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A Report to **Anglian Water Services Ltd**

December 1998

Northern Subsidiary Sewer Scheme

Archaeological Watching Brief

By K Wragg

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70342 - MEDIEVAL

NORTHERN SUBSIDIARY SEWER SCHEME, LINCOLN

Archaeological Watching Brief

Contents ***Page***

NORTHERN SUBSIDIARY SEWER SCHEME, LINCOLN

Archaeological Watching Brief

List of Illustrations

NORTHERN SUBSIDIARY SEWER SCHEME, LINCOLN

ARCHAEOLOGICAL WATCHING BRIEF

NON-TECHNICAL SUMMARY

The project covered an area of known archaeological importance lying to the west of the lower Roman *Colonia*, and to the west of the medieval town wall (which extended as far as the north bank of the Brayford Pool). The area is believed likely to contain evidence of Roman and medieval suburban occupation and land-use. This area was part of the medieval suburb of Newland.

The streets affected by the scheme were as follows (the area numbering generally represents the order in which the areas were initiated):

Area 1: Newland Street West;
Area 2: West Parade;
Area 3: Charles Street West;
Area 4: Foss Street;
Area 5: Nelson Street, Wellington Street & Harvey Street

In view of the possibility of encountering important buried archaeological remains, even given the restraints imposed by the necessary shoring, it was recommended that groundworks should be monitored by means of an intermittent watching brief. Accordingly, the City of Lincoln Archaeology Unit was commissioned by Anglian Water Services Ltd. to carry out a watching brief on all groundworks associated with the project, with archaeological observations undertaken between the 2nd of September and the 17th of November 1997.

The resulting watching brief, while somewhat limited in terms of productive results, has served to further illustrate that important buried archaeological remains, potentially relating to many of the different periods in Lincoln's history, exist in this part of the City.

From the results, it would appear almost certain that Roman pottery vessels unearthed along Newland Street West indicate the presence of a cemetery somewhere in the immediate vicinity, potentially in use from the later 1st century until the early to mid 3rd century.

Further to the west, remains of a metalled surface were present, together with other deposits, appearing to date to between the early-mid 12th and 14th centuries, and therefore probably associated with the medieval suburb of Newland.

Along Charles Street West, a small fragment of moulded stonework (part of a window tracery) was found, which, although isolated, could have been derived from the medieval St.Faith's church (or a similar sizeable medieval building).

Finally, to the north along West Parade, further cultural deposits were recorded, including a possible pond, which could possibly date from the late 10th century.

All of the foregoing, while albeit generally speculative owing to the very limited scope & extent of this particular investigation, do serve to highlight the need for further careful investigation and study in this general area.

NORTHERN SUBSIDIARY SEWER SCHEME, LINCOLN

ARCHAEOLOGICAL WATCHING BRIEF

1.0 INTRODUCTION

During September 1997 the City of Lincoln Archaeology Unit (C.L.A.U.) was approached by Anglian Water Services Limited (A.W.S.L.) to provide an archaeological watching brief during a scheme of sewer replacement on a number of streets lying along Carholme Road, and extending northwards to West Parade (see Figs.1, 2 & 3).

The project covered an area of known archaeological importance lying to the west of the lower Roman *Colonia*, and to the west of the medieval town wall (which extended as far as the north bank of the Brayford Pool - see 2.0 below). The area is believed likely to contain evidence of Roman, and later, medieval suburban occupation and land-use (this area was originally part of the medieval suburb of Newland).

The proposed works involved the laying of approximately 650m of new 375mm and 450mm diameter sewer pipe, together with the construction of several new inspection chambers. The pipe-run was contained within the carriageway of the existing road (see Figs.2 & 3), and all trenches were to be machine-excavated to depths of between 2m and 4m. Because of the depths involved, it was necessary to support the sides of the entire trench with close boarded trench sheet and/or shoring boxes.

In view of the possibility of encountering important buried archaeological remains, even given the restraints imposed by the necessary shoring, it was recommended that groundworks should be monitored by means of an intermittent watching brief. Accordingly, the C.L.A.U. was commissioned by A.W.S.L. to carry out a watching brief on all groundworks associated with the project, with archaeological observations undertaken between the 2nd of September and the 17th of November 1997.

The information in this document is presented with the proviso that further data may yet emerge. The Unit, its members and employees cannot, therefore, be held responsible for any loss, delay or damage, material or otherwise, arising out of this report. The document has been prepared in accordance with the terms of the Unit's Articles of Association, the Code of Conduct of the Institute of Field Archaeologists, and *The Management of Archaeological Projects 2* (English Heritage, 1991).

2.0 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

Lincoln is situated at the point where the Jurassic limestone ridge known as the Lincoln Edge is cut by a glacial gap, through which the River Witham now flows. At its junction with the River Till, canalised as the Fossdyke, flowing from the west, is a presumed natural lake, the Brayford Pool. Its extent was much greater in antiquity than at present, and it is known to have existed at the time of the Roman Conquest. The first syllable of the colloquial Roman name for the City of Lincoln, *Lindum*, was derived from the Celtic word for "lake", "pool" or "marshy/water place" (Rivet & Smith, 1979).

Archaeological investigation in this area has been relatively limited, although, excavations have been undertaken on Brayford Wharf North, and around West Parade/Orchard Street (both areas to the east of the current project).

In the Brayford Wharf area, excavations were carried out during the early 1970's prior to the construction of a multi-storey car-park at the southern end of Lucy Tower Street. The objective of this project was to investigate the early development of this part of town and the extended town wall and tower.

During this excavation the earliest feature recorded was a possible Late Saxon jetty cut into the underlying peat layers, which was overlain by a sloping foreshore of sand and peat. This was itself cut by a mid to late 12th century north-south channel, running into the

Brayford, together with several posts, dating to the mid 13th century.

This area seems to have been periodically flooded by the Brayford during the early to mid 14th century, and the channel appears to have become blocked by silt, requiring re-cutting, on at least one occasion.

Rubble dumps provided consolidation for the construction of the extended city wall and the "Lucy" Tower in the early to mid 14th to 15th centuries, and both the Tower and internal construction surfaces were well preserved. To the west of the wall a possible drainage ditch was found to have been in use between the 14th and 16th centuries, before finally silting up. An east-west wall ran along the edge of the Brayford, to the east of the Tower, probably protecting the land behind from flooding. This wall was replaced whenever the level of the land rose through dumping.

In the mid 16th century the ditch was recut, the Lucy Tower was re-faced in brick, and possibly at this time the bases of two vats were set into the tower base. The east-west walls continued to be replaced.

By the mid 18th century the ditch had again silted up, and dumps of material raised the surface to the south of the tower during the 18th and 19th centuries. The tower was again re-faced, while to the west it was butted by an east-west brick wall which cut across the site of the ditch, and acted as a flood barrier to the west of the tower. The city wall was thoroughly robbed in the 18th or 19th century and the Lucy Tower was finally demolished in the mid 19th century (Colyer, 1975; Vince & Jones, (eds) 1990).

Further archaeological investigation was undertaken in 1989, on the proposed site of a new "Holiday Inn" (subsequently to become the "Courtyard by Marriott" Hotel), on a site fronting Brayford Wharf North.

During this project, undated river deposits of gravel, peat and silt were revealed, together with a possible revetment comprising three tapered posts and associated stones. On reclaimed land to the north-east the remains of a line of posts aligned north-east to south-west suggested an early property line.

A large rectangular kiln constructed of limestone blocks and flat roof-tiles, some of which dated to the 14th to 16th century, was also revealed, and a small mid 14th to 15th century structure may have lain to the north, as indicated by a scatter of limestone and roof tile fragments. There were also a number of flat limestone slabs, possibly post-pads, aligned north-south between the possible structure and the kiln. Numerous isolated refuse pits, mostly of late medieval date were found throughout the site (Chitwood, 1990; Vince & Jones, (eds) 1990).

The elements of the project centred around West Parade and Newland Street West, lay to the west of both the lower Roman *Colonia*, and the medieval town wall (which, as related above, extended as far as the north bank of the Brayford Pool). The area is believed likely to contain evidence of Roman, and later, medieval suburban occupation and land-use.

During excavations at The Park (at the Lincoln City Council offices, to the east of the site), on the line of the lower city wall, two or three periods of building were found, sealed by the earliest rampart, which was built at the end of the 2nd or early in the 3rd century. Later, during the 4th century, a gateway was inserted through the defences, its frontal projections incorporating many large reused blocks. These included some decorated and moulded fragments from a temple or funerary monument; if the latter, it was probably located outside the walls, possibly close to the site.

While little or no evidence was found for activity during the majority of the Saxon period, re-occupation of the area within the walls seems to have begun in the 11th century.

The Roman fortifications are thought to have survived into the medieval period; the date at which the gate went out of use is uncertain although it was certainly blocked by the 13th century. There was some evidence of occupation and structures throughout the medieval period.

A postern gate running obliquely through the Roman fortifications was discovered during excavations on the site of the police station on West Parade, and was probably of medieval date suggesting the continued use of the wall.

3.0 RESULTS

For the purpose of the archaeological recording, the streets covered by the scheme were grouped into the following areas (the numbering generally representing the order in which the areas were initiated):

Area 1: Newland Street West;
Area 2: West Parade;
Area 3: Charles Street West;
Area 4: Foss Street;
Area 5: Nelson Street, Wellington Street & Harvey Street

Unfortunately, however, while the project itself covered a wide area, the trenching methodology (which was dictated by both the circumstances of the project and by safety considerations) was not particularly well-suited to detailed archaeological recording.

