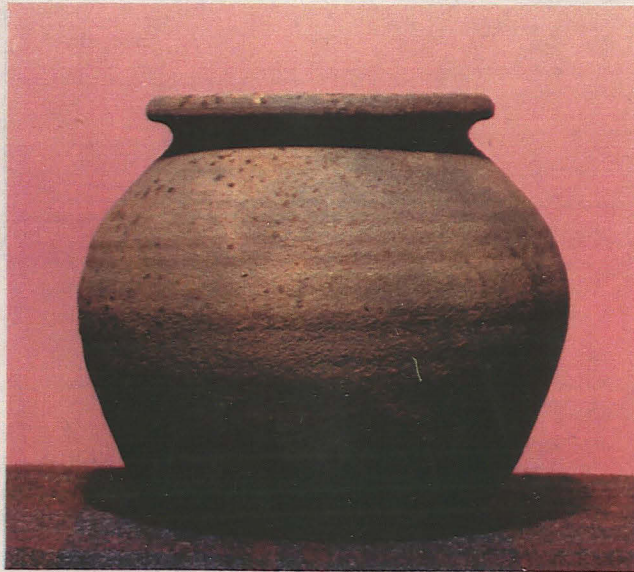


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CASTLE FARM, TORKSEY
ARCHAEOLOGICAL EXCAVATION
REPORT

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PRE-CONSTRUCT ARCHAEOLOGY

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CASTLE FARM, TORKSEY

AN ARCHAEOLOGICAL EXCAVATION REPORT

For

Manton & Bartle Architects
(on behalf of Mr RN Denby)

By

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1.0 Non-technical summary

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A moderately large-scale archaeological excavation took place on the former site of Castle Farm, Torksey, in advance of residential development (Fig. 1). An early Christian cemetery, two late Saxon pottery kilns, three possible pottery kilns, a lime kiln and a post-medieval structure were exposed and recorded. A small number of residual prehistoric artefacts were also recovered during the project.

The excavation results will add to an established archaeological record which suggests that pottery production at Torksey between the late C10th and mid-C11th was intense; they will complement the extensive works undertaken by Maurice Barley in the 1960's and have verified the presence of a potentially dense early Christian cemetery on the north-east side of the site which may be associated with the church of All Saints, the location of which is not known from documentary sources.

The project was undertaken as a condition of planning. Areas vulnerable to destruction during development were excavated: those expected to remain unaffected have been preserved *in-situ* beneath a geotextile porous membrane.

2.0 Introduction

Between November 18th and December 9th, 1994, a full archaeological excavation took place on the former site of Castle Farm, Main Street, Torksey (Fig. 1). The works were undertaken for Manton & Bartle Architects on behalf of their Client, Mr RN Denby.

The site was evaluated by Lindsey Archaeological Services in 1989/90; at which time an early Christian cemetery was identified, as was indirect evidence of late Saxon pottery production. A pit, which post-dated the cemetery, contained ten silver short-cross pennies, dated to the later C11th (Field 1990, unpublished).

The site evaluation suggested the archaeological potential was high. It was deemed appropriate, therefore, that further work be undertaken in advance of development.

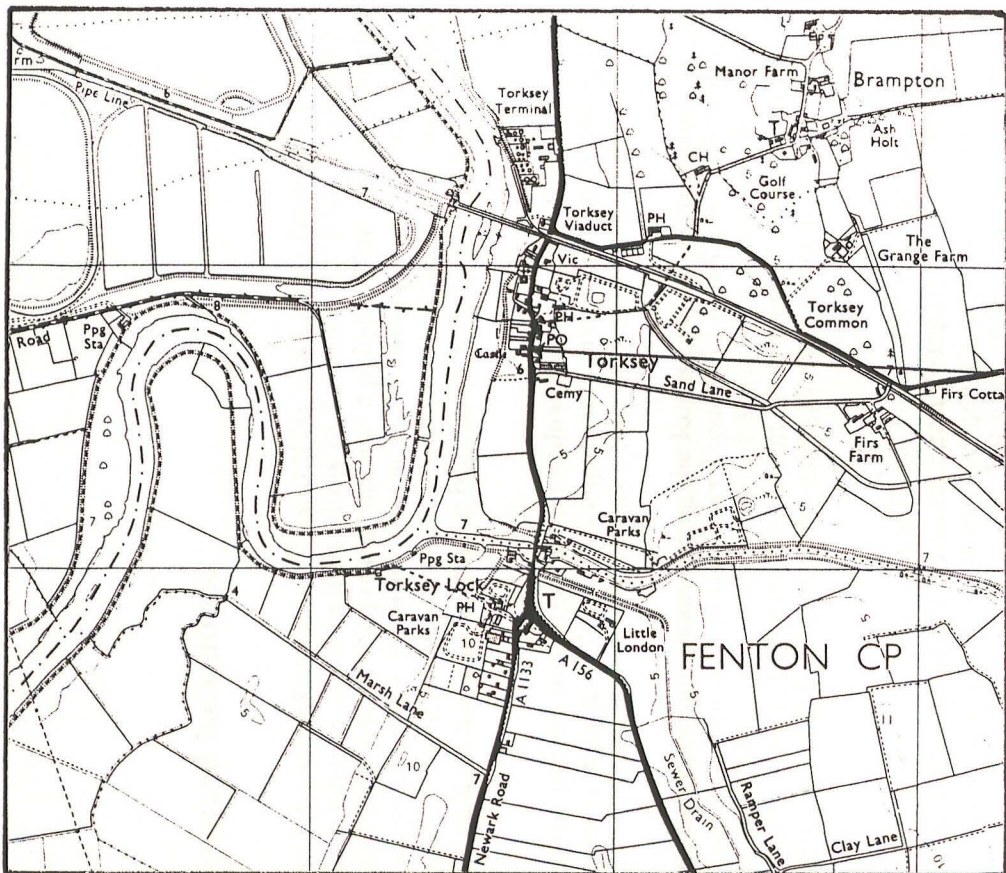
3.0 Planning background

There are two applications associated with this project (W114/1006/88 and W114/1005/88). Planning permission for residential development was granted in outline by West Lindsey District Council in August 1988, subject to conditions. One of these conditions required the undertaking of an archaeological investigation prior to development, with a view to securing a record of the archaeological resource. In the time-lapse between the first and second application, Planning Policy Guidance Note 16 was introduced (November 1990), and the archaeological requirement adjusted accordingly.

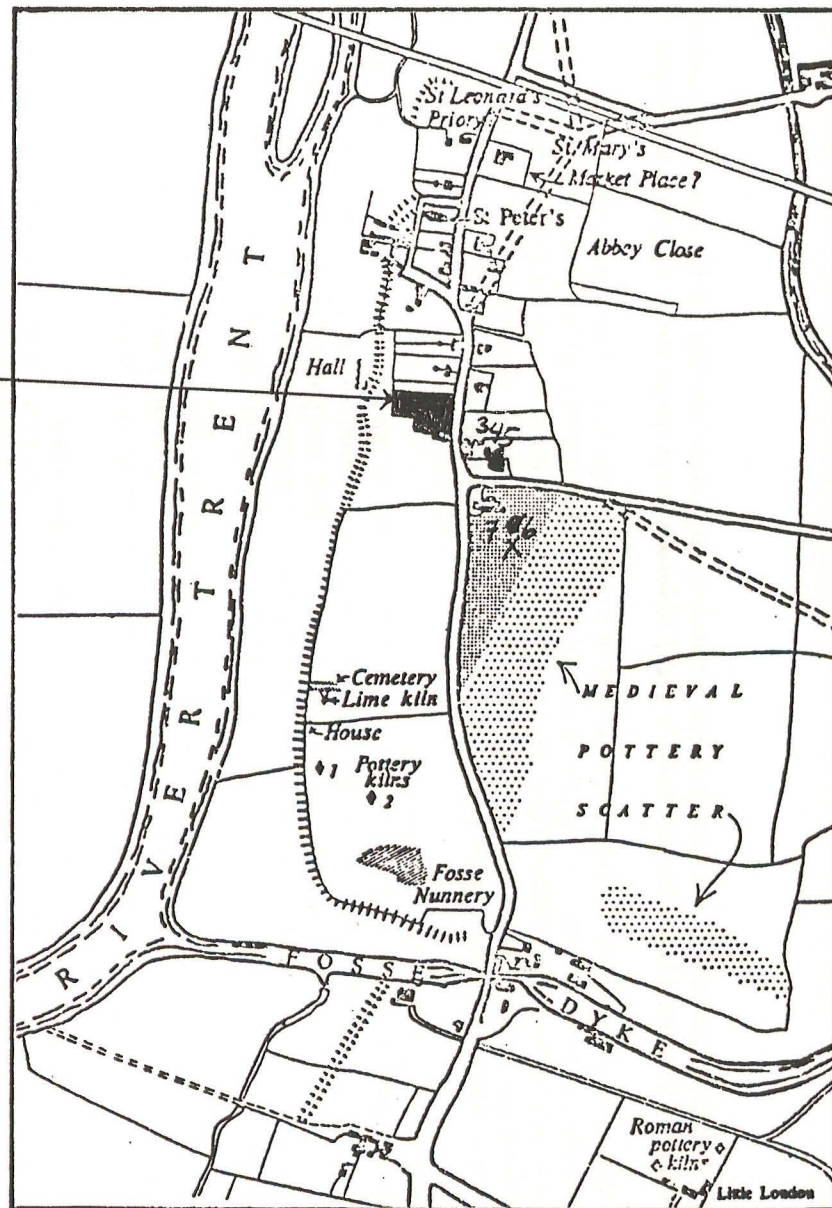
The client intends to sell the plot for housing development following the completion of archaeological investigations.

Fig. 1 SITE LOCATION

2



THE SITE



4.0 Archaeological and Historical background

Information contained within the Sites and Monuments Record (City and County Museum, Lincoln) indicates that prehistoric finds have been recorded in the vicinity of the modern village, including a hand axe that was discovered in a field south of the present site and a polished flint axe, dredged from the Trent on the west side of Torksey Island. A Neolithic flint adze was found in the garden of a property which lies a short distance north of the present site. It was shown to the writer, accompanied by museum records, though the find does not appear to have been incorporated within the Sites and Monuments Record at Lincoln.

Worked flints were found during the present investigation in residual contexts only. Clearly, the area now occupied by Torksey sustained a significant level of occupation in prehistoric times, though the nature (and individual periods) of occupation has yet to be more fully explored archaeologically.

In the historical era, Torksey first becomes significant during the Roman period. Approximately 700m south of the Castle Farm site is the junction of the River Trent and Fosse Dyke, a Roman canal, established to link the Trent with the Witham at Lincoln. Although it has been suggested the canal was first cut in the medieval period, it is more likely that documentary references dating from the reign of Henry I refer to a re-cutting (in 1121) rather than the establishment of the Fosse Dyke (Whitwell 1992, 58).

There are Roman pottery kilns at Torksey south side of the Fosse Dyke. The kilns, on the site of a farm known as Little London, were operating during the C3rd, specialising in the production of grey ware vessels (*ibid*). The potteries were ideally sited for water transportation, as were similar production centres at Knaith and Lea; and there is little doubt that some of the wares were destined for the large market at Lincoln (*Lindum Colonia*), though this has not been proved due to the difficulty associated with sourcing wares of similar form to specific production centres (Field and Palmer-Brown 1991, 56).

There is no evidence of Romano-British occupation at Torksey north of the Fosse Dyke (Barley, 1964, 172).

Although of minor economic and strategic importance today, Torksey was one of the principal medieval towns in Lincolnshire. The earliest historical reference to the settlement occurs in AD 873 when the Danish army, after wreaking havoc in Northumbria, came under their king, *Halfdene*, to Lindsey and wintered at a place called *Turcesige* (Hill, 1965, 306).

At the time of the Domesday Survey (1086), Torksey was the third largest borough after Lincoln and Stamford. It probably possessed borough status before the Conquest: a mint existed in the late C10th/early C11th, and so, probably, did a court (*burwarmot*) (Barley 1964, 167).

There were three parish churches in Torksey: dedicated to All Saints, St Peter and St Mary, all of which came into the hands of the Augustinian priory of St Leonard which was founded during the reign of Henry II. A small Cistercian nunnery was established south of the town which became known as St Nicholas de Fosse, or the Fosse Nunnery. The foundations of these religious houses seem to belong to the second half of the C12th and first half of the C13th, the period of the towns greatest post-Conquest prosperity (*ibid*).

By 1535, although the churches of St Mary and St Peter were still in existence, All Saints was described (by Leland) as 'another church there in ruins' (*ibid*, 309). The site of the church is not known, and it has been suggested that the cemetery which occupies part of the Castle Farm site lay within the former graveyard of All Saints (Field, 1990, unpublished). According to local tradition, the church of St Mary lay a short distance east of St Peter's, the only church now standing.

An extensive cemetery was investigated in 1960, approximately 400m south of Castle Farm. No surface building remains were visible in the vicinity of the graves, though the excavator believed it

possible they lay within the confines of a cemetery pertaining to the lost All Saints Church (Barley, 1964, 173).

Torksey owed much of its growth and prosperity to its privileged geographical position, at the junction of the Trent and Fosse Dyke. By the late C13th, the canal was beginning to fail it, and by the middle of the C14th, wool (for example) was being transported by road from Lincoln to Barton on Humber, instead of to Torksey and thence by boat to Hull (Hill 1965, 311).

The ruins of 'Torksey Castle' lie almost immediately west of the site. The inaccurate term 'castle' is of relatively recent origin - Torksey Hall was an Elizabethan manor house, components of which were robbed from St Leonard's priory. The hall was sacked by Royalists during the Civil War in 1645 and was never restored.

Prior to the excavations carried out at Castle Farm, seven late Saxon pottery kilns had been excavated on the north side of the Fosse Dyke (Barley, 1964; Barley 1981).

5.0 Geology and topography

Torksey lies approximately 9.6km west of Lincoln on the east side of the River Trent, the formal boundary between Lincolnshire and Nottinghamshire.

The parent geology is Mercea Mudstone (red clay), though deposits of wind-blown sand proliferate above the clays and characterise the right bank of the Trent from Newark to Scunthorpe. These sands continue to accumulate at the rate of c. 30cm each millennium (Barley 1964, 167).

6.0 Project aims

It was clear from the outset that the archaeological potential of the Castle Farm site was high. The evaluation undertaken by Lindsey Archaeological Services established the presence of a Christian cemetery (of unknown extent) and suggested, though did not confirm, the proximity of late Saxon pottery kilns.

As Torksey has been interpreted as being a shrunken medieval town (Barley, 1964), there existed a possibility that medieval town house remains would be located close to the Main Street frontage (the site lies approximately 100m south of the traditional market place, the focus of the medieval settlement - which was obliterated during construction of the railway in the middle of the last century).

By excavating areas vulnerable to destruction during development, there existed the first opportunity in nearly thirty years to add to and complement the work of Maurice Barley, who has already described (to varying degrees) some seven late Saxon pottery kilns located on the east and west sides of Main Street, north of the Fosse Dyke but south of the modern settlement.

042m

5

0.6m

CEMETERY

Location, Fig. 3

Location, Fig. 4

Location, Fig. 9

Location, Fig. 5

Location, Fig. 8

Location, Fig. 7

Location, Fig. 6

AREA NOT EXCAVATED
DUE TO TREE PRESERVATION
ORDER

Fig. 2 1:200 TRENCH LOCATION PLAN
(with locations of illustrations used within text)

(with locations of illustrations used within text)

MAIN STREET

- == FOUNDATION FOOTPRINT (ORIGINAL)
- - - - EXCAVATION BOUNDARY
- ▨ AREAS ILLUSTRATED AT LARGER SCALE WITHIN TEXT

(i), (ii), (iii), (iv) EVALUATION TRENCHES EXCAVATED BY LINDSEY ARCHAEOLOGICAL SERVICES

● KILN



20M.

WEST BOUNDARY ON ORIGINAL SURVEY

ACTUAL WEST BOUNDARY

(i)

(iii)

(ii)

(iv)

+100/100

+100/105

+100/110

+100/115

+105/110

+110/110

+115/110

+120/110

+125/110

+130/110

+135/110

+140/110

7.0 Methodology

The areas to be investigated were based on a plan supplied by Manton & Bartle Architects (Drawing 4067/2, incorporated within Fig. 2). The archaeological requirement, as defined in a project brief issued by the County Archaeologist, was to excavate areas that would be threatened by development: the access road and all service trenches associated with four (of five) house plots. The plots themselves were not included as it is understood that dwellings will be constructed on raised rafts.

The development will affect deposits to depths not exceeding 1.0m. For the most part, therefore, digging ceased at 1.0m, though earth-cut features (eg kilns, pits) were completely excavated of their fills where the tops of such features occurred within the stated depth band. Remains that lay entirely below 1.0m were not excavated, though they were recorded in plan and sampled for finds (dating).

In advance of excavation, the site was marked-out by Mr P Manton. A JCB, fitted with a toothless ditching blade, was then used to remove level spits, no greater than 200mm in depth, to the top of the first significant archaeological or natural horizon. It will be noted on Fig. 2 that on part of the south-east side of the site the exact foundation footprint of the access road and one north-south service trench was not excavated. This was based on an order issued by the District Council to avoid tree canopies where Tree Preservation Orders were in existence. Similarly, it will be noted that an east-west service trench on the west side of the access road was reduced from 21.0m to c. 4.5m. This adjustment was based on an error recorded on drawing 4067/2 which places the west boundary of the site approximately 10.0m west of its actual location (which also explains why a sewer link trench on the north side was excavated in a slightly different location).

