the ford. These are possibly of ritual significance. East of the river, a single in-urned cremation may signify the location of a cemetery (Fig. 13).

Settlement appears to have ceased around the beginning of the 5th century AD and was effectively replaced by Anglo-Saxon activity of essentially funerary nature. An inhumation burial represented by a shield boss, gilt stud and scramasax (Meaney 1964, 162) and two substantially intact Romano-Saxon bowls (Whitwell 1970, 143) have been recovered from the area. Slightly further afield, two Anglo-Saxon graves were found near the entrance to the Little Ponton cutting during construction of the London-Scotland railway (Lane *nd*, 1).

A number of stray finds have been made in the area, including an Anglo-Saxon scramasax from the bed of the Witham and a chip-carved bronze buckle of late or sub-Roman type (Hawkes and Dunning 1961,

57; fig. 18k). Sherds of Anglo-Saxon pottery have also been recovered west of the bridging point at locations close to the Salter's Way (SMR30509; J Dable, pers comm).

3. AIMS

The aims of the initial watching brief were to locate and record archaeological deposits and to recover evidence of their date.

Upon discovery of the human remains, the aims of the work were revised. This new, enhanced objective was to record and retrieve all the human burials within the development area and to recover evidence of associated phenomena.

4. METHODS

A mechanical excavator was used to remove the topsoil and subsoil from an area *c.* 45 by 13m. During machine excavation, human remains were encountered. As a result, all non-natural deposits were examined to determine their nature.

All graves were fully excavated by hand to recover the human skeletal remains and to retrieve artefactual material.

Recording of deposits encountered during the watching brief and excavation was undertaken according to standard Heritage Lincolnshire practice.

5. ANALYSIS

Finds recovered from those deposits excavated were examined and a period date assigned where possible. Records of the deposits and features recognised during the excavation were also examined. Phasing

was assigned based on artefact dating and the nature of the deposits and recognisable relationships between them. A stratigraphic matrix of all identified deposits was produced. Three phases were identified.

- Phase 1 - Natural deposits
- Phase 2 - Roman deposits
- Phase 3 - Modern deposits

Phase 1 Natural deposits

A deposit of limestone in fine orange-yellow silt (33) was revealed across the entire development site. This material is considered to be natural cornbrash bedrock.

Phase 2 Roman deposits

Cutting the natural cornbrash on the extreme west side of the site (Fig. 4) was a large V-profile feature (2). Over 2m deep and approximately 4m wide, this is interpreted as a ditch (Fig. 5). Apparently oriented north-south, this ditch was revealed in the north side of a large machine-dug foundation trench (Plate 2). However, no further remains of the ditch were evident in the opposite section, 11m to the south, or in the trench sides. This indicates, therefore, that the ditch terminated in the area destroyed by the foundation trench.

Against the west side of the ditch was a deposit of roughly-hewn limestone slabs (9). Observed to a depth of 1m, these slabs were rudimentarily coursed, lying one on top of another.

Slightly overlapping these coursed slabs, and lying against the east side of the ditch, was a deposit of limestone rubble in dark grey silt (7). Pottery recovered from the material was tentatively dated to the 3rd century (see Appendix 1a).

Overlying the two rubble/masonry deposits

were layers of brown silt and clayey silt (6, 8). From the uppermost deposit (6) pottery of 2nd-3rd century date was recovered. Above these layers was a sequence of brown sandy silts (3, 4, 5) that contained late 3rd century pottery.

Seen in both the east and west sides of the machine-excavated foundation trench was a linear feature (10). Approximately 1.4m wide and 0.5m deep, this is interpreted as a ditch or gully.

Also cut by the foundation trench were two flat-based features (12, 14), each c. 0.6m deep (Fig. 6). Both were oriented east-west and human bones were seen in, or disturbed from, them during machine excavation. In particular, the skeletal remains recovered from the fill (15) of feature 14 were possibly from a female. In consequence, these are interpreted as graves. Seven coffin nails recovered from the grave fill (15) revealed that this was a coffin burial.

Approximately 5m to the east was another elongated east-west cut (20). Containing an extended, supine (lying on its back) skeleton (25) of a possible male aged between 25-35 years at death (Plate 3), this is also interpreted as a grave (Fig. 7). Thirty iron nails distributed around the body indicated that this was a burial within a coffin. Beneath the left lower leg of the skeleton was a near complete pottery vessel of early 3rd century date (see Appendix 1a). Within this pot was a human finger bone, limbs and teeth of a number of field voles, shells of blind snails and a fragment of a single carbonised grain of spelt wheat (see Appendix 3).

Lying 4m to the north of grave 20 was a 0.6m deep rectangular cut (18). Approximately 3m by 2m in area, with the long axis oriented north-south, this contained an extended, supine skeleton (31)

of a possible female aged between 33-45 years at death (Fig. 8; Plate 5). The bones of the left foot were stained green by copper alloy, though no metallic artefact responsible for the green colouration was found. Iron nails (over 100) distributed around the grave indicated that the body had been buried in a coffin. Beneath the knees of this skeleton (Plate 6) were the partial remains of a chicken (see Appendix 5b). Above the head area of the skeleton were two pottery vessels, the lower half of a Nene Valley colour-coated beaker of possible early 3rd century date, and a grey ware pedestal beaker. This latter vessel has strong affinities with Iron Age forms but is in a Roman fabric and probably dates to the 2nd century AD. A number of shells of blind snail were found in this pot (Appendix 3).

Cutting the west side of grave 18 was a 2m long north-south feature (23). Containing the fragmentary remains of a possible male older adult (24) and four iron nails, this is interpreted as a coffin burial (Fig. 9).

Truncating the southern edges of graves 18 and 23 was another north-south aligned feature (28). Approximately 2.5m long, 1m wide and 0.4m deep, this contained the supine, extended skeleton (30) of a male aged 25-35 years (Fig. 9; Plate 4). Sixteen iron nails from around the grave showed that the body had been interred in a coffin. Located immediately adjacent to the skull were an animal bone (a sheep humerus), and the base of a pottery vessel. This pot, which had apparently been deliberately trimmed, was stamped with the name of the maker, *Severinus* (Plate 9), who was active c. 180-220 AD (Appendix 1b).

Immediately south of, and parallel to, grave 20 was a linear feature (17). Over 11m long and approximately 1m wide, this contained limestone fragments in dark brown silt (16). Fragments of a

disarticulated human skull were recovered from this feature, which is interpreted as a robbed and backfilled foundation trench (Fig. 4).

Parallel to and 12m north of this foundation trench was a 1.5m wide linear feature (35). Over 8m long and approximately 0.3m deep, this is tentatively interpreted as a ditch. Lying 3m to the north, and on the same east-west alignment, was a 4m long, 0.5m wide linear feature (47), interpreted as a gully.

Just to the north of the gully was an amorphous feature (26) that stretched out on an east-west line. At least 5m long and upto 0.6m deep, the function of this is uncertain, though it may have served as a ditch. A single sherd of Roman pottery, similar in fabric to 3rd century types, was recovered from the fill of the feature.

Immediately to the west was a similar east-west extended amorphous feature (37). Approximately 2m wide and up to 0.6m deep, the function of the feature is unclear though it was possibly a ditch.

North of this possible ditch were several amorphous features (39, 41, 43, 45). Although minimally investigated, these features had tendencies towards linearity. While this pattern of linearity was predominantly east-west across the site, two of the features (41, 45) had very regular, north-south aligned extensions. In consequence, they are considered to be foundation trenches, probably robbed and backfilled (Fig. 4).

Phase 3 Modern deposits

In the southwest corner of the area a north-south oriented linear feature (51) was observed. Approximately 0.6m wide and containing a pipe, this is interpreted as a service trench (Fig. 4).

Similarly, on the east side of the site was an east-west feature (49) that contained an electricity cable, thus also interpreted as a service trench.

Prior to machine clearance of the site, topsoil (1) covered the area to a depth of c. 0.15m. Romano-British pottery of 1st-4th century date (Appendix 1), together with a small number of flint tools of neolithic-Bronze Age date (Appendix 6), were recovered as unstratified finds during the excavation.

6. DISCUSSION

Natural deposits (phase 1) of cornbrash were observed across the entire site.

Six graves (phase 2), three aligned north-south and the others east-west, were encountered in the development area. Each burial was extended, supine and interred in a coffin. All the dead were apparently adults and it is probable that the sexes were equally represented. Where age could be assessed, two were between 33-45 ('older adult') and one was 25-35 years old ('adult') at death. Two of the other burials were considered to be adult and older adult, but age was not determined. By comparison, individuals buried at the 4th century rural cemetery at Bradley Hill, Somerset, had an average life expectancy of 42.2 years for males (range 20-75) and 30.9 years (range 19-45) for females (Everton and Leech 1981, 197). Two of the males/probable males at Saltersford were 5'8³/₄" and 5'8¹/₂" tall. In comparison, the average height of adult males at Bradley Hill was 5'6¹/₂" (*op. cit.*, 199).

Ceramic vessels - three beakers and a dish base (Figs. 14 and 15; Plate 10) - interred as grave goods with the bodies, indicate that the cemetery probably dates from the early 3rd century AD. Samples from each

of the substantially complete pottery beakers were investigated for the presence of food residues. These analyses were, however, essentially negative, the fats and waxes normally seen in food processing vessels being absent. However, it is possible that the beakers may have served as drinking vessels and possibly had contained aqueous beverages, such as ale or wine (Appendix 2).

One of the beakers contained part of a human finger and bones of field voles. It is possible that the finger bone was detached from the decomposing corpse and dragged into the beaker by the voles.

Additionally, the pot also contained part of a single grain of spelt wheat. This item has more bearing and relation to earlier discoveries of Romano-British arable activity at the settlement. Previous investigations revealed a T-shaped grain drier *c.* 50m to the east of these graves (Lane *nd*, 5). The newly recovered evidence would suggest that spelt wheat was one of the exploited arable crops and was, perhaps, a candidate for processing in the nearby grain drier.

Another grave (18) contained a possible female older adult. The bones of the left foot of this individual were stained green by copper alloy, though no artefact responsible for this was revealed during the excavation. It is possible that the colouration was caused by a fine copper alloy anklet that had totally decayed since burial.

With one exception (grave 18), the arrangement and quantities of nails recovered from each grave would suggest that the coffins were simple containers constructed from a small number of long planks, occasionally with transverse or vertical support strips (Figs 10 and 11). However, one grave (18) contained over

100 nails. This large quantity, together with the pattern described by the nails, suggests that the body had been interred in a coffin built of numerous small sections of planking (Fig. 12). Alternatively, the coffin may have been accompanied by wooden boxes, perhaps containers of the ceramic grave goods. Such boxes, used as receptacles for funerary offerings, have previously been identified at a number of late Iron Age or Romano-British burial sites. At Colchester, for example, at least one wooden box was included in the rich array of grave goods that accompanied an aristocratic burial of the mid 1st century AD (Crummy 1993, 495).

The three north-south graves (18, 23, 28) occur in a discrete, isolated cluster; the burials are in a cross-cutting sequence (Plates 7 and 8) but the group is then at least 1.5m from the nearest other grave (Fig. 4). It is possible that these burials constitute a communal group, perhaps in a family plot. Support for this identification as a family group is provided by the tentative age and sex determinations of the three individuals. A possible female older adult is the earliest in the sequence, followed by a possible male older adult, with a male adult the last in the group.

Additionally, cross-cutting of graves is a generally rare occurrence in the Roman world. Thus, for example, there is not a single instance of grave disturbing grave amongst the 55 burials at Bradley Hill, Somerset (Leech 1981). Similarly, there was no cross-cutting amongst the 21 graves in the ?mid-2nd century inhumation cemetery at Baldock, Hertfordshire (Stead and Rigby 1986, 78). This general inviolate nature of graves probably stems from the abhorrence with which Romans and Romanised peoples viewed death and the personal defilement associated with contact with death (Salway 1981, 702; 704). Consequently, the instances of cross-cutting

would suggest that the graves were closely confined and space for these burials was limited, though no evidence of a mausoleum or enclosing structure was revealed.

These remains identify the area as an inhumation cemetery. Moreover, the distribution of graves would suggest that the excavated area comprises the eastern edge of the burial ground, with graves extending westwards but not to north, south or east.

The *Twelve Tables*, the earliest of Roman laws, forbade burial or cremation within cities or other nucleated settlement areas. This regulation was later translated into municipal law in the colonies of Rome. Accordingly, Romano-British cemeteries are generally located outside the towns, often alongside the roads leading out of the settlement (Anderson 1984, 11).

Human remains of Roman date have previously been found, as might be expected, at the fringes of, or outside, the settlement. Thus, an in-urned cremation was discovered 250m south of the cemetery on the opposite side of the river and the remains of infants, buried beneath buildings, have been revealed 250m to the west, and half a kilometre to the northeast (Heritage Lincolnshire 1993a; 1993b). Cremation is, on the whole, the earlier burial rite in Roman Britain, predominating in the first two centuries AD. Also, infants were excluded from the rule forbidding burial within settlements. Therefore, on the basis of nature and distance, these earlier discoveries of funerary activity are unlikely to be directly associated with the newly-revealed cemetery (Fig. 13).

Previous investigations have shown the development site to be well within the area of settlement (Heritage Lincolnshire 1993a, 1993b). That the cemetery is located in an

area thought to be within the occupation zone may call into question the previous interpretations of the extent of settlement or, perhaps, illuminate the way that the form and size of the occupation area fluctuated through time.

Excavations alongside the Salter's Way, west of the cemetery, recovered pottery of 3rd-4th century date and coins of the late 3rd century onwards (Heritage Lincolnshire 1993b). No earlier material was found, implying that this area of settlement originated in the 3rd century. Neither were these finds spatially restricted, but occurred over a distance of 250m alongside the Roman road. Moreover, there is no clear evidence of a chronological progression which would suggest a gradual growth of settlement in this area. Rather, the uniformity of the date of material from this wide area implies rapid increase in the size of the settlement at this time.

This apparently rapid expansion has wider, regional implications. Although the cause of this dramatic growth is unknown, one possibility could be the merging of two separate settlements. Relocation of a population from another 'village' could have resulted in the expansion that is evident at Saltersford. However, such a mass-migration would have also possibly affected the regional economic geography. If such a scenario did occur then it is very likely that the population transference was either instituted or, at least, licenced by the regional government.

On the west side of the site, the southern end of a large north-south ditch (2) was seen. This ditch was clearly a major boundary, though the specific function was not determined. However, as graves occur to both east and west of the ditch line, the feature did not, apparently, demarcate the cemetery. Coursed limestone slabs (9) placed against the west side of the ditch

may have served as a lining. However, it is possible that the slabs and overlying rubble (7) are construction or demolition debris, deposited in the 3rd century. After a period of natural silting (7) the ditch was deliberately backfilled (3, 4, 5) in the late 3rd century.

Containing limestone rubble, the foundation trench (17) represents a masonry wall, perhaps one side of a building. Although no formal dating evidence was recovered from the feature, a detached human skull was found in the fill. By implication therefore, the wall post-dates the cemetery, the skull probably deriving from a pre-existing grave, disturbed during construction. It is possible that the skull was incorporated in the foundations as a votive deposit.

Although minimally investigated, a number of rectilinear gullies towards the northern end of the excavation site were tentatively interpreted as foundation trenches. Their location would suggest that these constitute the remains of buildings close to the Salter's Way Roman road, which bypasses the investigation area immediately to the north.

Modern activity (phase 3) is represented by service trenches and the ploughsoil that provided the ground surface prior to development. Although disturbed, the neolithic and Bronze Age flints recovered during the excavation supplement previous evidence of exploitation of the Saltersford area in the prehistoric period.

7. CONCLUSIONS

This investigation identified well-preserved deposits of Roman date. A Romano-British inhumation cemetery was located in the area, probably in the early 3rd century AD. Six graves, including a possible family

group of three burials, were revealed. Three of the bodies were provided with grave goods in the form of ceramics and animal remains and all, apparently, were interred in coffins.

The cemetery was probably located just outside the western limit of the Saltersford Romano-British small town, in accordance with Roman law that forbade burial within occupation areas. Major expansion of the settlement in the 3rd century caused this cemetery to fall into disuse and at least one wall, probably a structure rather than a boundary, was erected over the area previously used for burial. Buildings were located on the north side of the development area, near to the Salter's Way Roman road. Although of unknown date, these may constitute part of the 3rd century expansion. Several unassociated flint tools (Fig. 17) contribute to evidence for prehistoric use of the Saltersford area.

8. ACKNOWLEDGEMENTS

Heritage Lincolnshire wish to thank Anglian Water Services Ltd. who funded the fieldwork and analysis. Special thanks are due to Ian Foot (engineer) and Judith Brown (publicity officer), both of Anglian Water Services Ltd, for assistance with the project. The work was coordinated by Steve Haynes and this report was edited by Dave Start. Ruth Waller, the Community Archaeologist for South Kesteven District Council permitted examination of the relevant files. Access to the County Sites and Monuments Record was provided by Ian George and Julia Wise of the Archaeology Section, Lincolnshire County Council.

9. PERSONNEL

Project Manager: Steve Haynes

Supervisor: Gary Trimble
Site Assistants: David Brown, Denise Buckley, Mark Dymond, Richard Hilton, Dale Trimble, Sue Unsworth
Finds Processing: Denise Buckley
Illustration: Denise Buckley
Post-excavation Analyst: Gary Taylor

10. BIBLIOGRAPHY

Anderson, A. S., 1984 *Roman Military Tombstones*, Shire Archaeology **19**

Bass, W. M., 1987 *Human Osteology: a laboratory and field manual of the human skeleton*. Special publications of the Missouri Archaeological Society, Columbia, Missouri

Brothwell, D. R., 1981 *Digging up Bones*, BMNH, Oxford University Press

Charters, S., Evershed, R. P., Goad, L. J., Blinkhorn, P. W., and Denham, V., 1993 Quantification and distribution of lipid in archaeological ceramics: implications for sampling potsherds for organic residue analysis, *Archaeometry* **35**, 211-223

Crummy, P., 1993 Aristocratic graves at Colchester, *Current Archaeology* **132**

Dable, J., 1983 Bronze Working at the Saltersford Romano-British Settlement, *Lincolnshire History and Archaeology* **18**

Davies, B. J., 1993a Market Deeping (MAD91): Roman Pottery Assessment, CLAU Archive Report for the Heritage Trust of Lincolnshire

Davies, B. J., 1993b *Saltersford: Anglian Water (SAW93): Roman Pottery Assessment*, CLAU Archive Report for the Heritage Trust of Lincolnshire

Davies, B. J., 1994 *Hangman's Lane, Stainfield (SHR93): The Roman Pottery*, CLAU Archive Report for the Heritage Trust of Lincolnshire

Evershed, R. P., Heron, C., and Goad, L. J., 1990 Analysis of organic residues of archaeological origin by high temperature gas chromatography/mass spectrometry, *Analyst* **115**, 1339-1342

Everton, R. F., and Leech, R. H., 1981 4. The Burials, in Leech, R., The Excavation of a Romano-British Farmstead and Cemetery on Bradley Hill, Somerton, Somerset, *Britannia* **XII**, 177-252

Field, N., and Palmer-Brown, C. P. H., 1991 New Evidence for a Romano-British greyware pottery industry in the Trent Valley, *Lincolnshire History and Archaeology* **26**, 40-56

Gillam, J. P., 1970 *Types of Roman Coarse Pottery Vessels in Northern Britain*, Newcastle upon Tyne

Hawkes, S. C., and Dunning, G. C., 1961 Soldiers and Settlers in Britain, Fourth to Fifth Century, *Medieval Archaeology* **V**

Heritage Lincolnshire, 1993a *Desk-top Evaluation for the Widening of the Salter's Way, Saltersford, Lincolnshire* (unpublished report)

Heritage Lincolnshire, 1993b *Evaluation Excavation for the Widening of the Salter's Way, Saltersford, Lincolnshire* (unpublished report)

Hodge, C. A. H., Burton, R. G. O., Corbett, W. M., Evans, and Seale, R. S., 1984 *Soils and their Use in Eastern England*, Soil Survey of England and Wales **13**, Harpenden

- Howe, M. D., Perrin, J. R., and Mackreth, D. F., 1980 *Roman Pottery from the Nene Valley: A Guide*, Peterborough City Museum Occasional Paper 2
- Lane, T., nd *Salvage Excavations in and around Saltersford, Lincs., 1979-81* (unpublished draft report)
- Lauwerier, R. C. G. M., 1983 A meal for the dead: animal bones finds in Roman graves, *Palaeohistoria* 25, 183-93
- Lauwerier, R. C. G. M., 1988 *Animals in Roman times in the Dutch eastern river area* (Nederlandse Oudheden's 12) 's-Gravenhage./Amersfoort
- Lauwerier, R. C. G. M., 1994 Bird remains in Roman graves, *Archaeofauna* 2, 75-82
- Leech, R., 1981 The Excavation of a Romano-British Farmstead and Cemetery on Bradley Hill, Somerton, Somerset, *Britannia* XII
- Margary, I. D., 1973 *Roman Roads in Britain* (3rd ed.), London
- Martin-Kilcher, S., 1976 *Das romische Graberfeld von Courroux im Berner Jura* (Basler Beitrage zur Ur-und Fruhgeschichte 2) Derendingen
- Meaney, A. L. S., 1964 Gazeteer of Anglo-Saxon Burial Sites, *Medieval Archaeology* VIII
- Oetgen, J. M., and Simmons, B. B., 1992 *Excavation of an Iron Age and Roman Site at Old Place, Sleaford 1984-85*, Archive Report for the Heritage Trust of Lincolnshire
- Perrin, J. R., forthcoming, Unpublished Report on the Roman Pottery from the Kilns at Stanground
- Phillips, C. W., 1934 The Present State of Archaeology in Lincolnshire, *Archaeological Journal* 91
- Philpott, R., 1991 *Burial practices in Roman Britain: a survey of grave treatment and furnishing A.D. 43-410*, British Archaeological Reports, British Series 219, Oxford
- Preston, H., 1917 Romano-British Remains at Saltersford, near Grantham, *Lincolnshire Notes and Queries* 14, no. 2
- Rivet, A. L. F., and Smith, C., 1981 *The Place-Names of Roman Britain*, London
- Salway, P., 1984 *Roman Britain*, Oxford
- Stead, I. M., and Rigby, V., 1986 *Baldock The Excavation of a Roman and Pre-Roman Settlement*, Britannia Monograph Series 7
- Wahl, J., and Kokabi, M., 1987 Osteologische Untersuchungen und den im Rosgartenmuseum aufbewahrten spatromischen Skelettresten aus Konstanz, *Fundberichte aus Baden-Wurtemberg* 12, 456-61
- Wahl, J., and Kokabi, M., 1988 *Das romische Graberfeld von Stettfeld I: Osteologische Untersuchungen der Knochenreste aus dem Graberfeld*, Stuttgart
- Webster, G., 1960 A Romano-British pottery kiln at Rookery Lane, Lincoln, *Antiq J* 40, 214-40
- Webster, G., and Booth, N., 1947 The excavation of a Romano-British pottery kiln at Swanpool, Lincoln, *Antiq J* 27, 61-79
- Whitwell, J. B., 1970 *Roman Lincolnshire*,

History of Lincolnshire II

Whitwell, J. B., 1982 *The Coritani*, BAR British Series 99, Oxford

Wilson, M. G., 1983 Catalogue of the Pottery, in Frere, S., *Verulamium Excavations II*, The Society of Antiquaries of London

11. ABBREVIATIONS

'Antiq J' refers to the Antiquaries Journal.