In particular, the depths required for a sewer trench precluded direct access to investigate the trench sections (on all but a few occasions), and the presence of shoring throughout the trenching prevented clear observation of the revealed stratigraphy.

As a consequence, the following record is based on a number of individual 'snap-shots' recorded during the trenching, and does not therefore provide a detailed interpretation of all of the relationships present between deposits.

3.1 Area 1: Newland Street West (see Figs.2, 4 & 7)

The proposed new pipework in this area covered a distance of almost 300m, from the junction of Newland Street West and Charles Street West eastwards to a point adjacent to the Avenue/Carholme Road. Unfortunately, however, the majority of this Area was completed before archaeological attendance was arranged, resulting in a length of only c.50m being monitored archaeologically (between the Charles Street West and Nelson Street junctions).

The establishment of an archaeological watching brief on all remaining elements of the project was prompted by the discovery of two complete Roman pottery vessels (together with parts of a third), one of which contained an intact cremation burial. The smaller of the intact pots was revealed adjacent to no.43 Newland Street West, while the larger intact vessel (the cremation 'urn') and the broken fragments appeared further to the west, opposite nos.104/106.

The vessels are illustrated on the front cover of this report, (and in *Appendix B, Plate 3*, below), with the reports on the cremated remains, and the pots themselves included as *Appendices C, D & E*, below).

Notwithstanding the relatively limited extent of this part of the archaeological project, a number of interesting possible features and deposits were revealed, in addition to the Roman finds mentioned previously.

The first area to be recorded along this section of the trench was adjacent to the junction with Nelson Street. At this point, the earliest visible deposit was [111]/[123], a layer of orange-brown sand, up to 1.5m thick to the limit of excavation (L.O.E.). This contained no obvious inclusions, and appears to represent the prevailing natural (i.e., geological) deposit for the area.

This layer was cut by a broad shallow feature, probably a pit cut, which appeared in the south-facing trench section. This feature, [108], was c.2.4m wide (E-W), and approximately 500mm deep, and was filled with [107], a fine dark grey sandy loam/silt containing charcoal and shell flecks.

[107] was subsequently sealed by two layers of well compacted broken tile fragments, [104] and [106], separated by a layer of mid brown sandy silt/loam, [105] (see Fig.4; Section 1).

The uppermost of this group of deposits, [104], was then overlain by a 400mm thick mid brown sandy silt & rubble dump layer, [103]. This contained frequent limestone & brick fragments, and appeared to form the bedding for the present road surface, [100].

A modern service was also present at this point, cutting the trench in a N-S direction (fill [101], cut [102]).

Some bones, [110], including human remains (only five small pieces), were also recovered by the contractor during trenching in this general area, although an exact location could not be determined (this does, however,

possibly indicate that the cemetery suggested by the Roman pottery finds could continue this far to the west).

This general stratigraphic sequence was seen to continue towards the west as far as no.61 Newland Street West, when a new series of deposits was encountered (see Fig.4; Section 3). The earliest deposit at this point was still the sand layer [111]/[123], but above was a thin spread of mid brown silt containing frequent limestone inclusions, [122]. It is possible that this deposit is related to [127], a metalled surface present to the west (see below).

[122] was then overlain by two further layers of silt, [121]/[125] and [120]/[124]. Of these, the former comprised a mid-dark grey silt with occasional brick/tile and mortar inclusions, while the latter was mid brown in colour and contained much more frequent mortar and brick/tile fragments. The upper of these deposits, [120]/[124], was then sealed beneath a layer of compact mortar, cobbles and limestone pieces. This layer, [119], formed the bedding for the existing carriageway.

Slightly further to the west (adjacent to no.63), a possible metalled surface was revealed, lying above the natural sand [123]. The surface was present at a depth of c.800mm and comprised frequent small limestone pieces mixed with mid brown silty sand, [127] (c.80mm thick). This layer appeared contemporary with the aforementioned [122], and is almost certainly part of a medieval road surface.

Overlying the metalled surface [127], was a layer of accumulated material, [126] (also given context numbers [129] & [140]), which contained tile fragments, some of which appear to date to the 14th century. This layer was then sealed beneath the sequence noted above; [121]/[125], [120]/[124], [119] and [118].

The final deposits recorded along Area 1 were revealed approximately 2m to the east of the Charles Street West junction. At this point the sequence of deposits found elsewhere (with the exception of the sand layer [123], and the modern road layers [118] & [119]), were replaced by the following sequence (see Fig.7).

Overlying the natural sand was [139], a 100mm thick layer of silty sand containing charcoal and shell inclusions, together with a single piece of 12th to 13th century pottery. This was overlain by a series of four interleaved silt deposits (contexts [135]-[138]), which were generally nondescript, and contained no obvious dating evidence, which were in turn sealed beneath the modern road layers as before.

3.2 Area 2: West Parade (see Figs.2, 5 & 6)

New sewer pipe was inserted along West Parade between its junction with Gresham Street/Hampton Street in the west, to a point adjacent to the junction with Ashlin Grove in the east. However, only the section east of the Charles Street West junction fell within the area of this project, comprising approximately 115m of trench (the area to the west having already been completed at the inception of this watching brief).

The trench itself started on the eastern side of an inspection chamber already established at the junction of West Parade and Charles Street West, and was contained within the southernmost carriageway of the road.

The earliest deposits revealed during trenching comprised three clay layers, [115], [116] & [117], which were present throughout the Area from a depth of c.600mm below the existing ground level to the L.O.E. (at between 3m and 4m) (see Figs.5 & 6). These deposits comprised mottled blue-grey and grey brown clays, with no obvious inclusions (other than occasional ironstone pockets), and are almost certainly representative of the natural (i.e., geological) strata.

Adjacent to nos.150-154 West Parade, the uppermost clay deposit, [115], was overlain by an undulating layer of friable, very dark grey-brown, sandy silt, [132]/[134]. This deposit contained frequent charcoal inclusions and several fragments of animal bone and pottery. The presence of a slightly 'organic' odour, together with the general appearance of the deposit, suggested that it might represent the remains of a pond. The pottery recovered from this deposit appeared to indicate an early medieval date, possibly as early as the 10th century, although only three small fragments were recovered.

[132]/[134] was sealed by a layer of mid grey clay, [131]/[133], which was up to 400mm thick and contained limestone, ironstone and pebble inclusions, appearing to form the backfill of the possible pond. This deposit was in turn sealed by a thin (i.e., c.50mm) spread of reddish-brown clayey, silty sand, [130], which contained frequent limestone pieces. The latter deposit lay immediately beneath the modern road layers, at a depth of c.500mm. This possible pond and its associated fills extended for approximately 6-7m east-west, before disappearing.

Further to the east (adjacent to no.144 West Parade), clay layer [115] was seen to be overlain by [143], a 500mm thick light grey/orange-brown sand. This was sealed firstly by [142], a mid grey silty sand, and then by [141], a banded deposit made up of blue clay and mid brown sand. No obvious inclusions were present in any of these deposits (it is possible, however, that [141] was equivalent to [131] seen further to the west, although no direct correlation could be seen).

As with the aforementioned [130], layer [141] was then sealed by the layers associated with the modern road, namely [114] - pitched limestone foundations, [113] - 80mm thick sand & gravel bedding, and [112], the existing tarmac carriageway surface.

3.3 Area 3: Charles Street West (see Figs.2, 8, 10 & 11; Plate 2)

This section of the pipelaying linked the trenches in Areas 1 and 2, and comprised c.130m of trench, located generally along the eastern side of the carriageway. Trenching was carried out in a south to north direction (i.e., up the hill slope).

The stratigraphic record along this Area is somewhat complicated owing to the considerable difference in height between the northern and southern ends of the street (the ground rises by approximately 7m from north to south), with the deposits present at the top of the slope totally different to those seen to the south.

Basically, the stratigraphic sequence at the southern end of the Area was a continuation of that seen at the western end of Area 1, with the natural sand deposit [123] overlain by layers [122] and [121]/[120] (issued additional context numbers [144] and [145], respectively, for Area 3), which in turn lay beneath the modern road layers [118] and [119] (see Fig.8; Section 6).

As the trenching continued northwards, the sand layer [123] began to diminish, being replaced by a more substantial [144]. Ultimately, however, both [123] and [144] finally disappeared from view adjacent to no.9 Charles Street West, being replaced by a series of seven sandy silt and clay deposits ([155]-[158] & [161]-[163]) (Fig.8; Sections 8 & 9).

These deposits were largely unremarkable, being differentiated only by fairly subtle changes in colour and/or texture, and containing no obvious inclusions. A single moulded architectural fragment was however recovered by the excavator driver during trenching at this point, apparently part of a stone window tracery, although its exact origin could not be determined (consequently this artefact was recovered as part of the unstratified context [160]).

A thin layer of mortar, brick/tile & limestone fragments, [154], was also present from this point onward between the road surface [118], and its bedding layer [119], while the backfill of the existing sewer trench featured within the easternmost section, comprising an orange-brown sand & gravel deposit [159].

Of this group of deposits, only layers [155] and [158] continued for any distance (together with the uppermost layers [118], [119] and [145]), the remainder gradually disappearing as trenching continued up the slope.

Adjacent to nos.21 & 23, a sizeable pit cut was partially revealed in the east-facing section (see Fig.10). This feature, [166], was approximately 700mm deep, with concave sides, and was filled with a mixture of grey-brown silt, dark grey silty clay, ash, charcoal and modern brick/roof-tile fragments, [165]. The upper limit of this fill deposit lay approximately 1m below the existing ground level, and was overlain by [164], a 200mm thick layer of mid-light yellow-brown silty clay.