Following the completion of mechanical stripping, all section and plan surfaces were meticulously cleaned by hand and inspected for archaeological remains. Archaeological features were excavated stratigraphically and information was entered on standard pro-forma context sheets. Features were drawn, in plan and in section, and a full photographic record was maintained throughout the project.

Artefacts, for the most part, were bulk-recorded by context, though important or unusual finds (small finds) were individually recorded. Samples were taken where necessary and information entered on standard sample sheets.

Following completion of the excavation, all artefactual and ecofactual remains were presented to relevant specialists for written assessment reports. A site archive was initiated and stratigraphic matrices were prepared in respect of the areas investigated.

The overall project was directed by the writer, though day-to-day supervision and recording was largely undertaken by Mr R Schofield, the site supervisor.

After the excavation was completed, the site was backfilled. In areas where archaeological remains have been preserved *in situ*, a geotextile membrane was first laid down and covered with c. 20cm of fine sand, before being sealed with soil and rubble.

8.0 Results

During machine clearance, it was established that a build-up of blown sand varied in thickness considerably between west and east sides of the site. On the west side, an average 1.0m (including topsoil) was typical. However, these deposits (which sealed the archaeological remains) gradually shallowed towards the east, to the extent that the archaeology closest to the frontage lay beneath approximately 20cm of topsoil/overburden. It was possible, therefore, to leave some of the archaeology preserved *in situ*, though many features were totally or almost totally excavated.

8.1 The kilns

A total of six kilns were investigated during the course of the project. Two of these were pottery kilns. Another had been used to produce lime. Three other kilns (exposed but not fully excavated) may have been used to fire pottery, though this was not clarified.

8.1.1 Kiln [116] (Fig. 3)

Incredibly, the top of a well-preserved pottery kiln was discovered within moments of machine excavation, which commenced with the stripping of a service trench on the north-west side of the site (Fig. 2); perhaps more remarkable was the proximity of a previous archaeological trench (evaluation Trench iii), the south edge of which appeared to clip the north edge of the kiln oven.

Less than half of the kiln oven and its associated flue lay within the area investigated. The oven walls, [043], survived to a maximum depth of 75cm. Their inner faces comprised 1 - 3cm of well-fired (reduced) grey sandy clay, which merged with 2 - 3cm of red (oxidised) clay. The oven diameter measured approximately 2.0m. In its centre was a solid clay pedestal, c. 60cm in diameter/width which survived to a height of 50cm.

Unfortunately, the junction of the oven and flue had been significantly truncated by a later trench (below), though enough survived to demonstrate that the short flue, of approximately 50cm, was lined with vertically-set flat skerry cheek-pieces.

Although the kiln stoke hole lay almost entirely west of the trench investigated, the south edge of the flue appeared to diverge, more or less at the point where the fired base of the oven/stoke hole ceased, indicating a clear junction.

The lower c. 10cm of the oven (and its adjoining flue) was filled with grey silty sand containing a high percentage of fine ash, [105]/[106]; a residue of the fuel consumed during the kiln's last firing. It lay beneath up to 50cm of compact silty sand, [092], containing a mass of fired clay fragments (kiln structure) mixed with large quantities of broken pottery. Amongst the hundreds of sherds recovered during excavation was a complete (though cracked) globular jar.

The kiln appears to have been operating at some time between the early - mid-C11th (Appendix 2).

8.1.2 Kiln [051] (Fig. 6)

The truncated remains of a second kiln were exposed c. 27m south-east of the above. They lay beneath an accumulation of dirty sand measuring almost 1.0m in depth, [011], which was largely removed by machine. The kiln was exposed and recorded but not dismantled as its depth was sufficient to require preserved *in situ*.

In length, the kiln measured c. 2.5m. It was defined on its east side by an area of heavily burnt and fired clay [050]; the base of an oven. The periphery of the burnt area was intermittently demarcated by an external ring of unfired green clay. There was no indication of where the base of the firing chamber met the oven walls (which were totally absent).

There was no readily identifiable flue associated with this kiln, though slight traces of a backfilled stoke hole were examined at its west end - a shallow hollow filled with a mixture of clean clay and dirty soil. Only a small proportion of this was removed (to avoid unnecessary damage).

The function of the kiln was not determined. It did not resemble the kiln described above, and no direct product was identified. The extent to which the oven base was fired suggested, superficially, that temperatures had been obtained that were capable of firing pottery, though it is clear the kiln was quite unlike kiln [116]. There was no indication of a central pedestal.

Fig. 3 POTTERY KILN AND PALISADE TRENCH

(in north-south service trench)

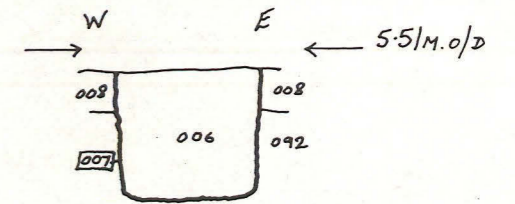
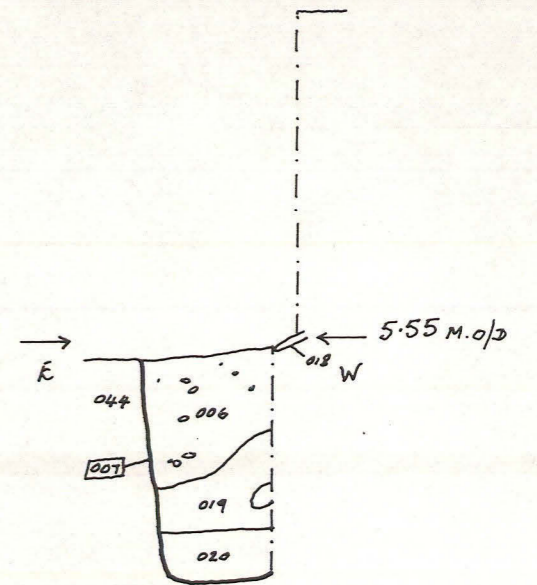
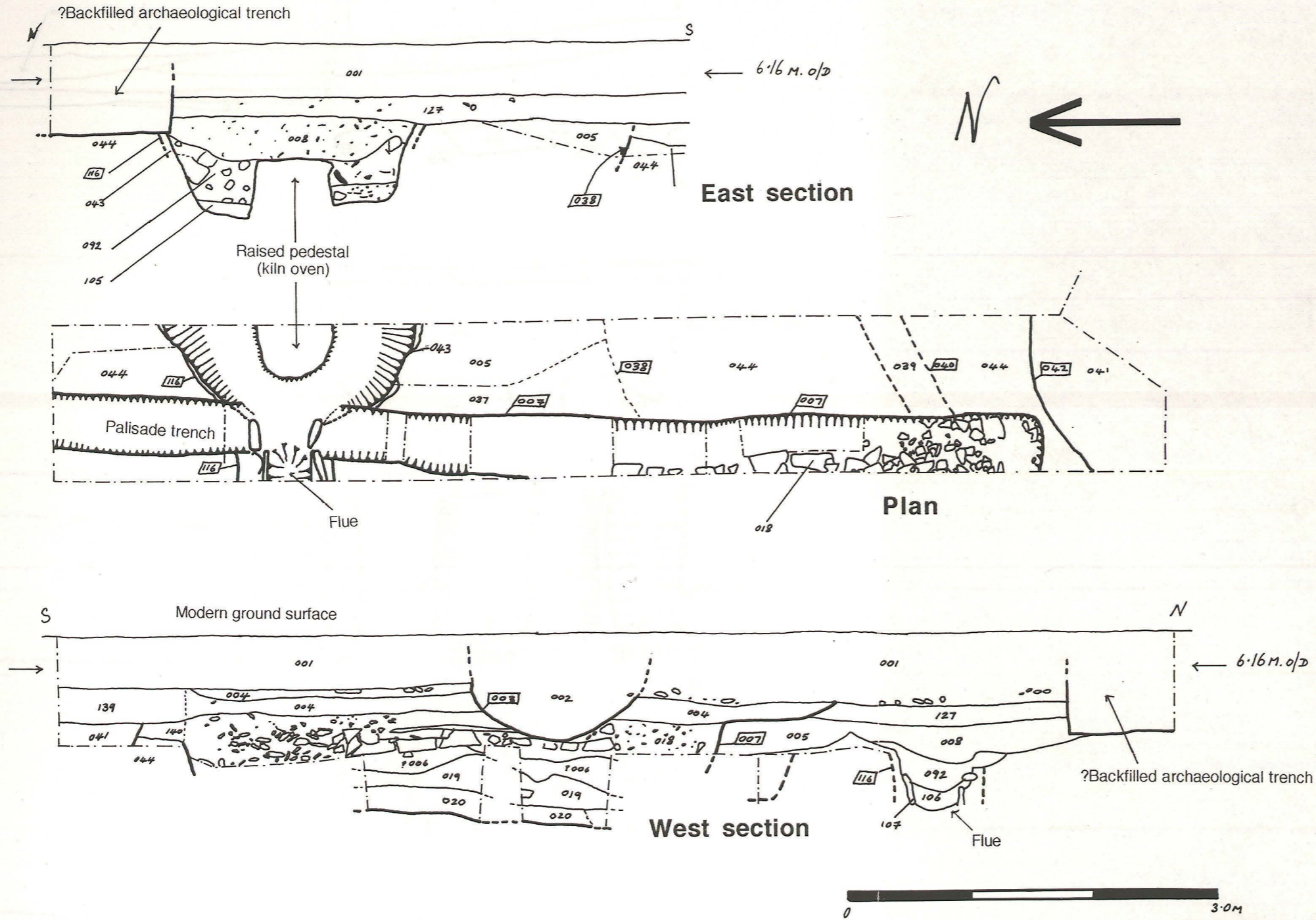


Fig. 4 CEMETERY, KILN AND EARTH-CUT FEATURES IN NORTH-SOUTH SERVICE TRENCH

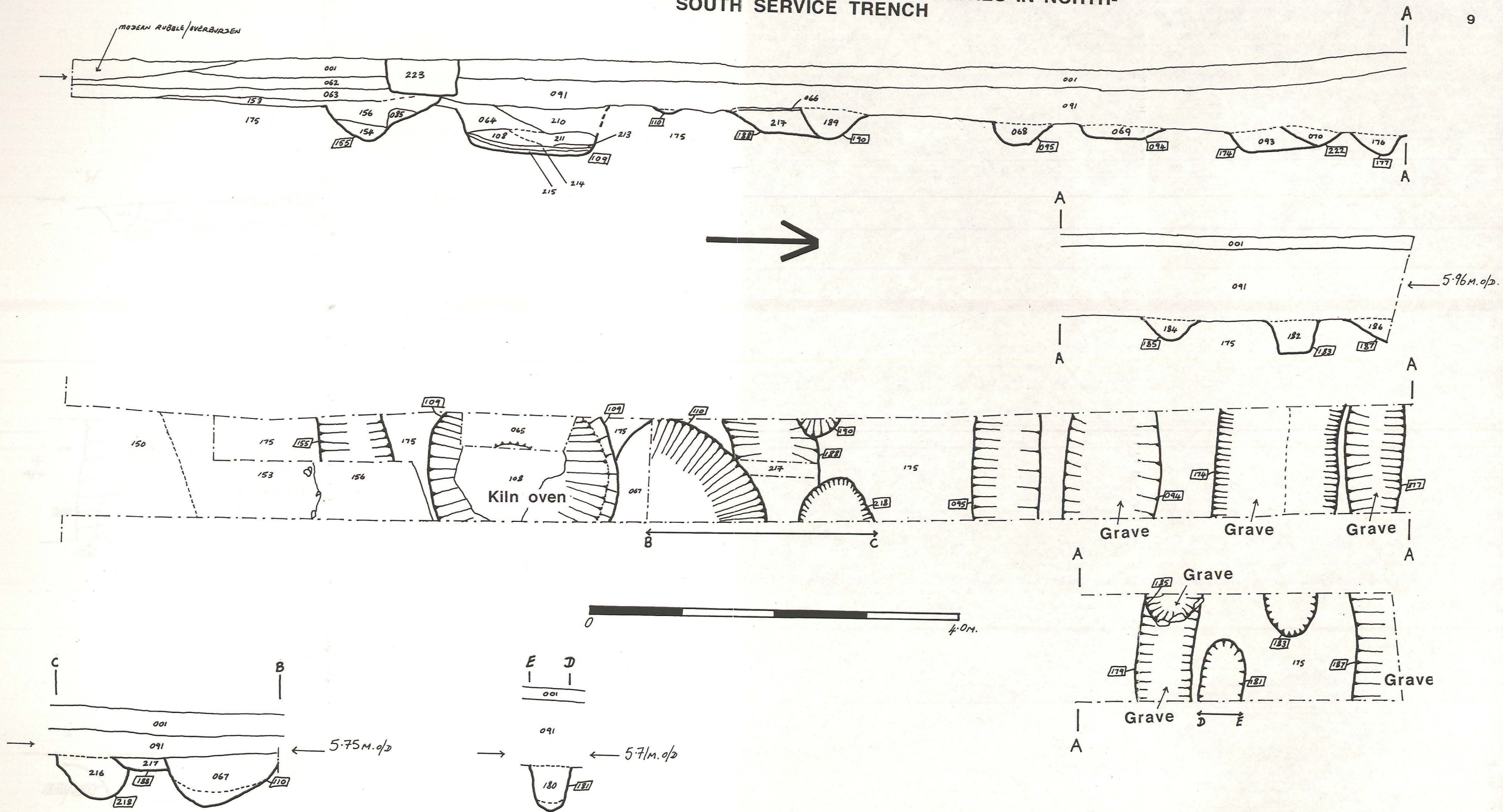
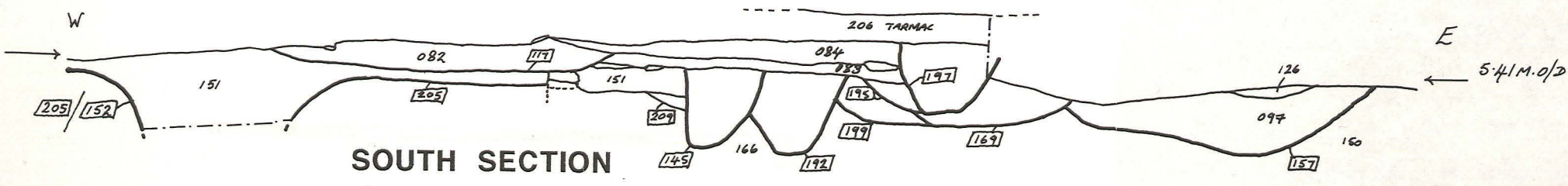
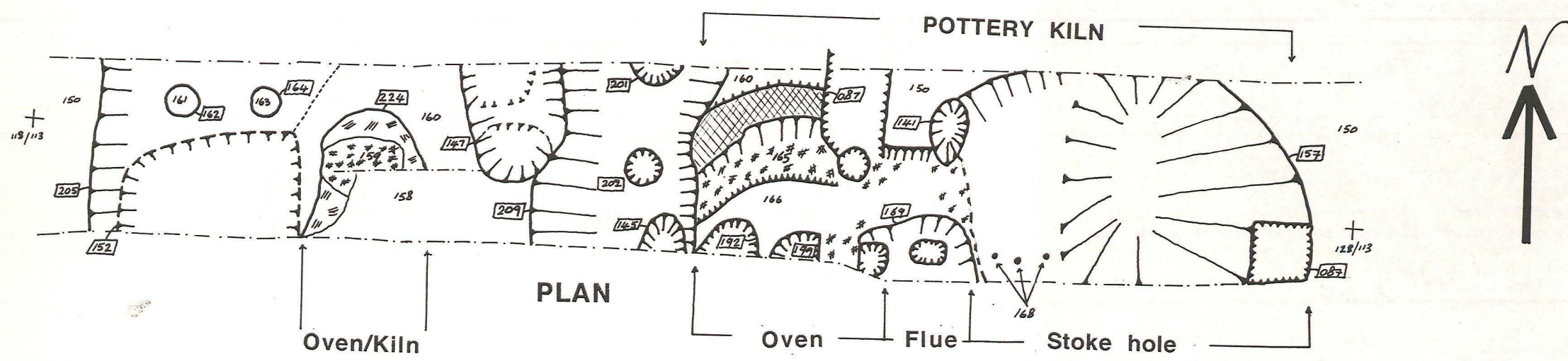
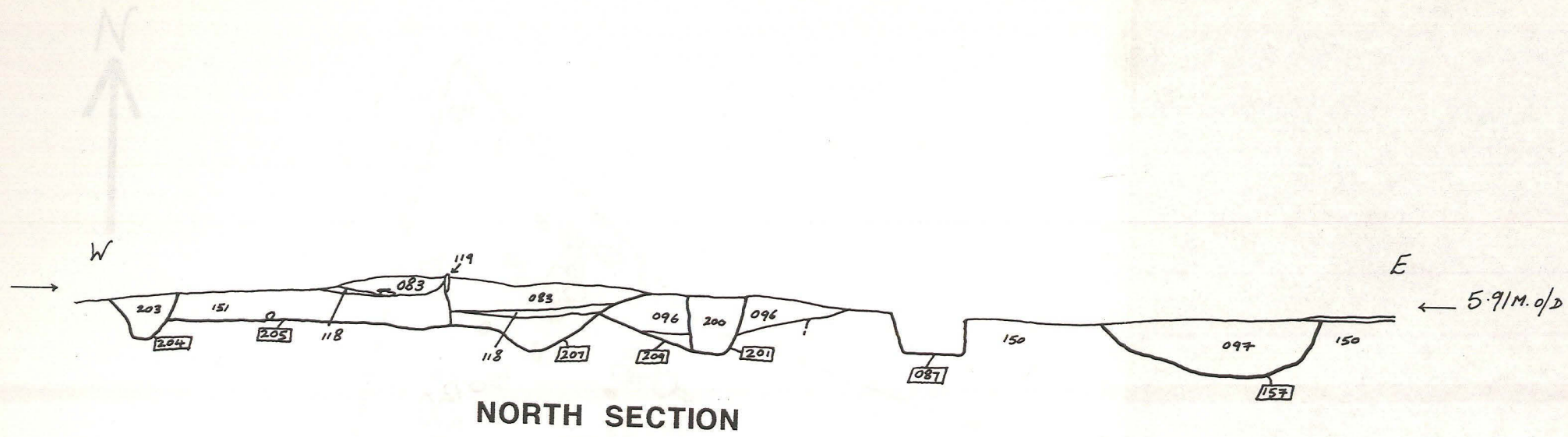