'CLAU' is the acronym for the City of Lincoln Archaeology Unit.

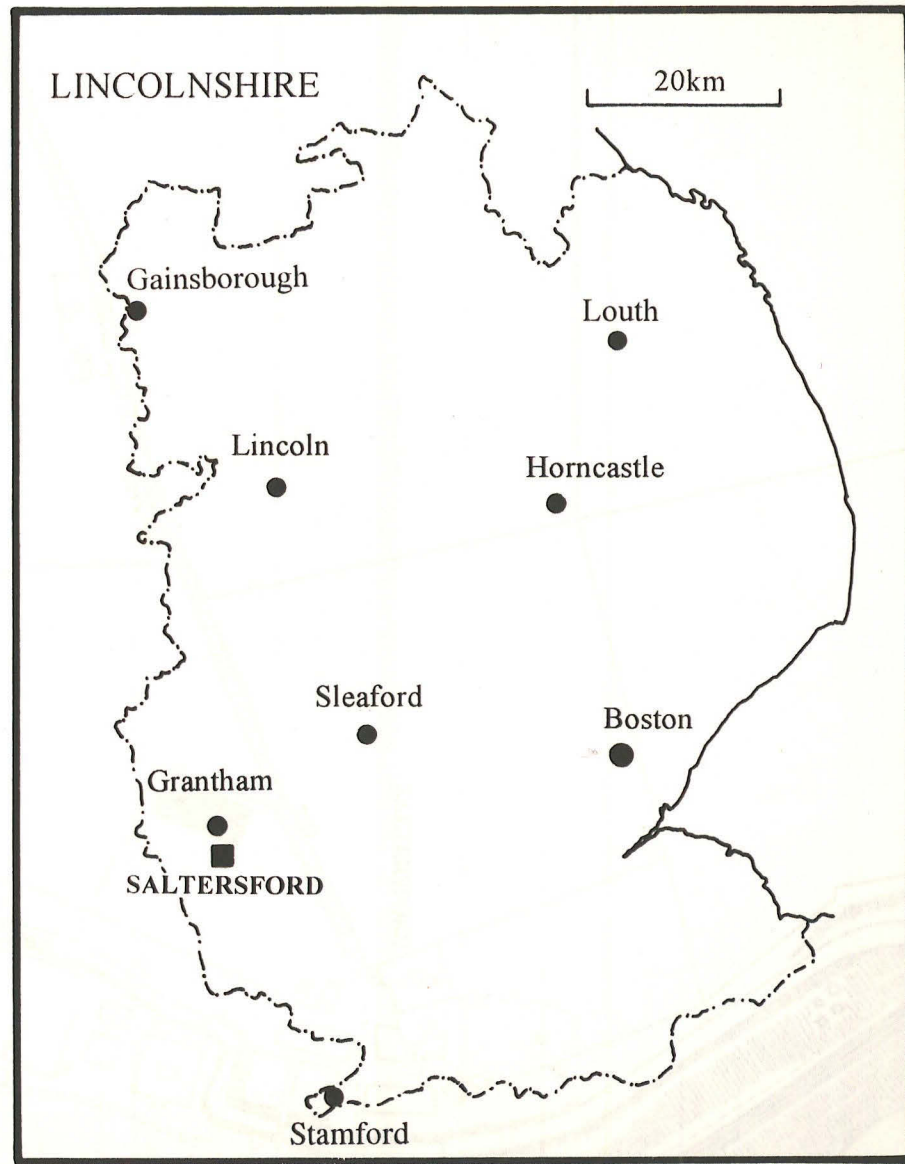
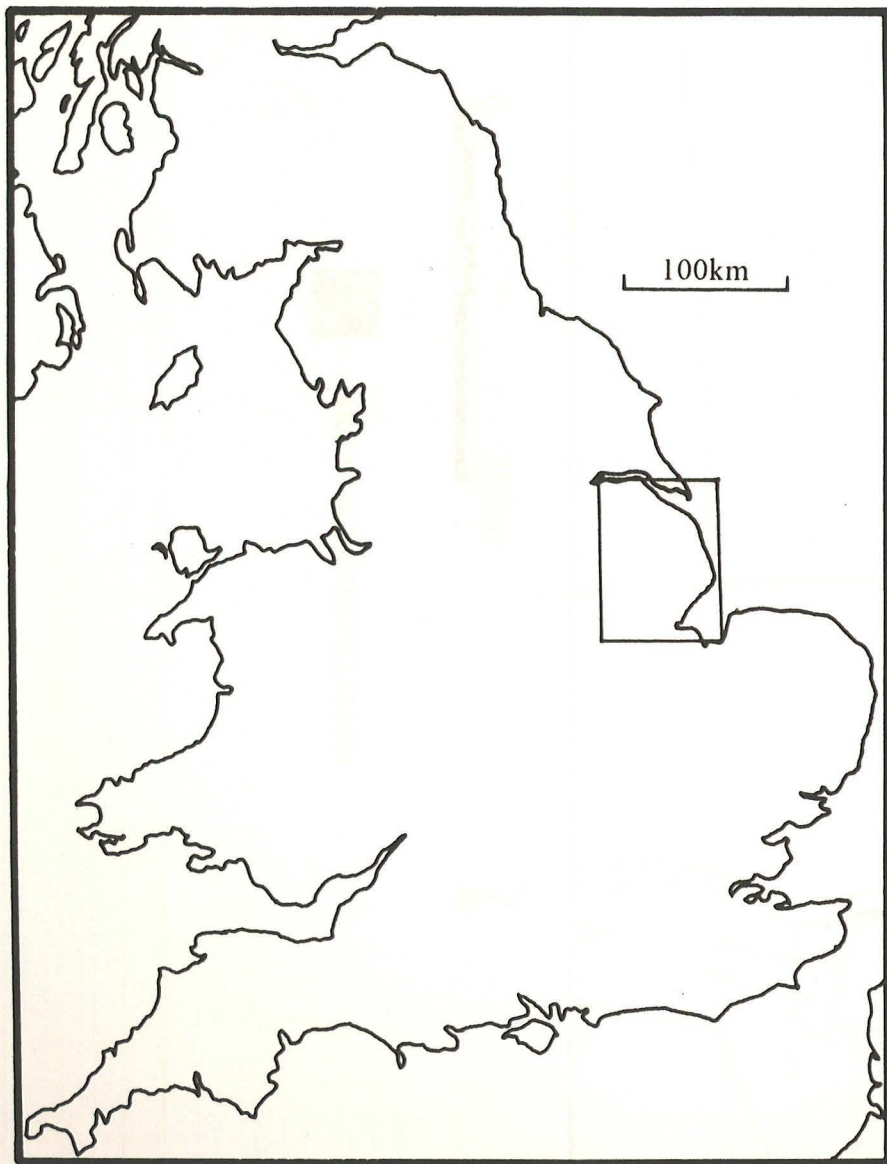
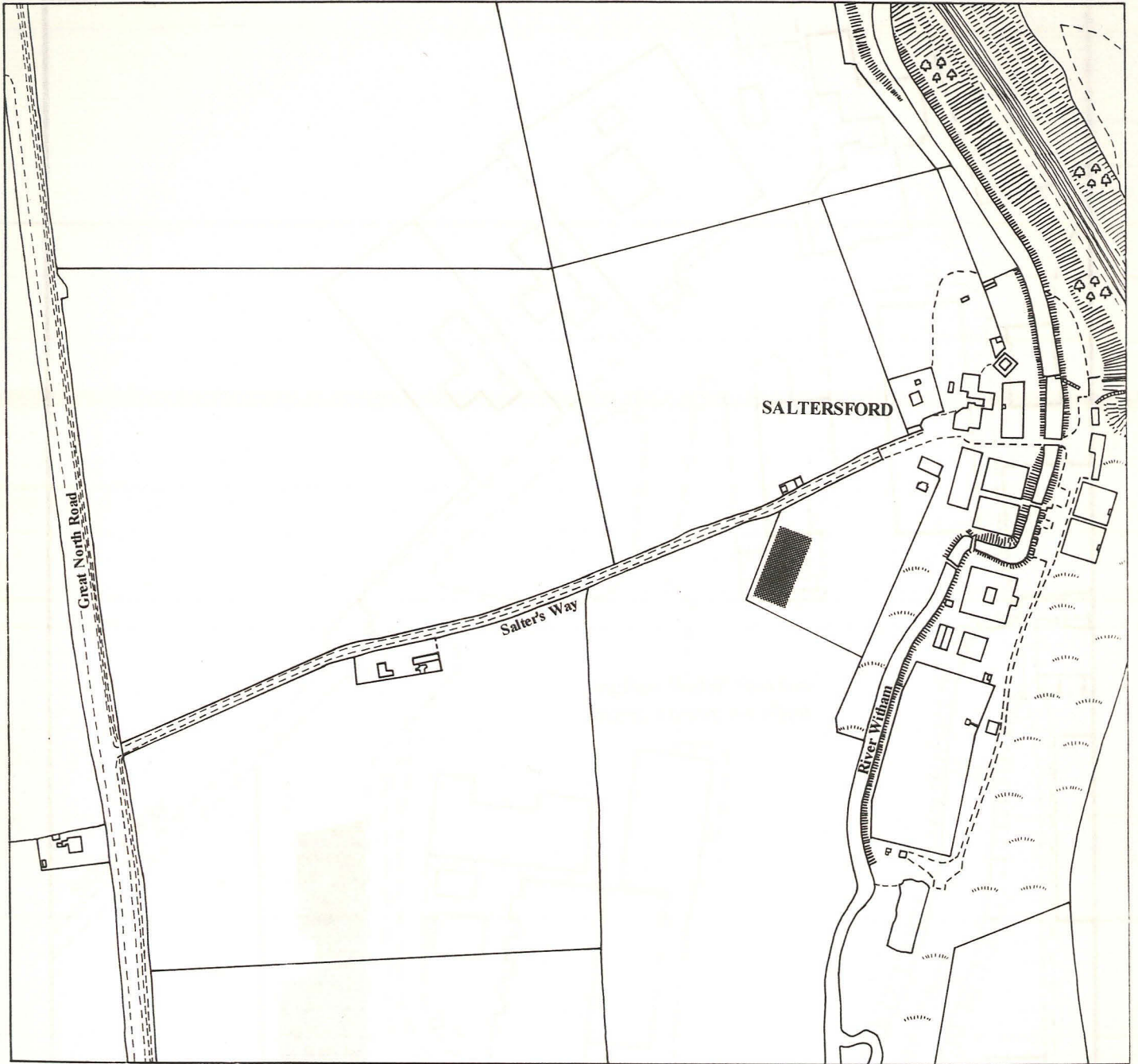