The final changes to the relatively consistent sequence of [118]/[119]/[145]/[155]/[158], occurred as the trench approached the junction of Charles Street West and West Parade.

At c.8m south of West Parade, a further possible cut feature, [168] was revealed (see Fig.11), but again only partially, within the east facing trench section. As with [166], this feature appeared to form part of a concave pit, although its extent could not be determined. The cut was backfilled firstly with a c.200mm thick dump of orange-brown sand & gravel [169], which was in turn overlain by [167], a mid brown sandy silt. Neither deposit contained any obvious inclusions.

Finally, between the southern side of West Parade, and a point c.3m further to the south, layers [145] and [155] were no longer visible.

The stratigraphic sequence at this northern extreme of Area 3 comprised (from earliest to latest): Layer [158], up to 2m in thickness (to L.O.E.); a layer of mottled mid grey/mid orange-brown clay [170] (up to 1.5m thick); [173], a moderately compacted mid-light brown sandy silt, c.1m-1.2m in thickness; 400mm-500mm of orange-brown sand, [172]; and [171], a deposit of mid brown sandy silt containing small limestone pieces and shell fragments. This latter deposit was truncated by the existing inspection chamber on West Parade. Layer [171] was finally overlain by the existing road layers [118] & [119].

3.4 Area 4: Foss Street (see Figs.3 & 5)

This Area was the smallest of the five investigated during this project, comprising a trench approximately 35m in length, excavated to a depth of between 2.5m and 3m.

The trench ran along the western side of Foss Street, terminating at an inspection chamber in the westbound carriageway of Carholme Road.

The deposits revealed during the trenching appeared to be of either modern or natural (i.e., geological/alluvial) origin, with no positive evidence of any early occupation or activity.

The earliest of the deposits uncovered was [153], a 1.2m thick (to L.O.E.) layer of mid orange-brown sand. This layer was subsequently overlain by two further sand deposits, [152] & [151] (250mm thick and dark to mid grey-black in colour; 500mm thick and mid grey, respectively).

None of these layers appeared to contain any obvious inclusions, and probably represent geological or alluvial deposits.

Towards the junction of Foss Street and Carholme Road, the uppermost of the sand layers, [151], was cut by an E-W modern pipe trench (fill [149]; cut [150]). This was in turn sealed by [148], a layer of modern demolition material, and [147]/[146] the present road surface and its associated bedding.

3.5 Area 5: Nelson Street, Wellington Street & Harvey Street (see Fig.3)

The proposals for this part of the scheme called for the insertion of c.90m of 300mm to 400mm sewer pipe, running from Carholme Road to a connection point on Nelson Street.

The trenching along these streets predominantly followed the line of existing pipework, and the trenching methodology offered little opportunity for detailed recording. As a result, no direct observation was carried out on this Area.

4.0 DISCUSSION OF RESULTS AND CONCLUSIONS

This watching brief serves to further illustrate that important buried archaeological remains, potentially relating to several different periods in Lincoln's history, exist in this part of the City.

From the results, it would appear almost certain that the Roman pottery remains unearthed along Newland Street West indicate the presence of a cemetery somewhere in the immediate vicinity, potentially in use from the later 1st century until the early to mid 3rd century. Given the considerable distance of this potential cemetery from the main settlement, it is possible that it relates to a farm or a villa establishment, rather than to the fortress and later town

Further to the west, remains of a metalled surface were present, together with other deposits, appearing to date to between the early-mid 12th and 14th centuries, and therefore probably associated with the medieval suburb of Newland.

Along Charles Street West, a small fragment of moulded stonework (part of a window tracery), was recovered, which although isolated, could have formed an element of the medieval St.Faith's church (or other sizeable medieval building).

Finally, to the north along West Parade, further cultural deposits were recorded, including a possible pond, which could possibly date from the late 10th century.

All of the foregoing, while albeit generally speculative owing to the very limited scope & extent of this particular investigation, do serve to highlight the need for further careful investigation and study in this general area.

5.0 ACKNOWLEDGEMENTS

The City of Lincoln Archaeology Unit would like to thank the following for their assistance during this project: Anglian Water Services Limited, for funding this project; Stephen Gormley, A.W.S.L. Project Engineer; Mr Ian George, Lincoln City Council Archaeology Officer, Lincoln City Council, City Hall, Beaumont Fee, Lincoln LN1 1DH; and all on-site staff.

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7.0 LHA NOTE/ARCHIVE DETAILS

7.1 LHA NOTE DETAILS

CLAU CODE: NSS97

PLANNING APPLICATION NO.:

FIELD OFFICER: R.Trimble & K.Wragg

NGR: SK 9685/7160

CIVIL PARISH: Lincoln

SMR No.: N/A

DATE OF INTERVENTION: 02/09/97 - 17/11/97

TYPE OF INTERVENTION: Watching Brief

UNDERTAKEN FOR: Anglian Water Services Limited, P.O. Box 12, Lincoln, LN5 7JE.

7.2 ARCHIVE DETAILS

PRESENT LOCATION: City of Lincoln Archaeology Unit, Charlotte House, The Lawn, Union Road, Lincoln, LN1 3BL.

FINAL LOCATION: The City and County Museum, Friars Lane, Lincoln.

MUSEUM ACCESSION No.: 212.97

ACCESSION DATE: -

APPENDIX A - ARCHIVE DEPOSITION

The archive consists of:

No.		Description
1		Site diary
1		Report
74		Context records
12		Plan & Section drawings
1	set	Colour slides

The primary archive material, as detailed above, is currently held by :

The City of Lincoln Archaeology Unit,
Charlotte House,
The Lawn,
Union Road,
Lincoln,
Lincolnshire,
LN1 3BL.

It is intended that transfer to the City and County Museum, Friars Lane, Lincoln, in accordance with current published requirements, under Museum Accession Number 212.97, will be undertaken following completion of this project.

Note: the complete 1st century cremation urn is currently on temporary dispaly at the Lincoln Archaeology Centre, The Lawn, Lincoln.

APPENDIX B - COLOUR PLATES

Plate 1: Illustration of limited potential for archaeological recording

APPENDIX B - COLOUR PLATES

Plate 2: View of trenching in progress along Area 3 (Charles Street West)

APPENDIX B - COLOUR PLATES

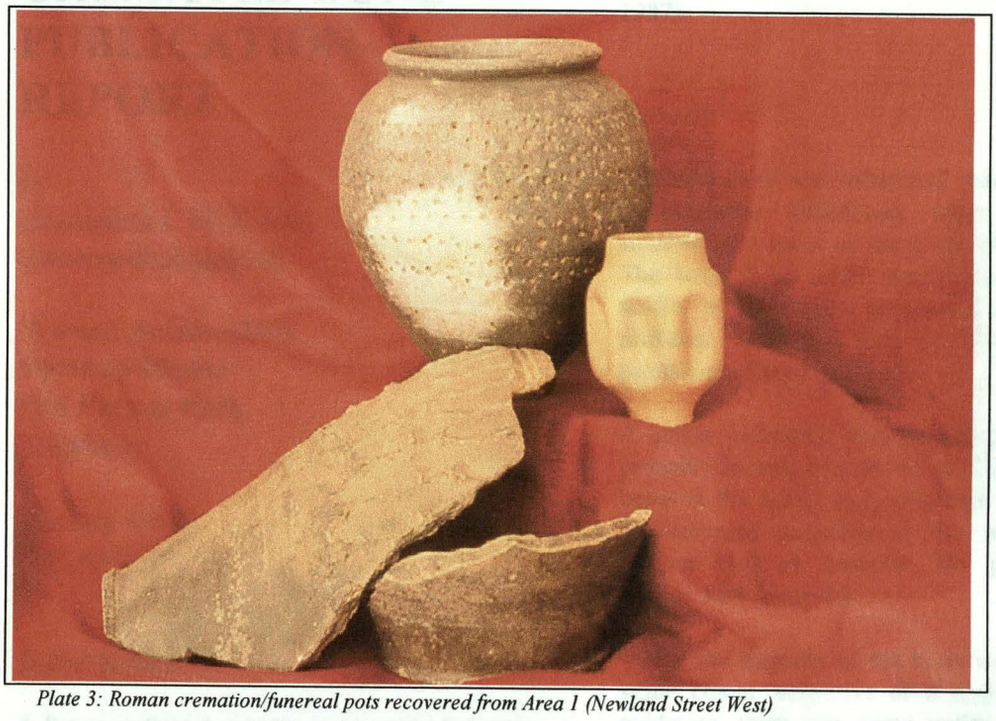

Plate 3: Roman cremation/funereal pots recovered from Area 1 (Newland Street West)

APPENDIX C - CREMATED BONE PUBLICATION REPORT

by
Jacqueline I. McKinley
(Osteoarchaeologist)

Wessex Archaeology
Portway House
Old Sarum Park
Salisbury

January 1998
Ref. 44364

Introduction

A Romano-British, urned cremation burial was recovered by contractors, having falling from the sides of a sewage pipe trench under construction. The burial was apparently previously undisturbed in a grave cut into the natural terrace sands. The cremated bone and residues from the fill were received for analysis.

Methods

The intact vessel was excavated in seven 2mm spits in the Lincoln conservation laboratory. The fills were then wet sieved to 0.25mm fraction size. The cremated bone was sorted from the >4mm residues, the <4mm residues being retained *en masse*.

Osteological analysis followed the writer's standard procedure for the examination of cremated bone (McKinley 1989, 1994a). The <4mm fraction residues were scanned to extract any identifiable skeletal elements. Fragments of pyre goods and pyre debris were extracted and forwarded to the appropriate specialist.