Fig. 5 FEATURES IN (REDUCED) CENTRAL CUTTING, BETWEEN GRID POINTS 118/113 - 128/113



-  CHARCOAL
-  CLAY
-  BURNT SAND

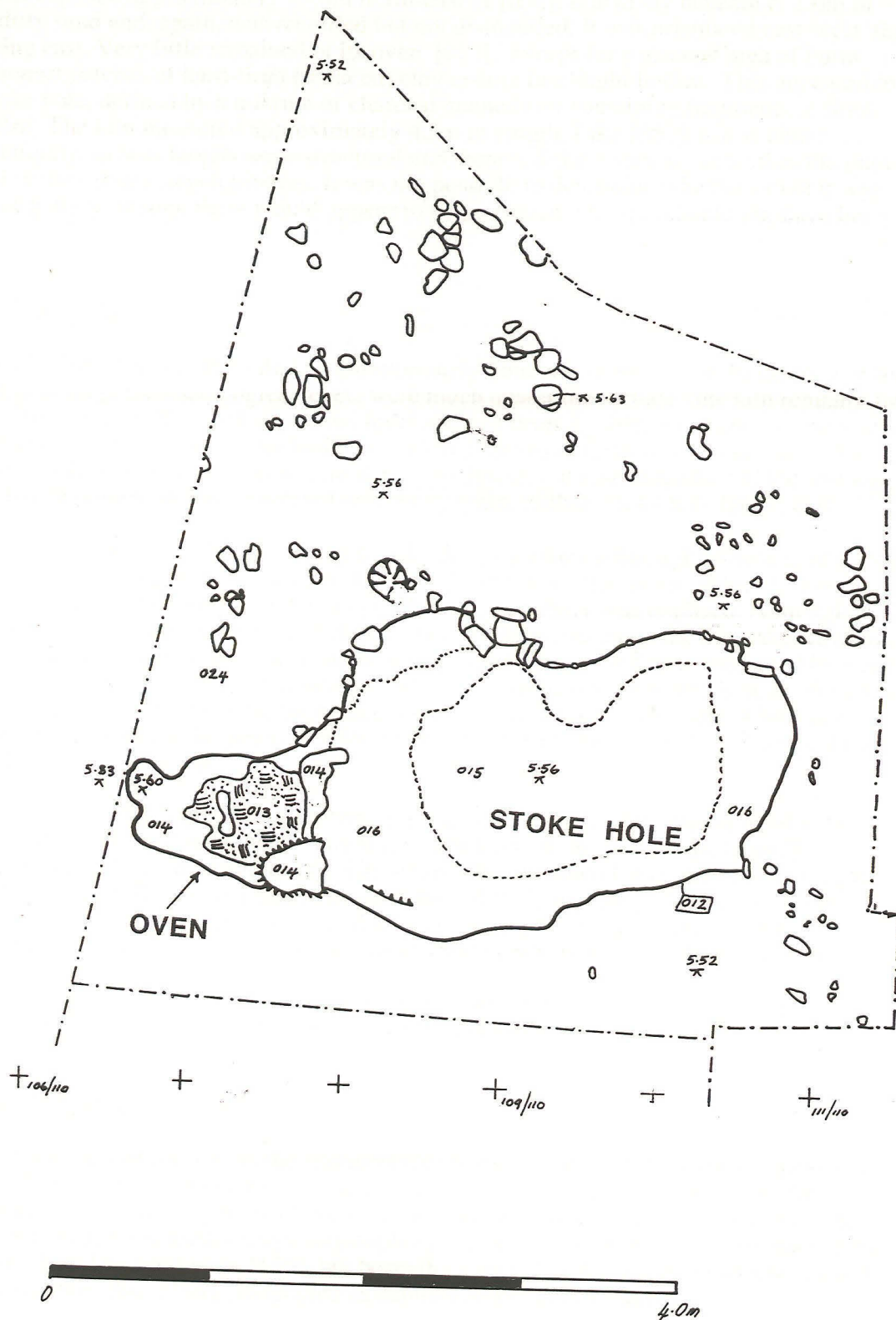


Fig. 7 KILN [012] AND ASSOCIATED DEPOSITS

8.1.3 Kiln [012] (Fig. 7)

A third kiln was exposed approximately 10.0m north-east of [051]. It also lay beneath c. 1.0m of accumulated dirty sand and, again, was recorded but not dismantled. It was orientated east-west, the stoke hole facing east. Very little remained of its oven, [013], except for a discreet area of burnt sandy clay amongst patches of hard-fired (reduced) clay resting in a slight hollow. This appeared to join a large stoke hole, defined by a mixture of charcoal-stained soil containing fragments of fired clay, [015]/[016]. The kiln measured approximately 4.3m in length. Like [051], it was either truncated in antiquity, or was largely superstructural and, hence, did not survive as well as the pottery kiln excavated in the service trench (above). It was not possible to determine whether or not it was used to produce pottery, though there would appear to be no reason why this should not have been so.

8.1.4 Kiln [157] (Fig. 5)

A large, extremely disturbed, pottery kiln lay approximately 16m east of the above. In this part of the site (closer to the frontage), archaeological levels were much nearer the surface - the kiln remains lay approximately 30cm beneath the modern ground level and had been significantly truncated by works associated with the construction of a later building, and by features of relatively recent origin. Enough of the fabric survived, however, to demonstrate that, typologically, it resembled kiln [116] and was built and used to fire pottery. It was orientated east-west; again, with its stoke hole facing east.

Like the other pottery kiln, it had been made by first by digging a trench through natural sand, [150]. Its oven and flue, [165]/[166], were lined with clay on at least two occasions (ie re-lined). The inner face of the oven was reduced, though sand and clay about its periphery was oxidised. Although it was not possible to examine the entire plan of the kiln (due to disturbance and the limited excavation area imposed by a Tree Preservation Order), the diameter of the oven would have measured between 2.0 and 2.5m. In its centre was a large clay pedestal which was truncated almost to base level by later features. A short flue, c. 50cm in length, connected the oven with a large stoke hole, which had remained largely intact. Close to its junction with the flue, there were three small stake holes, [168]. The function of these was not clear.

The kiln oven was filled with a mixture of mottled grey/red ashy sand, [125], intermingled with fragments of demolished lining and pottery. The flue was filled with similar material, [142] containing large fragments of collapsed lining. The stoke hole contained loose, soft, very dark grey sand, [143]/[097] mixed with charcoal and large quantities of broken pottery. Above the stoking area was a general spread of mixed red and black sand containing ash, fired clay, charcoal and pottery. This appeared to be a disturbed horizon, perhaps the product of subsequent building activities.

The main kiln product appears to have been medium-sized jars which have been dated between the late C10th and early C11th (Appendix 2) - making this kiln slightly earlier than kiln [116].

8.1.5 Kiln/oven [224] (Fig. 5)

Approximately 2.0m west of the above, the fragmentary remains of an oven base were exposed, the construction level of which was natural sand. No associated flue or stoke hole was found, the remains comprising a sub-circular patch of fired clay measuring approximately 75cm from east to west. Its centre was totally reduced, though its periphery was oxidised, giving-way to a zone of unfired, soft yellow clay. The fired base, [159], lay beneath c. 4cm of soil containing yellow and red fragments of fired sandy clay, [158], interpreted as demolition material/collapse.

Little can be said regarding the function or date of the oven. It may have been the scant remains of a kiln similar to the two described above ([051] and [012]), which do not appear to have been constructed in the same way as the kilns which may be more readily associated with pottery production ([116] and [157]).

8.1.6 Lime kiln [109] (Fig. 4)

On the south side of a service trench, excavated on the north-east side of the plot (Fig. 2), the oven of a further kiln was exposed, just beneath the topsoil/overburden. This was of a different character to other ovens and had been cut through three earlier phases of archaeology. It measured a little over 2.0m in diameter and survived to a depth of c. 50cm. Most of its lining was substantially degraded, the reduced inner face being an intermittent occurrence around its walls and base: more common was an oxidised (red) wall, eroded traces of which were found in the base of the bowl-shaped oven.

Several discreet soil horizons lay within the oven void. Its base was intermittently lined with c. 4cm of orange-brown sand, [215], derived from the eroded sides. Above was a layer of charcoal, [214], which measured up to 10cm in thickness - residue of the fuel used during a final phase of firing. Above the charcoal horizon were localised areas of eroded kiln lining and up to 16cm of what appeared to be compact, mottled degraded limestone, [108]/[212]. A sample was submitted for analysis, to test a suggestion made by the excavator that the kiln was used (or possibly re-used) to produce lime. The assessment is in broad agreement with the excavators interpretation (Appendix 3) - the major sample component appeared to be fired, reduced limestone.

Charcoal from the same kiln was examined by Rowena Gale (Appendix 4). The main species present (from context [214]) was *Fraxinus*, which is apparently noted for its ability to burn well when green.

The upper void of the lime kiln was filled with dumped layers of dirty sand mixed with stone and charcoal: [211], [064] and [210]. One of these 'secondary fills', [064], contained a sherd of glazed Lincoln ware of C14th/C15th date.

8.2 The cemetery (Fig. 4)

As noted, it was anticipated that human remains would be encountered during this excavation - in two of four trenches excavated by Lindsey Archaeological Services (iii and iv, Fig. 2), burials were exposed. During the present investigation, at least six further burials were positively identified, as were other grave-like features, each of which lay within the same service trench as the lime kiln; suggesting the graveyard is confined to a restricted area on the north-east side of the site. A ditch or trench appears to have delineated the southern boundary of the cemetery and, although a direct boundary was not identified that could mark its western extent, it is noteworthy that no human remains were found in either of the two north-south service trenches on the north-west side of the site during the present investigation, and that remains appeared to cease in evaluation Trench iii at a point c. 18.0m east of the west end of the cutting (Fig. 2).

It has been suggested that the cemetery is relatively early in date, based on the evidence that one grave was truncated by a pit containing a hoard of late C11th short cross pennies. The recent excavation results agree with this suggestion and point towards general contemporaneity between the cemetery and the period of pottery production (see Appendix 2).

Each of the burials exposed was orientated east-west, with the head facing west. Each was filled with similar soil: greyish-brown silty sand. The tops of the grave cuts became visible at or near to the surface of the natural sand sub-stratum.

Grave positions are indicated on Fig. 4 and skeletal positions can be examined in photographs 11 - 15. Presented below is a basic description of each grave or possible grave. The order of description runs from north to south.

Context	Description
---------	-------------

[187]	Part-excavated grave, extreme north end of trench. Excavated to 24cm beneath top of natural. Skull and RHS shoulder bones exposed only. Shape of cut and position of skeleton suggests possibility of two longitudinally-intercutting burials
-------	---

- [183] Eastern terminal of grave-like feature, protruding less than 50cm into trench. No human remains found.
- [181] West terminal of grave-like feature, extending c. 60cm into trench. No human remains found, though cut form more akin to grave than gully etc.
- [179] Shallow truncated grave containing only two legs and feet. Cut through on west side by later grave [185]
- [185] East terminal of grave-like feature, extending c. 40cm into trench. Human remains presumed to lie further west. Cut through grave [179]
- [177] Narrow grave cut (partially excavated). Contained extended skeleton (hips upwards), hands resting over groin
- [174] Grave containing adult skeleton in extended position, hands resting over groin
- [115] Unexcavated grave, cut through by grave [094]
- [094] Described by excavator as single grave containing one complete skeleton and the skull of a second skeleton: more likely two graves, where the later (complete) grave has cut through an earlier entry, removing most of the bones. Complete skeleton in extended position with hands resting over groin.

A further grave-like feature, [095], lay on the south side of [115]/[094]. Half of its fill was removed, though no human remains were found. Approximately 1.7m further south was a flat-bottomed trench-like feature, [188], orientated east-west. It appeared to mark the southern boundary of the cemetery.

The tops of the graves became visible at a level 0.5 - 0.75m beneath the modern ground surface. Technically, therefore, they should have been removed during excavation. However, the Client expressed a willingness to avoid the remains by excavating a shallower service trench and it is hoped, therefore, the graves will be preserved *in situ* indefinitely.

8.3 Post-medieval building remains (Fig. 9)

At some time following the abandonment or demolition of kiln [157], a building was erected on the east side of the site, the evidence for which was extremely fragmentary; due largely to subsequent truncation. In essence, the remains comprised fragments of a clay-bonded wall foundation, two possible partition lines and intermittent traces of a mortar/clay floor. On stratigraphic grounds, it may be possible to associate one or two post-holes, though the evidence is not conclusive.

During machine clearance, the scant remains of an east-west wall foundation, [079], were exposed beneath approximately 30cm of modern overburden. The foundation, which measured approximately 75cm in length, 40cm in width, was made from small-medium sized pitches Lias limestones bonded with dirty yellow clay. One relatively large flat limestone may have been a sole superstructural remnant.

The wall was flanked on both sides with an intermittent spread of redeposited yellow clay, [083]. A similar deposit was coded [082] which lay south-west of [083], and another spread, [088], lay close to (and beyond) the north section of the trench. The latter two deposits apparently contained mortar-type inclusions within their make-up.

The line of a north-south partition was indicated by two vertically-set stones, [119], which were established when the building was constructed, before the floor was put down. The alignment was possibly perpetuated further north, where the west edge of the floor, [083], appeared to coincide with a ragged alignment of stones, [120]. Five very small stake holes, [124], extending eastwards from partition [119] may have delineated a further partition, parallel with wall [079].