Fig. 1 General Location Plan

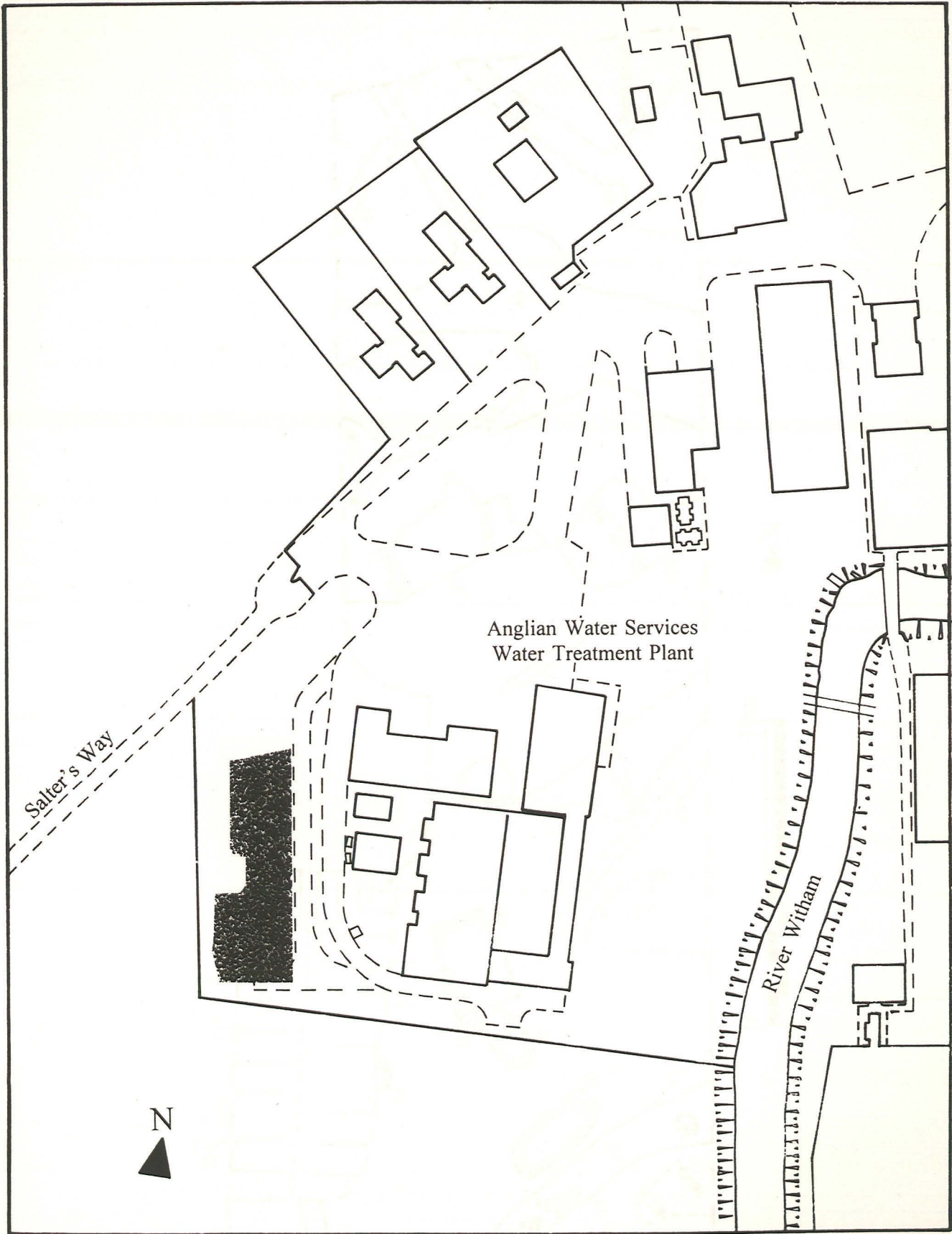
Fig. 2 Site Location Plan



AREA OF INVESTIGATION

EXCAVATION SITE

Fig. 3 Area of Excavation



EXCAVATION SITE

Fig. 4 Investigation Area,
showing excavated features

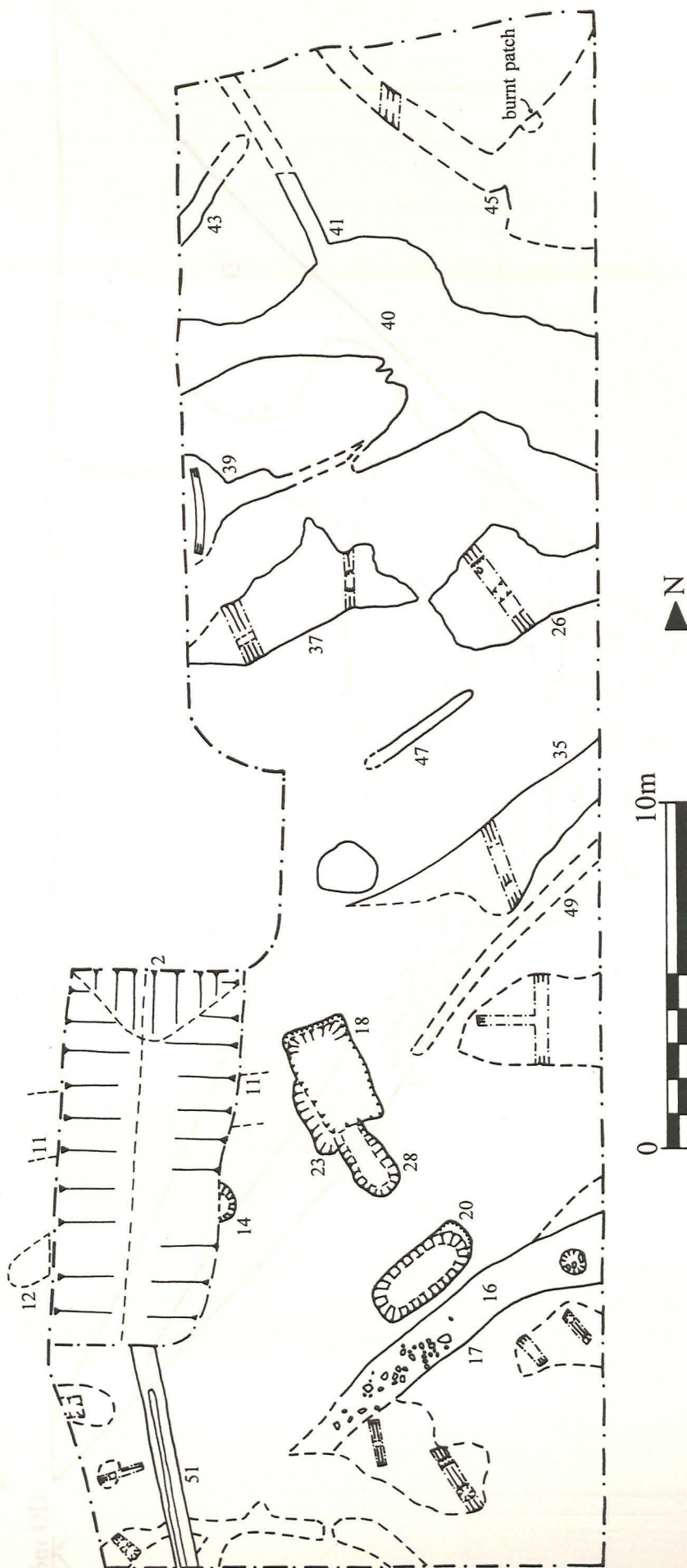


Fig. 5 Section of Ditch 2

Fig. 6 Sections of Graves 12 and 14

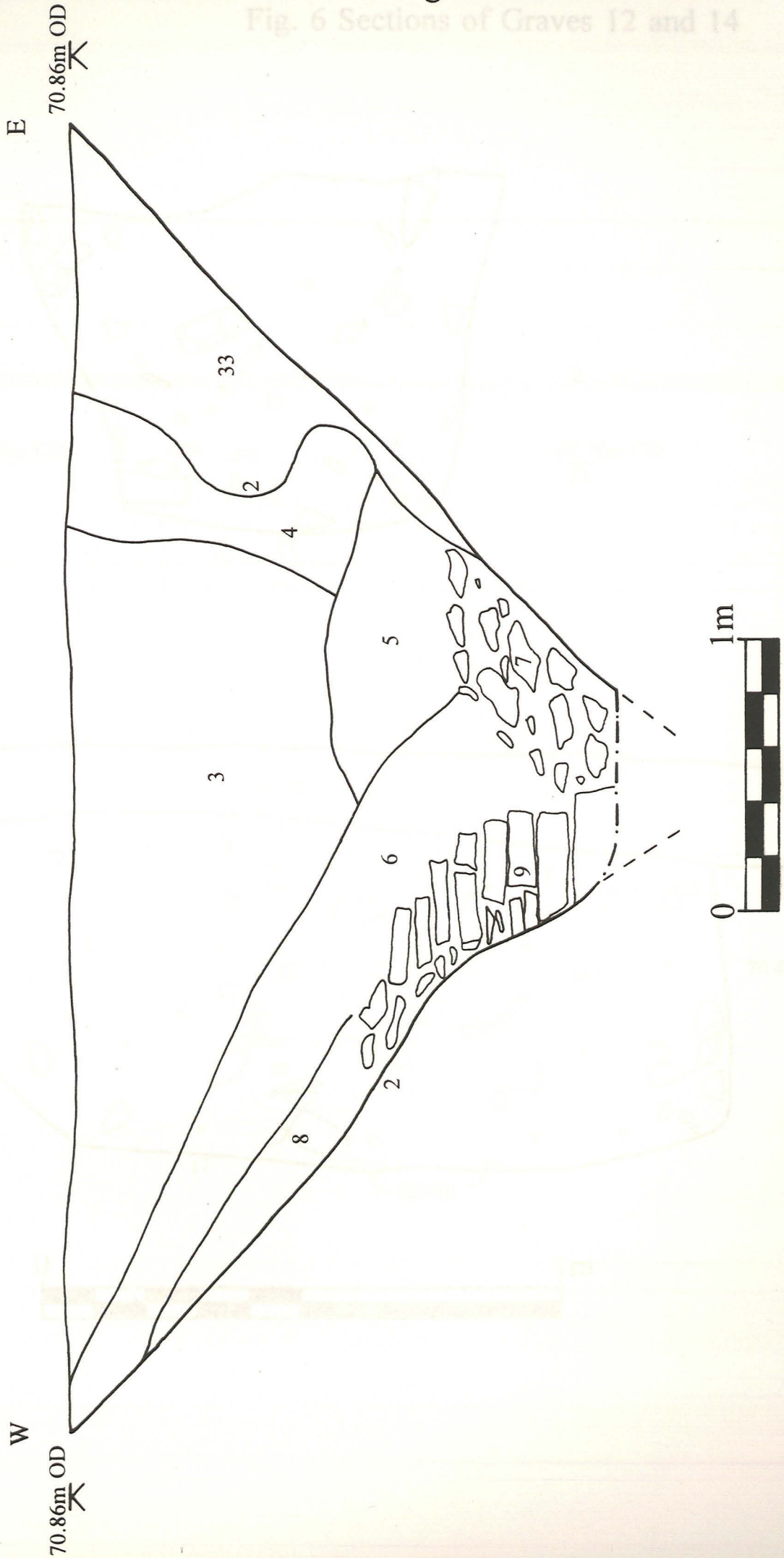


Fig. 6 Sections of Graves 12 and 14

Fig. 7 Grave 20, with skeleton 25

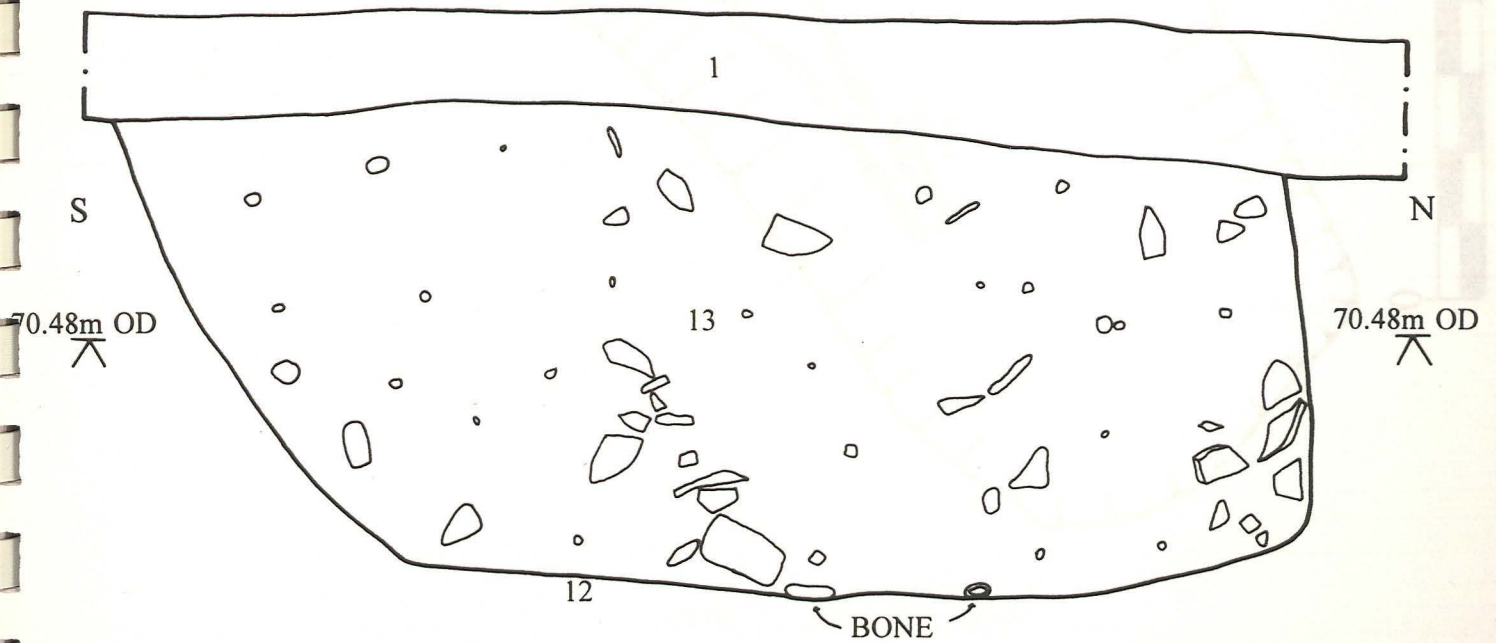
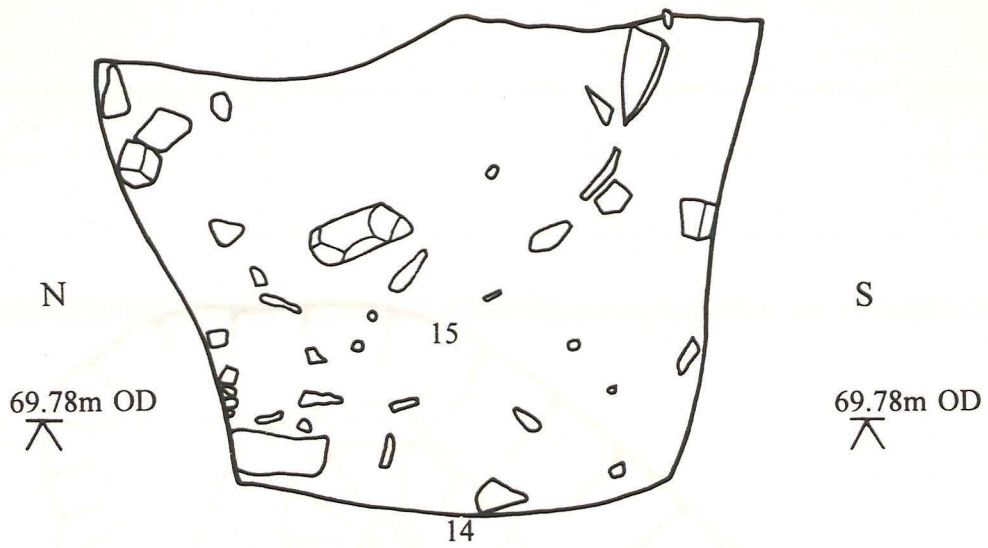


Fig. 8 Grave 18, with skeleton 31

Fig. 7 Grave 20, with skeleton 25

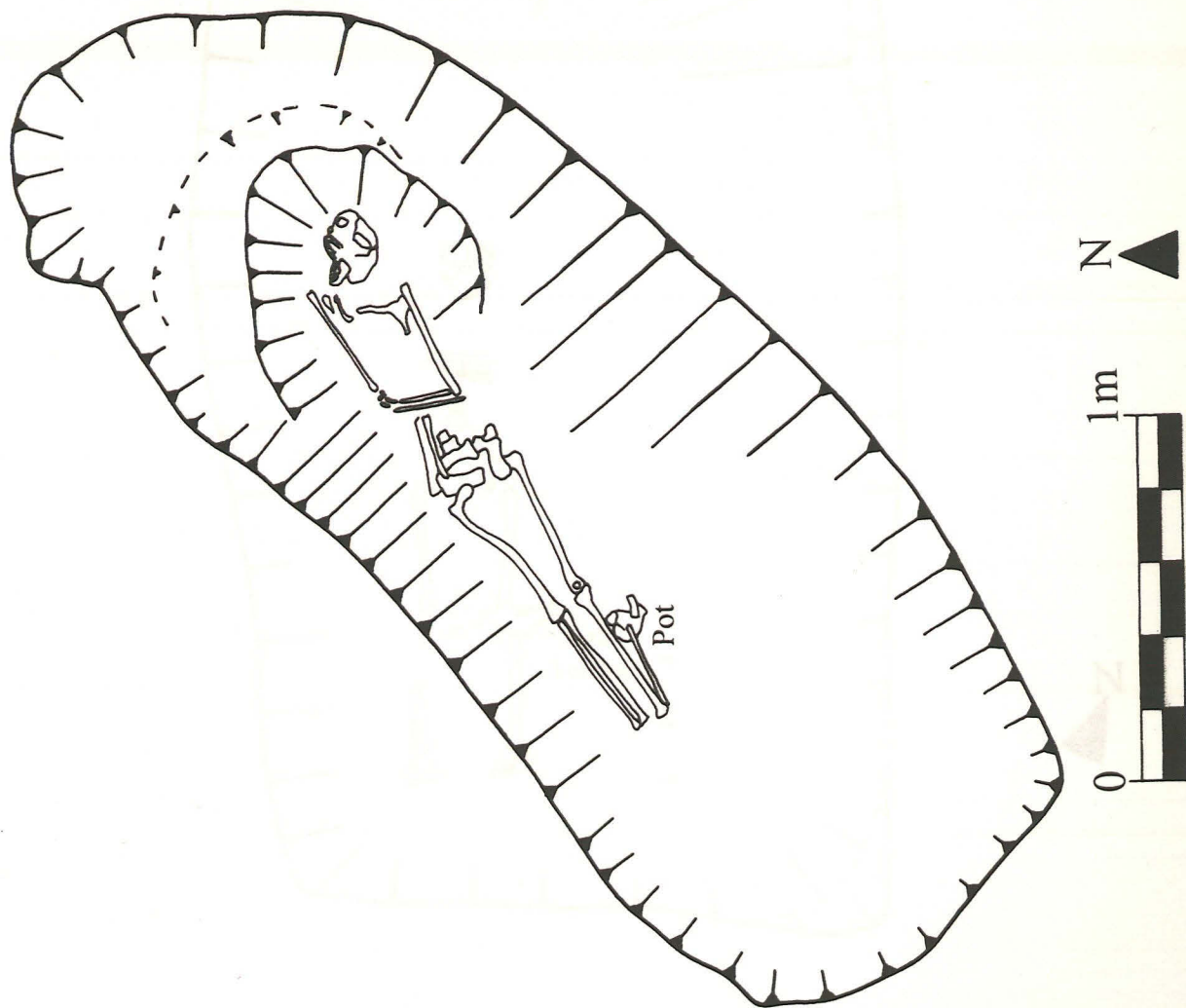


Fig. 8 Grave 18, with skeleton 31

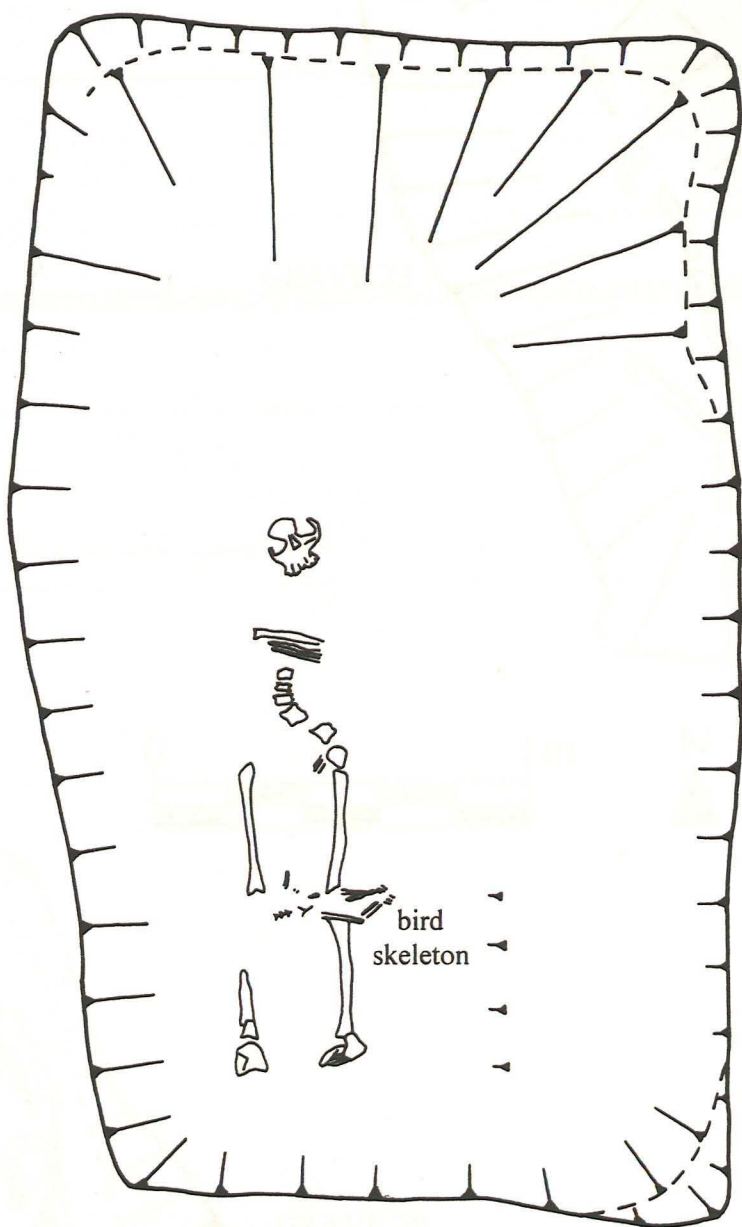
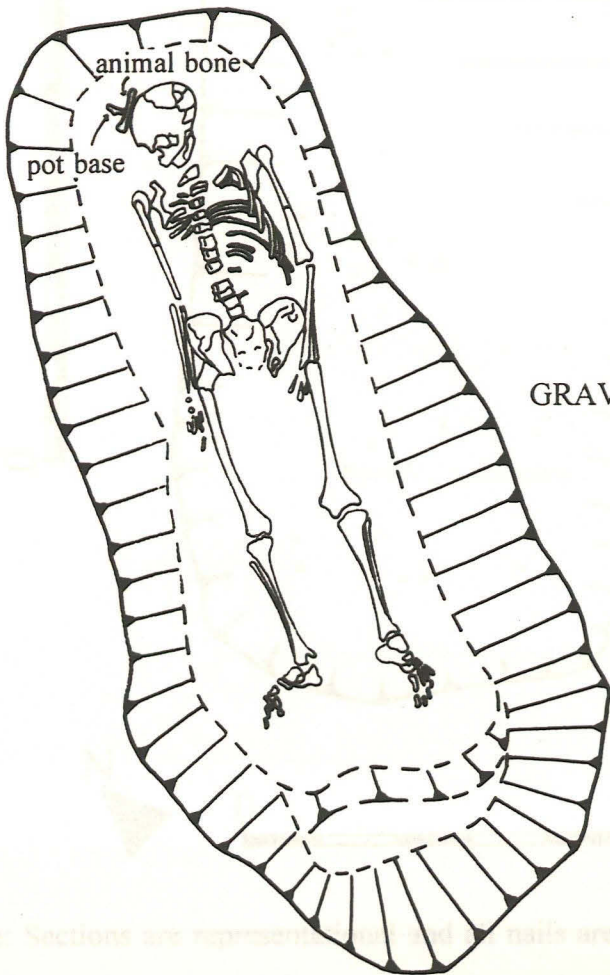
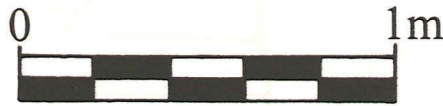
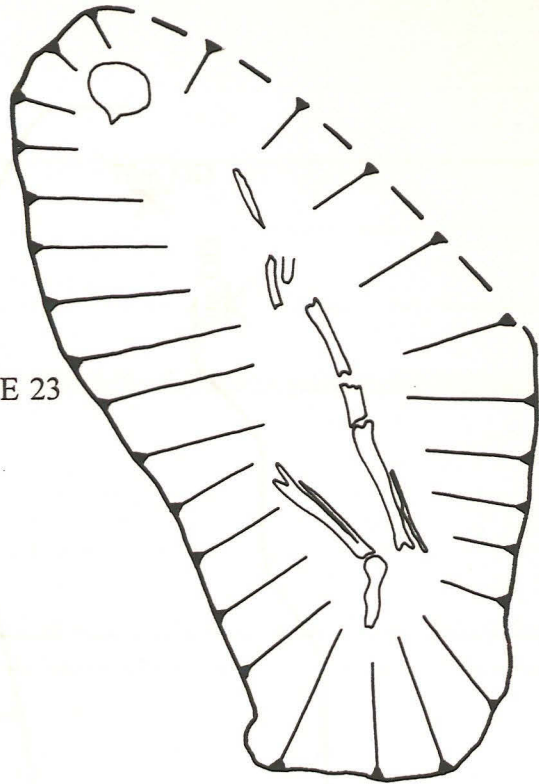


Fig. 9 Graves 23 and 28

Fig. 10 Grave 20, showing distribution of coffin nails

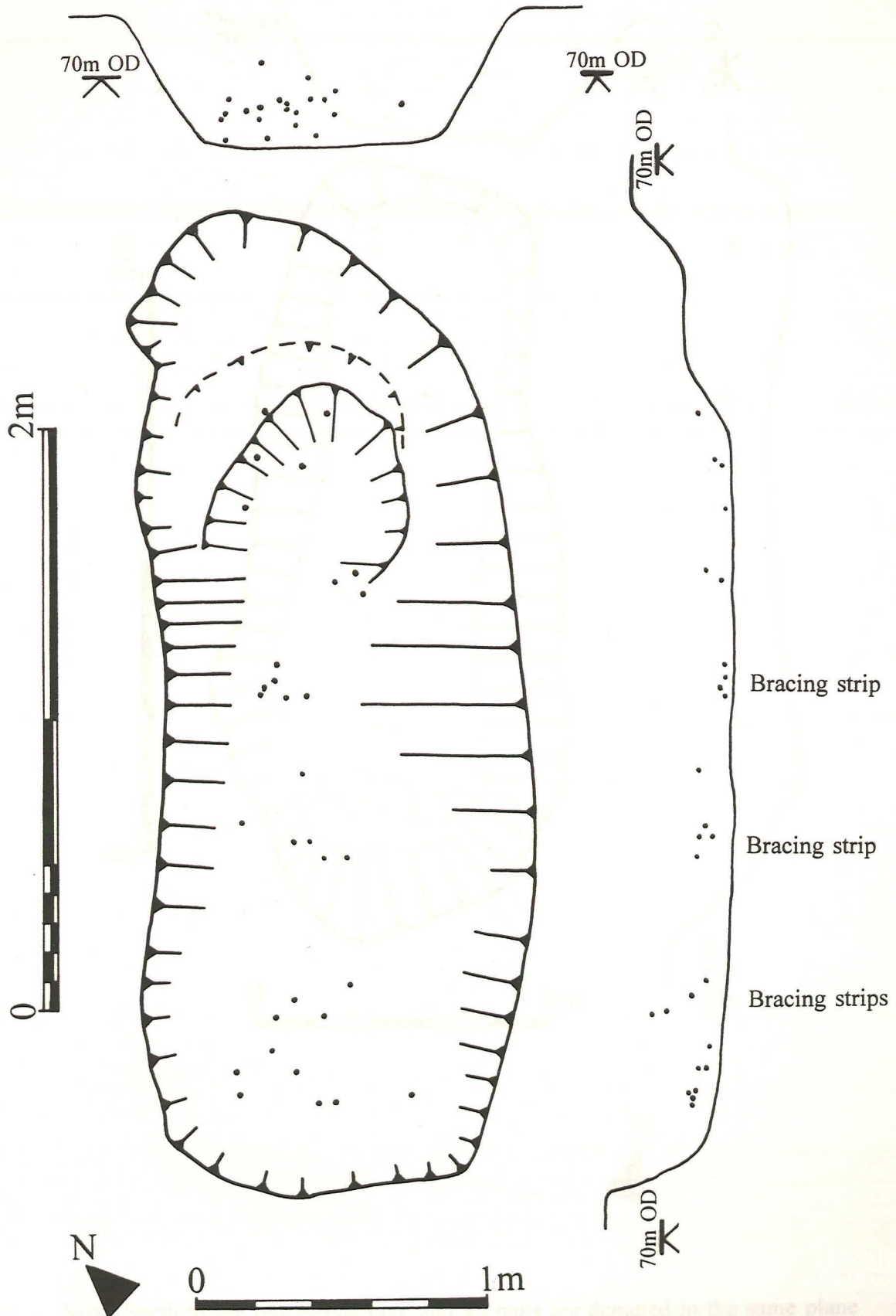
GRAVE 23



GRAVE 28

Note: Sections are representative of all graves. Coffin nails are depicted in the same plane.

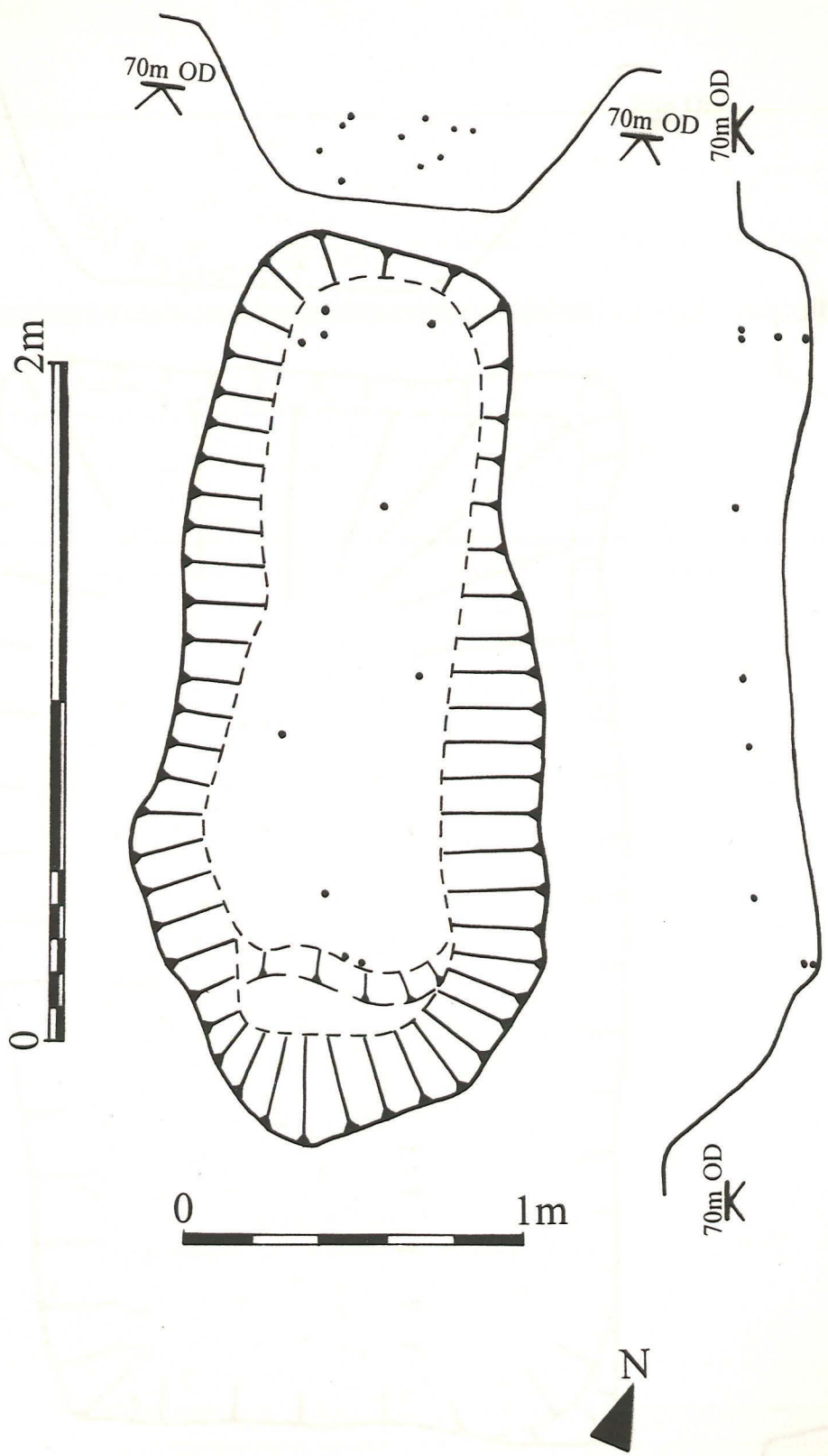
Fig. 10 Grave 20, showing distribution of coffin nails