Age was assessed from the stage of skeletal and tooth development (Van Beek 1983, McMinn and Hutchings 1985, Webb and Suchey 1985) and the general degree of age-related changes to the bone (Bass 1987). Sex was ascertained from the sexually dimorphic traits of the skeleton (Gejvall 1981, Bass 1987).

Results

The burial urn was intact and there had been no apparent disturbance other than that suffered as a result of the mode of discovery. The bone is in good condition despite the acidity of the almost pure sand soil matrix, probably, at least in part, as a result of the protection offered by the urn.

A single individual was identified, an adult, probably female, of *c.* 30-45 yr. The excavator believes the burial may originate from a yet undiscovered cemetery to the west of the Roman city of Lincoln. No pathological lesions were observed.

Whilst the majority of the bone was the buff-white colour indicative of a high degree of oxidation, there was some variation. Almost half the fragments of skull vault identified showed variations from black (charred), through blue to grey, predominantly in the endocranial vault and the diplöe. A finger phalanx and fragment of radius shaft were also blue-grey. This particular pattern of poor oxidation would suggest peripheral positioning of the skull and arm(s) on the pyre, or perhaps coverage of these areas of the body with some other material (e.g. dense clothing) during cremation.

A relatively small proportion of the bone was collected for burial, representing a maximum of 47%, probably more in the region of 29% of what would have comprised the total cremated remains (McKinley 1993). The majority (>80%) of the bone fragments were >10mm, with a maximum fragment size of 81mm (long bone shaft). Many factors may affect the size of bone fragments (McKinley 1994b), for example, there was an average 14% decrease in the maximum fragment size recorded in each spit in excavation and those observed during osteological analysis. There is no evidence to suggest deliberate fragmentation of bone prior to burial. Bone elements from each skeletal area were present in each spit. There was a noticeable absence of small bones - tooth roots, phalanges etc. – which may suggest a rather rapid collection procedure or a

method of collection which did not favour the recovery of such small bones.

The lowest percentage of bone (0.2%) was recovered from spit 1 (top) and the highest (24%) from spit 7 (base), with relatively similar quantities spread through the rest of the 14cm of fill. Such a distribution is as one would expect given the forces of gravity, though there was no increase in the amount of small bone fragments towards the base, i.e. they did not filter through. There is no evidence to suggest an ordered deposition of bone within the vessel, fragments from the same variety of bones occurring at all levels.

Full details of all identified bones are presented in the archive report, where Table 1 gives bone weights and percentages by fraction size and identified skeletal element groups for each spit.

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APPENDIX D - CREMATED BONE ARCHIVE REPORT

by
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Salisbury

January 1998
Ref. 44364

Table 2 shows; total bone weight, sieve fraction weights and percentages of total, weight of identifiable bone and percentage of total, weight of identified skeletal elements and percentage of total identifiable bone, and maximum fragment sizes.

NB. All the bone is cremated unless otherwise stated.

Urned cremation burial

Disturbed from the sides of a sewage pipe trench by contractors, previously undisturbed in grave cut into natural terrace sands. Vessel intact, emptied by conservator in seven 2mm spits.

***Spit 1* - Top of vessel - no bone recovered.**

Spit 2

SKULL:
Vault; 12 fragments. 1a = 3.9mm. One fragment adhering to Fe ?coffin nail (corrosion after burial) together with a fragment of long bone shaft.

AXIAL SKELETON:
Thoracic; articular process pair. Fragments minimum 1 body.
Innominate; fragment ilium with crest.

UPPER LIMB:
Clavicle; shaft fragment
Radius; shaft fragment.

Spit 3

SKULL:
Fragment right occipital.
Vault; 13 fragments (4 blue/black).

AXIAL SKELETON:
Thoracic/Lumbar; body fragments.
Innominate; Fragment ilium with crest.
Ischium fragment.

UPPER LIMB:
Fragments humerus (4) and radius (1) shaft.

LOWER LIMB:
Fragments femur (3) and fibula (1) shaft.

Spit 4

SKULL:
Vault; 9 fragments, upper and lower sutures open. 1a = 3.8mm (few slightly blue endocranial).

AXIAL SKELETON:
Thoracic/lumbar; body fragment.
Innominate; ilium fragments.

UPPER LIMB:
Fragments humerus (2) and radius (1) shaft.
Middle phalanx base with shaft fragment (blue inside).

LOWER LIMB: Femur; 7 fragments shaft.

Spit 5

SKULL:
Sphenoid fragment.
Vault; 11 fragments (several blue, generally diplöe and endocranial surface), upper sutures open.

AXIAL SKELETON:
Cervical; body.
Thoracic; fragments minimum 2 upper-mid bodies.
Lumbar; fragments minimum 1 body.
Rib; shaft fragment.

UPPER LIMB:

Fragments humerus (2) and radius (1, inside grey) shaft.

LOWER LIMB:
Femur; fragment right greater trochanter. Fragment lesser trochanter. 2 fragments shaft. Distal articular surface fragment.
Patella; fragments minimum 1 including anterior and articular surfaces.

Spit 6

SKULL:
Mandible - left lateral condyle and neck. Blunt left coronoid process. Fragment petrous temporal. Volmer.
Vault; 9 small fragments (some slightly grey diplöe).

AXIAL SKELETON:
Thoracic; fragments 2 upper bodies, 1 articular process.
Thoracic/lumbar; fragments minimum 3 bodies.
Sacrum; 1st body fragment.
Rib; 5 fragments shaft.
Innominate; fragments ilium with crest. Left auricular surface. Acetabulum fragments.

UPPER LIMB:
Humerus; 2 fragments shaft.

LOWER LIMB:
Femur; 5 fragments shaft, *linea aspera* not very strong. Fragments distal articular surface.
Tibia; shaft fragment.

INCLUSIONS:
Fragments of ?fired clay.
Tiny flake of iridescent blue material.

Spit 7 - base

SKULL:
Maxilla - fragment with minimum 1 socket. Fragment right petrous temporal, joins fragment in Spit 6 (not fresh break). Fragment articular tubercle.
Vault; 5 fragments including frontal (2 with blue/grey diplöe and endocranial surface).

AXIAL SKELETON:
Cervical; 2 bodies.
Thoracic; fragments minimum 1 body.
Lumbar; fragment upper body.
Rib; 2 fragments shaft.
Innominate; fragments ilium with crest and tuberosity. Fragment ischial tuberosity. Fragment greater sciatic notch, angle tending obtuse. Large fragment ?left acetabulum, acetabulum fragment.

UPPER LIMB:
Humerus; shaft fragment.
Ulna; fragment right proximal shaft with tuberosity, radial surface and coronoid process. Fragment distal shaft and head.

LOWER LIMB:
Femur; fragment left neck. 3 fragments shaft. Distal articular surface fragment.
Fibula; shaft fragment.
1st metatarsal shaft fragment.

AGE: older mature adult (30-45 yr.)

SEX: ?female

CREMATION:
blue/black - some vault fragments (mostly diplöe and endocranial);
blue - finger phalanx;
blue/grey - 2 vault fragments (diplöe and endocranial);
grey - radius shaft fragment (inside), 9 fragments vault (diplöe)

INCLUSIONS:
Fe ?coffin nail with cremated bone fused via corrosion products.
Fragments of ?fired clay.
Tiny flake of iridescent blue material.

spit no.	total	10mm	% total	5mm	% total	2mm	% total	max.	max.	i/d wt.	% total	skull	% i/d	axial	% i/d	u.limb	% l/d	l.limb	% i/d
	wt. (g)	wt. (g)	wt.	wt. (g)	wt.	wt. (g)	wt.	skull	l.bone	(g)	wt.	wt.	wt.	wt.	wt.	wt.	wt.	wt.	wt.
spit 1	1	0	0.00	0.7	70.00	0.3	30.00		14.7mm	0	0.00								
spit 2	38.1	34.2	89.76	3.6	9.45	0.3	0.79	47.9mm	54.2mm	33.7	88.45	27.7	82.20	3	8.90	3	8.90	0	0.00
spit 3	70.2	59.8	85.19	10.2	14.53	0.2	0.28	35.2mm	81.0mm	45.9	65.38	15.1	32.90	3.1	6.75	7.1	15.47	20.6	44.88
spit 4	78.9	70.4	89.23	8.3	10.52	0.2	0.25	31.8mm	56.5mm	48.6	61.60	10	20.58	3.9	8.02	12.1	24.90	22.6	46.50
spit 5	81.1	70.2	86.56	10.8	13.32	0.1	0.12	42.3mm	68.4mm	61.1	75.34	22	36.01	11.9	19.48	11.3	18.49	15.9	26.02
spit 6	86.4	66.8	77.31	18.8	21.76	0.8	0.93	22.9mm	61.3mm	58.8	68.06	8	13.61	24.9	42.35	5	8.50	20.9	35.54
spit 7	115.2	99.9	86.72	14.5	12.59	0.8	0.69	33.1mm	50.2mm	71.2	61.81	11.8	16.57	36.4	51.12	9.3	13.06	13.7	19.24
Total	470.9	401.3	85.22	66.9	14.21	2.7	0.57	47.9mm	81.0mm	319.3	67.81	94.6	29.63	83.2	26.06	47.8	14.97	93.7	29.35

Table 1: Sieve fraction weights and percentages; maximum fragment sizes; and identifiable bone weights percentages

APPENDIX E - ROMAN POTTERY REPORT

by B J Precious

The Pottery

Three distinctive vessels, two of which are whole examples, were recovered from unstratified material excavated at NSS97. The smallest vessel is a neat example of a Nene Valley colour-coated beaker with a folded body-wall and a short funnel neck - a very small example of a published vessel manufactured in the Nene Valley (Howe et al, 1980, fig 3, no 42). These vessels are generally dated from the early to mid 3rd century. Its small size and the fact that it has remained whole suggests that it may have been a votive offering to accompany a burial.