Fig. 8 FEATURES EXPOSED (AND PRESERVED *IN SITU*)
BETWEEN GRIDS 99/115 - 106/115

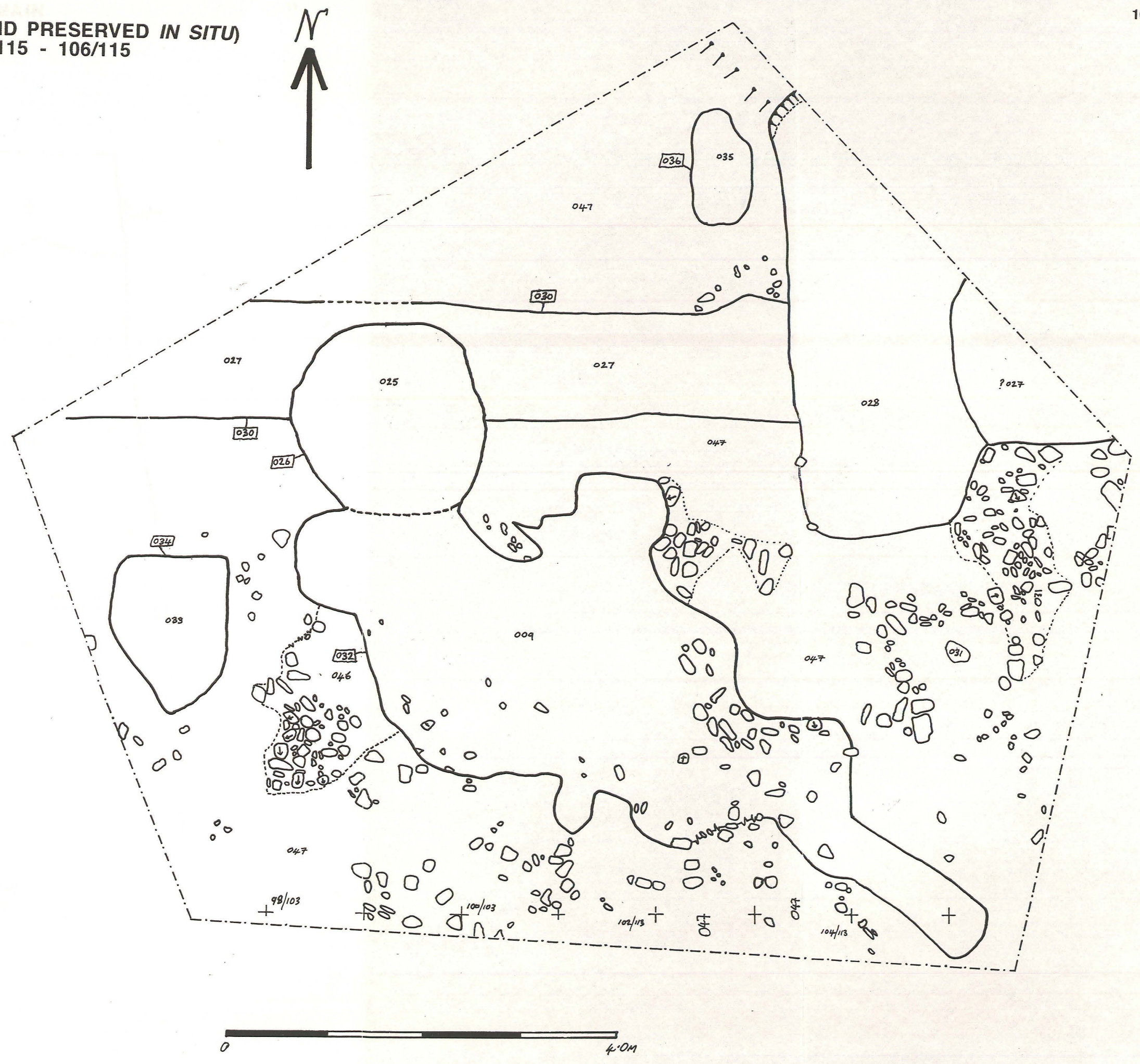


Fig. 6 FEATURES EXPOSED (AND PRESERVED IN SITU)
 BETWEEN GRIDS 97/106 - 104/106, SOUTH-WEST SIDE OF MAIN
 TRENCH

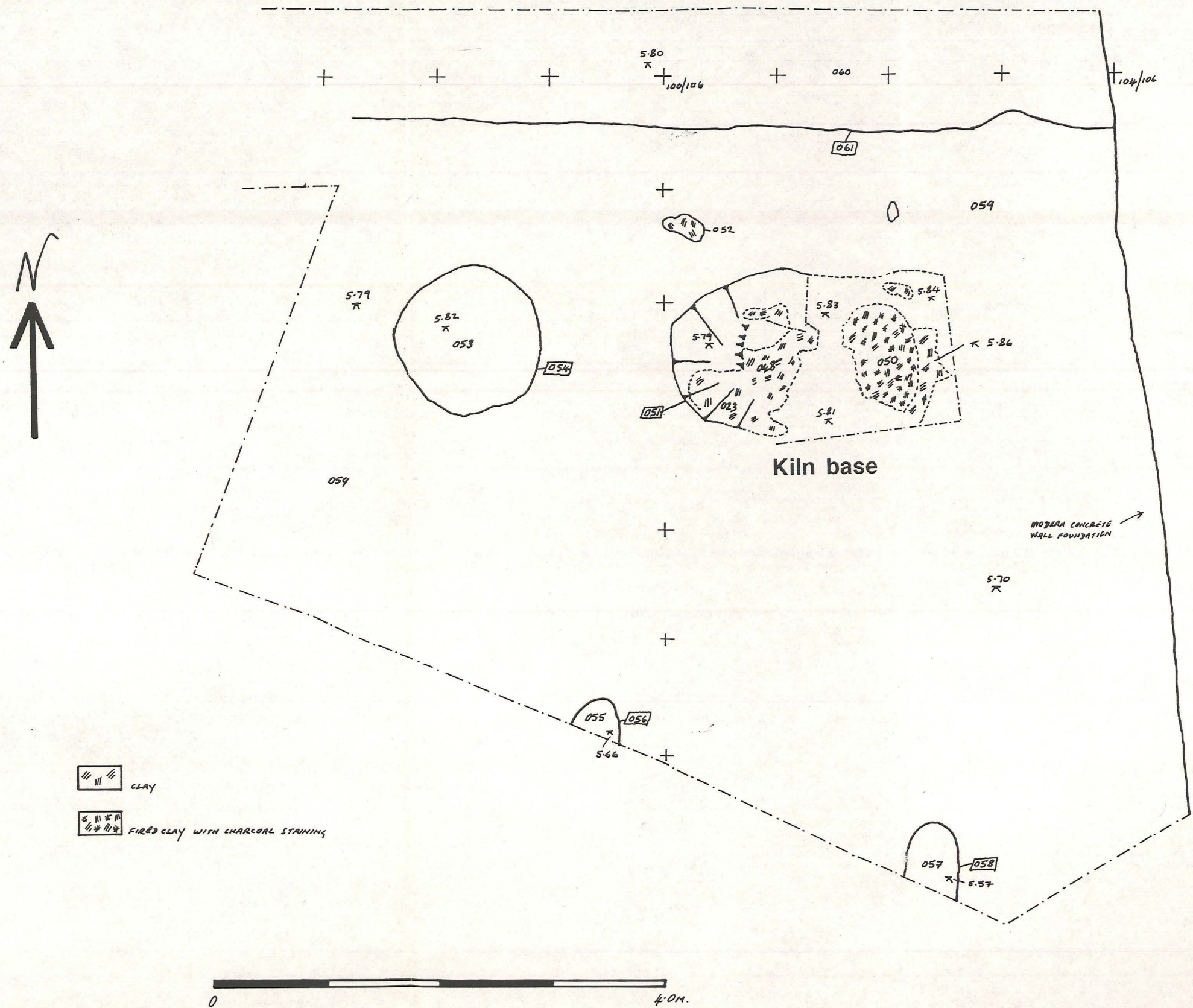
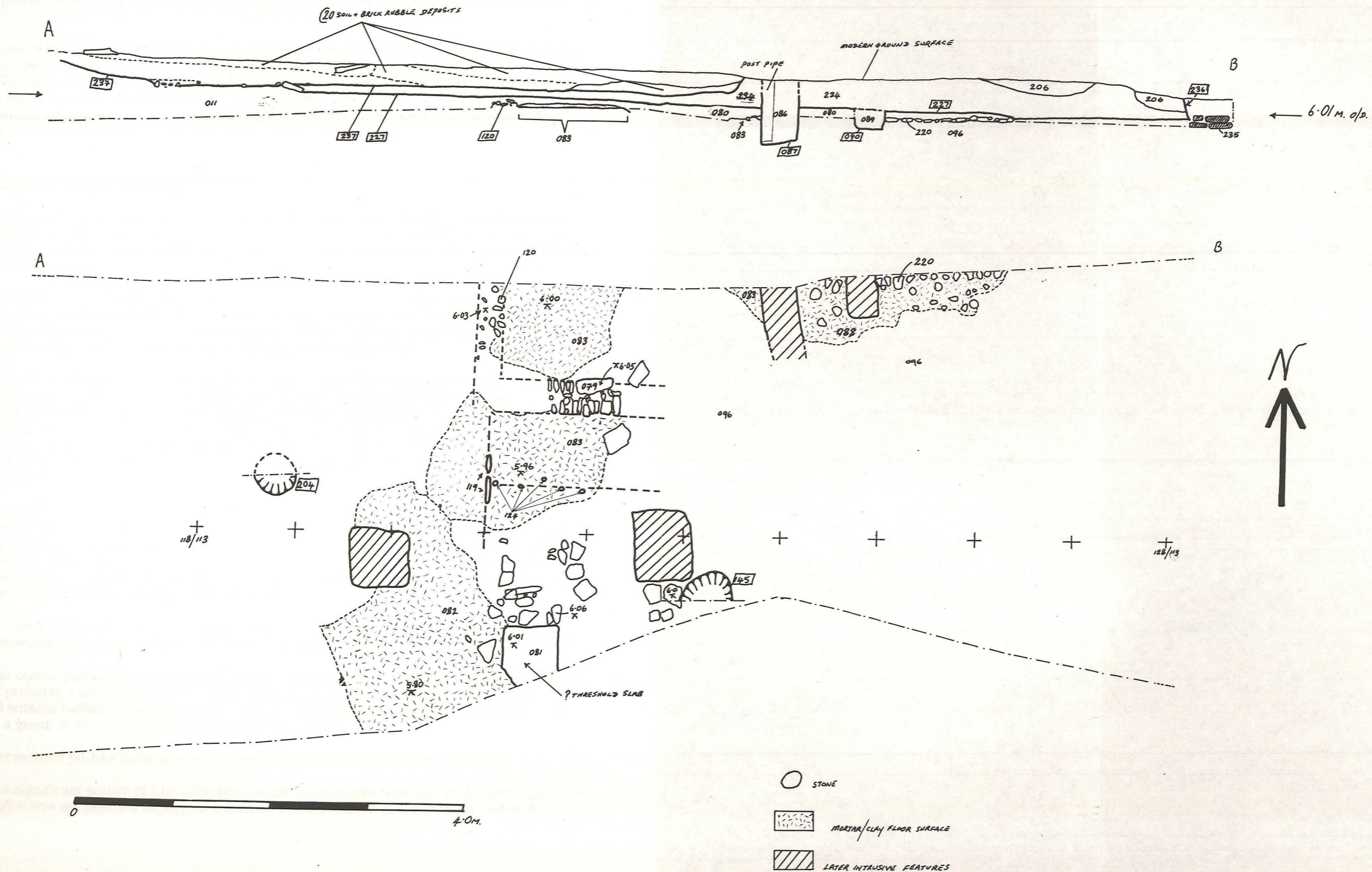


Fig. 9 PLAN OF STONE BUILDING REMAINS, EAST SIDE OF CENTRAL AREA (and north section)



On the east side of surface [082], was a spread of stone rubble, probably un-robbed demolition debris. One very large, squarely-cut stone, [081], may have been a threshold, though the evidence was not clear. Similarly speculative is the interpretation of a line of water-worn cobbles, [220], exposed when the north section was cleaned for drawing. They were set into one of the patches of flooring, [088], and the excavator suggested the stones may have been the edge of an east-west drain. Clearly, other interpretations are possible. The excavator also suggested that two, widely-spaced post holes, [204] and [145], were associated with the building - impossible to disprove or prove.

Very little dating evidence was recovered during excavation. However, C16th pottery was found in one of the patches of flooring and also within an occupation or post-occupation horizon above the floor.

The functional status of the building was not determined, though it is quite possible it was part of a structure depicted on a mid-C18th estate map (Hume Estate Map, purchased ?1751; archive ref. 3 BNL 14). The map shows the site of Torksey Hall (a more complete plan than that which survives today) and places the Castle Farm site within an area known then as Hall Yards. A rectangular building, orientated east-west, is shown immediately south-west of Torksey Hall, and another rectangular structure is indicated on the site of the excavated remains.

8.4 Areas preserved *in situ* (Figs 6, 7, 8)

As noted, in some areas (principally on the west side of the site, where blown sand accumulations exceeded depths of 1.0m), features were exposed and recorded but were left, largely unexcavated. Included in this category were kilns [051] and [012], as well as the burials exposed on the north-east side of the site.

There was a cluster of earth-cut features, principally on the west side of the main trench, that were not excavated (not, that is, beyond removing pottery and other finds protruding through their upper backfills). These features were drawn, photographed and recorded in the usual way, after which a geotextile permeable membrane was placed over them prior to backfilling.

Machining on the west side of the main trench ceased at, or just above a level 1.0m below the modern ground surface. A topsoil of approximately 20cm gave way to a dirty, mixed blown sand accumulation, [021] which measured between 60cm and 80cm in thickness. Vague traces of archaeological features were visible at the arbitrary level reached during machining and, in order that greater sense be made of these remains, areas were selectively reduced further by hand (involving the removal of between 15cm and 20cm of overlying sand). Three large areas were sampled in this way (Fig. 2; Figs 6, 7 and 8), aspects of which (the kilns) have already been described.

The greatest clustering of remains lay within the north-west segment (Fig. 8), where a complex of inter-truncating earth-dug features was exposed. The features were cut through natural sub-strata comprising clean reddish sand and occasional outcrops of Mercia Mudstone (Keuper Marl), [047]. Stratigraphically, one of the earliest features was a linear ?ditch, [030], which extended in an east-west direction on the north side of the cutting. Its upper fill, [027] contained Torksey pottery and bone, some of which was removed for dating purposes.

The above ?ditch was cut through by two later features; a large sub-circular ?pit, [026], and a large, vaguely sub-rectangular, feature, [029]. The latter contained a small group of C13th pottery sherds.

Much of the central part of this area was covered by a substantial spread of dark soil, [009]; recorded as one, but probably a complex of inter-cutting features, the sequences of which could not be established without further excavation. Again, samples of pottery were removed for identification purposes - a group of sherds from vessels dating to the C12th.

Two further isolated pit-like features were exposed but not investigated, [034] and [036].

There was a significant scatter of Lias limestone rubble on the north-west side of the site (Figs 7 and 8). Although it was not possible to suggest a definitive interpretation of the remains (not without

excavating further) it is suggested the stones possibly derived from a building. Firmer evidence may have been obtained by further excavation, though this would have involved breaching the scope of the project brief. It is noteworthy, however, that virtually no rubble was found on the south side of the main trench (Fig. 6).

8.5 Other features

8.5.1 Palisade trench [007] (Fig. 3)

The pottery kiln on the north-west side of the site, [116], was cut through by a steep-sided, flat-bottomed palisade-type trench, [007]. It extended southwards from the north section face for a distance of 8.0m, ceasing with a butt-ended terminal. It measured more than 60cm in depth and was filled with deposits derived from natural sub-strata, as well as kiln debris, including large quantities of Torksey ware pottery; [020], [019], [006]. The upper fill, [018] comprised densely-packed small/medium Lias limestone slabs, which appeared to be associated with a wall that had collapsed into, and partially filled, the trench. The relationship between the stones and the trench was not completely understood (a more comprehensive interpretation would have involved extending the trench westwards).

The large pottery assemblage associated with this trench was dominated by redeposited products from kiln [116] (through which it was cut). However, C12th sherds were also present in small numbers (Appendix 2).

8.5.2 Modern features

Over much of the site there existed a relatively low level of modern intrusion, the majority of disturbance relating to farm buildings and associated infrastructure close to the Main Street frontage (service and foundation trenches etc). On the south side of the proposed service trench where kiln [116] was exposed, a large burial pit, [003] contained the complete skeleton of a cow (photo. 20). The pit was cut from, or through, the topsoil and was considered to be of limited archaeological value.

On the east side of the main area (east of grid 118/113), widespread truncation levels were apparent in section ([237], [227], Fig. 9 Section), associated with levelling preceding the construction of brick and rubble farm yard surfaces. Foundations associated with Castle Farm were also recorded in section and in plan and, immediately adjacent to the frontage, a complex of straight-sided regular service trenches were exposed, one of which was cut through a brick foundation raft, thought to be associated with an earlier farm building.

All modern features were recorded and sampled by excavation. Detailed records may be found in the site archive.

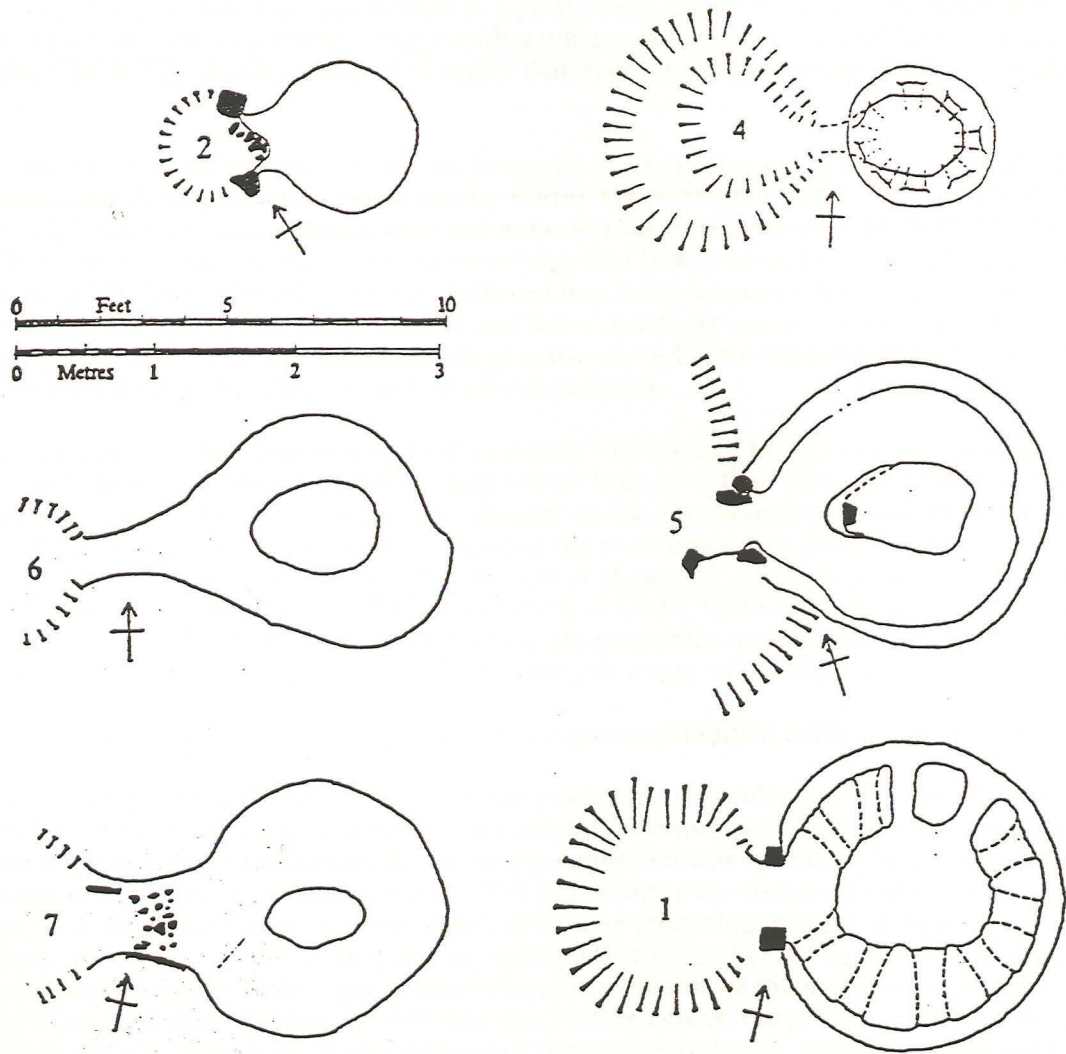
9.0 Interpretation and conclusions

Archaeologically, the most significant finds associated with the recent excavations at Castle Farm are the kilns and the cemetery. Three of the kilns ([051], [012] and [224]) could not be definitively linked with pottery manufacture, though the ovens of each appeared to have been exposed to temperatures capable of firing pottery. One kiln, [109] had been used to process lime in the later medieval period (probably to produce mortar, though lime does have other uses - eg agricultural).