Note: Sections are representational and all nails are depicted in the same plane

Fig. 11 Grave 28, showing distribution of coffin nails

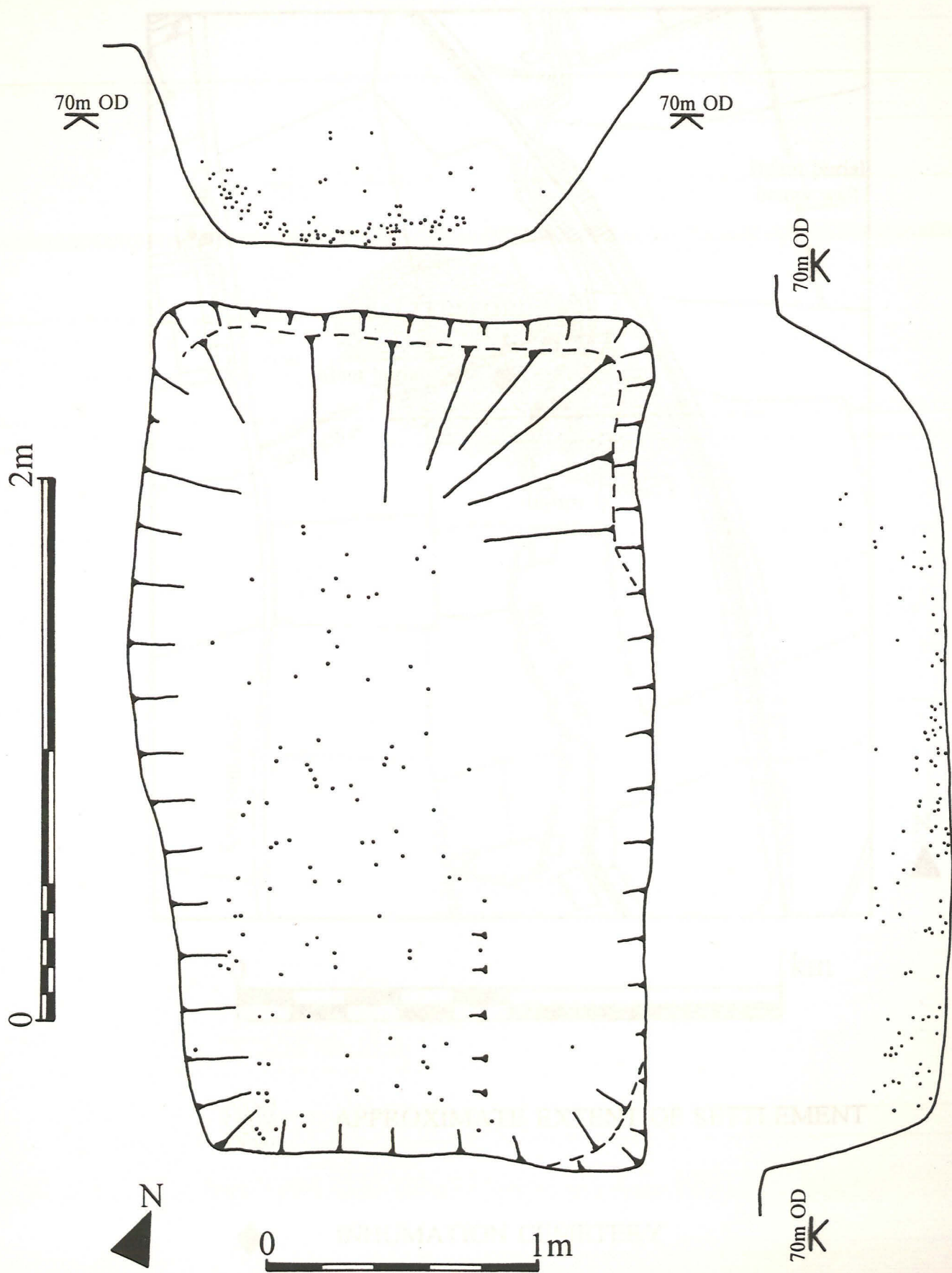
Fig. 12 Grave 18, showing distribution of coffin nails



Note: Sections are representational and all nails are depicted in the same plane

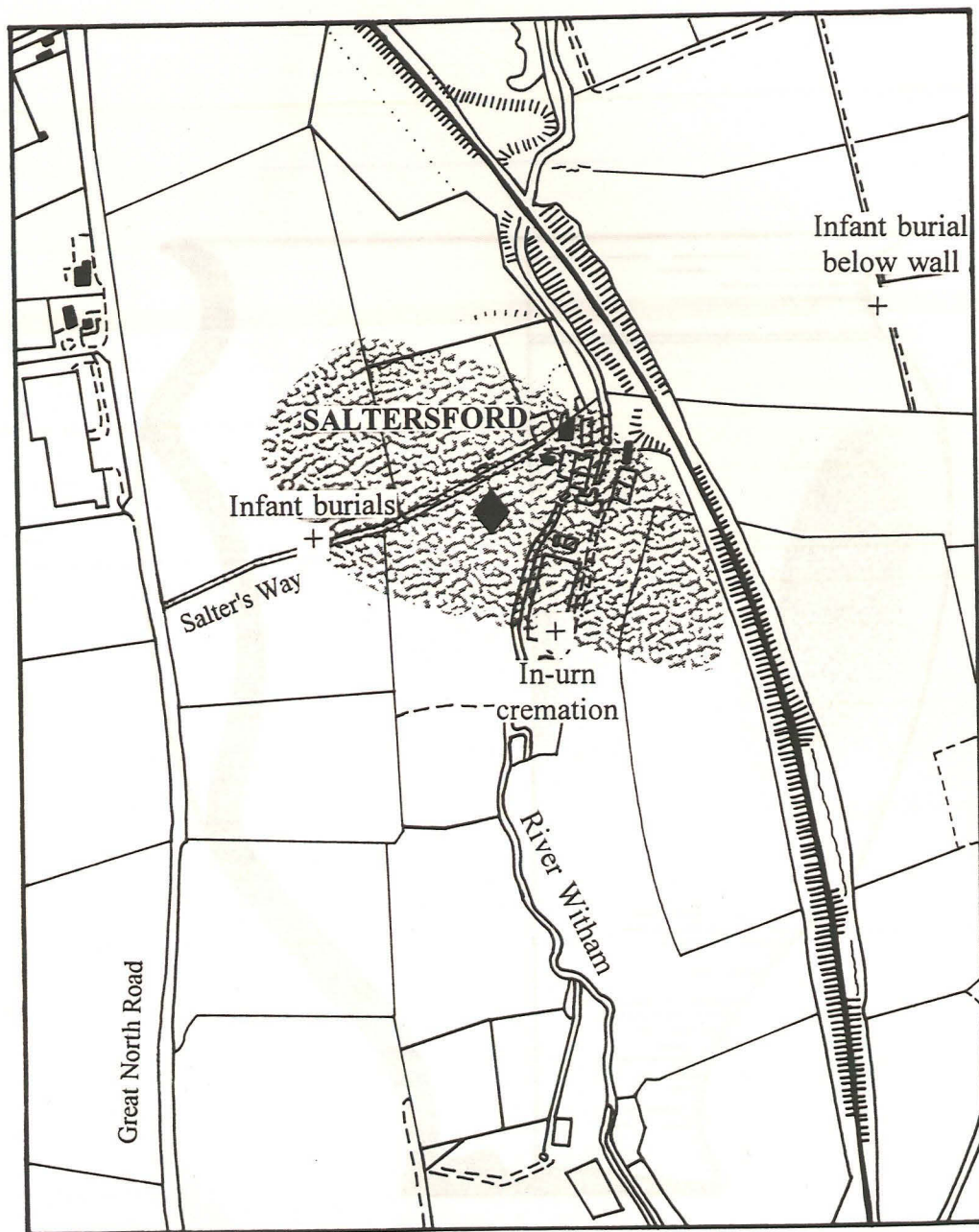
Note: Sections are representational and all nails are depicted in the same plane

Fig. 12 Grave 18, showing distribution of coffin nails



Note: Sections are representational and all nails are depicted in the same plane

Fig. 13 Saltersford Romano-British settlement and location of burials and cremations

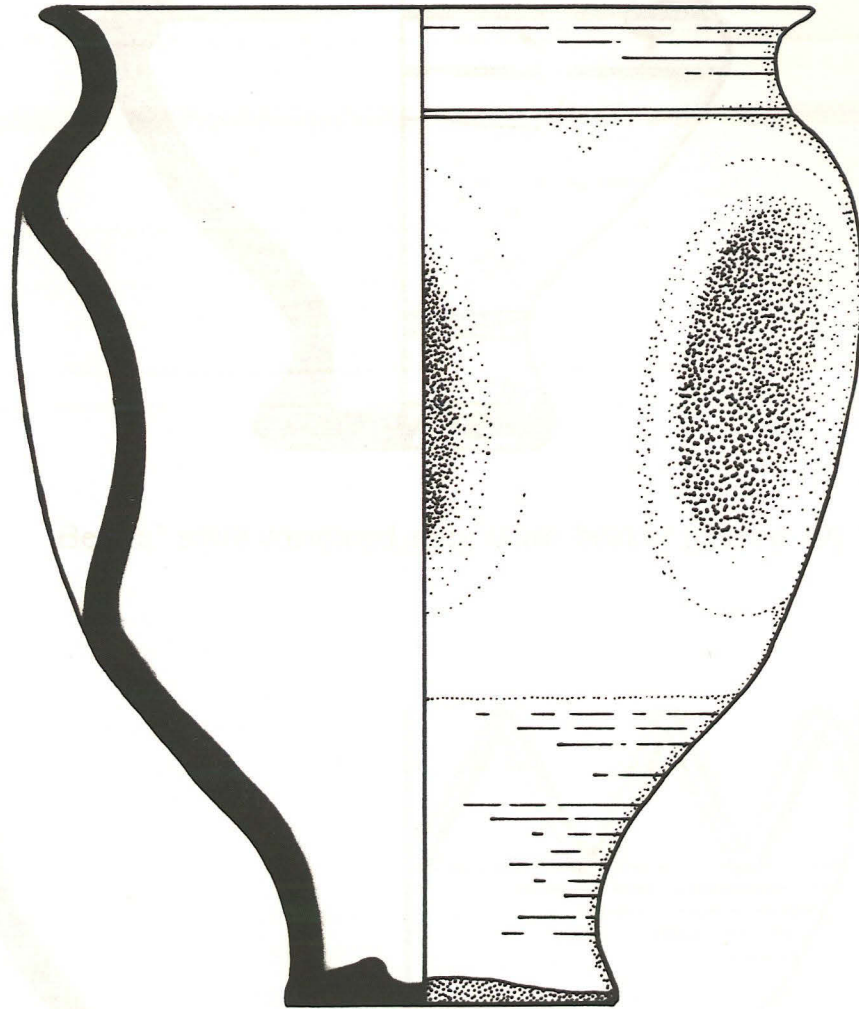


APPROXIMATE EXTENT OF SETTLEMENT



INHUMATION CEMETERY

Fig. 14 Finds - Ceramic Grave Goods

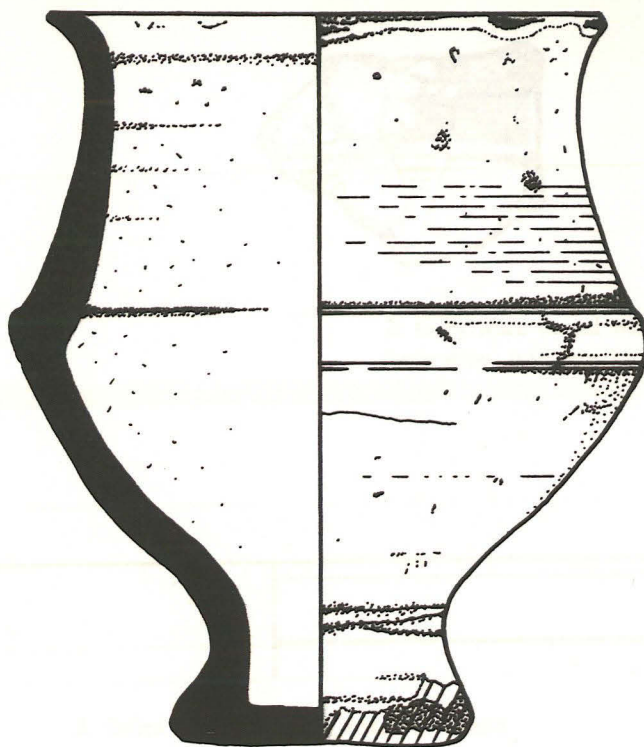


0 5cms

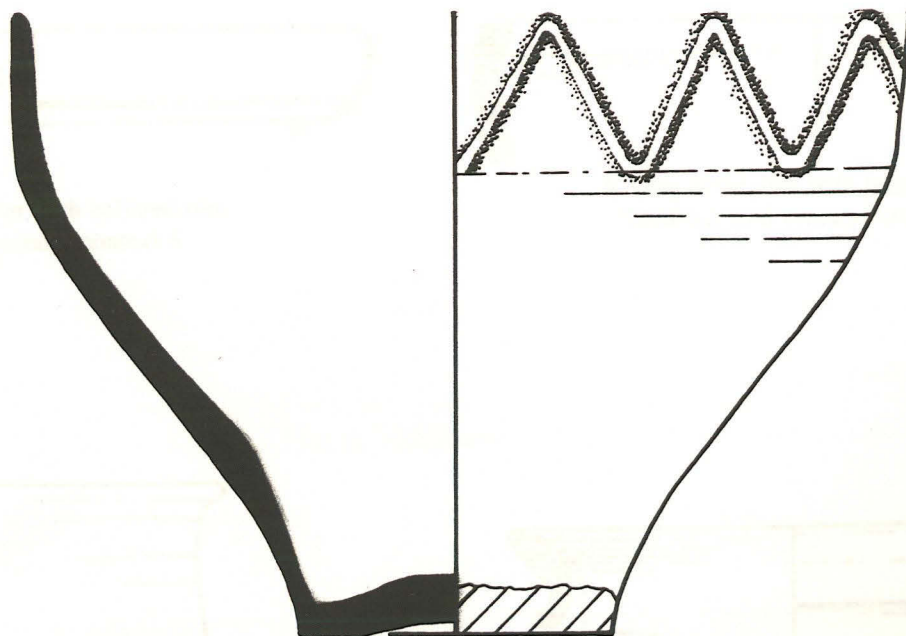
Nene Valley grey colour-coated ware folded beaker (context 21)

Note: Pot is irregular in shape

Fig. 15 Finds - Ceramic Grave Goods



'Belgic' style carinated grey ware beaker (context 19)

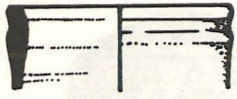


Bag-shaped beaker in Nene Valley colour-coated ware (context 19)

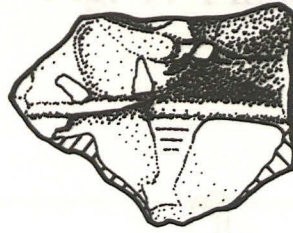
0 5cms

All are at scale 1:2, except 2, which is at 1:1

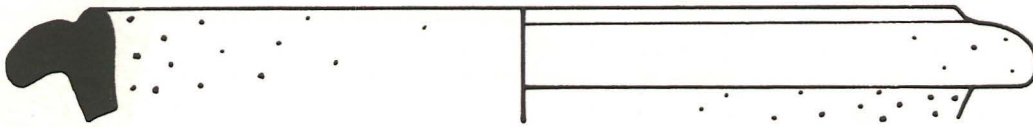
Fig. 16 Finds - Romano-British Pottery



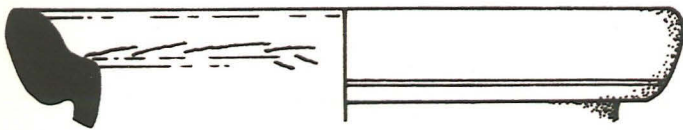
1. Nene Valley colour-coated ware flagon, unstratified



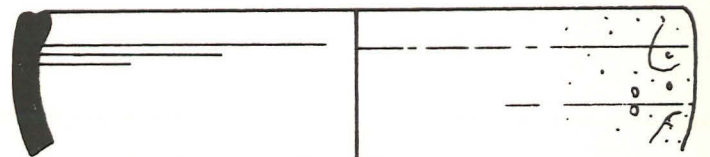
2. Grey ware vessel with nodular rusticated decoration, mid-late 1st century, unstratified



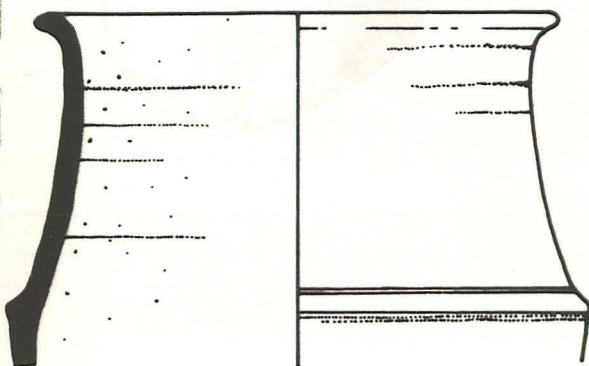
3. Dales shell-tempered ware? bead and flanged bowl, 4th century, unstratified



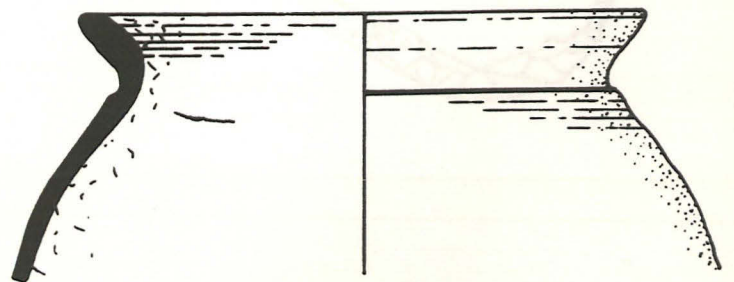
4. Grey ware jar with collared rim, late 3rd century, context 5



5. Grey ware dish with incurving rim, ?mid-late 2nd century, unstratified



6. Grey ware beaker, c. AD 120-140, unstratified



7. Black burnished ware (BB1) cooking pot, c. AD 120-160, unstratified

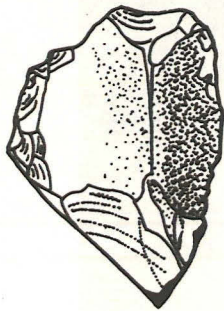
All are at scale 1:2, except 2. which is at 1:1

Plate 1 Aerial View of Saltersford, showing Salter's Way Roman road leading down to the water treatment plant (right)

Fig. 17 Finds - Flints



1



2



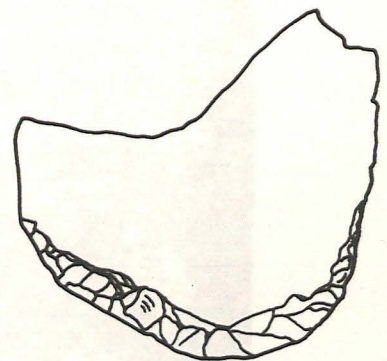
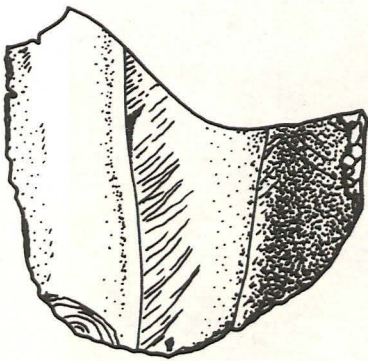
—



—

6

0 5cms



1

Plate 1 Aerial View of Saltersford, showing Salter's Way Roman road leading down to the water treatment plant (right)