The second whole vessel has been securely identified as a cremation urn. It is a medium sized jar with an everted rim, and is decorated with stabbed circles, possibly made with a cut quill end, in a relatively uniform pattern. The fabric of the vessel is made with a fine pale grey clay, typical of the legionary fabric LEG which was manufactured in the environs of the City of Lincoln from the mid to late 1st century. The form of this jar suggests a later 1st century date. **It is a unique example as this type of decoration has not been noted before on vessels in the LEG fabric.**

A third vessel, in a grey fabric with a design of linear rustication executed below the shoulder and towards the base, only survives as a complete base and a large fragment from the shoulder to the base. Vessels of this type were manufactured at the North Hykeham kilns during the later 1st to the early to mid 2nd century. Occasionally, similar vessels excavated from the City have been found to have contained cremations.

Conclusions

The fact that at least one vessel contained a cremation, and the other two have associations with either cremations or burials, together with the different date ranges for the individual examples, suggests that the site at NSS97 may be part of a larger cemetery which was in use from the later 1st century until the early to mid 3rd century.

Bibliography

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CLIENT: Anglian Water Services Ltd		
DESCRIPTION: Site Location Plan		
SCALE:	ARCHIVE NO:	
DRAWN BY:	CHECKED:	DATE:
MUSEUM ACCESSION NO: 212.97		

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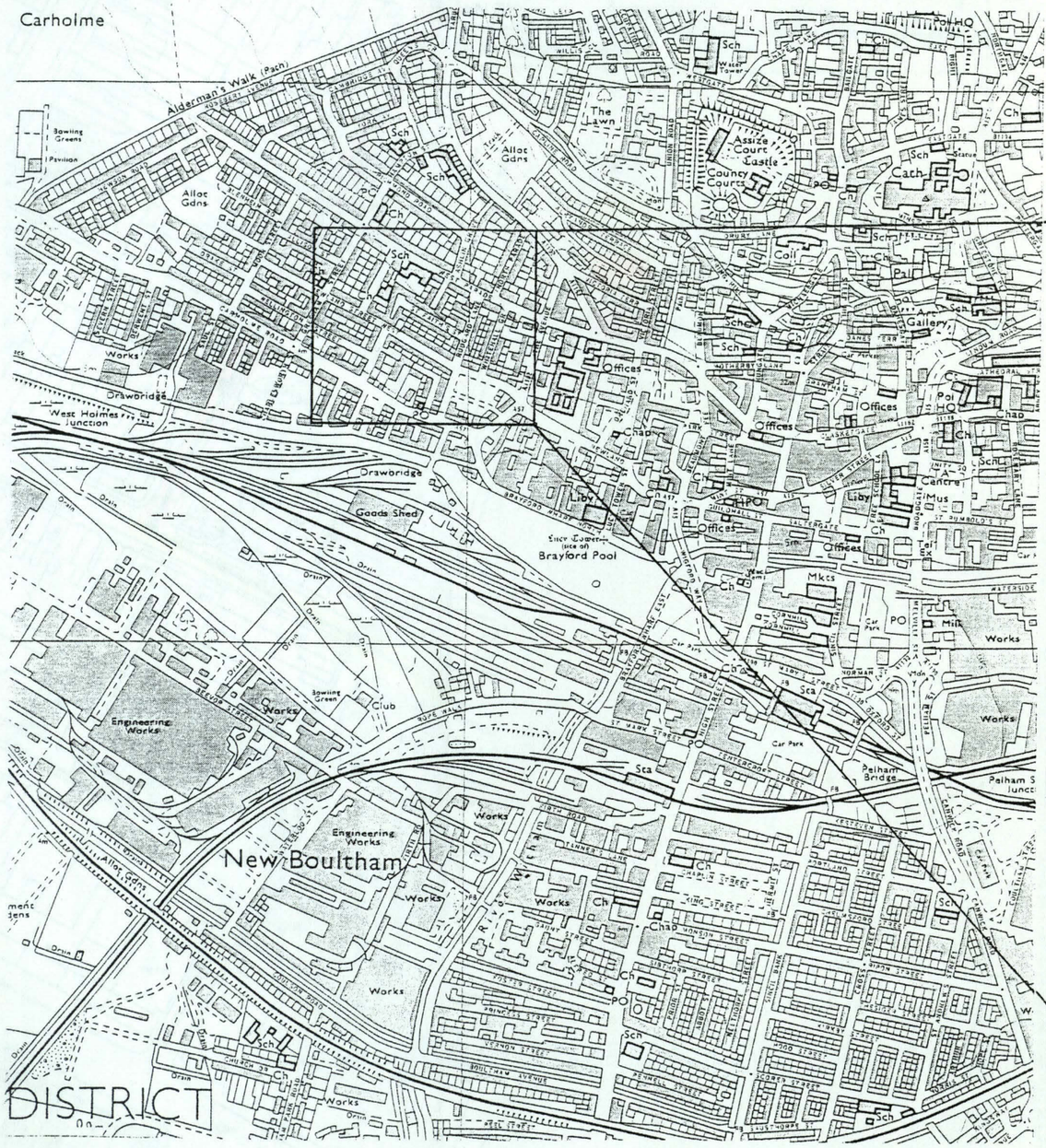

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KEY

Location of Site

1:2500

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Fig.1

CITY OF LINCOLN ARCHAEOLOGY UNIT		
SITE CODE: NSS97	PLAN/ELEV/SECTION NO:	
CLIENT: Anglian Water Services Ltd		
DESCRIPTION: Plan of Areas ① - ③ (Newland St. West, Charles St. West, West Parade)		
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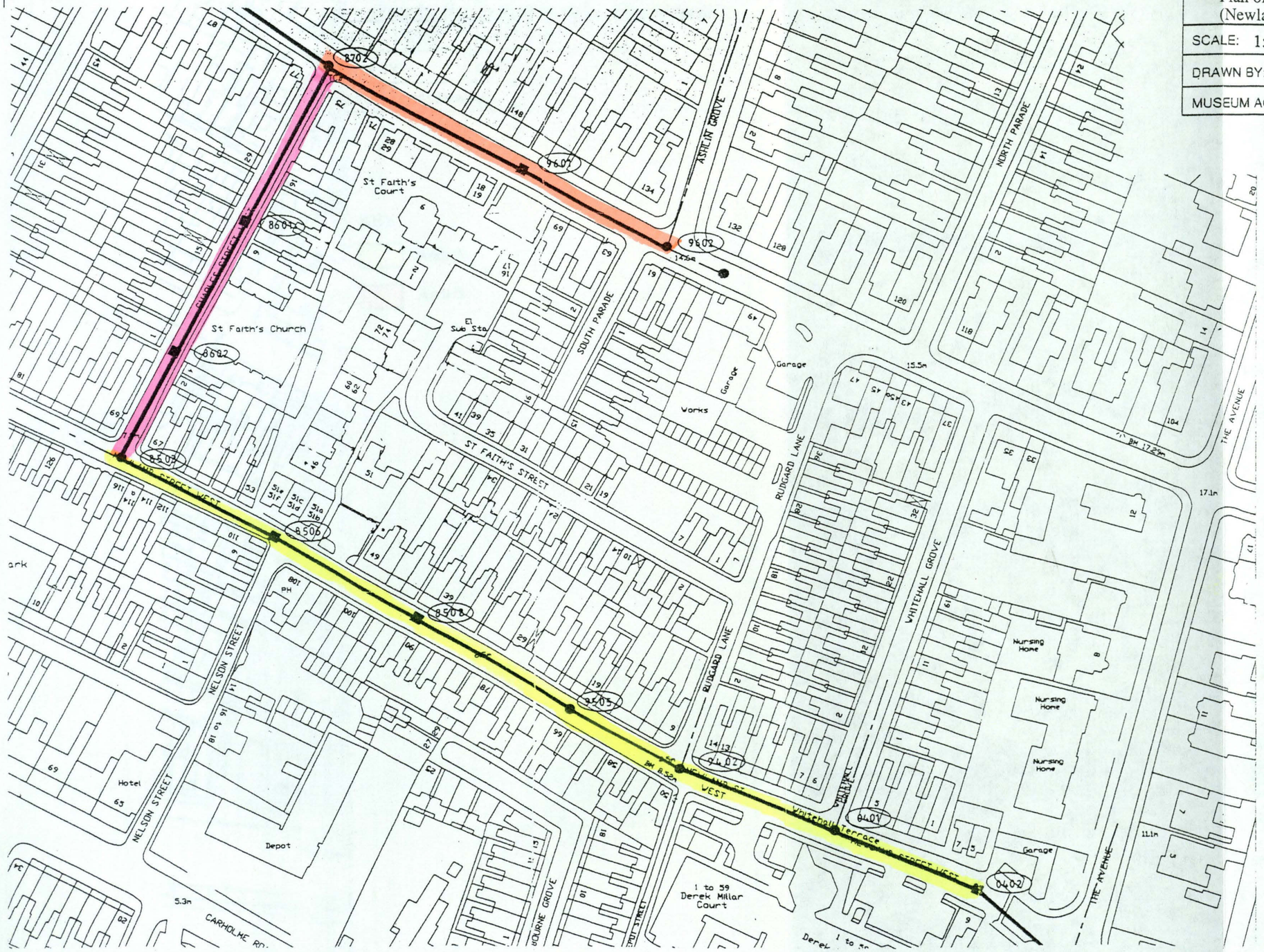
MUSEUM ACCESSION NO: 212.97		