In the 1960's, Maurice Barley recorded (to varying levels) some seven late Saxon pottery kilns at Torksey (three of which lay on the immediate opposite side of the road to the present site). Of these, at least four may be physically compared with kilns [116] and [157] (No.'s 1, 5, 6 and 7). Each contained, within their ovens, a central circular or oval-shaped pedestal (Fig. 10). Kiln 1, which was re-excavated by Barley (after Spencer Cook) was exceptionally well-preserved and two solid fire bars

linked the oven walls with the central pedestal - Barley suggested that there may have been ten such fire bars, upon which the kiln load was stacked (Barley 1964, 176). Kiln 5 was roughly the same

Fig. 10 Plans of previously excavated Torksey pottery kilns
(from Barley 1981, 277)



shape and size as kiln 1 and there was little doubt in the mind of Barley that fire bars, again, originally extended between the pedestal and the oven walls (Barley 1981, 273).

No fire bars were found in the ovens of kilns [116] or [157], though this probably reflects poor survival rather than absence in antiquity - there were numerous fragments of (largely undiagnostic) baked clay in the oven of kiln [116], some of which may have been remnants of fire bars.

Almost all of the kilns examined by Barley were furnished with very short flues, between 0 and 30cm in length (the exceptions being kilns 6 and 7, which measured between 95cm and 1.0m). The flues of kilns 1, 2, 5 and 7 were lined with stone 'cheek pieces', and this configuration was recorded in kiln [116].

The stoke holes of kilns excavated in the 1960's faced in a westerly direction, presumably to take advantage of the prevailing wind. At Castle Farm, the stoke holes of two kilns ([157] and [112]) faced east. The reasons are not clear though it is possible there existed obstructions on the west side of each kiln, making changes of orientation necessary rather than desirable.

The discovery of at least five late Saxon kilns or kiln-type structures in a relatively small area, in addition to those examined by Barley, suggests that pottery production was prolific during the late C10th - mid-C11th. The density would also imply that many more kilns await discovery in this part of Torksey.

The lime kiln on the north-east side of the site belonged to a period when the pottery kilns had long ceased production. A lime kiln was excavated by Barley approximately 400m south of Castle Farm (Barley 1964, 172). Its oven contained lime and unburnt Lias limestone and, given the proximity of an extensive cemetery, Barley suggested the possibility that lime was being produced during the construction of All Saints Church, which he believed may have lain close by (regardless of the fact that there were no scatters of building remains and that a resistivity survey failed to provide evidence of structures). The discovery of a potentially large cemetery at Castle Farm has introduced new possibilities regarding the location of the lost church (below).

The exact date and overall period of use of the cemetery first located by Lindsey Archaeological Services is not clear, though its foundation cannot have been later than the late C11th. Indeed, it is significant that some of the earliest ware types present on the site came from some of the grave fills (Appendix 2). The question at issue now is which of the two cemeteries discovered over the past thirty or so years belonged to All Saints Church - and if an answer is found to this question, what then is the status of the other cemetery? If the cemetery at Castle Farm did belong to the church of All Saints, remains of the actual building should lie beneath properties immediately to the north. It may be prudent, therefore, to monitor all future works likely to cause sub-surface disturbance in this area.

None of the burials sampled during the present investigation contained evidence of coffins.

It was disappointing that no traces of early structural remains (ie dwellings) were found during the present investigation. Barley claimed to have discovered the remains of stone buildings on the site of Kiln 2 which pre-dated the kiln (which he tenuously suggested was operating before AD 1000). He further suggested that "the two fields south-west of the village may contain dwellings of post-Roman date but prior to the pottery kilns" (Barley 1964, 187). The present investigation failed to produce such remains; the earliest clear building activity taking place long after the demolition of kiln [157]. It has been suggested that the rubble spread located on the west side of the main trench was the remnants of a demolished structure, though this was far from clear. On present evidence, the earliest occupation on the site dates from the foundation of the pottery industry, and perhaps the cemetery.

The relationship between cemetery and pottery kilns is interesting. Disregarding the lime kiln [109] (which was considerably later than the other kilns), it will be seen from Fig. 2 that no evidence of pottery kilns has been found within the suggested cemetery area (within evaluation trench iv, the east side of evaluation trench iii or the whole of the proposed north-south service trench on the east side of the site). Although it may be that there are kilns in this area which await discovery in the future, it is suggested, given the numbers encountered elsewhere during the present investigation, that the cemetery may have been active (broadly) at the same time as the late Saxon pottery industry. Indeed, the earlier date range for pottery incorporated within grave fills (Appendix 2) and the contemporaneity

of sherds from grave [094] with ware types associated with kiln [157] would strongly imply that the kilns and the cemetery were contemporary. They appear to have been separated by an east-west boundary, ditch [188].

10.0 References

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11.0 Acknowledgements

Sincere thanks are expressed to Mr RN Denby and to Peter Manton (Manton & Bartle Architects) for commissioning Pre-Construct Archaeology to undertake excavations at Castle Farm and for providing continued support following the completion of excavations.

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Finally, thank you to Mr and Mrs Eatch for their kind hospitality and keen interest in all aspects of the project.

12.0 Appendices:

Appendix 1: Colour photographs

Appendix 2: Assessment Report on the Post-Roman Pottery
(J Wilkinson and J Young - City of Lincoln Archaeology Unit)

Appendix 3: Environmental Archive Report and Archive Catalogue of Animal Bones
(J Rackham - independent environmental archaeologist)

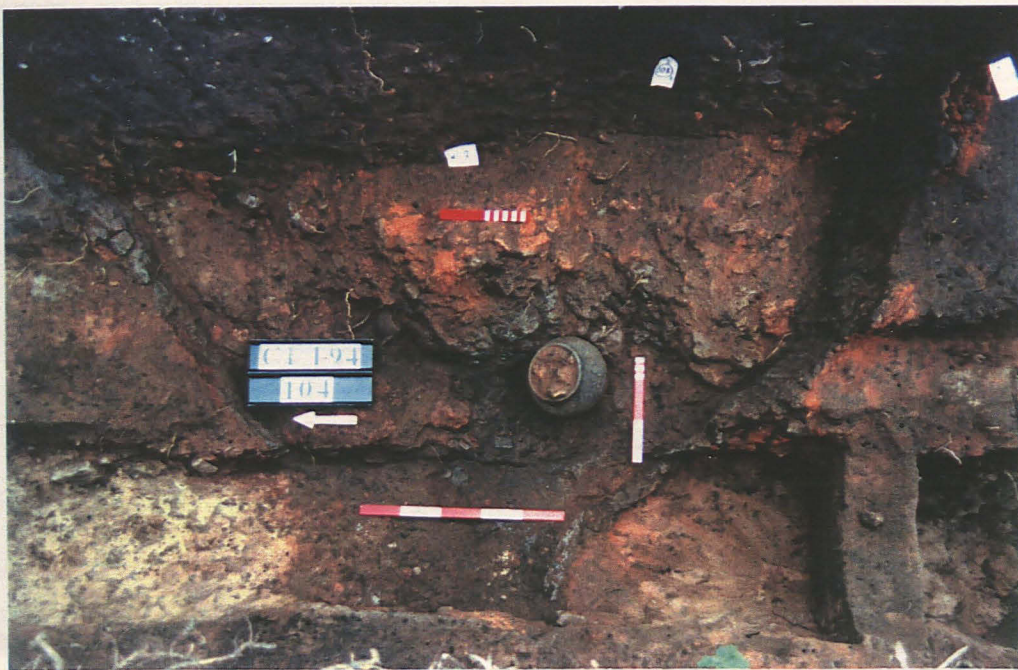
Appendix 4: Charcoal Report
(R Gale - independent environmental archaeologist)

Appendix 5: Fired Clay/Slag Archive
(J Cowgill - City of Lincoln Archaeology Unit)

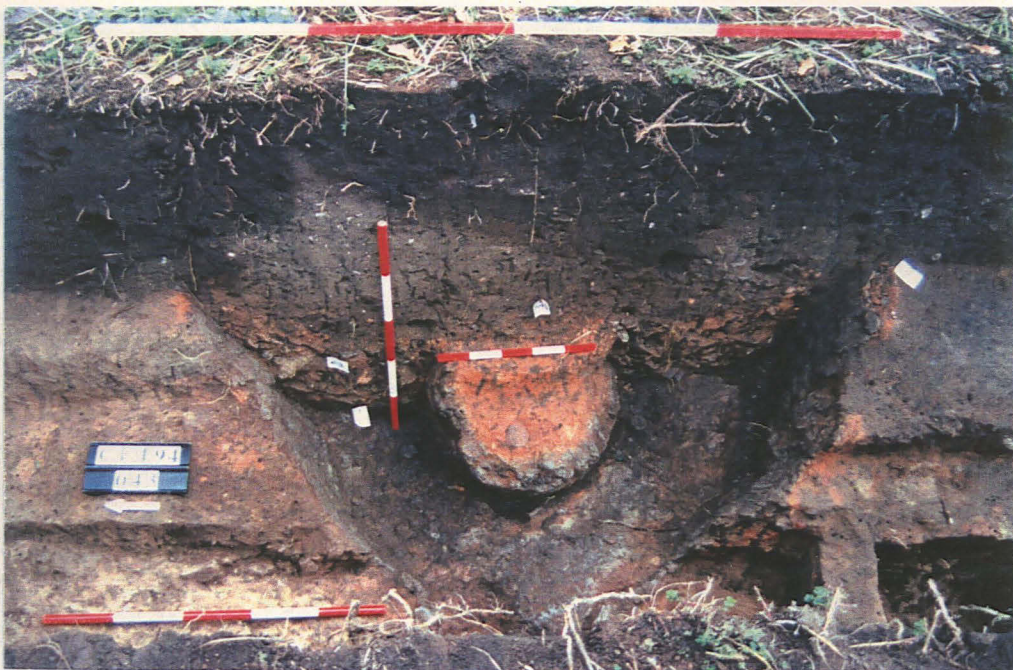
Appendix 6: Context Classification Lists

Appendix 7: Selected Site Matrices

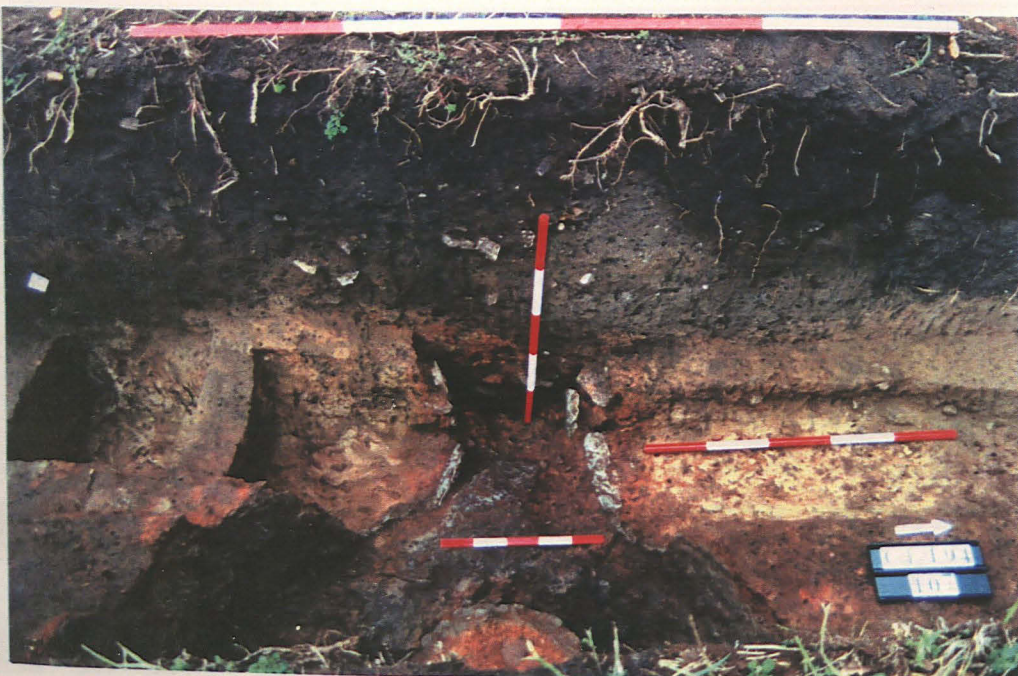
APPENDIX 1



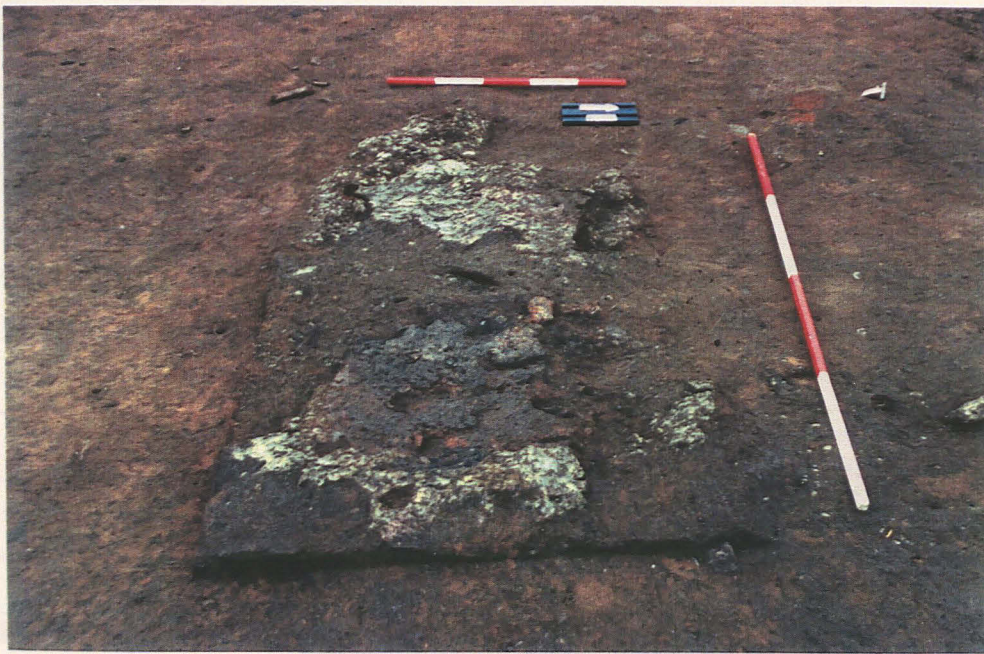
P1. Pottery kiln [116] during excavation of oven (complete pot in situ, right hand side)



P2. Sectioned oven of kiln [116] after complete excavation of oven. Note raised central pedestal.