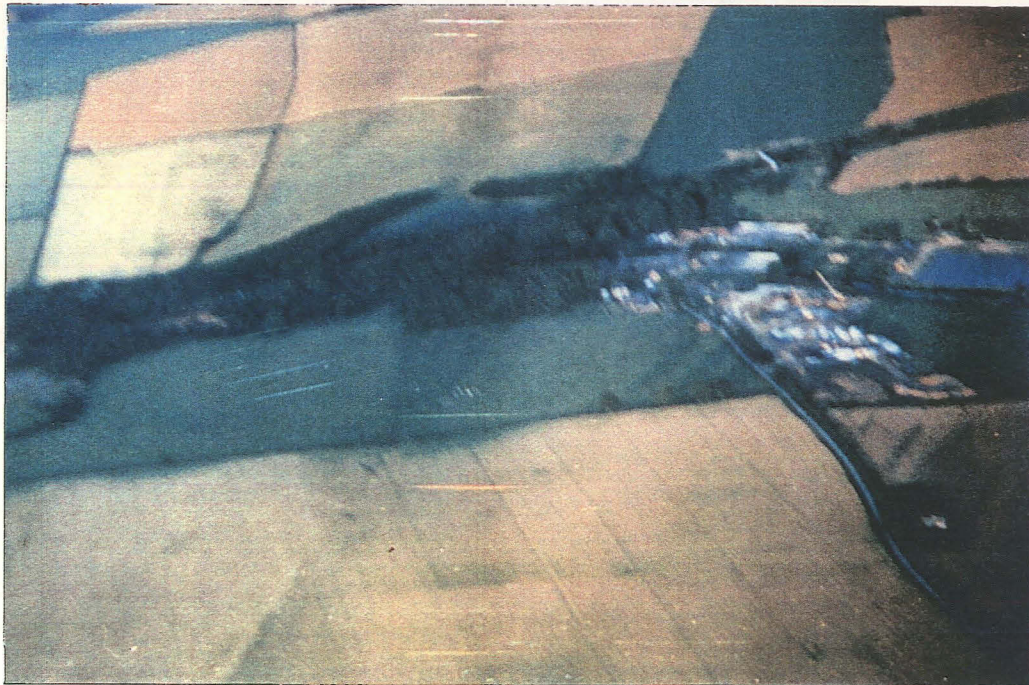


Plate 2 Section of Large Ditch (2), showing limestone ?lining

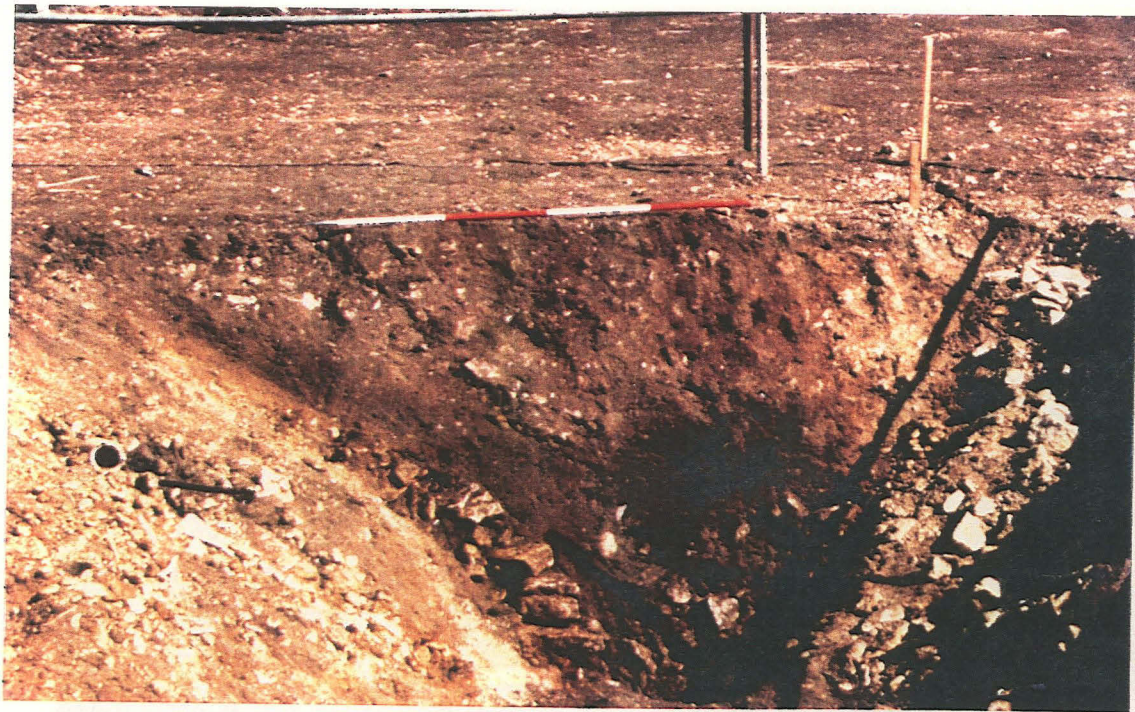


Plate 3 General View, cleaning skeleton 25

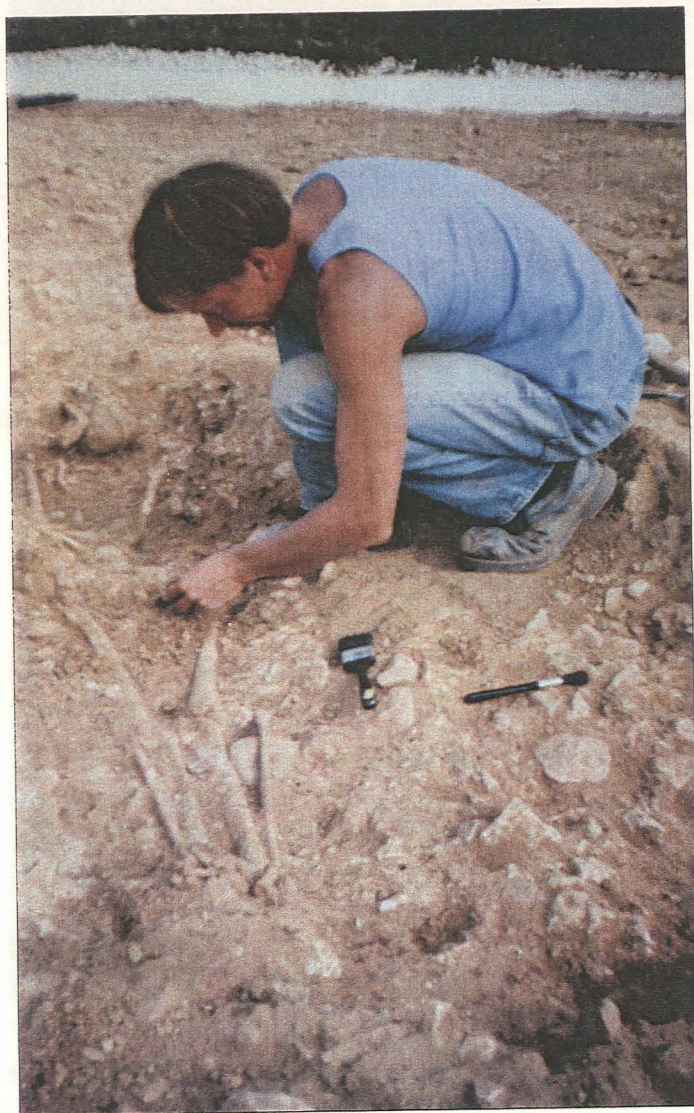


Plate 4 Skeleton 30





Plate 6 Bird Bones below legs of skeleton 31 (note wishbone, centre)



Plate 7 Grave Group 18, 23 (extreme left) and 28



Plate 8 General View, recording graves 18, 23 and 28



Plate 9 Stamped Samian Base, showing maker's name *Severinus*

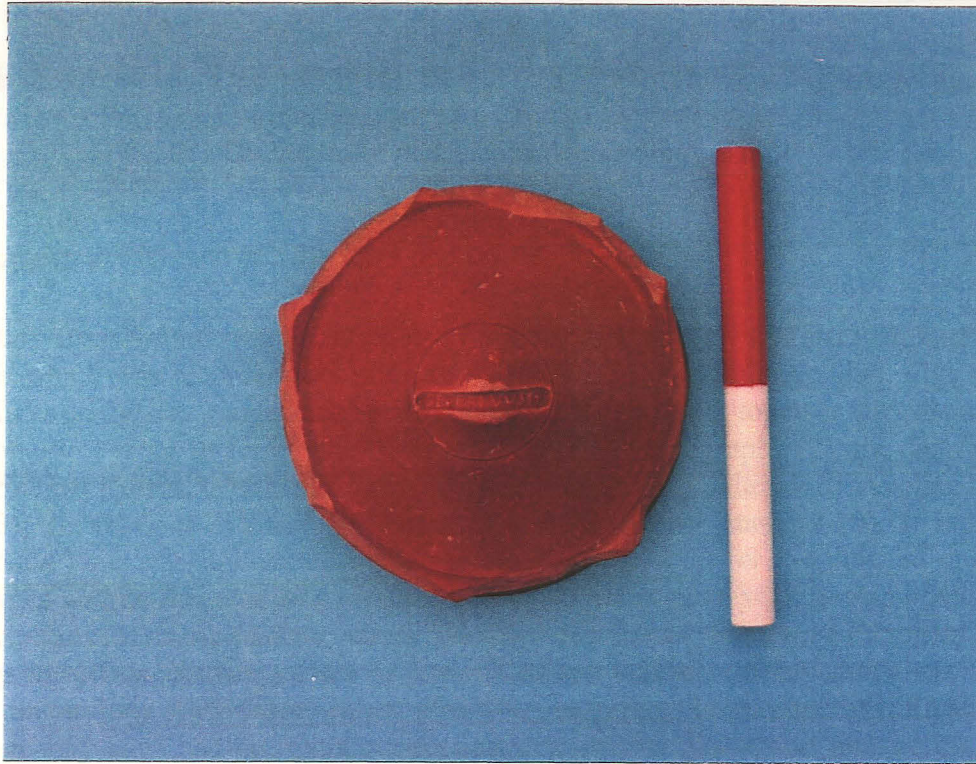


Plate 10 Grave Goods, left to right: Nene Valley ware colour-coated beaker; folded beaker; grey ware 'Belgic' style beaker



APPENDIX 1a

SALTERSFORD, TREATMENT PLANT (STP93): Roman Pottery Report

B J Davies, City of Lincoln Archaeology Unit

1. Introduction

The pottery from the excavation, consists of a small assemblage 144 shs weighing 2715 grammes which was recorded according to CLAU's Basic Ceramic Archive. This report concentrates on the date range and the provenance of the material, together with discussion of the condition of the material where it is relevant to the stratigraphy (2); the distribution of the principal Roman fabrics and forms (3); comparison with Saltersford: Anglian Water (SAW93); conclusions (5) and recommendations for further analysis (6). It is worth emphasising that, although small, the assemblage is important for the unusual range of vessel types and its function as a cemetery site. In a wider context, it is also notable for the distribution of Nene Valley wares. The site lies on the Salt Way (Margary 58a), spanning the River Witham, close to Ermine Street, and it is likely that these wares reached Saltersford via Ermine Street. However, according to Whitwell (1982:86), the settlement may have had no direct connection with Ermine Street and may be merely a market centre on the line of the Salt Way. This highlights the possible connection with the Salt Way and the revised Roman coast line, which may be another, though less likely, route by which these wares reached Saltersford.

2. Dating and Provenance

Table 1 (below) shows the overall date range of the pottery from the site, which spans from the second to the fourth centuries. The main emphasis lies in the fourth century, but this material is derived from unstratified groups the composition of which is discussed below (2.1). Within this group there is a worn single sherd which is likely to date to the first century, and also a sherd of post Roman pottery - a fragment of late earthen ware of 19th or 20th century date. Examination of the stratified material shows that the cemetery material is predominantly early third century in date, but also contains an unusual vessel that is derived from the 'Belgic' tradition (see 2.2B below).

Finds other than pottery were derived from the unstratified groups, consisting of two fragments of ceramic building material, one of which is definitely a piece of worn Roman tile of indeterminate date; a fragment of flint which may have been worked; and a fragment of slate. There was also small piece of slag, a plano-convex bottom which forms on the hearth just below the *tuyere*, and was derived from smithing. It is undatable (pers. comm Jane Cowgill).

Table 1. STP93 ROMAN POTTERY: Dates as a percentage of sherd count and weight

Sherds	Percent	Weight	Percent	Date
3	2.08%	21	0.77%	2-3
2	1.38%	92	3.38%	L2E3+
43	29.86%	740	27.25%	E3
2	1.38%	85	3.13%	L3
1	0.69%	18	0.66%	3?
90	62.50%	1728	63.64%	4
3	2.08%	31	1.14%	RO
144	100.00%	2715	100.00%	TOTAL

2.1 The Unstratified Roman Pottery

Referring to Tables 2 & 3 (below) and Appendix 1 it can be seen that over 60% of the pottery from the site came from unstratified contexts (+ and +WB). Despite the broad fourth century date assigned to these layers on the basis of the latest sherds, the assemblages are comprised of pottery of varying dates. The earliest pottery, a worn sherd of grey ware with nodular rusticated decoration from (+), is likely to be mid-late first century in date. Nodular rustication, rather than the linear type which can continue into the second century, is generally assigned a first century date.

At least four vessels can be assigned a date range from the early-mid/late second century. These consist of a BB1 cooking pot (+) in a fresh condition similar to Gillam type 120 dated to *c* AD 120-160 (Gillam, 1970); a grey dish (+), Lincoln form 452 with a plain incurving rim; and an oxidised or burnt grey bowl (+WB), Lincoln form B333, with a bifurcated rim. The latter both appear to be most common in the mid-late second century but can be as early as the late first century. A more unusual form is a grey beaker (+; drawing no. 4082) similar to Gillam form 177 dated by him to *c* AD 120-140 (Gillam, 1970). This vessel is incomplete with the base missing, and although the upper part resembles the complete vessel from context 019, (see 2.2B below), it is in a different fabric. The form is derived from 'Belgic' influences but also resembles Lincoln form B334, which is more definitely a bowl form with a wide mouth, and which dates from the early to mid/late second century. Two sherds in a gritty fabric resemble Dressel 20 amphorae earlier, rather than the third century, fabric. They are very abraded and/or well scrubbed, therefore the identification is tentative.

Early-mid third century forms consist of a folded beaker in Nene Valley grey colour-coated ware (+); a fragment of Nene Valley colour-coated beaker in an early rather than late fabric (+) and a flanged bowl (+WB) in the same fabric; together with an abraded triangular rimmed bowl in Nene Valley grey ware (+WB).

Pottery dating to the later third century and extending into the fourth century is comprised of a grey ware jar with a Dales Ware type rim (+WB); a large grey ware jar with a string base (+WB); and several grey ware wide-mouthed bowls (+WB).

Definite fourth century forms include a large jar with rilling on the shoulder in a shell tempered fabric resembling South Midlands shell-tempered ware (+); a bead and flanged

bowl in Nene Valley colour-coated ware (+), and a beaker in the same fabric similar to Gillam type 43 dated to *c* AD 350-400 (Gillam, 1970) and also to Nene Valley forms 54-57 (Howe *et al*, 1980 fig. 5) dated to the fourth century (+). A large grey ware jar with juddered rouletting on the shoulder (+) also dates to this period, as does a bead and flanged bowl in late shell-tempered ware (+WB). There is no certain evidence for very late fourth century material. South Midlands shell-tempered ware appears to occur in groups of this date within assemblages from the City of Lincoln, but their occurrence to the south has a wide date range.

A large proportion of the grey and Nene Valley grey wares from these contexts shown signs of abrasion, which reflects the nature of their deposition as well as the mixed date of the pottery - the earlier sherds generally showing most abrasion. Three sherds from (+) appear to have been burnt. These factors would be consistent with the cemetery site having been situated in an occupation area that had since been abandoned. A single sherd of post Roman pottery a rim of a late earthen ware jar dating to the 19th or 20th century came from +WB.

Table 2. STP93 ROMAN POTTERY: Context dates as a percentage of sherd count and weight

Sherds	Percent	Weight	Percent	Context	Date
59	40.97%	1131	41.65%	+	4
31	21.52%	597	21.98%	+WB	4
2	1.38%	85	3.13%	005	L3
3	2.08%	21	0.77%	006	2-3
1	0.69%	18	0.66%	007	3?
26	18.05%	372	13.70%	019	E3
17	11.80%	368	13.55%	021	E3
2	1.38%	25	0.92%	022	RO
1	0.69%	6	0.22%	027	RO
2	1.38%	92	3.38%	029	L2E3+
144	100.00%	2715	100.00%	TOTAL	

Table 3. STP93 ROMAN POTTERY: Unstratified Forms and fabrics as a percentage of sherd count and weight

Sherds	Percent	Weight	Percent	Context	Fabric	Form
1	1.11%	52	3.01%	+	BB1	CP
15	16.67%	139	8.04%	+	GREY	-
5	5.56%	47	2.72%	+	GREY	BD
6	6.67%	73	4.22%	+	GREY	BKG177
2	2.22%	13	0.75%	+	GREY	CLSD
1	1.11%	17	0.98%	+	GREY	D452
2	2.22%	28	1.62%	+	GREY	J
2	2.22%	7	0.40%	+	GREY	JCUR
6	6.67%	322	18.63%	+	GREY	JL
1	1.11%	5	0.29%	+	GREY	OPEN?

1	1.11%	21	1.22%	+	NVCC	BFB
5	5.56%	26	1.50%	+	NVCC	BK
1	1.11%	2	0.12%	+	NVCC	BK?
1	1.11%	4	0.23%	+	NVCC	BKG43
1	1.11%	4	0.23%	+	NVCC	F?
1	1.11%	3	0.17%	+	NVCC	OPEN?
1	1.11%	8	0.46%	+	NVGCC	BKFO
1	1.11%	28	1.62%	+	NVGW	CLSD
1	1.11%	13	0.75%	+	SHEL	-
5	5.56%	319	18.46%	+	SMSH?	JL
2	2.22%	65	3.76%	+WB	DR20?	A?
2	2.22%	46	2.66%	+WB	DWSH?	BFB
10	11.11%	123	7.12%	+WB	GREY	-
2	2.22%	71	4.11%	+WB	GREY	BWM
1	1.11%	30	1.74%	+WB	GREY	BWM?
1	1.11%	13	0.75%	+WB	GREY	JBCUR
1	1.11%	7	0.40%	+WB	GREY	JDW
1	1.11%	6	0.35%	+WB	GREY	JEV
3	3.33%	127	7.35%	+WB	GREY	JL
1	1.11%	65	3.76%	+WB	NVCC	BFL
1	1.11%	9	0.52%	+WB	NVGW	BTR
1	1.11%	5	0.29%	+WB	NVGW	OPEN?
2	2.22%	15	0.87%	+WB	OX?	B333
1	1.11%	8	0.46%	+WB	SHEL	-
1	1.11%	7	0.40%	+WB	SLGY?	-
1	1.11%	.	.	+WB	ZPR	POST ROMAN
90	100.00%	1728	100.00%	TOTAL		

2.2 The Stratified Roman Pottery

All of the following stratified events produced only very small groups of pottery. The presence and absence of fabrics and forms is restricted by the nature of the deposits, consequently the dates given to the pottery are conservative.

2.2A The Fills of Ditch 002

Table 4 (below) lists the fills of ditch 002 showing the earliest fill (007) progressing to the latest (005). A sherd of grey ware with a coarse fabric in a fresh condition exhibits a pronounced string base which is generally a feature of third century wares. As there is only one sherd from this context the date is tentative. Fill 006 lies directly over fill 007 and is comprised of three sherds of pottery of an indeterminate second -third century date. The second century date is suggested by an abraded sherd of grey ware resembling fabrics SLGY and NVGY noted at Stainfield (SHR93 Davies, 1994) which has sub angular quartz inclusions 0.2 in size with occasional larger more rounded quartz and occasional black iron ore/organic inclusions. The quartz resembles that found in Nene Valley grey and colour-coated wares and is a fabric noted in the Peterborough area (pers. comm. Lindsay Rollo). At Stainfield this fabric seemed to occur from the early - late second

century. A sherd of grey ware with a light grey core and decorated with a burnished wavy line is reminiscent of Nene Valley grey ware but with a coarser quartz matrix. The sherd is fresh in condition and may date from the second to the mid third century.

The highest fill (005) of ditch 002 which produced pottery is dated more securely to the late third century by a fresh grey jar with a collared rim. The form can be paralleled in both the Rookery Lane (Webster, 1960: fig. 3 no.15) and Swanpool (Webster & Booth, 1947: no. C40) kiln repertoires, which date to the late third century although the Swanpool products continue into the fourth. The fabric of the vessel from context 005 is similar to the fabrics of the kiln wares.

Table 4. STP93 ROMAN POTTERY: Fills of Ditch 002 Forms and fabrics as a percentage of sherd count and weight

Sherds	Percent	Weight	Percent	Context	Fabric	Form
1	16.67%	18	14.52%	007	GREY	-
.	.	.	.	007	ZDATE	3?
1	16.67%	11	8.87%	006	GREY	CLSD
1	16.67%	6	4.84%	006	SHEL,	
1	16.67%	4	3.22%	006	SLGY?	JBK
.	.	.	.	006	ZDATE	2-3
1	16.67%	29	23.39%	005	GREY	CLSD
1	16.67%	56	45.16%	005	GREY	JCR
.	.	.	.	005	ZDATE	L3
6	100.00%	124	100.00%	TOTAL		

2.2B The Sequence of Graves 018-028

Context 019, the product of the lowest grave (018) in this sequence formed the largest group of stratified pottery, 26 sherds in total (see Table 5 below), and is dated by the latest pottery to the early third century. However, the high number of sherds resulted from only seven forms, including one whole vessel and a very fragmented, incomplete beaker. Some of the sherds are undatable, a fragment of grog and a fragment from what is likely to be an open vessel in a sandy grey fabric. Included in the assemblage is a small flake, of unidentified form, from a Central Gaulish samian vessel dated to the Hadrianic or Antonine period (see Appendix 1b). The probable early third century date rests on the presence of Nene Valley colour-coated wares, a barbotine decorated beaker and the base fragment of an open form. Although it is broken just below the area where rouletting is usually found, it is probably the base of a castor box, generally ascribed a third century date. The beaker survives only as the lower half of a fragmented, relatively large vessel (drawing no. 4084). As the rim of the beaker is missing it is not possible to date the vessel precisely. The profile of the beaker indicates an elongated bag-shaped form and is decorated with a barbotine lattice. There is no direct parallel within the available literature, but a sherd of colour-coated ware, probably Nene Valley, with similar decoration was found at Verulamium in layers date *c* AD 220-240 (Wilson, 1983: fig. 136 no 1470). Bag-shaped beakers are produced in the Nene Valley from the late second century to the early third, in particular those with cornice rims, but the relatively large, elongated shape together with the presence of lattice barbotine decoration suggests that it is more likely to be early third century in date.

This group is unusual in that one of the vessels appears to be anomalous within an assemblage of this date. The form is a small wheel-made carinated grey ware beaker (drawing no. 4083) with a narrow pedestal base in a Roman fabric. In style it would fit well within a 'Belgic' tradition but has strong affinities with Iron Age forms. A virtually identical example was recovered from a pit at Old Place, Sleaford (Oetgen & Simmons, 1992: no.76) and a similar vessel from early Roman layers noted by Ruth Leary at Aslockton (pers. comm. Sheila Elsdon and David Knight).

The vessel from Old Place came from the primary fill (032) of Pit 033 and appears to be early Roman in date, probably late first century. However, the upper fill (021) although containing early Roman pottery also has a necked jar which is reminiscent of second century forms. It is worth noting that the surface of this vessel is described as being heavily pitted which is also a feature of the vessel from Saltersford. The pitting on the Old Sleaford example appears to be the result of either spalling in the kiln or reuse, whereas the damage to the Saltersford beaker is likely to be due either soil conditions or its period of use. The fabrics of the two vessels appear to be dissimilar in that the Old Place example is a medium grey sandy fabric with a light grey core, whilst the Saltersford vessel has medium grey surfaces and the break shows light brown margins with a dark grey core. Microscopic examination of the fabric reveals ill-sorted, rounded quartz grains (0.2-0.3mm) with occasional larger quartz particles (>1mm), a single fragment of vegetable/organic tempering, rare calcareous inclusions together with a clay pellet set in a silty matrix.

If the vessel is early Roman in date its deposition in this grave together with vessels of a probable early third century date suggests that it may have been an heirloom. Another possibility is that this form continues well into the second century. The evidence for this relies on the similarity between this beaker and Gillam form 177 dated to *c* AD 120-140 (Gillam, 1970) although the proportions differ and the latter has a much broader base. A similar vessel lacking a base came from the unstratified material (see above 2.1). It also resembles Lincoln form B334, which is more definitely a bowl form with a wide rim, and which dates from the early to mid/late second century. Forms like this occur in the assemblages from the Lea and Newton on Trent kilns (Field & Palmer-Brown, 1991: fig. 15 nos 15 & 16 and fig. 17 no 9) which date to the second century, probably early-mid/late second century.

Grave 023 overlies Context 019, but the contents (Context 022) are not precisely datable. Two fairly fresh sherds in a wheel made, shell-tempered ware, probably a jar form, cannot be dated further than a broad Roman date.

The contents (029) of the last grave in the sequence (028) produced a fragment of grog tempered ware which may have been hand made and a single sherd of East Gaulish samian ware, a complete stamped base from a bowl - Dragendorff form 31 (see Appendix 1b). Given the information regarding the reuse of the samian vessel it is likely that it was deposited in the grave some time after the date of manufacture. This would fit well with the entire sequence of the above graves, giving a date range from the early to mid third century for the sequence. The grog tempered fragment, which is similar to that from 019 is undatable.