Based upon Anglian Water Services Ltd drawing no. DC0124 001

Fig.2

N

Based upon Anglian Water Services Ltd drawing no. DC0124 001

CITY OF LINCOLN ARCHAEOLOGY UNIT		
SITE CODE: NSS97	PLAN/ELEV/SECTION NO:	
CLIENT: Anglian Water Services Ltd		
DESCRIPTION: Plan of Areas ④ and ⑤ (Foss St., Harvey St., Nelson St., Wellington St.)		
SCALE: 1:1250	ARCHIVE NO:	
DRAWN BY:	CHECKED:	DATE:
MUSEUM ACCESSION NO: 212.97		

KEY

Area 4

Area 5

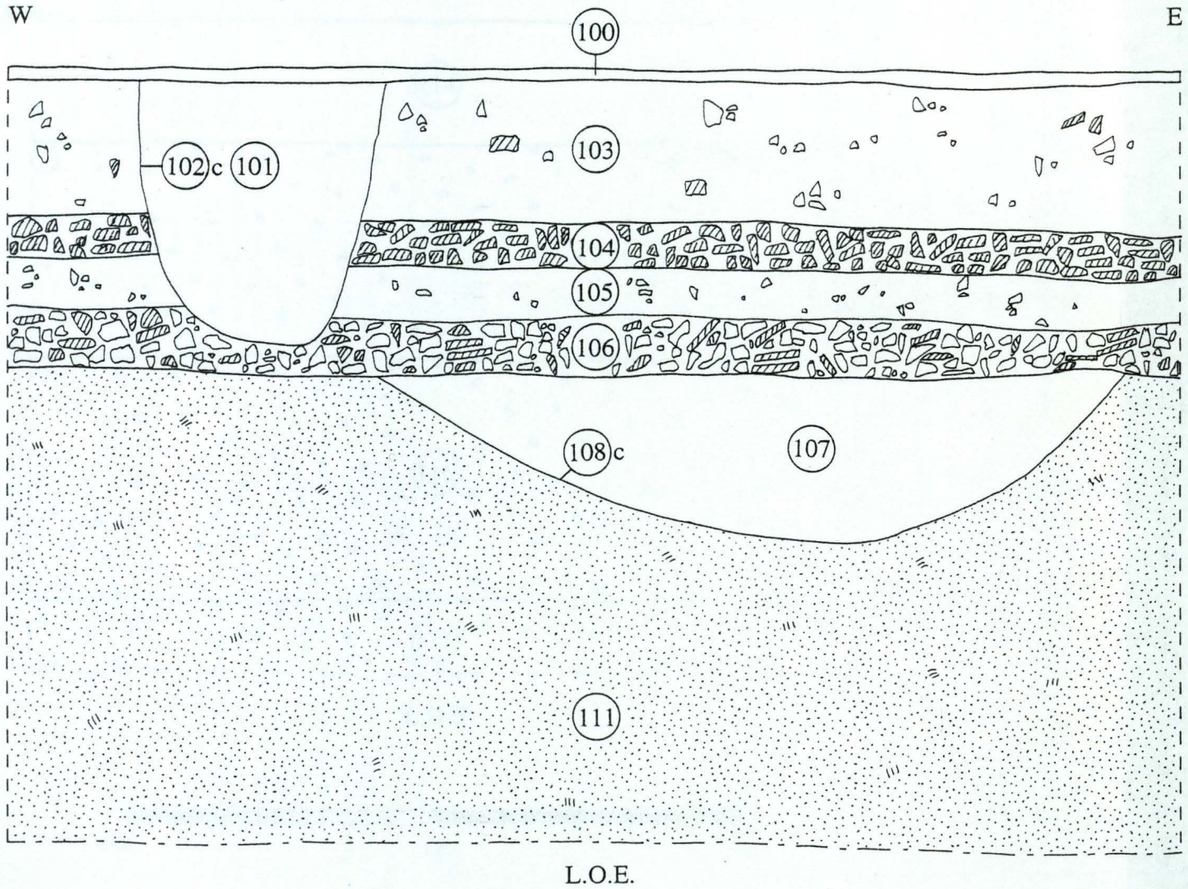
Fig.3

CITY OF LINCOLN ARCHAEOLOGY UNIT		
SITE CODE: NSS97	PLAN/ELEV/SECTION NO:	
CLIENT: Anglian Water Services Ltd		
DESCRIPTION: South-Facing Sections (1) and (3)		
SCALE: 1:20	ARCHIVE NO:	
DRAWN BY: R.T.	CHECKED:	DATE: 02/09/97 & 02/10/97
MUSEUM ACCESSION NO: 212.97		

KEY

- Sand
- Clay
- Brick/Tile
- Limestone
- Mortar

Section (1)



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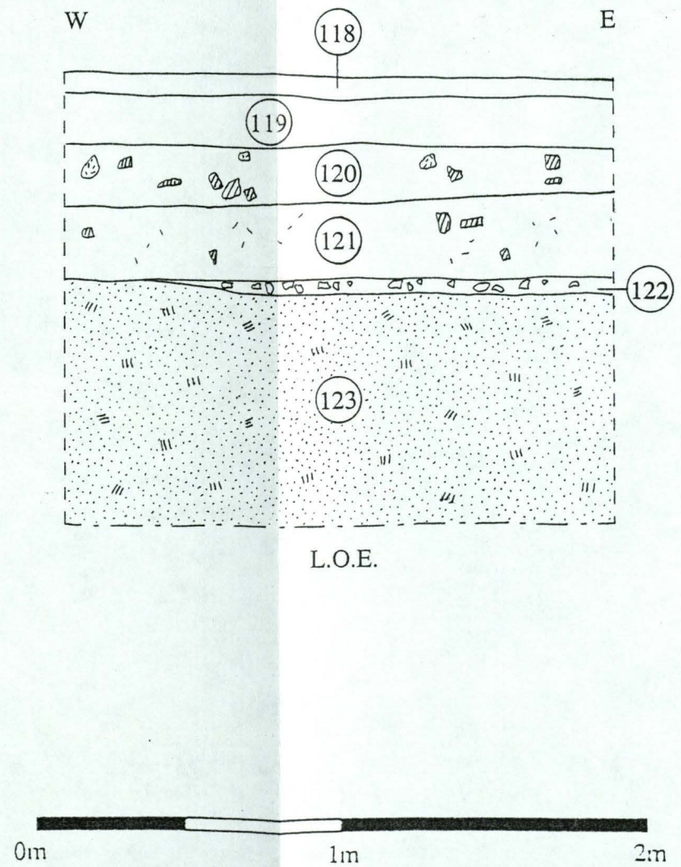

Fig.4

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CLIENT: Anglian Water Services Ltd		
DESCRIPTION: North-Facing Section (2)		
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MUSEUM ACCESSION NO: 212.97		