P3. The same kiln looking west at flue into stoke hole (largely beyond excavation)



P4. General view of kiln [051], looking west (oven base in foreground)



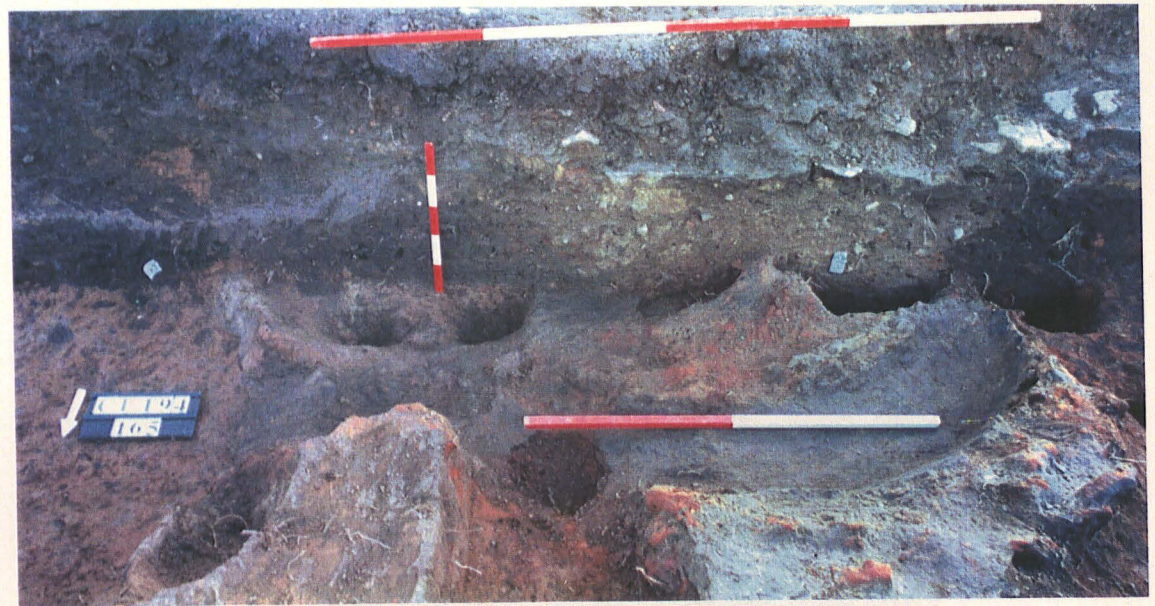
P5. Kiln [012], looking south. The dominant dark area is the backfilled stoke hole. The oven is marked by the red burnt area to the right



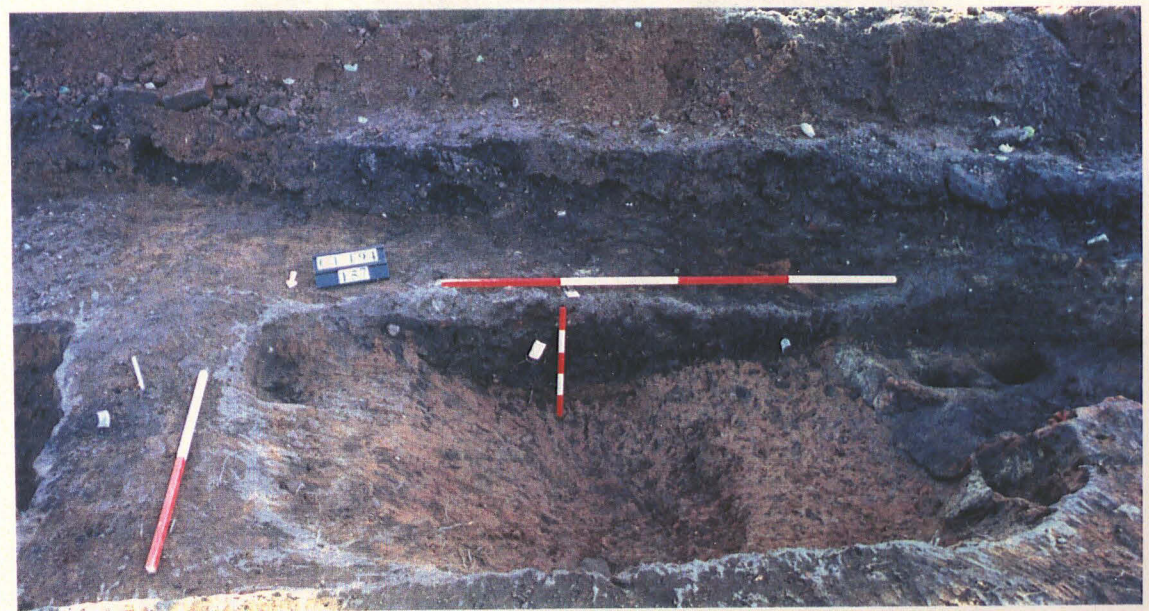
P6. Truncated kiln oven base [224]



P7. General view of pottery kiln [157], looking west with stoke hole in foreground



P8. Truncated oven of pottery kiln [157]. The smaller horizontal scale rests on the oven base, immediately in front of the central pedestal. The number board is in the stoke hole



P9. Sectioned stoke hole of kiln [157]. The flue can be seen on the right hand side of the photograph



P10. General view of cemetery remains in north-south service trench, looking south



P11. Grave [094] and remains of earlier grave on left hand side



P12. South edge of grave [187]
(extreme north end of trench)



P13. Grave [179] (above legs, body
truncated by grave [185])



P14. Grave [177]



P15. Grave [174]



P16. Lime kiln [109]. In foreground (within oven), deposit of burnt lime and soil



P17. North edge of lime kiln (extreme right hand side) cut through fill of earlier pit



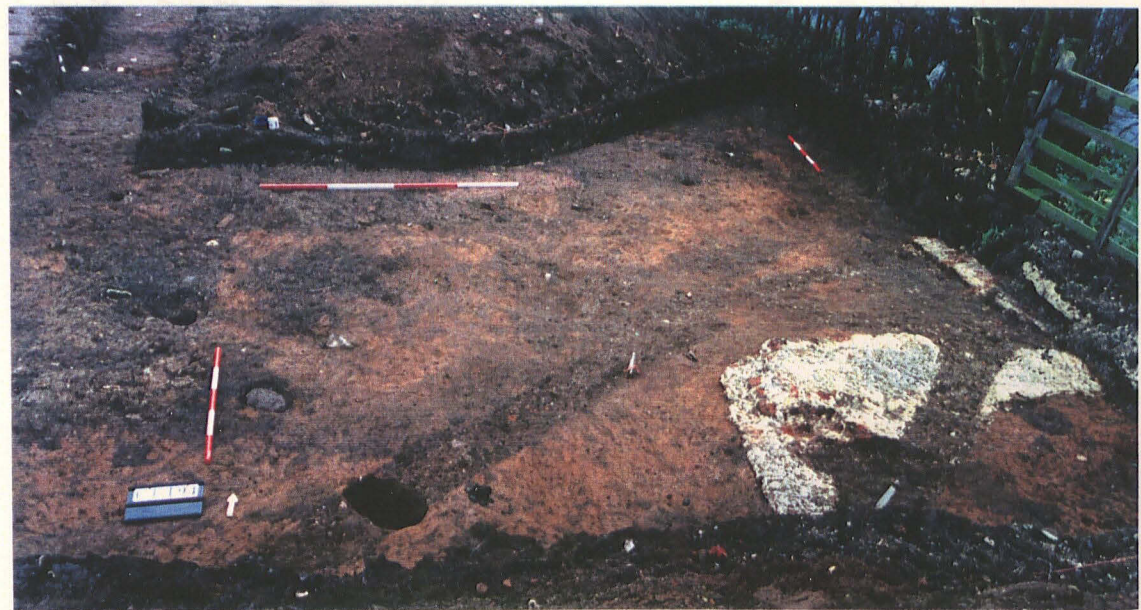
P18. Building remains near frontage. In foreground, wall remains [079]; in background, large ?threshold slab + demolition debris. Partition marked by stone edging [119], centre right within floor



P19. North-south palisade trench within proposed service trench. Note wall in foreground ?collapsing into trench



P20. Skeletal remains of cow in modern burial pit



P21. Late post-medieval/modern features on extreme east side of excavation

APPENDIX 2

A

Report to
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March 1995

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CASTLE FARM, TORKSEY (CFT94)

MEDIEVAL POTTERY ASSESSMENT REPORT

By J Wilkinson & J Young

CLAU ARCHAEOLOGICAL REPORT NO: 157

APPENDIX 3: CLAU POTTERY DATING 5TH TO 19TH CENTURIES AT SEP 1994

HORIZONS	DATING	PERIOD
ASH1	5TH - ?L7TH	ANGLO-SAXON
ASH2	?L7TH - ?L7/E8TH	MIDDLE SAXON
ASH3	?E8TH - ?M8TH	
ASH4	?M8TH - ?L8TH	
ASH5	?E9TH - ?M9TH	
ASH6	?M9TH - ?L9TH	
ASH7	?L9TH	LATE SAXON
ASH8	L9TH - E10TH	
ASH9	E/M10TH - M10TH	
ASH10	M10TH - L10TH	
ASH11	L10TH	
ASH12	E11TH - ?E/M11TH	SAXO-NORMAN
ASH13	?E/M11TH - M/L11TH	
ASH14	L11TH - E/M12TH	
MH1	?E/M12TH - M12TH	EARLY MEDIEVAL
MH2	M12TH - M/L12TH	
MH3	M/L12TH - E13TH	
MH4	E13TH - E/M13TH	
MH5	E/M13TH - ?L13TH	HIGH MEDIEVAL
MH6	?L13TH - ?M14TH	
MH7	?M14TH - ?L14TH	LATE MEDIEVAL
MH8	?L14TH - ?E15TH	
MH9	?E15TH - M/L15	
MH10	M/L15TH - L15TH	
PMH1	E16TH-M16TH	EARLY POST-MEDIEVAL
PMH2	M16TH-M/L16TH	
PMH3	M/L16TH-E17TH	POST MEDIEVAL
PMH4	E17TH-M17TH	
PMH5	M17TH-M/L17TH	
PMH6	M/L17TH-L17TH	
PMH7	L17TH-E18TH	
PMH8	E18TH-M18TH	LATE POST-MEDIEVAL
PMH9	M18TH-L18TH	
PMH10	L18TH-E19TH	
EMH	L18TH-20TH	EARLY MODERN

CFT94: Assessment Report on the Post-Roman Pottery

J Wilkinson and J Young

CLAU 06.03.95

1. Introduction

The excavation at Castle Farm, Torksey produced an important large group of post-Roman pottery. A total of 1720 post-Roman sherds were submitted for assessment. The material ranges in date from the late Saxon through to the early modern periods. A summary of ware types found on the site can be seen in Table 1. For a detailed description by context see appendix 2.

Table 1: CFT94 Overall date span of Pottery showing ware types by period

Ware code	No of sherds	percentage
LKT	2	
LATE SAXON	2	0.1%
LFS	5	
ST	4	
TORK	1634	
SAXO-NORMAN	1643	95.5%
EMX	1	
LEMS	16	
LSW1	2	
NSP	1	
EARLY MEDIEVAL	20	1.2%
BEVO	4	
LSW2	2	
LSW3	1	
MEDLOC	1	
MEDX	1	
NOTG	9	
MEDIEVAL	18	1.0%
CMW	1	
HUM	6	
LMLOC	1	
MP	4	
LATE MEDIEVAL	11	0.7%
BL	3	
CIST	3	
SLIP	1	
POST MEDIEVAL	7	0.4%
LPM	16	
LSTON	1	
MODERN	17	1.0%
LSW	1	
UNIDENTIFIED	1	0.1%
TOTAL	1720	100%

The material was collated and recorded according to the CLAU basic post-Roman ceramic archive level (ref. Guidelines For The Processing And Publication Of Medieval Pottery From Excavations). The record was entered into a UNIX based data base in two directories called spot and spotdate. In the spot directory a single record or line within each file represents a vessel or several vessels with the same ware type. Each record is divided into 7 fields: context / ware type (see appendix 1) / no.sherds / weight / drawing / form / comments. In the spotdate directory a single record represents a context. Each record is divided into 13 fields: context / earliest date / latest date / probable date / drawing (8 fields) / comments on the group.

The majority of the pottery (1634 sherds) is consistent with waste products from kilns producing Torksey-type wares. Previous finds of reduced sand tempered wasters have been made at several sites in Torksey (Barley 1966, 1981)

2. Condition

Much of the Torksey pottery uncovered was in good condition. A considerable variation in the range of colour occurred. There were examples of both fully reduced and fully oxidised sherds, together with those where imperfect control during firing had caused a variety of surface and core colours. Little of the pottery was of the typical back/red/black/red/black colouration that characterises Torksey ware found on domestic sites.

Most of the wastage appears to have been caused by poor control over the firing temperature rather than faulty manufacturing techniques. Obvious wasters, that is vessels totally distorted by firing, form only a small proportion of the sherds recovered. Examples include warping, dunting cracks, networks of hairline cracks, flaking surfaces and a hard brittle texture. Some of the other Torksey-type material showed signs of vitrification or differential firing and there is evidence that several of the vessels blew apart during firing.

A few of the Torksey vessels are obviously domestic waste and have sooting marks or internal white deposits.

3. The Pottery

Torksey ware

Fabric

The Torksey pottery (TORK) was initially sorted macroscopically. A sample of the material was then viewed under a binocular microscope at x20 magnification. Macroscopically and microscopically it was impossible to see any differences except for the amount of calcite present between the material recovered from the site and that found at the other Torksey kilns. The fabric of the material recovered from Castle Farm especially that from kiln 116 has noticeably more calcite in the fabric than that observed from the other kilns.

Forms

Detailed rim type analysis and measurement has not been done for this assessment. It should however be carried out at some future date both to enable comparison with material from other sites, especially those with secure dating and also to reconstruct the size range of vessels being produced.

A limited range of forms is present. The most common form is a standardised globular jar. There is evidence for both a range of sizes and rim types. A slightly thickened hollow everted rim seems to be the most common type and this can be paralleled from kilns 5, 7 and 1 at Torksey. Little decoration is present on any of the jar sherds. A small number of rims are thumbled, either continuously giving a piecrust effect or with single occasional pressings similar to those found on SNLS of the late 10th or early 11th century. A few shoulder sherds were decorated with incised horizontal lines and two vessels had direct thumbing to the body. Single examples of bossed and incised wavy line decoration were found. Square roller-stamping was found on the shoulder of two vessels, the pattern was similar to that found on kiln???

A small number of bowls are represented including examples of spouted or socketed bowls, small bowls with flanged rims and large Stamford type 1 bowls (Kilmurry 1980). With the exception of one inturned-rim bowl with diamond roller stamping on the rim edge, decoration is limited to thumb pressing to the rim edge or applied thumbed strips.

A small number of thick handmade base sherds and one large heavily decorated body sherd indicates the manufacture of large Thetford-type storage vessels. The thumb pressed applied strip decoration present on the body sherd is typical of these vessels.

There was little evidence for the production of spouted pitchers, however as this form was simply an adaptation of the jar form vessels may have gone undetected.

Other wares

Only 11 other sherds contemporary with the Torksey production were found. They include jars from Lincoln (LKT and LSH) and Stamford (ST).

The small number of medieval sherds present includes wares from Beverly (BEVO), Lincoln (LSW1 LSW2 LSW3), Nottingham (NSP NOTG), the Humber area (HUM), Yorkshire (MEDX) as well as unidentified local and non local sources.

The late medieval and post medieval pottery includes both local (LMLOC) and regionally imported wares (CIST CMW BL MP SLIP).

4. Dating

The kilns

Kiln 116

Table 2: CFT94 Kiln waste from kiln 116 sherd count by form type

FORM	RIM	BASE	BODY	Total
UNKNOWN FORM	.	17	75	92
JAR	105	90	335	530
SMALL JAR	17	5	.	22
LARGE JAR	.	.	2	2
PIECRUST JAR	5	.	.	5
BOSSSED JAR OR PITCHER	.	.	1	1
PRESSED JAR OR PITCHER	.	.	1	1
PITCHER?	1	.	.	1
BOWL	.	5	1	6
FLANGED BOWL	1	.	.	1
PIECRUST BOWL	5	.	.	5
Total sherds	134	117	415	666

The material recovered from the fills and sealing of kiln 116 was obviously kiln waste. Several of the vessels showed signs of having exploded during firing and the group may in fact represent the final use of the kiln. Included in the group was a complete but cracked plain globular jar probably a typical example of the vessels produced in this kiln. The complete profile of one other vessel and substantial parts of several more also argue for this being a primary deposit.

All of the vessels are competently made with thin even walls and show signs of careful finishing.

The main output of the kiln seems to be plain medium sized jars. Only 12 fragments of bowls and 3 possible pitcher sherds were recovered. The only decoration consisted of pressed 'piecrust' decoration to the rim of 10 sherds, the body of one and a single bossed sherd.

The material from this kiln probably dates to the early to mid 11th century. Early medieval sherds of 12th century date were found in the post-demolition deposits 005 and 008.

Kiln 051

Only a small number of sherds were associated with this kiln. It is difficult to place any reliable date on the material as three intrusive early medieval sherds and one possibly residual late Saxon LKT sherd occurred. One of the Torksey sherds had an internal white deposit indicating possible domestic use.

Kiln 012

Only two sherds of Torksey jars were found in this kiln. One of these had an internal white deposit.

Kiln 157

Table 3: CFT94 Kiln waste from kiln 157 sherd count by form type

FORM	RIM	BASE	BS	Total
UNKNOWN FORM	.	24	16	40
JAR	59	39	127	225
JAR INCISED WAVY DECORATION	.	.	1	1
PIECRUST JAR	1	.	.	1
JAR RILLED/GROOVED LINES	.	.	2	2
PIECRUST BOWL	5	.	.	5
SMALL FLANGED BOWL	2	.	.	2
Total	67	63	146	276

This kiln produced a large group of associated pottery. The vessels were very standardised being mostly medium sized jars. Fragments of seven bowls were found. One jar sherd had incised wavy line decoration on the shoulder.

The pottery was very thin walled, well made and appears to be earlier than that from kiln 116. This kiln was probably in operation during the late 10th or early 11th centuries.

Deposit 125 contained two intrusive sherds, one late medieval Humberware jug or cistern sherd and one sherd of late 11th or 12th century Stamford ware.

Kiln 224

Little can be said about the six Torksey sherds found in this kiln. One intrusive late medieval Humberware sherd occurred.

Lime kiln 109

Only two sherds of Torksey ware and one sherd of LSW3 were found in this feature. The glazed Lincoln ware sherd dates to the 14th or 15th centuries.