Table 5. STP93 ROMAN POTTERY: Contents of Graves 018-028 Forms and fabrics as a percentage of sherd count and weight

Sherds	Percent	Weight	Percent	Context	Fabric	Form
2	6.66%	210	42.85%	019	GREY	BKG177V
1	3.33%	8	1.63%	019	GREY	CLSD
1	3.33%	27	5.51%	019	GREY	OPEN?
1	3.33%	1	0.20%	019	GROG	-
19	63.33%	121	24.69%	019	NVCC	BKBAG
1	3.33%	4	0.81%	019	NVCC	BX?
1	3.33%	1	0.20%	019	SAMCG	-
.	.	.	.	019	ZDATE	E3
2	6.66%	25	5.10%	022	SHEL	-
.	.	.	.	022	ZDATE	RO
1	3.33%	88	17.95%	029	SAMEG	31
1	3.33%	4	0.81%	029	GROG	-
.	.	.	.	029	ZDATE	L2-E3+
30	100.00%	490	100.00%	TOTAL		

2.2C Grave 020

The principal content (021) of grave 020 is a necked folded beaker in Nene Valley grey colour-coated ware (drawing no. 4085). This almost complete vessel can be paralleled within the Stanground kiln assemblage (Perrin, forthcoming fig.6 no. 110) dating to the early third century. Table 6 (below) shows that there are also fragments of three other vessels: a closed form in a variant of Nene Valley grey ware; an oxidised sherd with a soapy texture similar in colour and containing quartz reminiscent of later Nene valley colour-coated ware; and a sherd of cream ware, probably a flagon form, with quartz again resembling that found in Nene Valley products. All three types would be consistent with a third century date.

Table 6. STP93 ROMAN POTTERY: Contents of Grave 020 Forms and fabrics as a percentage of sherd count and weight

Sherds	Percent	Weight	Percent	Context	Fabric	Form
14	82.35%	341	92.66%	021	NVGCC	BKFOC
1	5.88%	11	2.99%	021	NVGW?	-
1	5.88%	7	1.90%	021	OX	-
1	5.88%	9	2.44%	021	SLCR	F?
.	.	.	.	021	ZDATE	E3
17	100.00%	368	100.00%	TOTAL		

2.2D Fill of Amorphous feature 026

A single sherd of grey ware, probably a jar with a curved rim and a cordon at the neck is undatable beyond noting that it is Roman. However, the fabric consists of fairly coarse quartz with rare calcite inclusions which is similar to third century types.

3. An Overview of the Principal Roman Fabrics and Forms

The dating and provenance of the Roman pottery has been discussed above. The following comments concentrate on the overall supply and function of the pottery. As the function of the stratified material is site specific this element is separated from the discussion of the unstratified wares.

3.1 The Fabrics

Table 7 (below) illustrates the major suppliers of wares to the site. Imported wares form a small percentage consisting of a small flake of Central Gaulish samian, the base of a samian bowl from the Rheinzabern factory in East Gaul, and two possible sherds of Dressel 20 amphorae from Southern Spain. Nevertheless, the presence of these wares indicates that the settlement was unlikely to have been a rural site, where imported wares are generally absent, but may have been a market town of some importance. This is highlighted by the presence of the stamped sherd of East Gaulish samian. Wares of this type are considered to have a predominantly East coast distribution and, perhaps more speculatively, the position of the site on the Salt Way could suggest a trading link with the East coast. Alternatively, the vessel may have arrived via Ermine Street, which suggests that Saltersford did have a direct connection to this routeway. The presence of BB1, which travelled from Dorset, adds credence to this hypothesis.

Wares from the Nene Valley including cream (SLCR), grey (NVGW & SLGY) and colour-coated (NVGCC & NVCC) pottery forms the largest group of identifiable wares, but the presence of two fragmented individual vessels tends to distort the statistics. Even so, Nene valley grey wares are rare in assemblages from the Colonia in Lincoln but are present in some quantity in Stainfield (SHR93: Davies, 1994) and Market Deeping (MAD91: Davies, 1993a) assemblages. Saltersford, from its position, would appear to be on the periphery of the potential distribution area, however the presence of these wares suggests otherwise. It is likely that the Nene Valley products also arrived via Ermine Street, again strengthening the argument that it was directly connected to this route.

Shell-tempered wares form a small percentage of the total assemblage. Although the precise location is not known, the presence of a jar in probable South Midlands shell-tempered (SMSH) also provides evidence of trade outside a purely localised area. A similar case can be made for the late shell-tempered fabric (DWSH). It is worth noting that bryozoa is present in small quantities in the sherd assigned to the SMSH vessel and to sherds of miscellaneous shell-tempered wares from the unstratified contexts but is absent from those of contexts 006 and 022 and the DWSH bead and flanged bowl. It seems that there are at least two areas supplying shell-tempered pottery.

The grey wares form the largest group, with the majority likely to be more local products. The fabrics vary from coarse to medium sized quartz tempering and cannot be readily isolated from the majority of grey wares present on sites within the area of the Trent Valley. Two vessels can be paralleled within assemblages from the City of Lincoln, dish form 452 and a collared rim jar (JCR), the latter being almost identical to products from the Rookery Lane and Swanpool kilns. A further bowl form (B333) which may be either a burnt grey or oxidised fabric can also be paralleled with the Lincoln material. The fabrics of these wares are similar to the vessels found in Lincoln, but the precise

source is not certain. Pottery is clearly travelling to the site from the south and further afield, and is also probably arriving from the north, suggesting that Saltersford is a market settlement of some importance.

Miscellaneous wares include a very small proportion of unsourced oxidised and grog-tempered wares.

Table 7. STP93 ROMAN POTTERY: Percentage of fabrics by total number of sherds and weight

Sherds	Percent	Weight	Percent	Fabric
1	0.69%	52	1.91%	BB1
2	1.39%	65	2.39%	DR20?
2	1.39%	46	1.69%	DWSH?
68	47.55%	1393	51.30%	GREY
2	0.69%	5	0.18%	GROG
31	21.67%	250	9.20%	NVCC
15	10.48%	349	12.85%	NVGCC
3	2.09%	42	1.54%	NVGW
1	0.69%	11	0.40%	NVGW?
1	0.69%	7	0.25%	OX
2	1.39%	15	0.55%	OX?
1	0.69%	1	0.03%	SAMCG
1	0.69%	88	3.24%	SAMEG
5	3.49%	52	1.91%	SHEL
1	0.69%	9	0.33%	SLCR
2	1.39%	11	0.40%	SLGY?
5	3.49%	319	11.74%	SMSH?
143	100.00%	2715	100.00%	TOTAL

3.2A The Stratified Forms

The groups of pottery from Ditch 002 and the amorphous feature 026 are too small to comment on the likely function of the pottery. However, the cemetery sequence (see Tables 5 & 6 above) shows some diversity in the surviving contents of the graves. In view of the fact that the graves were cut into an area of abandoned occupation it is possible that some of the pottery may be disturbed early material. Even so, the pottery (019) from the earliest grave (018) in the sequence is clearly the most abundant consisting of several vessels. The presence of a probable castor box and a relatively elaborate drinking vessel, with barbotine lattice decoration (drawing no. 4083), both in Nene Valley colour-coated ware, would fit well with the preliminary identification which suggests that the skeleton is an elderly female. The fact that the female was elderly may also account for the almost complete grey ware beaker of 'Belgic' tradition (drawing no 4084), which appears to be earlier in date than the colour-coated wares, suggesting that it may well have been a treasured heirloom. The remaining contents consist of single sherds of grog and grey ware unidentifiable forms as well as a scrap of Central Gaulish samian, and may either be the

only surviving elements of other grave goods or the result of disturbance of earlier material.

Philpott (1991:p112) suggests that in the early period of inhumations the pottery assemblage represents a meal set for the dead person and the occasional presence of bird carcasses and other food in vessels suggests that some vessels may have been food containers. The presence of bird remains (032) from grave 018 and the variety of ceramic remains may well have represented a meal for the deceased woman. This aspect would also apply to a lesser extent for the contents of grave 020 (below).

In comparison with the relatively high status of the pottery from grave 018 the goods of the remaining graves (023;028; & 020) are much sparser and of comparatively less quality. In particular the pottery from grave 023 which consisted of two quite fresh sherds of a shell-tempered cooking pot. The principal content of grave 028 is somewhat unusual, being the reused stamped base of an East Gaulish samian bowl, possibly modified as a child's spinning top (see Appendix 1b). Although the skeleton has a preliminary identification as being a possible male it would be particularly interesting if it was a young person. A sherd of grog tempered ware is similar to that from 019 and may be the result of disturbance.

The principal content (021) of the remaining grave (020) is also a virtually whole drinking vessel, but of a more common type than that found in grave 018. Fragments of other vessels may again either be the remains of grave goods or disturbed earlier material.

Philpott (*ibid.* p106) suggests that in the Midlands inhumations with vessels often occur at romanised urban centres or forts rather than rural settlements or small towns, and urban cemeteries at Leicester have produced a few examples of 3rd or 4th century date often with colour-coated beakers. The Saltersford cemetery would appear to fit within this category. He also suggests that whilst the level of furnishings is quite high in the early transitional-period inhumations it declines in the 3rd century from the late 2nd century peak. The early third century date for the contents of graves 018 and 020 and the comparative variety of the pottery, possibly a meal set, fits well with a transitional-period inhumation, whilst the paucity of material from the later graves (023 & 028) may be indicative of the decline of furnishings in the mid-later 3rd century.

3.2B The Unstratified Forms

Although comparatively small there is a diverse range of forms from the total unstratified assemblages (+ & +WB - Table 8 below). This partly reflects the mixed dates of the pottery from these layers, but also that the site's occupants were able to trade within a relatively wide, rather than a confined, market. The emphasis is towards a non-rural assemblage, although there is a distinct lack of samian wares and mortaria, and the presence of amphorae and flagons is tentative. However, this may be due to the small size of the group.

Jars form the largest element, and are composed of cooking vessels (CP and JDW) as well as curved and everted rim types which may have been used either for cooking or serving food, together with at three large jars probably used for storage. Bowls and dishes form the second largest group, predominantly oven to table wares, including a bead and flanged

bowl, triangular and flanged rimmed examples, and several wide-mouthed bowls. Forms that can be paralleled within assemblages from the City of Lincoln consist of a bifurcated rimmed vessel (B333) and a dish with an incurved rim (D452). The base of a bowl or dish (BD) in a coarse gritty fabric which may be hand made resembles BB1 forms but the fabric is not that of the Dorset kilns.

Beakers are relatively common and are predominantly Nene Valley products, including a folded beaker and one similar to Gillam form 43 (Gillam, 1970) which has affinities to pentice moulded types. The sole grey ware drinking vessel (drawing no. 4082) is similar to the 'Belgic' type beaker (drawing no. 4083) discussed in 2.2B (above).

Table 8. STP93 ROMAN POTTERY: Percentage of forms from unstratified layers by total number of sherds and weight

Sherds	Percent	Weight	Percent	Form
28	31.46%	290	16.78%	Unidentified
2	2.25%	65	3.76%	Amphorae?
1	1.12%	4	0.23%	Flagon?
5	5.62%	26	1.50%	BK
1	1.12%	2	0.12%	BK?
1	1.12%	8	0.46%	BKFO
6	6.74%	73	4.22%	BKG177
1	1.12%	4	0.23%	BKG43
14	15.72%	113	6.53%	Beakers
1	1.12%	52	3.01%	CP
2	2.25%	28	1.62%	J
1	1.12%	13	0.75%	JBCUR
2	2.25%	7	0.40%	JCUR
1	1.12%	7	0.40%	JDW
1	1.12%	6	0.35%	JEV
14	15.73%	768	44.44%	JL
3	3.37%	41	2.37%	CLSD
25	28.08%	922	53.34%	Jars
2	2.25%	15	0.87%	B333
5	5.62%	47	2.72%	BD
3	3.37%	67	3.88%	BFB
1	1.12%	65	3.76%	BFL
1	1.12%	9	0.52%	BTR
2	2.25%	71	4.11%	BWM
1	1.12%	30	1.74%	BWM?
1	1.12%	17	0.98%	D452
3	3.37%	13	0.75%	OPEN?
19	21.34%	334	19.33%	Bowls/dishes
89	100.00%	1728	100.00%	TOTAL

4. Comparison with Saltersford: Anglian Water (SAW93)

The Roman pottery from the Saltersford : Anglian Water site (SAW93: Davies, 1993b) appears to have a later bias than that from Saltersford cemetery site (STP93), ranging from the mid-later second to the fourth century. The main period of occupation lies in the third century with a concentration towards the mid-late third. Unlike the cemetery site SAW93 produced no evidence of first century occupation.

There are more imported wares from SAW93 including two definite amphorae types, a sherd of Central Gaulish colour-coated ware and a higher percentage of samian, mostly Central Gaulish and two sherds that may be East Gaulish. As this site produced a larger assemblage of Roman pottery (580 shs) it is perhaps more representative. Nevertheless the presence of these wares suggests some status for the ford settlement.

The source of the majority of the pottery from SAW93 is very similar to that from STP93, including BB1 from Dorset, with the largest group of non-locally produced wares represented by products from the Nene Valley. In contrast shell-tempered pottery, including Dales ware, forms a larger group at SAW93, which is probably a reflection of the later bias of the group.

Comparison of the forms from the two assemblages shows that there is higher presence of amphorae and samian forms at SAW93, as well as larger percentage of flagon types. There are also a number of mortaria sherds, which were absent at STP93. The size of the group at SAW93 may well be more representative than that from STP93, which was also probably biased by the specific function of the site as a cemetery. Apart from these more specialised vessel types, the composition of the remaining forms from the two sites is very similar.

5. Conclusions

The ceramic evidence suggests that the cemetery was likely to have been sited in an area of abandoned occupation. It ranges in date from the early to the mid third century with the furnishings from the earliest graves appearing to conform to the tradition of supplying the deceased with a meal for the journey to the afterlife. The grave goods from the later graves are more sparse perhaps reflecting the general decline in furnishings during the mid-later third century. It would seem from the fact that grave goods are present that Saltersford is likely to be a romanised urban settlement rather than a rural site. This is also reflected by the diverse forms present within the pottery assemblage as a whole, despite the small size of the group, which appears to be drawing from a relatively wide rather than a confined market. There is an absence of mortaria and definite amphorae from the site and the samian ware is minimal, but this again might be due to the small size of the assemblage. It is clear that pottery is travelling to the site from a relatively wide area, especially when the assemblage from SAW93 is taken into consideration, which suggests that Saltersford might be more than a mere market town sited on the Salt Way, and is a site of some importance with a direct connection with Ermine Street.

6. Further Work

Referring to Table 9 (below) it is recommended that four vessels should be drawn for both intrinsic and dating value (V). A further eight vessels may be drawn to show the date range of the material from the Saltersford site (S?), including a probable flagon in Nene Valley colour-coat for which there is no obvious parallel (S).

Table 9. STP93 ROMAN POTTERY : Vessels recommended for drawing (V) and vessels of dating value (S?) to be drawn

context	fabric	form	dec	status	draw no	REPORT
+	GREY	BKG177	-	V	4082	Fig. 16.6
019	GREY	BKG177V	-	V	4083	Fig. 15
019	NVCC	BKBAG	-	V	4084	Fig. 15
021	NVGCC	BKFOC	-	V	4085	Fig. 14
+	NVCC	F?	-	S	-	Fig. 16.1
+	BB1	CP	-	S?	-	Fig. 16.7
+	GREY	D452	-	S?	-	Fig. 16.5
+	GREY	J	-	S?	-	
+	GREY	J	RNOD	S?	-	Fig. 16.2
+	SMSH?	JL	RIL	S?	-	
+WB	DWSH?	BFB	-	S?	-	Fig. 16.3
+WB	NVCC	BFL	-	S?	-	
005	GREY	JCR	-	S?	-	Fig. 16.4

7. References

Davies B J, 1993a *Market Deeping (MAD91) : Roman Pottery Assessment*, CLAU Archive Report for the Heritage Trust of Lincolnshire

Davies B J, 1993b *Saltersford: Anglian Water (SAW93) : Roman Pottery Assessment*, CLAU Archive Report for the Heritage Trust of Lincolnshire

Davies B J, 1994 *Hangman's Lane, Stainfield (SHR93) : The Roman Pottery*, CLAU Archive Report for the Heritage Trust of Lincolnshire

Field N & Palmer-Brown C P H, 1991 'New evidence for a Romano-British greyware pottery industry in the Trent Valley', in *Lincolnshire History and Archaeology* Vol 26 p40-56.

Gillam J P, 1970 *Types of Roman Coarse Pottery Vessels in Northern Britain*, Newcastle upon Tyne: Oriel Press Ltd.

Howe M D, Perrin J R & MacKreth D F, 1980 *Roman Pottery from the Nene Valley: A Guide*, Peterborough City Museum Occasional Paper No 2

- Margary I D, 1967 *Roman Roads In Britain*, London, John Baker Publishers Ltd.
- Oetgen J M & Simmons B B, 1992 *Excavation of an Iron Age and Roman Site at Old Place, Sleaford 1984-85*, Archive Report for the Heritage Trust of Lincolnshire.
- Perrin J R, forthcoming, *Unpublished Report on the Roman Pottery from the Kilns at Stanground.*
- Philpott R, 1991 *Burial Practices in Roman Britain*, BAR British Series 219, Oxford, Tempus Reparatum.
- Webster G, 1960 A Romano-British pottery kiln at Rookery Lane, Lincoln, *Antiq J* 40 p214-40
- Webster G & Booth N, 1947 The excavation of a Romano-British pottery kiln at Swanpool, Lincoln, *Antiq J* 27, p61-79
- Whitwell J B, 1982 *The Coritani*, BAR British Series 99, Oxford, BAR
- Wilson M G, 1983 'Catalogue of the Pottery' in Frere S, *Verulamium Excavations Vol II*, The Society of Antiquaries of London, 1983.

STP93 APPENDIX 1: All the Roman Pottery

Unstratified Groups

Context,Fabric,Form,Dec,No of vess,Draw,Draw no,Comments,Join,Shs,Weight
+,GREY,-,-,-,-,BSS COARSE SANDY MED GREY SURFS,-,4,43
+,GREY,J,-,-,-,-,BASE COARSE GREY SANDY MED GREY SURFS ABR,-,1,19
+,GREY,-,-,-,-,BSS DK GREY SURFS MOD Q,-,3,30
+,GREY,-,-,-,-,BSS MED GREY SURFS MOD Q,-,2,26
+,GREY,-,-,-,-,BS COARSE SANDY BURNT ABR,-,1,7
+,GREY,-,-,-,-,BSS MOD Q BN MARGIN,-,2,14
+,BB1,CP,BWL LA,-,S?,-,RIM SHLDR DORSET BB1 CF G120 120-160 SEE SKETCH,-,1,52
+,SHEL,-,-,-,-,BS RED BN SURFS MOD SIZED SHELL IN SILTY MATRIX BRYOZOA ABR,-,1,13
+,SM SH?,JL,RIL,-,S?,-,BSS LT BN EXT RED BN INT DK GREY CORE MIN BRYOZOA PITTED INT RIL ON SHLDR,-,5,319
+,GREY,J,RNOD,-,S?,-,BS DK GRY CORE MED GREY MARGINS DK GREY EXT FAB CF SLGY ABR,-,1,9
+,NVCC,BFB,-,-,-,-,RIM FRAG LFAB,-,1,21
+,NVCC,BK,-,1,-,-,BSS LFAB,-,3,22
+,NVCC,BK,-,-,-,-,BS LFAB,-,1,2
+,NVCC,BK?,-,-,-,-,FLAKE WHT FAB,-,1,2
+,NVCC,OPEN?,-,-,-,-,BS FLAKED WHT FAB,-,1,3
+,NVCC,BK,-,-,-,-,BS LT BN FAB,-,1,2
+,GREY,CLSD,-,-,-,-,FTM COARSE BURNT,-,1,11
+,NVGCC,BKFO,-,-,-,-,BS,-,1,8
+,NVCC,BKG43,-,-,-,-,RIM LFAB AS GILLAM TYPE 43 RPNV TYPES 54-57,-,1,4
+,NVCC,F?,-,-,-,S,-,RIM W GROOVE BELOW UNUS FORM NO PARALLEL NV TYPES SEE SKETCH,-,1,4
+,GREY,CLSD,-,-,-,-,BS DK GREY EXT LT GREY INT GRITTY,-,1,2
+,NVGW,CLSD,-,-,-,-,BASE VABR,-,1,28
+,GREY,BD,-,1,-,-,BASE BSS VABR HM? CF BB1 GRITTY NON DORSET,-,5,47
+,GREY,JL,BS JUD,1,-,-,BSS JUDDERED ZONE ON SHLDR POINTED ELONGATED SCROLLS TOWARDS BASE COARSE GRITTY MED GREY SURFS,-,6,322
+,GREY,JCUR,-,1,-,-,RIM FRAGS J MED GREY SURFS MOD Q,-,2,7
+,GREY,BKG177,-,1,V,4082,RIM GIRTH AS GILLAM 177 COARSE GRY FAB W CALC SEE ALSO 019 COMP VESS FOR VARIANT SEE SKETCH,-,6,73
+,GREY,D452,-,-,S?,-,RIM GIRTH MOD Q MED GRY SURFS,-,1,17
+,GREY,-,-,1,-,-,BSS MOD Q IN SILTY MATRIX ABR,-,2,13
+,GREY,OPEN?,-,-,-,-,BS BASAL BURNT ABR,-,1,5
+,GREY,-,-,-,-,BS MOD Q,-,1,6
+,ZZZ,-,-,-,-,1 FRAG RTILE WORN; FRAG FLINT WORKED? RPOT MIXED DATES DATED ON LATEST NVCC,-,-,-
+,ZDATE,-,-,-,-,4,-,-,-
+,WB,NVCC,BFL,-,-,S?,-,RIM-LWR WALL CR FAB FRESHISH EM3? NO DIRECT PARALLEL BUT CF SOME STANGROUND NVGCC,-,1,65