KEY

Clay

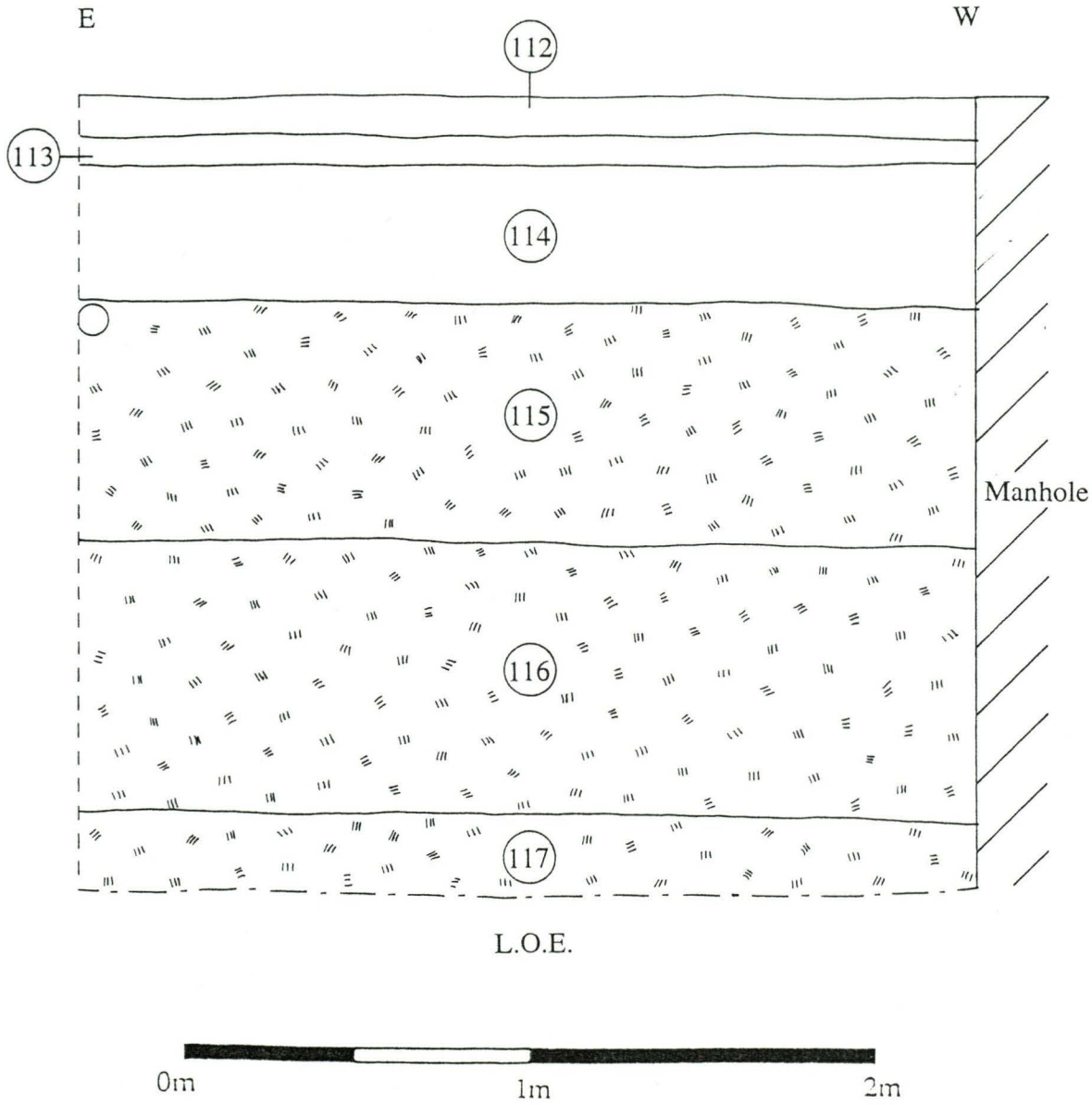

Fig.5

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DESCRIPTION: South-Facing Section (4)		
SCALE: 1:20	ARCHIVE NO:	
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MUSEUM ACCESSION NO: 212.97		

KEY

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Clay

Limestone

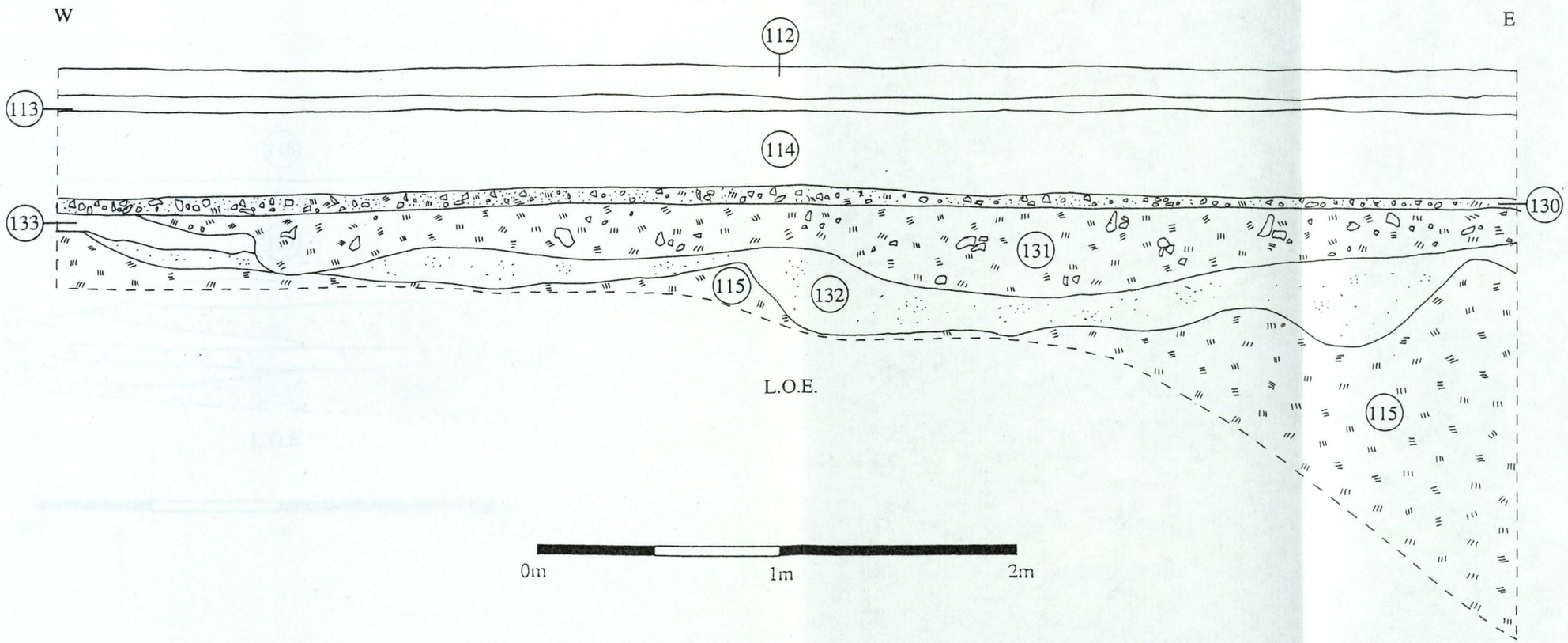

Fig.6

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CLIENT: Anglian Water Services Ltd		
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MUSEUM ACCESSION NO: 212.97		

KEY

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Clay

Limestone

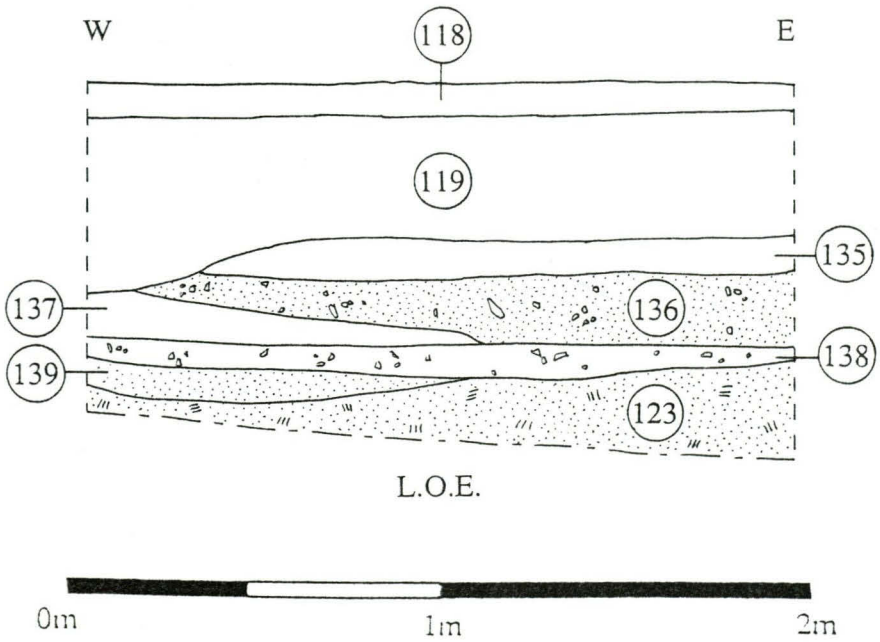

Fig.7

CITY OF LINCOLN ARCHAEOLOGY UNIT		
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CLIENT: Anglian Water Services Ltd		
DESCRIPTION: East-Facing Sections ⑥, ⑧ and ⑨		
SCALE: 1:20	ARCHIVE NO:	
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MUSEUM ACCESSION NO: 212.97		

KEY

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- Clay
- Mortar
- Brick/Tile
- Limestone