+WB,GREY,JL,-,1,-,-,BSS BASE STRING MED GREY COARSE Q BN CORE
 FRESHISH,-,3,127
 +WB,GREY,JDW,-,-,-,-,RIM FRAG MED GRY MOD Q IN SILTY MATRIX
 ABR,-,1,7
 +WB,GREY,BWM,-,-,-,-,RIM-NECK MED GRY MOD Q IN SILTY MATRIX
 ABR,-,1,47
 +WB,GREY,BWM?,-,-,-,-,RIM FRAG BKN MED GREY MOD Q IN SILTY
 MATRIX ABR,-,1,30
 +WB,GREY,JBCUR,-,-,-,-,RIM FRAG MED GRY MOD Q IN SILTY MATRIX W
 CALC ABR,-,1,13
 +WB,GREY,BWM,-,-,-,-,RIM-NECK DK GREY BN CORE COARSE Q MIN
 ABR,-,1,24
 +WB,GREY,JEV,-,-,-,-,RIM FRAG DK GREY BN CORE MOD Q MIN ABR,-,1,6
 +WB,NVGW,OPEN?,-,-,-,-,BS FLAT ABR,-,1,5
 +WB,NVGW,BTR,-,-,-,-,RIM FRAG VABR,-,1,9
 +WB,DWSH?,BFB,-,1,S?,-,RIM-NECK BS NO OBVIOUS BRYOZOA,-,2,46
 +WB,OX?,B333,-,1,-,-,RIM BS J OR GREY BURNT COARSE Q + FE,-,2,15
 +WB,GREY,-,-,-,-,BSS MED GRY COARSE MISC ABR,-,6,76
 +WB,GREY,-,-,-,-,BS COARSE BN SURF EXT ABR,-,1,22
 +WB,GREY,-,-,-,-,BSS DK GRY SURFS MOD Q,-,3,25
 +WB,SLGY?,COL,-,-,-,BS W FINE COMBING,-,1,7
 +WB,SHEL,-,-,-,-,BS FINE SHEL OCC BRYOZOA BLK SURF ABR,-,1,8
 +WB,DR20?,A?,-,-,-,-,BSS CF DR20 FABRIC GIRTH WOULD FIT BUT V
 ABR,-,2,65
 +WB,ZPR,-,-,-,-,RIM FRAG LERTH LATE EARTHEN WARE FLOWER POT
 FAB,-,1,-
 +WB,ZZZ,-,-,-,-,FRAG SLATE; FRAG SLAG SEE NOTE; FRAG CBM?; RPOT
 GREY MOST ABR MIX DATES SOME M3 DATED ON DWSH BFB,-,-,-
 +WB,ZDATE,-,-,-,-,4,-,-,-

Fills of Large Ditch 002

007,GREY,-,-,-,-,BS MED GREY COARSE Q BN CORE AS STRING BASE IN
 +WB
 FRESHISH,-,1,18
 007,ZDATE,-,-,-,-,3?,-,-,-

006,SHEL,-,-,-,-,FRAG FLAKED FINE SHEL NO OBV BRYOZOA BURNT INT
 BN EXT SURF,-,1,6
 006,SLGY?,JBK,-,-,-,-,BS THIN WALLED BLK FE OR ORGANICS Q AS SLGY
 NVGY ABR,-,1,4
 006,GREY,CLSD,BWL,-,-,-,BS LT GREY CORE BLK FE V HIGH FIRED ABUND
 Q CF NVGW COARSE VAR FRESHISH,-,1,11
 006,ZDATE,-,-,-,-,2-3,-,-,-

005,GREY,JCR,-,-,S?,-,RIM CF SWANPOOL C40 ROOKERY LANE FIG3 NO15
 ABUND MED Q IN SILTY MATRIX MED GRY SURFS FRESH,-,1,56
 005,GREY,CLSD,-,-,-,-,BS GRY BURNISHED EXT PALE GRY BN INT COARSE
 Q W RED FE FRESH,-,1,29

005,ZDATE,-,-,-,-,L3,-,-,-

Fill of Grave 018

019,GROG,-,-,-,-,SCRAP AS IN,029,1,1

019,NVCC,BX?,-,-,-,-,FTM CR FAB 3RD C,-,1,4

019,GREY,OPEN?,-,-,-,-,BS DK GRY EXT SURF COARSE Q CF SWANPOOL?
FRESHISH,-,1,27

019,GREY,CLSD,-,-,-,-,BS DK GRY EXT SURF DK GREY CORE BN MARGIN
SANDW Q SIZE CF NVGY,-,1,8

019,GREY,BKG177V,-,1,V,4083,RIM-BASE BS ALMOST COMP VESS SEE
SKETCH ID OLD PLACE SLEAFORD NO 76 M-L1 THERE SF NO 88,-,2,210

019,NVCC,BKBAG,BALA,1,V,4084,BASE + BSS PROB LATTICE BARB WHT
FAB + CHIPS E3 SF NO 62,-,19,121

019,SAMCG,-,-,-,-,FLAKE HAD OR ANT,-,1,1

019,ZZZ,-,-,-,-,UNUS MIXED DATE CONTEXT DATED ON LATEST NVCC,-,-,-

019,ZDATE,-,-,-,-,E3,-,-,-

Fill of Grave 023

022,SHEL,-,-,1,-,-,BS BASAL BS BLK SURFS MED SHEL SILTY MATRIX + OCC
LGE ROUNDED Q NO OBV BRYOZOA ?GREETHAM FRESHISH WM,-,2,25

022,ZDATE,-,-,-,-,RO,-,-,-

Fill of Grave 028

029,SAMEG,31,NAME,-,-,-,BASE STAMPED SEVERINVSFE SEVERINUS III RZ
DIE 3B 180-220 REUSED,-,1,88

029,GROG,-,-,-,-,BS SCRAP HM? LIGHT BN EXT BURNT? BLACK INT AS
IN,019,1,4

029,ZZZ,-,-,-,-,DATED ON SAM ONLY NB REUSED,-,-,-

029,ZDATE,-,-,-,-,L2E3+,-,-,-

Fill of Grave 020

021,SLCR,F?,-,-,-,-,BS MIN ABR,-,1,9

021,OX,-,-,-,-,BS SOAPY FAB ORANGE BN FAB W MOD CF NVCC LFAB
FRESHISH,-,1,7

021,NVGW?,-,-,-,-,BS DK GRY SURFS LT GRY MARGINS PINK CORE FAB ID
NVGW,-,1,11

021,NVGCC,BKFOC,-,1,V,4085,RIM BASE BSS ALMOST COMP VESS CF
STANGROUND 110 E3 + CHIPS SPLINTERS SF NO 8,-,14,341

021,ZDATE,-,-,-,-,E3,-,-,-

Amorphous Feature

027,GREY,JCUR?,-,-,-,-,BS CORDON AT NECK MED GRY FAIRLY COARSE Q
W RARE CALC,-,1,6

027,ZDATE,-,-,-,-,RO,-,-,-

APPENDIX 1b

Samian

Dr Brenda Dickinson, University of Leeds

- [019] A flake, of unidentified form, Central Gaulish. Hadrianic or Antonine.
- [109] Form 31 base, East Gaulish, stamped SEVERINVSFE: Severinus iii of Rheinzabern, Die 3b. Site evidence for Severinus is still lacking, as for so many Rheinzabern potters, and he can only be dated by the forms which he stamped. These include 31R, 32, and the particular type of form 31 represented here, all of which were made in the late second and first half of the third century. The stamp in question is known on forms 31 and 31R; it is largely confined to the two Germanies, but has been noted twice from London. The underside of the footring is worn or perhaps eroded. The edge of the base seems to have been deliberately trimmed after the vessel was broken, as if for some secondary purpose, and the wear on the top of the steep basal kick suggests that it might have been used as a child's top. This is a well-made piece and does not seem to be one of the latest examples of the form. A range of *c.* AD 180-220 is likely.

APPENDIX 2

Analysis of Organic Residues from Ceramic Vessels from Human Burials at Saltersford, Grantham, Lincolnshire

Richard P. Evershed, School of Chemistry, University of Bristol

Aims

The aim of the analysis was to determine the presence (or absence) of organic residues, particularly lipids (*i.e.* the fat and wax components of plants and animals), in potsherds from three beakers from the Saltersford Romano-British cemetery.

Samples

Samples were received from Archaeological Project Services packaged in zip lock plastic bags and stored in the dark until required for analysis. The samples included three body sherds from each of an Indented beaker (8 021), Pedestal beaker (88 019) and a Colour-coated beaker (62 019).

Analytical Approach

None of the sherds displayed residues, hence, analysis focused upon organic residues absorbed within the ceramic fabric. The sherds were submitted to our standard analytical protocol (Evershed *et al.* 1990; Charters *et al.* 1993) in which the surfaces of the sherds to be examined are cleaned with a modelling drill fitted with an abrasive bit to remove contamination from the burial matrix or what might have been introduced during handling by excavators. Portions of the cleaned sherd were then taken and crushed to a fine powder in a pestle and mortar. Two gram samples were then extracted with a mixture of chloroform and methanol to yield a total lipid extract. Portions of the extract were then trimethylsilylated and submitted directly to gas chromatography (GC) and combined gas chromatography/mass spectrometry (GC/MS). GC was used to screen for the presence of lipids and

quantify their concentrations in potsherds. GC/MS employing the conventional full scan mode of operation was used to identify the major compounds.

Results and Discussion

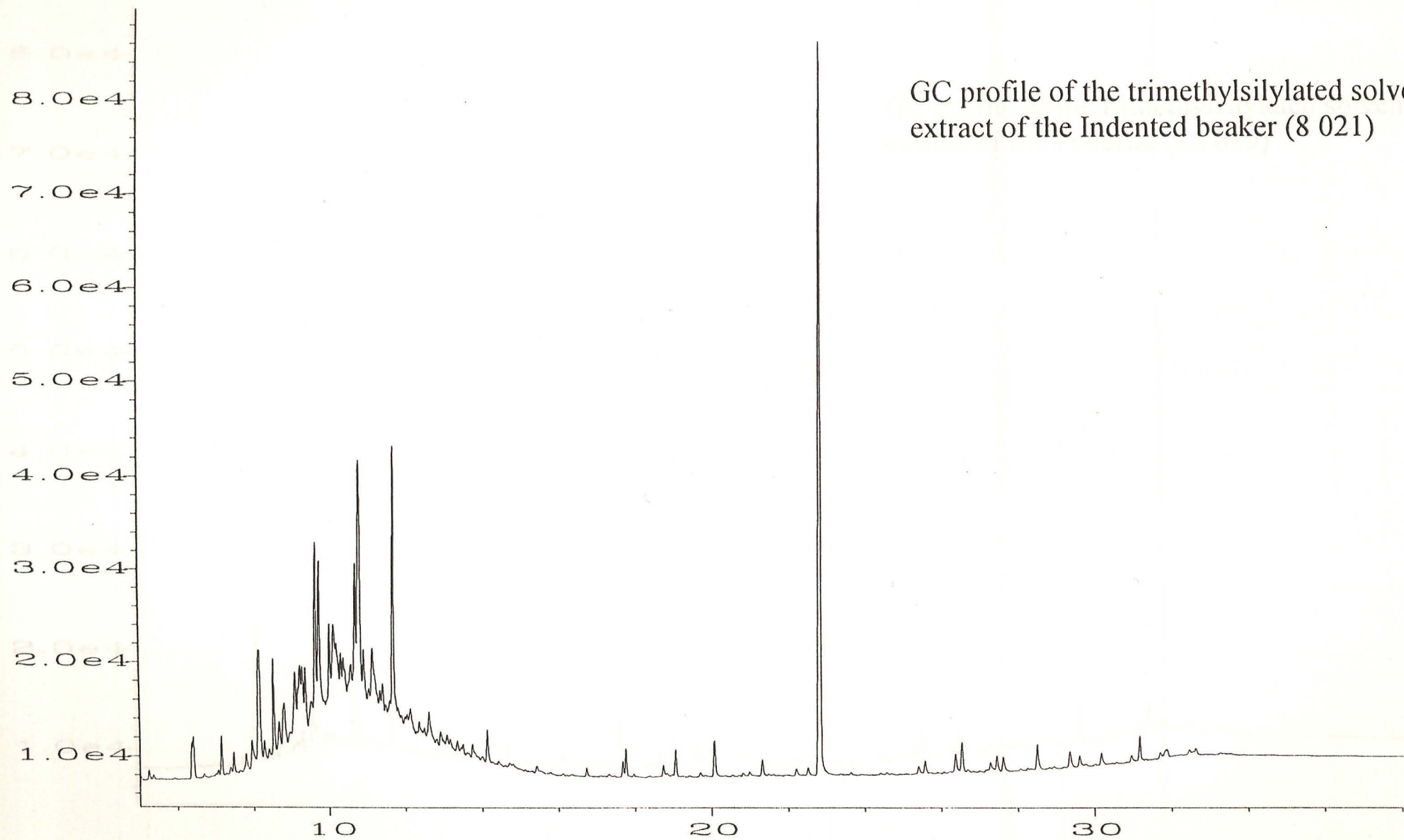
The GC profiles for the total lipid extracts of the three sherds from the beakers are shown in the accompanying figures. The major peak in each of the chromatograms corresponds to an internal standard that was added at the extraction stage to allow quantitative assessments to be made. The results show that the vessels are essentially devoid (low microgram quantities) of the fats and waxes that are normally seen in vessels that have been used in food processing, *e.g.* jar type vessels. The group of peaks seen at short retention times (*c.* 10 minutes) in each of the chromatograms is probably not significant. One of the extracts (019; pedestal beaker) was submitted to combined GC/MS which showed the major peaks to be plasticiser contamination probably derived from the plastic bags in which the sherds were packaged.

Given the nature of the vessels it would perhaps not be unreasonable to expect them to have functioned as some type of drinking vessel. Unfortunately there are no simple tests currently available for specific beverages such as wine or ale in archaeological vessels. Some of the components eluting in the earlier parts of the chromatogram may have some diagnostic value in this respect but we are unable to draw any firm conclusions with the current state of our knowledge.

References

Charters, S., Evershed, R. P., Goad, L. J., Blinkhorn, P. W., and Denham, V., 1993 Quantification and distribution of lipid in archaeological ceramics: implications for sampling potsherds for organic residue analysis, *Archaeometry* **35**, 211-223

Evershed, R. P., Heron, C., and Goad, L. J., 1990 Analysis of organic residues of archaeological origin by high temperature gas chromatography/mass spectrometry, *Analyst* **115**, 1339-1342



GC profile of the trimethylsilylated solvent
extract of the Indented beaker (8 021)

Fig. 1 in D:\HPCHEM\1\DATA\STEG1\002F0101.D

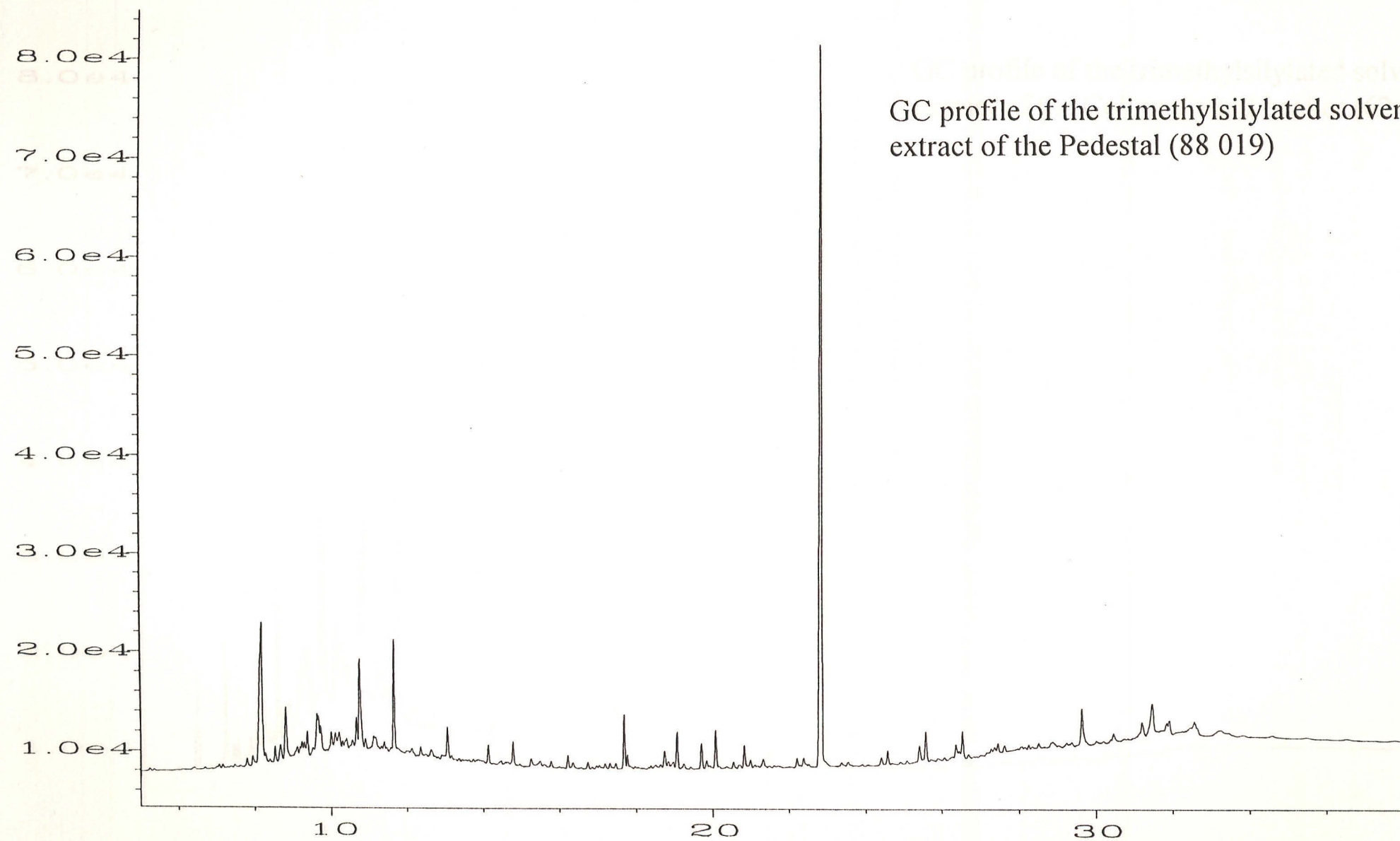


Fig. 1 in D:\HPCHEM\1\DATA\SND\STP88019.D

GC profile of the trimethylsilylated solvent
extract of the Colour coated beaker (62 019)

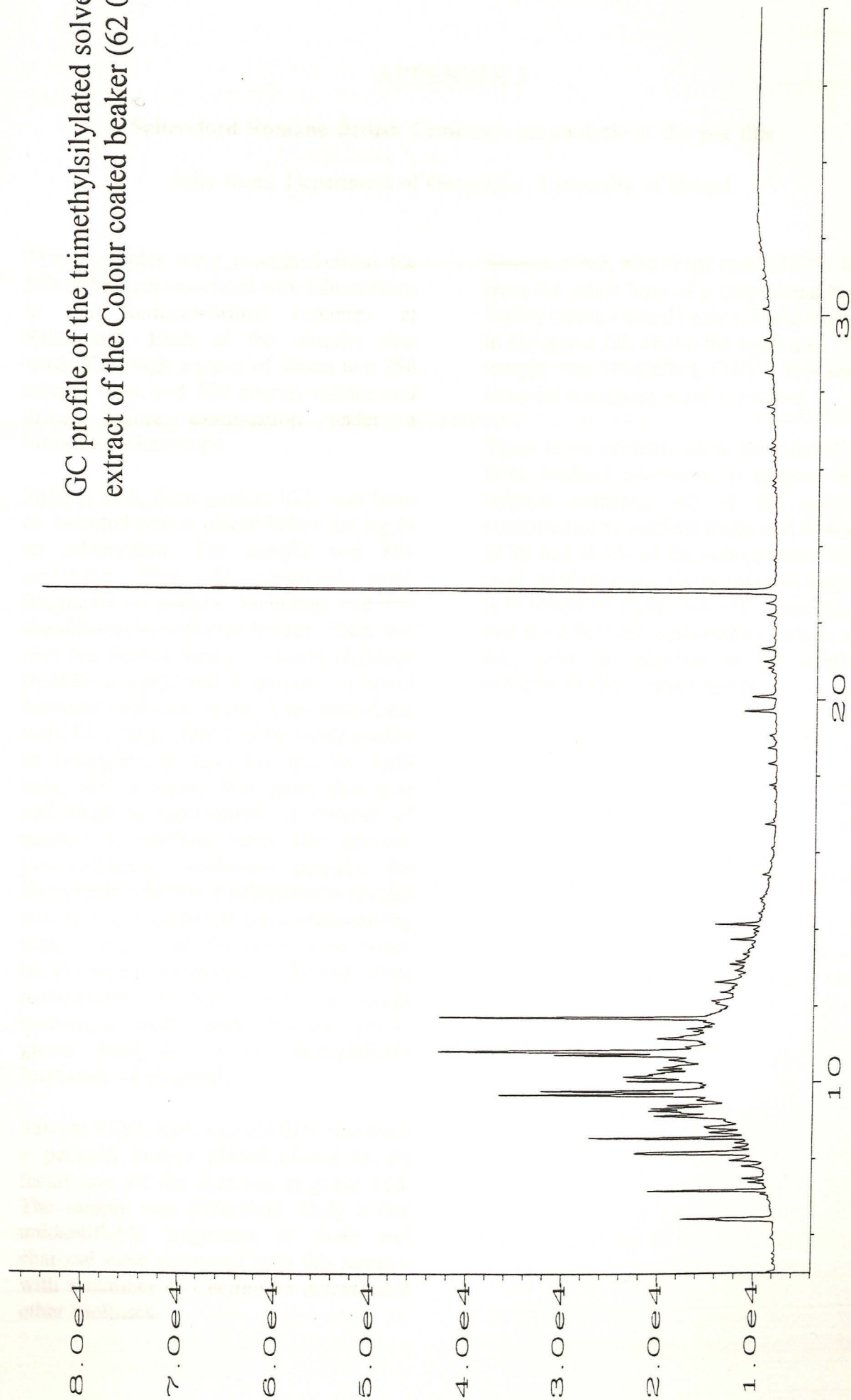


Fig. 1 in D:\HPCHEM\1\DATA\STEG1\001FO101.D

APPENDIX 3

Saltersford Romano-British Cemetery: an analysis of the pot fills

Julie Jones, Department of Geography, University of Bristol

Three samples were examined from the fills of beakers associated with inhumations at the Romano-British cemetery at Saltersford. Each of the samples was washed through a series of sieves to a 250 micron float, and 500 micron residue and dried, before examination under a binocular microscope.

Sample SF8, from context 021, was from an indented beaker placed below the leg of an inhumation. The sample was 804 grams/0.5 litres. It contained small fragments of pottery, including one rim sherd from the enclosing beaker. There was also one human bone, a medial phalange (middle finger), and a number of small mammal limbs and teeth. A number of the teeth have been identified by Gerry Barber as belonging to *Microtus sp.*, the field vole, and it seems that more than one individual is represented. A number of species of mollusc were also present, predominantly *Cecilioides acicula*, the blind snail, which is a subterranean species which lives well below the surface among plant roots, or in the crevices of rocks, mostly on calcareous soils. The only plant macrofossils present were a single carbonised spelt wheat (*Triticum spelta*) glume base and small unidentifiable fragments of charcoal.

Sample SF88, from context 019, was from a pedestal beaker placed closed to the facial area of the skeleton in grave 018. The sample was 258g/90ml. Only a few unidentifiable fragments of bone and charcoal were recovered from this sample, with a number of *Cecilioides acicula* and other molluscs.

Sample SF62, also from context 019, was from the intact base of a fragmented Nene Valley colour-coated beaker, found high up in the grave fill, above the head area. The sample was 146g/60ml. Only a few small charcoal fragments were recovered.

There is no evidence from the fills of the three beakers examined to suggest their original contents. All of the samples contained some modern roots, and SF8 and SF88 had shells of the subterranean blind snail. SF8 also had the remains of several individuals of field vole. It seems likely that these fills are of secondary nature, and may bear no relation to the original contents of these grave goods.

APPENDIX 4

The Human Bone from Saltersford

T. Jackman

A total of six individual skeletons were identified from Saltersford. None of the skeletons are complete and only one, (30) was almost complete. The rest have less than half the skeleton present. Preservation of the bone was generally poor with the majority of the bones fragmented. The cortical surfaces of the bones in some cases were severely eroded. Only skeleton (25) and the bone associated with cut [14] were in a good condition.

All the skeletons are the remains of adults. Broad age bands are given and a general impression of age has been gained from the wear of the molars, the appearance of the pubic symphysis and the degree of osteoarthritis present. Two are adults, three are older adults and one is a probable adult.

Only one individual can be sexed positively. The remaining five either display borderline characteristics or the skeleton is incomplete. Skeleton (30) is a male, skeletons (24) and (25) are possible males, skeletons (31) and the bone associated with cut [14] are possible females and skeleton (16) is unknown.

Skeletons (25) and (30) had complete long bones from which stature could be determined. Skeleton (25) is 5'8½" (1.71m) and skeleton (30) is 5'8¾" (1.72m) and both are based on calculations for males.

Four of the skeletons had teeth recovered either in the jaw or found in the soil around the burial. The total number of teeth examined was 80 out of a possible

192 or 42%. Three teeth are carious (have cavities) and are from skeleton (30). Calculus and periodontal disease score slightly or moderately and occurrences are common among Roman burials.

Calculations to determine Platymeria and Platycnemia can only be done where complete bones exist. Skeleton (30) is the only skeleton that had complete long bones of the legs. Platymeria shows the amount of antero-posterior flattening of the femur and may be caused by mechanical adaptation to stresses on the bone, calcium or vitamin deficiency in response to loss of bone material. Platycnemia shows the traverse flattening of the tibia shaft and causes of this remain in doubt.

$$\text{Platymeria} = 79.25$$

$$\text{Platycnemia} = 56.5$$

The only pathological lesions present with this group of skeletons are those associated with osteoarthritis and this type of lesion is probably the most common from archaeological material. Skeleton (25), an older adult possible male displays lipping and osteophytes around the margins of L5 and S1 of the vertebrae. There is a small exostosis extending from the area of attachment of the triceps on the left ulna while the right pelvis has a small, blunt exostosis along the posterior gluteal line.

Skeleton (30), an adult male, has lesions that appear to be confined to the lower half of the skeleton. The spine is affected with slight lipping and osteophytes around the margins of the lumbar bodies and L5 has

fused with S1. The right tibia has a small exostosis on the shaft. It is towards the proximal end, posteriorly while the right foot has an exostosis on the heel of the calcaneus and slight lipping on the articular surface of the first proximal phalanx. The left foot also displays lipping and osteophytes around the edges of the first distal phalanx. Some of the articular facets of the ribs are eburnated.

Skeleton (31) is an older adult possible female. The spine displays large osteophytes around the edges of the lumbar vertebral bodies and there is eburnation (bone-on-bone rubbing characteristic of complete cartilage loss) of the articular surfaces of the superior and inferior articular processes. The remaining three skeletons were very incomplete and did not show signs of pathology.

This group from Saltersford though small, leans towards typical expectations of what one may discover from the study of human remains of this period.

References

Bass, W. M., 1987 *Human Osteology: a laboratory and field manual of the human skeleton*. Special publications of the Missouri Archaeological Society, Columbia, Missouri

Brothwell, D. R., 1981 *Digging up Bones*, BMNH, Oxford University Press

Catalogue

S15, (+) ?Female, adult

Condition: Left leg and foot present in fairly good condition

S16 Unidentifiable human bone fragments

S24 ?Male, older adult

Condition: Lower half of skeleton with some of left upper present. Poor, fragmented with cortical surfaces eroded.

Dental pathology: A single molar present damaged post-deposition

Pathology: Thickened skull may indicate old age

S25 ?Male, older adult. Stature: 5'8 $\frac{1}{2}$ " 1.71m

Condition: Most of the skeleton represented, bone preservation generally good though cortical surfaces of the arms are eroded.

Dental pathology: PM loss: 5/29. Calculus and periodontal disease are slight.

Pathology: Lipping and osteophytes around the margins of the vertebral bodies of L5 and S1. Small exostosis extending from area of attachment for the triceps on the left ulna. The right ilium has a small, blunt exostosis along the posterior gluteal line.

S30 Male, adult. Stature: 5'8 $\frac{3}{4}$ " 1.72m

Condition: Most of the skeleton is represented with some complete bones. Some of the surfaces are eroded.

Dental pathology: All the teeth are present. Caries 3/32. Calculus and periodontal disease are moderate.

Post-cranial metrics: Platymeria (left) 79.25. Platycnemia (left) 56.5, (right) 56.8. Robusticity index (left) 11.9

Pathology: Slight lipping and osteophytes around the margins of the lumbar bodies of the spine and L5 has fused with S1. The right tibia has a small exostosis on the shaft, proximal end posteriorly. The right calcaneus has an exostosis, also posteriorly and slight lipping on the medial distal articular surface of the first proximal phalanx. The left foot displays lipping and osteophytes around the edges of the first distal phalanx. Some of the articular facets of the ribs are eburnated.

S31 ?Female, older adult

Condition: Very poor, eroded cortical surfaces, teeth damaged. Copper alloy staining around left metatarsals.

Dental pathology: AM loss 2/32, PM loss 7/30. Calculus, slight and periodontal disease, moderate.

Pathology: Large osteophytes around the edges of the lumbar vertebral bodies. The articular surfaces of the superior and inferior articular processes are eburnated.

APPENDIX 5a

ANIMAL BONE REPORT

James Rackham

The 23 bones deserve minimal comment, and include fragments of cattle, sheep, dog, pig and an unidentified wild bird. However the sheep humerus, small find 108, from context 029 was found in association with the base of a samian bowl in grave 028. It derives from a juvenile animal and is complete except for the unfused proximal epiphysis and may have been butchered at the distal end, although the mark could have been made during excavation. There is nothing particular about the bone to support an inference that it was a grave offering other than its find location. The normal "joint" with this bone in might be expected to include the scapula but offerings need not abide by common practice.

SITE	CONTEXT	SPECIES	BONE	NO	SIDE	FUSION	ZONES	TOOTH WEAR	COMMENTS
STP93	+	CSZ	RIB		F				SHAFT FRAGMENT
STP93	+	BOS	SKL		L				ZYGOMATIC ARCH
STP93	+	BOS	CPI		R		1		
STP93	+	OVI	TIB		R	DF	567		DISTAL END DOG CHEWED
STP93	+	SSZ	LBON		F				SHAFT FRAGMENT
STP93	+	BOS	TIB		F				SHAFT FRAGMENT
STP93	+	BOS	TIB		F				POSS SAME BONE AS ABOVE
STP93	+	BOS	LM2		L			J7	
STP93	+	BOS	UM2		R			J6	
STP93	+	CSZ	LBON	2	F				SHAFT FRAGMENTS
STP93	+	UNB	CMP		L				ERODED, MC3 LOST, CROW SIZE
STP93	+	CAN	ATL		W				COMPLETE
STP93	+	CAN	SCP		R	DF	1235		DIST END
STP93	+	CSZ	UNI		F				INDET FRAG, ?MAND
STP93	005	OVCA	TRV		F	CFAF	1345		CHOPPED Laterally
STP93	019	SUS	SCP		L		4		BLADE FRAGMENT - 2 PIECES
STP93	019	SSZ	LBON		F				SHAFT FRAGMENT-IN PIECES
STP93	019	SSZ	LBON		F				SHAFT FRAGMENT
STP93	029	OVI	HUM		R	PNDF	56890		DIST. ARTICUL. CHOPPED- 108
STP93	029	OVI	TIB		R		47		DISTAL SHAFT-3 PIECES
STP93	029	OVI	TIB		R		4		MIDSHAFT FRAGMENT
STP93	029	OVI	MTC		L		125		DISTAL END POSS CHOPPED

ARCHIVE CATALOGUE OF ANIMAL BONES FROM
 SALTERSFORD TREATMENT PLANT, STP93

SPECIES	BONE	SIDE	FUSION
BOS cattle	SKL skull	W - whole	Records the fused/unfused condition of the epiphyses
CSZ cattle size	TEMP temporal	L - left side	P - proximal; D - distal; E - acetabulum;
SUS pig	FRNT frontal	R - right side	N - unfused; F - fused; A - anterior; C - caudal
OVCA sheep or goat	PET petrous	F - fragment	
OVI sheep	PAR parietal		
SSZ sheep size	OCIP occipital		
EQU horse	ZYG zygomatic		
CER red deer	MAND mandible		
CAN dog	MAX maxilla		
MAN human	ATL atlas		
UKN unknown	AXI axis		
CHIK chicken	CEV cervical vertebra		
GOOS goose, dom	TRV thoracic vertebra		
LEP hare	LMV lumbar vertebra		
UNB indet bird	SAC sacrum		
MALL duck, dom.	CDV caudal vertebra		
GULL gull sp.	SCP scapula		
	HUM humerus		
	RAD radius		
	MTC metacarpus		
	MCI-4 metacarpus 1-4		
	INN innominate		
	ILM ilium		
	PUB pubis		
	ISH ischium		
	FEM femur		
	TIB tibia		
	AST astragalus		
	CAL calcaneum		
	MTT metatarsus		
	MT1-4 metatarsus 1-4		
	PH1 1st phalanx		
	PH2 2nd phalanx		
	PH3 3rd phalanx		
	LM1-LM3 Lower molar 1 - molar 3		
	UM1-UM3 upper molar 1 - molar 3		
	LPM1-LPM4 lower premolar 1-4		
	UPM1-UPM4 upper premolar 1-4		
	DLPM1-4 deciduous lower premolar 1-4		
	DUPM1-4 deciduous upper premolar 1-4		
	MNT mandibular tooth		
	MXT maxillary tooth		
	LBON long bone		
	UNI unidentified		
	STN sternum		
	INC incisor		
	TTH indet. tooth		
	CMP carpo-metacarpus		

TOOTH WEAR - Codes are those used in Grant, A. 1982 The use of tooth wear as a guide to the age of domestic animals, in B.Wilson, C.Grigson and S.Payne (eds) *Ageing and sexing animal bones from Archaeological sites, 91-108.*

Teeth are labelled as follows in the tooth wear column:

h	ldpm4/dupm4	f	ldpm2/dupm2
H	lpm4/upm4	g	ldpm3/dupm3
I	lm1/um1		
J	lm2/um2		
K	lm3/um3		

ZONES - zones record the part of the bone present.

The key to each zone on each bone is on page 2

MEASUREMENTS - Any measurements are those listed in A.Von den Driesch (1976) *A Guide to the Measurement of Animal Bones from Archaeological Sites, Peabody Museum Bulletin 1, Peabody Museum, Harvard, USA*

- SKULL - 1. paraoccipital process
 2. occipal condyle
 3. intercornual protuberance
 4. external acoustic meatus
 5. frontal sinus
 6. ectorbitale
 7. entorbitale
 8. temporal articular facet
 9. facial tuber
 0. infraorbital foramen
- MANDIBLE
 1. Symphyseal surface
 2. diastema
 3. lateral diastemal foramen
 4. coronoid process
 5. condylar process
 6. angle
 7. anterior dorsal ascending ramus posterior M3
 8. mandibular foramen
- VERTEBRA
 1. spine
 2. anterior epiphysis
 3. posterior epiphysis
 4. centrum
 5. neural arch
- SCAPULA
 1. supraglenoid tubercle
 2. glenoid cavity
 3. origin of the distal spine
 4. tuber of spine
 5. posterior of neck with foramen
 6. cranial angle of blade
 7. caudal angle of blade
- HUMERUS 1. head
 2. greater tubercle
 3. lesser tubercle
 4. intertuberal groove
 5. deltoid tuberosity
 6. dorsal angle of olecranon fossa
 7. capitulum
 8. trochlea
- RADIUS
 1. medial half of proximal epiphysis
 2. lateral half of proximal epiphysis
 3. posterior proximal ulna scar and foramen
 4. medial half of distal epiphysis
 5. lateral half of distal epiphysis
 6. distal shaft immediately above distal epiphysis
- ULNA
 1. olecranon tuberosity
 2. trochlear notch- semilunaris
 3. lateral coronoid process
 4. distal epiphysis

- METACARPUS -
 1. medial facet of proximal articulation, MC3
 2. lateral facet of proximal articulation, MC4
 3. medial distal condyle, MC3
 4. lateral distal condyle, MC4
 5. anterior distal groove and foramen
 6. medial or lateral distal condyle
- FIRST PHALANX
 1. proximal epiphysis
 2. distal articular facet
- INNOMINATE
 1. tuber coxae
 2. tuber sacrale + scar
 3. body of illium with dorso-medial foramen
 4. iliopubic eminence
 5. acetabular fossa
 6. symphyseal branch of pubis
 7. body of ischium
 8. ischial tuberosity
 9. depression for medial tendon of rectus femoris
- FEMUR
 1. head
 2. trochanter major
 3. trochanter minor
 4. supracondyloid fossa
 5. distal medial condyle
 6. lateral distal condyle
 7. distal trochlea
 8. trochanter tertius
- TIBIA
 1. proximal medial condyle
 2. proximal lateral condyle
 3. intercondylar eminence
 4. proximal posterior nutrient foramen
 5. medial malleolus
 6. lateral aspect of distal articulation
 7. distal pre-epiphyseal portion of the diaphysis
- CALCANEUM
 1. calcaneal tuber
 2. sustentaculum tali
 3. processus anterior
- METATARSUS
 1. medial facet of proximal articulation, MT3.
 2. lateral facet of proximal articulation, MT4
 3. medial distal condyle, MT3
 4. lateral distal condyle, MT4
 5. anterior distal groove and foramen
 6. medial or lateral distal condyle

APPENDIX 5b

The remains of a chicken from a Roman grave at Saltersford water treatment plant, near Grantham, Lincolnshire

Keith Dobney and Deborah Jaques
Environmental Archaeology Unit, University of York

Summary

A substantial proportion of the skeleton of a chicken was identified from a Roman grave of early 3rd century date. This is interpreted as a specific funerary ritual, involving possible food offerings, parallels of which exist for the Roman period in Great Britain and for mainland Europe.

Introduction

During excavation, the remains of part of a chicken were recovered from below the knees of a poorly preserved skeleton of probable early 3rd century date. The poor condition of the human remains and the lack of diagnostic features associated with the skull and pelvic region made the attribution of sex problematic. However, the small size and gracile nature of the surviving elements suggest that the remains are from an adult female.

Although there appeared to be little archaeological evidence of direct articulation, all the avian bones were in close association with each other and certainly represent the remains of a single chicken. Preservation of the material appeared fair to poor, with what is assumed to be copious root etching visible on the surface of all elements.

Bird skeletal elements recovered included both left and right lower leg bones (tibiotarsus and tarsometatarsus), two wing bones (radius and carpometacarpus), the wish-bone (furcula), several vertebrae and 21 phalanges. The major leg bones were well enough preserved to allow some biometrical data to be recorded (Table 1).

Discussion

The remains of domestic fowl (in addition to pig and some other birds) are not uncommon finds from graves dated to the Roman period, both from Britain and mainland Europe, and are usually thought to represent food offerings for the deceased (Lauwerier 1983; 1988; 1993 and Philpott 1991). Often both the head and the meatless portions of the lower legs have been removed (some are even arranged in bowls or on platters), strengthening the assumption that they do indeed represent food offerings. Interestingly, however, only the lower legs and feet are present in the example from Saltersford, whilst the major meat-bearing elements (*i.e.* upper wings and legs) are wholly absent. If this particular case represents a food offering to the dead, it may well be either a symbolic offering or all that remains of a ritual funerary meal carried out prior to burial.

Other food offerings (which may have left no physical trace) may also have been originally placed in the grave. For example, Lauwerier (1993) points out that recipes using beef may have often involved filleted joints (unlike chicken where meat is usually left on the bone) and as a result do not survive in the archaeological record.

Previous work on food offerings from Roman graves has attempted to show a correlation between certain categories of offering and the sex of the deceased. The results of this work apparently indicate that chickens are usually associated with female burials (Martin-Kilcher 1976; Wahl and Kokabi 1987; 1988). However, a recent re-

evaluation of the data on which these assumptions were based, suggests that little or no real association exists between the sex of the individual and the category of food offering (Lauwerier 1993). The data from Saltersford certainly do not contradict the original hypothesis, although a single poorly preserved individual of dubious sex attribution has little interpretive value.

Conclusions

The chicken remains excavated from Saltersford water treatment plant represent an additional interesting example of the practice of Roman funerary offerings already well documented for Britain and mainland Europe.

References

Lauwerier, R. C. G. M., 1983 A meal for the dead: animal bones finds in Roman graves, *Palaeohistoria* **25**, 183-93

Lauwerier, R. C. G. M., 1988 *Animals in Roman times in the Dutch eastern river area* (Nederlandse Oudheden's **12**) 's-Gravenhage,/Amersfoort

Lauwerier, L. C. G. M., 1994 Bird remains in Roman graves, *Archaeofauna* **2**, 75-82

Martin-Kilcher, S., 1976 *Das romische Graberfeld von Courroux im Berner Jura* (Basler Beitrage zur Ur-und Fruhgeschichte **2**) Derendingen

Philpott, R., 1991 *Burial practices in Roman Britain: a survey of grave treatment and furnishing A.D. 43-410*, British Archaeological Reports, British Series **219**, Oxford

Wahl, J., and Kokabi, M., 1987 Osteologische Untersuchungen an den im Rosgartenmuseum aufbewahrten spatromischen Skelettresten aus Konstanz, *Fundberichte aus Baden-Wurtemberg* **12**, 456-61

Wahl, J., and Kokabi, M., 1988 *Das romische Graberfeld von Stettfeld I: Osteologische Untersuchungen der Knochenreste aus dem Graberfeld*, Stuttgart

Table 1. Biometrical data (measurement in mm)

Element	Measurement 1	Measurement 2	Measurement 3	Measurement 4
Tibiotarsus (right)	Dip = 18.1			
Tibiotarsus (left)	Dd = 10.9			
Tarsometatarsus (right)	Bp = 13.5	Bd = 11.7	SC = 5.9	GL = 68.4
Tarsometatarsus (left)		Bd = 11.9	SC = 6.0	

APPENDIX 6

Flints from Saltersford Water Treatment Pant

William Bee

ITEM	DESCRIPTION
1	Fragments of a worked scraper - some pieces refit
2	Casual core
3	Unworked flake with hinge fracture
4	Natural
5	Broken unworked flake
6	Tanged blade with possible burin spalls taken from right side
7	Unworked blade

All the flints recovered during investigations at the Saltersford water treatment plant are unstratified. Most of the artefacts, notably the blades, are likely to date from the neolithic, though the scraper is probably Bronze Age. The scraper, the tanged blade and the core are illustrated on Figure 17.

APPENDIX 7

Context Summary

Context No.	Description	Interpretation
1	Dark brown soil, c. 0.15m deep	Topsoil
2	V-profile cut, probably linear, 3.8m wide, c. 2m deep	Ditch
3	Grey-brown sandy silt with frequent limestone fragments	Fill of 2
4	Orange-brown sandy silt with moderate shell and flint fragments	Fill of 2
5	Dark grey-brown silt with moderate small limestone fragments	Fill of 2
6	Dark orange-brown silt	Fill of 2
7	Large limestone fragments in dark grey silt	Fill of 2
8	Light brown clayey silt with frequent small limestone fragments	Fill of 2
9	Roughly coursed limestone slabs	Fill of 2 - lining?
10	E-W linear cut, 1.4m wide, 0.5m deep	Ditch
11	Orange-brown sandy silt with moderate small limestone fragments	Fill of 10
12	N-S linear cut, 1.4m wide, 0.6m deep	Grave
13	Orange-brown silt with frequent limestone fragments and human bones	Fill of 12
14	Probably linear cut, 0.9m wide, 0.6m deep	Grave
15	Yellow-brown silt with limestone and iron nails	Fill of 14
16	Limestone fragments in dark brown silt, with fragmented human skull	Wall, footings/foundation
17	NE-SW linear cut, 11m long, 1m wide	Foundation trench for 16
18	Rectangular N-S cut, 3m x 1.9m and 0.65m deep	Grave
19	Yellow-brown sandy silt with frequent limestone fragments	Fill of 18
20	E-W rectangular cut, 3.4m x 1.2m and 0.4m deep	Grave

21	Limestone fragments in yellow-brown silt, with iron nails	Fill of 20
22	Limestone fragments in brown silty sand, with iron nails	Fill of 23
23	N-S oval cut, 2.3m x 1.2m and 0.3m deep	Grave
24	Fragmentary human skeleton in cut 23	Burial
25	Human skeleton in cut 20	Burial
26	Amorphous, E-W extended cut, 0.6m deep	Possible ditch
27	Red-brown silt	Fill of 26
28	N-S rectangular cut, 2.7m x 1.1m and 0.4m deep	Grave
29	Limestone fragments in yellow-brown silty sand	Fill of 28
30	Human skeleton in cut 28	Burial
31	Fragmentary human skeleton in cut 18	Burial
32	Bird bones beneath legs of burial 31	Bird remains, grave goods
33	Orange -yellow cornbrash	Natural
34	Red-brown silt	Fill of 35
35	E-W linear cut, 9m x 1.5m, 0.35m deep	Possible ditch
36	Red-brown silt	Fill of 37
37	Amorphous E-W extended cut, 0.4m deep	Possible ditch
38	Red-brown silt	Fill of 39
39	Amorphous E-W extended cut, 0.3m deep	Possible foundation trench
40	Red-brown silt	Fill of 41
41	Large amorphous cut with linear extensions lying N-S and E-W	Possible foundation trenches
42	Red-brown silt	Fill of 43
43	E-W linear cut, over 4m long, 0.5m wide	Probable foundation trench
44	Grey-brown silt with frequent charcoal limestone and sandstone	Fill of 45
45	Amorphous cut with straight E-W edge to north and N-S linear extension	Probable foundation trenches
46	Red-brown silt	Fill of 47

47	E-W linear cut, 3.8m long, 0.4m wide	Gully
48	Electricity cable	Fill of 49
49	E-W linear cut, over 8m long, 0.5m wide	Service trench
50	Pipe	Fill of 51
51	N-S linear cut, over 6m long, 0.6m wide	Service trench

APPENDIX 8

The Archive

The archive consists of:

- 51 Context records
- 8 Photographic records
- 10 Scale drawings
- 1 Stratigraphic matrix
- 6 Boxes of finds

All primary records are currently kept at:

Heritage Lincolnshire
The Old School
Cameron Street
Heckington
Lincolnshire
NG34 9RW

Heritage Lincolnshire Site Code: STP93
City and County Museum, Lincoln Accession Number: 72.94