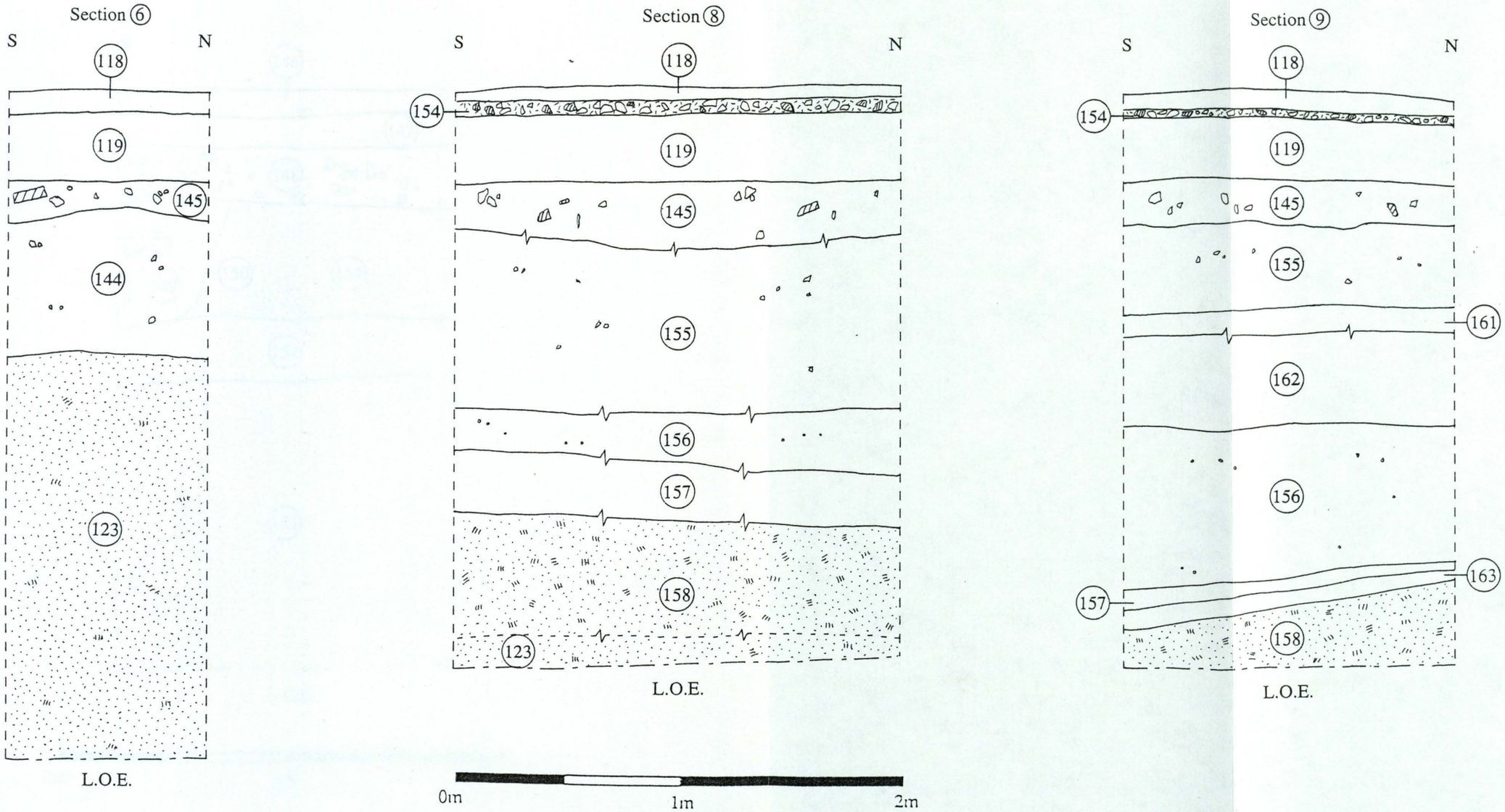

Fig.8

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MUSEUM ACCESSION NO: 212.97		

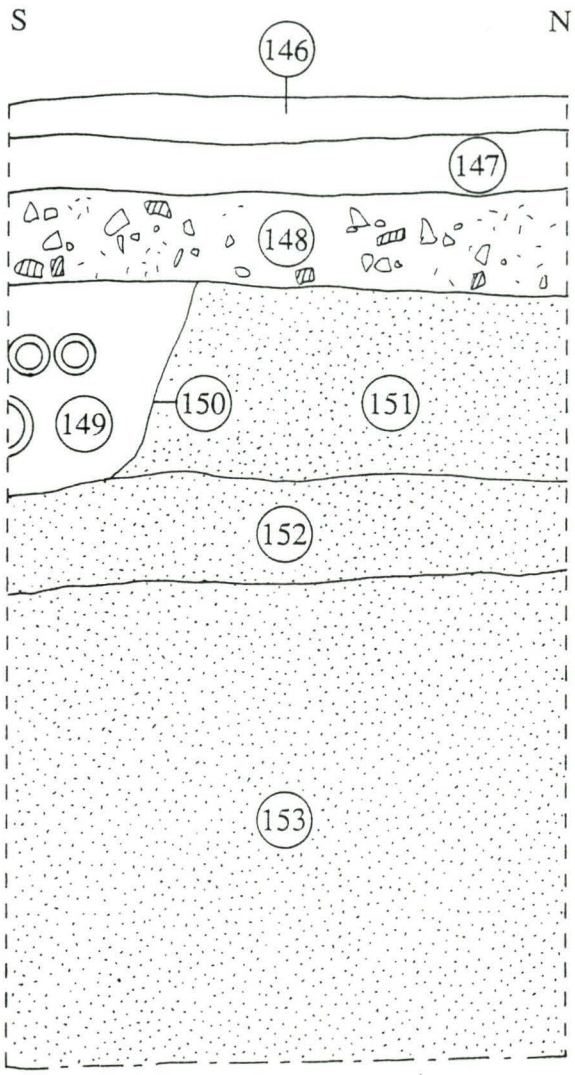
KEY

Sand

Mortar

Brick/Tile

Limestone



0m 1m 2m

Fig.9

CITY OF LINCOLN ARCHAEOLOGY UNIT		
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DESCRIPTION: East-Facing Section (10)		
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KEY

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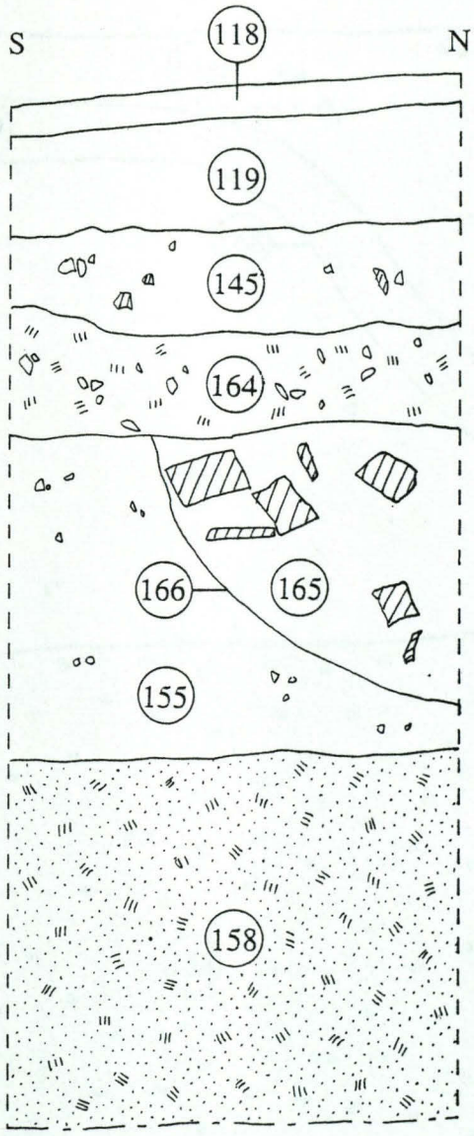
Clay

Limestone

Brick/Tile



0m 1m 2m

Fig.10

CITY OF LINCOLN ARCHAEOLOGY UNIT		
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KEY

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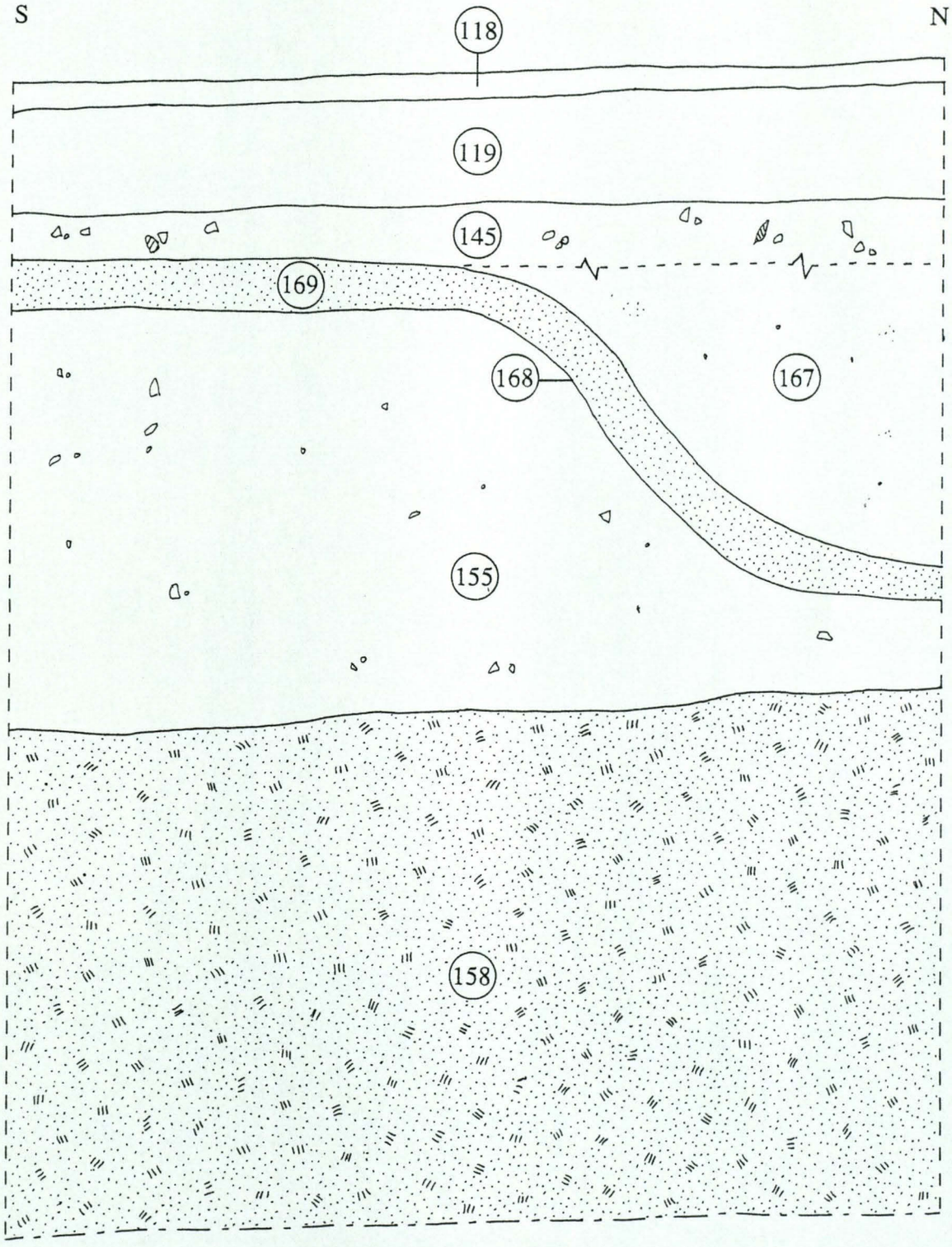
Clay

Brick/Tile

Limestone



L.O.E.

0m 1m 2m

Fig.11