The cemetery

Pottery was only recovered from two graves - 174 and 094. Both graves produced only a small amount of Torksey ware. The sherds from grave 094 were similar to the products of kiln 157 and as such date to the late 10th or early 11th century. The material from grave 174 however included an early rim type and may date to the early to mid 10th century. This grave was cut by feature 222 which contained Torksey wares with square roller stamped decoration dating to no later than the late 10th century.

Grave like feature 095 produced a small group of 10th century pottery. Boundary trench 188 contained a few sherds dating to the 11th century. This feature cut a pit (218) which produced a bowl of early/mid to late 10th century date.

Late medieval (Post medieval) building remains

Little pottery was recovered from these features (080 and 082). The wares included CIST CMW and MP dating to the 16th century. A further sherd of the CIST tall two handled beaker found in 080 was recovered from pit 090.

Areas preserved in situ

Dating of these features is only by the pottery sampled from the upper surfaces and as such can only serve as a general guide.

Accumulation 021 produced a small group of Torksey ware including a jar base with an internal deposit. Only two sherds of Torksey ware were recovered from the upper fill 027 of ditch 030. Pit 026 cutting this ditch also only contained a few Torksey ware sherds.

Large sub-rectangular feature 029 produced a small but nice group of 13th century pottery. The group includes jugs from Lincoln (LSW2), Nottingham (NOTG) and Yorkshire (MEDX).

Dark soil 009 contained a small group including several LEMS vessels dating to the 12th century. Unexcavated pit 034 also contained sherds of LEMS.

Other features

A large group of residual Torksey wasters probably disturbed material from kiln 116 was recovered from the palisade trench. The latest pottery includes a LEMS cookpot and a NSP jug dating to the 12th century.

5. Local Context

Within the East Midlands area, production of wheel-thrown pottery was established at most of the major urban centres by the late 10th century and in some places (Lincoln, Stamford and Torksey) by the late ninth century.

The ceramic assemblage in most of the East Midlands and parts of Humberside and Yorkshire in the late 10th to mid 11th centuries is dominated by sandy Torksey-type wares. By the mid 11th century there is a resurgence of handmade fine shell tempered wares possibly made at a non-urban centre. This, coupled with an increased amount of traded Stamford fine wares seems to mark the end of the reduced sandy ware industries in the local area.

The excavations at Castle Farm bring the known number of kilns at Torksey to 12, the largest number from any centre in the area.

Despite the number of kilns producing Torksey-type wares there are surprisingly few find spots in the East Midlands outside the urban centres. In the EMASPP database, only 45 non-urban sites producing 381 sherds of Torksey-type pottery are recorded, compared with 159 sites producing 4555 sherds of LKT. The largest group from these sites is from Goltho where 223 Torksey-type sherds were recovered. From this evidence it is apparent that the two wares were marketed differently. Torksey-type wares certainly reached

Lincoln in some quantity especially during the 11th century with 5026 recorded sherds from the city. These Torksey-types mainly come from the Torksey kilns, although some sherds isolated by microscopic examination of the Flaxengate pottery (Adams Gilmour 1988) appear to belong to the Newark production. It is possible, given the estimated size of Torksey in the Lincolnshire Domesday that much of the pottery produced was only intended for local consumption.

In the north Torksey wares are commonly found in deposits of the late 9th to late 11th centuries. Scientific work (Brooks and Mainman 1984) however has shown that at least some of these Torksey-type wares may not have originated at Torksey. In the light of the new kilns found Castle Farm Torksey and those found producing Torksey-type wares at Newark (Phillips and Young 1994) a far wider programme of analysis needs to be set up covering the whole distribution area of Torksey-type wares. The study needs to take place on carefully selected material both from the kilns and from dated groups in the area to enable meaningful conclusions to be drawn.

6. Conclusions

The kiln production

The presence of only three vessels with roller stamp decoration, all found in earlier deposits is crucial in dating this material. Roller stamping is the most common type of decoration found on pottery in the East Midlands, East Anglia and Yorkshire from the late 9th to the mid to late 10th centuries. Industries starting in the late 10th century *ie* SNLS at Lincoln do not use this as a decorative element. Torksey wares found at both Lincoln and York (Mainman 1993, 584) from the late 10th century do not have this form of decoration. Conversely the direct thumbing of rims does not seem to take place until towards the end of the 10th century.

The waste products found on the Castle Farm site can be best paralleled by the material from kilns 7 and 5 at Torksey (Barley 1981, 282-283), tentatively putting the production between the end of the 10th and the middle of the 11th century. Torksey-type wares have become residual in deposits by the late 11th century in both Lincoln and York (Brooks 1984, 65). Production may have continued locally later than this although at present the only evidence is the occurrence of a few handmade early medieval vessels (EMHM) in a fabric similar to Torksey ware.

In light of recent work suggestions can be made for the dating of the kilns at Torksey as follows : kiln 2 operating in the mid to late 9th century, kiln 4 in the early to early/mid 10th, kiln 3 during the mid 10th, kiln 6 during the mid/late 10th, kilns 7 and cft94 157 during the late 10th, kilns 5 and cft94 116 during the late 10th to mid 11th and kiln 1 during the mid to late 11th.

The material excavated at Castle Farm adds greatly to our knowledge of the Torksey pottery industry. The site demonstrates the extensive nature of the production and indicates that many more kilns remain to be found. The pottery adds important new details of information to our current thoughts about the ware. This information will be of use to ceramic specialists and should be made available in a suitable published format.

7. Recommendations

- 1) Neutron Activation analysis should take place on a number of sherds as part of a programme of research on Torksey-type wares.
- 2) Rims should be typed and diameters measured from deposits obviously associated with kiln material.
- 3) The pottery should be published and not just left as an assessment report.

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APPENDIX 1: CLAU LIST OF WARE TYPE NAMES

Ware code	description	period	earliest horizon	latest horizon
BEVO	BEVERLEY ORANGE WARE	EMED-MED	MH1	MH7
BL	BLACKWARE	PMED	PMH3	EMH
CIST	CISTERCIAN-TYPE WARES	PMED	MH10?	PMH5
CMW	WHITE COAL MEASURE FABRICS	MED-PMED	MH7	PMH3
EMHM	EARLY MEDIEVAL HANDMADE FABRICS	EMED	MH1?	MH3?
EMX	EARLY MEDIEVAL NON-LOCAL FABRICS	EMED	MH1	MH4
HUM	HUMBERWARE	LMED-PMED	MH7	PMH2
LEMS	LOCAL EARLY MEDIEVAL SHELLY WARE	EMED	MH1	MH4
LFS	LINCOLN FINE-SHELLED WARE	SN	ASH11	MH3?
LKT	LINCOLN KILN-TYPE WARE	LSAX	ASH7	ASH11
LMLOC	LATE MEDIEVAL LOCAL FABRICS	LMED	MH8	PMH1
LPM	EARLY MODERN OR MODERN	EMOD	EMH	EMH
LSTON	LATE STONEWARES	EMOD	PMH10	EMH
LSW	UNDATED LINCOLN FABRICS	LSAX-LMED	ASH7	MH10
LSW1	GLAZED LINCOLN WARE	EMED	MH1	MH4
LSW2	GLAZED LINCOLN WARE	MED	MH4	MH6
LSW3	GLAZED LINCOLN WARE	LMED	MH6	MH9?
MEDLOC	MEDIEVAL LOCAL FABRICS	MED	MH4	MH10
MEDX	MEDIEVAL NON-LOCAL FABRICS	MED	MH4	MH10
MP	MIDLAND PURPLE-TYPE WARE	LMED-PMED	MH8?	PMH3?
NOTG	NOTTINGHAM GREEN-GLAZED WARE	MED	MH4?	MH7
NSP	NOTTINGHAM SPLASHED GLAZED WARE	EMED	MH1	MH4?
SLIP	SLIPWARE (GENERAL)	PMED	PMH4	EMH
SNLS	SAXO-NORMAN LINCOLN SANDY WARE	SN	ASH11	ASH13
ST	STAMFORD WARE	SN	ASH7	MH3
TORK	TORKSEY WARE	SN	ASH7	ASH13

Appendix Two:

Context	Common Name	No of Sherds Draw? Form	Comments
5	LEMS	1 - COOKPOT	BS;SV 006 008
5	TORK	1 - ?	BS
5	TORK	1 - BOWL	BASE
2	TORK	1 - BOWL?	BASE
2	TORK	2 - JAR	BASE
2	TORK	2 - JAR	RIMS
5	TORK	3 - JAR	RIMS
2	TORK	4 - ?	BS
5	TORK	4 - JAR	BS
2	TORK	5 - JAR	BS
6	LEMS	1 - COOKPOT	BASE;SV 008 005
6	LSW1	1 - JUG/PIT	BS
6	TORK	1 - BOWL	BASE
6	TORK	1 - BOWL	BS
6	TORK	1 - BOWL	RIM;HOOK
6	TORK	1 - JAR	BASE;OXID
6	TORK	1 - JAR	BS
6	TORK	1 - JAR	BS
6	TORK	1 - JAR	BS
6	TORK	1 - JAR	BS
6	TORK	1 - JAR	BS;CHAFF IMPRESSION
6	TORK	1 - JAR	RIM;PRESSED AS SNLS
6	TORK	1 - Lsj	BS;DIRECT THUMBED DECORATION
6	TORK	1 Y JAR	RIM;PIECRUST PRESSED RIM
6	TORK	110 - JAR	BS
6	TORK	17 - JAR	BASE
6	TORK	2 - ?	BASE
6	TORK	2 - JAR	BASE;SV?
6	TORK	2 - JAR	RIMS;TORK3
6	TORK	20 - JAR	RIMS
6	TORK	89 - ?	BS
8	LEMS	3 - COOKPOT	BS;SV 006 005
8	TORK	1 - BOWL	RIM;FLANGED
8	TORK	1 - BOWL	RIM;TORK16;PIECRUST PRESSED RIM
8	TORK	1 - BOWL;LARGE	BS
8	TORK	1 - JAR	BS;SHOWS COIL CONSTRUCTION
8	TORK	1 - JAR	RIM
8	TORK	1 - JAR	RIM;TORK1
8	TORK	1 - JAR	RIM;TORK11
8	TORK	1 - JAR	RIM;TORK12
8	TORK	1 - JAR	RIM;TORK13
8	TORK	1 - JAR	RIM;TORK14
8	TORK	1 - JAR	RIM;TORK14;OVERFIRED
8	TORK	1 - JAR	RIM;TORK14;OVERFIRED
8	TORK	1 - JAR	RIM;TORK3
8	TORK	1 - JAR	RIM;TORK3
8	TORK	1 - JAR	RIM;TORK3
8	TORK	1 - JAR	RIM;TORK4
8	TORK	1 - JAR	RIM;TORK4
8	TORK	1 - JAR	RIM;TORK4
8	TORK	1 - JAR	RIM;TORK4
8	TORK	1 - JAR	RIM;TORK4
8	TORK	1 - JAR	RIM;TORK4
8	TORK	1 - JAR	RIM;TORK4
8	TORK	1 - JAR	RIM;TORK4
8	TORK	1 - JAR	RIM;TORK4
8	TORK	1 - JAR	RIM;TORK4
8	TORK	1 - JAR	RIM;TORK4
8	TORK	1 - JAR	RIM;TORK4
8	TORK	1 - JAR	RIM;TORK4
8	TORK	1 - JAR	RIM;TORK5
8	TORK	1 - JAR	RIM;TORK5
8	TORK	1 - JAR	RIM;TORK5
8	TORK	1 - JAR	RIM;TORK5
8	TORK	1 - JAR	RIM;TORK5
8	TORK	1 - JAR	RIM;TORK5
8	TORK	1 - JAR	RIM;TORK5
8	TORK	1 - JAR	RIM;TORK5
8	TORK	1 - JAR	RIM;TORK5
8	TORK	1 - JAR	RIM;TORK5
8	TORK	1 - JAR	RIM;TORK5
8	TORK	1 - JAR	RIM;TORK5
8	TORK	1 - JAR	RIM;TORK5
8	TORK	1 - JAR	RIM;TORK5
8	TORK	1 - JAR	RIM;TORK5
8	TORK	1 - JAR/PIT	BS;BOSSSED DECORATION
8	TORK	1 - JAR/PIT	BS;DIRECT PRESSED DECORATION
8	TORK	1 - PITCHER?	RIM;TORK17;OVERFIRED
8	TORK	132 - JAR	BS
8	TORK	2 - JAR	RIM & BS;SV;TORK10
8	TORK	2 - JAR	RIM;SV;TORK15
8	TORK	2 - JAR;LARGE	BS
8	TORK	3 - JAR	RIMS;WARPED;OVERFIRED
8	TORK	30 - JAR	BASE
8	TORK	4 - JAR	BS & BASE;SV; COLOUR PATCHES
8	TORK	40 - ?	BS
8	TORK	7 - ?	BASE
9	LEMS	1 - ?	BS

Appendix Two:

Context	Common Name	No of Sherds Drawn?	Form	Comments
9	LEMS	1	BOWL	RIM
9	LEMS	1	COOKPOT	BS
9	LEMS	4	COOKPOT	BS
9	TORK	1	JAR	BS
9	TORK	3	JAR;SMALL	BASE;SV
10	TORK	1	JAR	RIM
10	TORK	7	JAR	BS
11	BEVO	2	JUG	BS;SV;? ID
11	EMX	1	?	BASE;QUARTZ & CALCITE; CHECK TS FOR CODE?
11	LKT	1	JAR	BASE
11	TORK	1	?	BASE
11	TORK	1	BOWL	RIM;FLANGED
11	TORK	1	JAR	BASE
11	TORK	1	JAR	RIM
11	TORK	1	JAR	RIM;PIECRUST PRESSED DECORATION
11	TORK	2	?	BS
11	TORK	8	JAR	BS
15	TORK	1	JAR	BS;INT DEP
15	TORK	1	JAR	RIM;? DIRECT PRESSED BODY OR TOP OF STRIP
18	TORK	1	BOWL	BS
18	TORK	1	BOWL	BS
18	TORK	1	BOWL?	BASE
18	TORK	1	JAR	BASE
18	TORK	1	JAR	BASE
18	TORK	1	JAR	BASE
18	TORK	1	JAR	BASE
18	TORK	1	JAR	BS
18	TORK	1	JAR	BS
18	TORK	1	JAR	RIM;TORK1
18	TORK	1	JAR	RIM;TORK2
20	LSW1	1	JUG/PIT	BS;? ID
20	NSP	1	JUG/PIT	BS
20	TORK	1	?	BASE
20	TORK	1	?	BASE;THICK
20	TORK	1	?	BASE;THICK
20	TORK	1	JAR	BASE
20	TORK	1	JAR	BS
20	TORK	2	JAR	BS
20	TORK	3	JAR	BASES
21	TORK	1	?	BASE
21	TORK	1	BOWL	RIM;FLANGED
21	TORK	1	BOWL	RIM;FLANGED
21	TORK	1	JAR	BASE;INT DEP
21	TORK	2	?	BS
21	TORK	2	JAR	BS
22	TORK	1	?	BASE
22	TORK	3	JAR	BS
25	TORK	1	JAR	BS
25	TORK	1	JAR	RIM
25	TORK	2	?	BS;SCRAPS
27	TORK	1	?	BASE
27	TORK	1	JAR	BS
28	LEMS	1	?	BASE
28	LSW2	1	JUG	BS
28	LSW2	1	JUG	BS
28	MEDLOC	1	?	BS;FABRIC A
28	MEDX	1	JUG	BS;DECORATED WITH COMBED HORIZONTAL AND VERTICAL LINES & CU SPOTS;YORKS
28	NOTG	1	JUG	BS
28	NOTG	1	JUG;LARGE	BS;CU GLZE
28	NOTG	1	JUG;LARGE	BS;CU GLZE
33	LEMS	2	?	BASE
33	TORK	1	JAR	BS
33	TORK	1	JAR;SMALL	BASE
33	TORK	2	JAR	BASE
45	TORK	1	JAR	BASE;SCRAP
45	TORK	1	JAR	BS;SCRAP
64	LSW3	1	JUG	BS
64	TORK	1	?	BASE
64	TORK	1	JAR	BASE
67	HUM	1	JAR/JUG	BS
67	LSW	1	?	BS
68	LKT	1	?	BS;? ID
68	TORK	1	JAR	RIM
68	TORK	5	JAR	BS
69	LFS	1	?	BS
69	ST	1	JAR/PIT	BS;INCISED HORIZONTAL LINE
69	TORK	1	?	BASE
69	TORK	1	BOWL	RIM;FLANGED

Appendix Two:

Context	Common Name	No of Sherds Draw? Form	Comments
69	TORK	1 - BOWL;SMALL	RIM;FLANGED
69	TORK	1 - JAR	BASE
69	TORK	1 - JAR	RIM;PIECRUST PRESSED RIM DECORATION
69	TORK	8 - JAR	BS
70	TORK	1 - BOWL	RIM;FLANGED
70	TORK	1 - BOWL	RIM;INT
70	TORK	1 - BOWL	RIM;INT
70	TORK	1 - BOWL;SMALL	RIM;FLANGED
70	TORK	1 - JAR	BS;SPALLED
70	TORK	1 - JAR	BS;SROUL SHOULDER;
70	TORK	1 - JAR	BS;SROUL SHOULDER;
70	TORK	1 - JAR	RIM
70	TORK	1 - PITCHER	HANDLE JOIN
70	TORK	1 Y BOWL	RIM;PIECRUST PRESSED RIM DECORATION
70	TORK	10 - ?	BS
70	TORK	13 - JAR	BS
70	TORK	2 - JAR	BS;SV;SLIGHTLY RILLED
70	TORK	2 - JAR	BS;SV;SOOT
70	TORK	2 - JAR	BS;SV;SOOT;INT DEP
70	TORK	3 - JAR	BS;SV;SOOT
70	TORK	5 - ?	BASE
70	TORK	7 - JAR	RIMS;EARLY?;EVERA1
70	TORK	9 - JAR	BASE
71	TORK	1 - ?	BASE
71	TORK	1 - JAR	BASE
71	TORK	1 - JAR	RIM
71	TORK	4 - ?	BS
75	TORK	1 - ?	BASE
75	TORK	1 - ?	BS
75	TORK	1 - JAR	BS
75	TORK	2 - JAR	RIM
80	CIST	1 - CUP	BS;SV 90?
80	LMLOC	1 - JUG	BASE;INT DEP
82	CMW	1 - BOWL	RIM;RAWLMARSH TYPE
82	MP	1 - CISTERN	BASE;THUMBED HOLE
82	TORK	1 - JAR	BS
85	BEVO	2 - JUG	BS;SV;SPL GLZE;? ID
85	LEMS	1 - ?	BS
85	TORK	1 - BOWL?	BASE
85	TORK	1 - JAR	BASE
85	TORK	1 - JAR	RIM; THUMBED RIM
85	TORK	2 - ?	BS
85	TORK	2 - JAR	BS
85	TORK	2 - JAR	RIMS
86	BL	1 - ?	18/19TH
86	BL	1 - ?	INT GLZE;18/19TH
86	CIST	1 - CUP	-
86	HUM	1 - JAR/JUG	BASE
86	HUM	1 - JAR/JUG	BS
86	HUM	1 - JAR/JUG	BS;RIDGED;INT DEP
86	MP	1 - CLOSED	BASE
86	MP	1 - JAR	RIM
86	TORK	1 - BOWL	RIM;EVERTED;OVERFIRED
86	TORK	1 - JAR	RIM;PIECRUST PRESSED RIM DECORATION
86	TORK	11 - JAR	BS
86	TORK	2 - ?	BS
86	TORK	2 Y BOWL;SPOUTED	RIM;EVERTED
86	TORK	3 - JAR	BASE
86	TORK	6 - JAR	RIMS
90	CIST	1 - CUP	BS;SV 80?
90	LSTON	1 - -	BASE
90	MP	1 - JAR/JUG	BS
90	NOTG	5 - JUG;LARGE	BASE & BS;SV;FRESH BREAKS
90	TORK	1 - BOWL	RIM
90	TORK	1 - JAR	BS
90	TORK	5 - JAR	BASE
90	TORK	8 - JAR	RIMS
92	TORK	1 - BOWL	RIM;PIECRUST PRESSED RIM
92	TORK	1 - JAR	RIM;PIECRUST PRESSED RIM
92	TORK	10 - ?	BASE
92	TORK	162 - JAR	BS
92	TORK	2 - BOWL	BASE
92	TORK	2 - BOWL	BASE;SV
92	TORK	2 - JAR	BASE;SV
92	TORK	2 - JAR	BASE;SV;OXID
92	TORK	2 - JAR	RIM;SV;PIECRUST PRESSED RIM
92	TORK	2 - JAR	RIMS;SV

Appendix Two:

Context Common Name	No of Sherds Draw? Form	Comments
92 TORK	2 - JAR	RIMS;SV
92 TORK	2 - JAR;SMALL	BASE;SV;BLOWN
92 TORK	2 Y JAR	RIM & BS;SV;PIECRUST PRESSED RIM
92 TORK	2 Y JAR	RIM;SV
92 TORK	28 Y JAR	PROFILE;SV
92 TORK	29 - ?	BS
92 TORK	3 - JAR;SMALL	BASE;SV
92 TORK	3 Y BOWL;LARGE;STRAIGHT SIDED	RIM;PIECRUST PRESSED RIM
92 TORK	3 Y JAR	RIM;SV
92 TORK	4 Y JAR	RIM & BS;SV
92 TORK	4 Y JAR	RIM & BS;SV
92 TORK	41 - JAR	RIMS
92 TORK	47 - JAR	BASE
92 TORK	8 Y JAR;SMALL	RIM & BS;SV
92 TORK	9 Y JAR;SMALL	RIM;SV
93 TORK	1 - ?	BASE
93 TORK	1 - BOWL;SPOUTED?	RIM
93 TORK	1 - JAR	BS;PRESSED BODY;INT DEP
93 TORK	1 - JAR	RIM;EARLY;OXID
93 TORK	4 - JAR	BS
93 TORK	5 - JAR	RIMS
93 TORK	7 - JAR	BASE
93 TORK	8 - ?	BS
96 NOTG	1 - JUG	BS
96 TORK	1 - ?	BASE
96 TORK	2 - JAR	RIM
96 TORK	4 - JAR	BS
97 TORK	1 - BOWL	RIM;PIECRUST PRESSED RIM DECORATION
97 TORK	1 - JAR	BS;INCISED WAVY DECORATION
97 TORK	117 - JAR	BS
97 TORK	13 - ?	BS
97 TORK	17 - ?	BASE
97 TORK	2 - BOWL;SMALL	RIM;SV;FLANGED
97 TORK	2 - JAR	BS;SV;RILLED/GROOVED LINES
97 TORK	38 - JAR	BASE
97 TORK	51 - JAR	RIM
98 BL	1 - ?	INT GLZE;18/19TH
98 TORK	3 - JAR	BASE
98 TORK	5 - JAR	BS
102 TORK	3 - ?	BS
102 TORK	3 - BOWL;LARGE;STAM TYPE 1	BASE & BS;THUMBED VERT STRIP DECORATION
105 TORK	1 - JAR	BASE
105 TORK	1 Y JAR	COMPLETE VESSEL;WASTER
105 TORK	3 - JAR	BS
106 TORK	1 - JAR	BASE
106 TORK	2 - JAR	BASE;?SV
106 TORK	2 - JAR	RIM & BS
106 TORK	2 - JAR	RIM & BS
106 TORK	3 - JAR	RIM & BS
106 TORK	5 - ?	BS
106 TORK	7 - JAR	BS
125 HUM	1 - JUG/CISTERN	HANDLE;PURPLE GLAZE
125 ST	1 - JAR/PIT	BS;ASH13+
125 TORK	1 - BOWL	RIM;PIECRUST PRESSED RIM DECORATION
125 TORK	1 - JAR	BASE
125 TORK	1 - JAR	RIM;PIECRUST PRESSED RIM DECORATION
125 TORK	10 - JAR	BS
125 TORK	2 - JAR	RIM & BS
125 TORK	3 - ?	BS
125 TORK	3 - BOWL	RIM;PIECRUST PRESSED RIM DECORATION
125 TORK	3 - JAR	RIM & BS
125 TORK	3 - JAR	RIMS
125 TORK	7 - ?	BASE
126 TORK	1 - JAR	BASE
126 TORK	3 - ?	BS
126 TORK	3 - JAR	BASE & BS;2 INCISED HORIZ LINES
126 TORK	4 - JAR	RIMS
126 TORK	7 - JAR	BS
131 SLIP	1 - ?	BS;BADLY WORN NO GLZE;? ID
131 TORK	3 - ?	BS
131 TORK	3 - JAR	BS
134 LPM	16 - -	-
134 ST	1 - JAR/PIT	BS;ASH11+
134 TORK	1 - JAR	BASE
134 TORK	1 - JAR	BS
134 TORK	2 - JAR	RIMS
138 TORK	2 - JAR	BASE;SV

Appendix Two:

Context	Common Name	No of Sherds	Draw?	Form	Comments
138	TORK	2	-	JAR	RIM
138	TORK	3	-	?	BASE
138	TORK	5	-	JAR	BS
148	TORK	1	-	JAR	BASE
148	TORK	2	-	JAR	BS
148	TORK	2	-	JAR	RIM
151	ST	1	-	JAR	RIM;ASH11+
151	TORK	1	-	JAR	RIM;PRESSED AS SNLS
151	TORK	1	-	JAR	RIM;PRESSED AS SNLS
151	TORK	1	Y	BOWL;SPOUTED	RIM;EVERTED;
151	TORK	14	-	JAR	BS
151	TORK	15	-	?	BS
151	TORK	16	-	JAR	RIMS
151	TORK	4	-	?	BASE
151	TORK	5	-	JAR	BASE
153	TORK	1	-	JAR	BASE
153	TORK	1	-	JAR	RIM
153	TORK	2	-	JAR	BS
154	TORK	1	-	?	BASE
154	TORK	1	-	?	BS
154	TORK	2	-	JAR	RIMS
158	HUM	1	-	JAR/JUG	BS;PURPLE GLAZE
158	TORK	1	-	JAR	RIM
158	TORK	1	-	JAR	RIM;ODD
158	TORK	2	-	?	BS
158	TORK	2	-	JAR	RIM & BS;SV
174	TORK	1	-	BOWL	BS
174	TORK	2	-	JAR	BS
174	TORK	3	-	?	BASE
174	TORK	3	-	?	BS
174	TORK	3	-	JAR	RIMS;COUNT!
200	TORK	1	-	JAR	BASE
200	TORK	2	-	JAR	RIM
200	TORK	5	-	JAR	BS
203	TORK	1	-	?	BS
203	TORK	1	-	JAR	BASE
203	TORK	1	-	JAR	RIM
203	TORK	2	-	?	BASE
216	TORK	1	-	JAR	BS
216	TORK	1	-	JAR	RIM
216	TORK	1	Y	BOWL	INT RIM;DROUL RIM EDGE
216	TORK	3	-	?	BS
216	TORK	5	-	?	BASE
217	LFS	1	-	?	BS
217	LFS	3	-	?	BASE;SV
217	TORK	3	-	JAR	RIMS

APPENDIX 3

Torksey, CFT94

Environmental Archive report

Introduction

The samples obtained from the excavations at Torksey were insufficient for any detailed analyses. This report therefore presents a description of the samples, and assessment of their contents and a catalogue of the animal bones.

Samples

A total of five samples were collected. Three of these were samples of charcoal from the kiln stoke-holes, and two were soils samples from the stoke hole of one of the kilns, <116> and the residue in kiln <109>. The charcoal samples are reported below by Rowena Gale.

A one litre sub-sample of each of the soil samples was taken and wet-sieved and floated on a 250 micron mesh. The floats were scanned under a low power binocular microscope, and the residues sorted and described.

Sample 1, <106>, kiln <116>

This sample is composed of fired sandy silt, reddened by heat and baked into small lumps. Much of it washed through the sieve but 15% was retained on the mesh and all was fired sandy silt, no pebbles or gravel was present. The sample included small fragments of pottery and calcined bone. Comminuted and slightly larger charcoal fragments were very common. These included both timber fragments and small roundwood and twig fragments. Also a number of carbonised seeds, a few cereal grains, moss fragments and unidentifiable grass? tubers are present. The latter indicate material other than wood being burnt, possibly 'hay' and twigs were being used as kindling or possibly other material was being thrown on the fire.

Sample 4, <108>, kiln <109>

The composition of this sample is different to sample 1. While including some fire reddened sandy silt lumps it appears to have been subjected to less 'firing'. The major component of the residue is fire reduced limestone, which is exceedingly friable, and some fossils from the limestone. 50% of the sample was retained by the sieve. The float is composed almost entirely of charcoal with one or two carbonised seeds and cereal grains. Although described as a 'mortar' sample these results perhaps confirm the suggestion that the kiln was used as a 'lime kiln' at least as its last function.

Animal bone

23 contexts produced an assemblage of only 62 bones. These included cattle, horse, sheep, pig and human bones and a single find of goose. An archive catalogue is appended.

ARCHIVE CATALOGUE OF ANIMAL BONES FOR TORKSEY, CFT94

SITE	CONT	SPEC.	BONE	NO	SIDE	FUS.	ZONES	TOOTH WEAR	COMMENTS
CFT94	006	OVCA	MAND	1	R		578	FGHI13JK	TOOTH ROW BROKEN
CFT94	006	CSZ	RIB	1	F				SHAFT FRAG
CFT94	006	OVI	MTT	1	R	DF	12345		2 PECES GL125 BP19.6 DP18.2 BD23.5 DD14 SD10.6
CFT94	009	OVCA	RAD	1	R				MIDSHAFT
CFT94	010	OVCA	FEM	1	L	DN	4		DIST HALF SHAFT EPI UNF
CFT94	011	CSZ	RIB	1	F				SHAFT FRAG
CFT94	011	BOS	MAX	1	L			J12K11	
CFT94	021	BOS	MTT	1	R	DF	345		LATERAL EXPANSION OF CONDYLE
CFT94	021	BOS	HUM	1	L		69		DIST HALF SHAFT
CFT94	021	CSZ	RIB	1	F				SHAFT FRAG-ERODED
CFT94	021	BOS	MTC	1	R		5		SHAFT-2 PIECES
CFT94	021	BOS	MTC	1	L	DN	15		SHAFT & PROX-ERODED
CFT94	021	SUS	SCP	1	R		35		DIST SHAFT-CHEWED
CFT94	021	BOS	INN	1	R	EF	5		ERODED ILLIAL FRAG
CFT94	021	BOS	SCP	1	F				SHAFT FRAG
CFT94	021	OVCA	HUM	1	R	DF	6789		DIST HALF
CFT94	021	BOS	AST	1	R				GL58.2 BP39.8 BD36
CFT94	021	BOS	CAR	1	W				WORN
CFT94	027	BOS	MTC	1	L		1		PROX FRAG
CFT94	028	BOS	AXI	1	F				ANT VENTRAL FRAG-PEG
CFT94	028	SUS	MAND	1	R		678	G6H6I11J6K0	MALE
CFT94	033	CSZ	RAD	1	F				PROX END-VERY SEVERELY ERODED
CFT94	064	CSZ	RIB	1	F				SHAFT FRAG-PROX CHOPPED
CFT94	064	SUS	HUM	1	L		6		DIST SHAFT-LARGISH ?ADULT
CFT94	064	CSZ	LBON	1	F				SHAFT FRAG-CHARRED ?RADIUS
CFT94	064	OVCA	FEM	1	L	DF	567		DIST END
CFT94	068	OVCA	TIB	1	L	DF	567		DIST END- BD24 DD19
CFT94	068	BOS	FEM	1	R		4		DIST SHAFT
CFT94	069	MAN	RIB	2	F				VERY ERODED
CFT94	069	MAN	SCP	1	F				DISTAL SPINE-VERY ERODED

CFT94 069	MAN	HYD	1	F				SHAFT VERY ERODED
CFT94 069	MAN	LBON	3	F				VERY ERODED SHAFTS
CFT94 070	CSZ	RIB	1	F				SHAFT FRAG - 2 PIECES
CFT94 070	BOS	MAND	1	L	23	g11h14		JUV
CFT94 070	CSZ	LBON	1	F				SHAFT FRAG
CFT94 070	CSZ	LMV	1	F				LATERAL FRAG
CFT94 070	CSZ	LBON	1	F				SHAFT FRAG
CFT94 070	CSZ	UKN	1	F				INDET FRAG-BURNT
CFT94 070	BOS	HUM	1	R				DIST POST SHAFT FRAG
CFT94 070	CSZ	UKN	1	F				INDET-SCP ? RIB
CFT94 070	SUS	AST	1	R				WHOLE
CFT94 071	OVCA	TIB	1	L	PJ	123		PROX-3 PIECES FUSION VIS
CFT94 071	GOOS	RAD	1	F	PF			PROX HALF
CFT94 075	OVCA	MTC	1	L		1		PROX SHAFT-ROBUST ? MALE
CFT94 080	EQU	MTT	1	R	DF	123		COMPLETE-GL250 BP42.8 BD43.8 SD27.4
CFT94 082	OVCA	INN	1	L	EF	459		ACETAB-?FEMALE
CFT94 082	OVCA	MAND	1	L		2	GH12I13J12	M3 LOST-P2 ABSENT
CFT94 082	OVCA	MAND	1	L		2	GH12I13J12	M3 LOST
CFT94 085	SUS	MAX	1	L			GH6I10	FRAG ONLY
CFT94 086	BOS	MAND	1	L		7	J16K16	M1 LOST ANTEMORTEM
CFT94 086	BOS	MAND	1	L		23		PROB PART OF ABOVE
CFT94 086	SUS	HUM	1	R	DN	690		DIST SHAFT-POROUS-JUV
CFT94 086	OVCA	MTT	1	R		25		SHAFT-VERY ERODED
CFT94 093	OVCA	RAD	1	L		3		PROX SHAFT-BROAD
CFT94 131	BOS	MTT	1	R	DF	12345		GL211 BP42.4 BD49 SD24.2 DP39 DD27.8
CFT94 153	SSZ	MAND	1	R				VENTRAL FRAG RAMUS
CFT94 154	BOS	PH2	1	L	PF	12		COMPLETE
CFT94 174	CSZ	RIB	1	F				SHAFT FRAG
CFT94 174	BOS	SCP	1	F				FRAG SHAFT

Key to codes used in the cataloguing of animal bones

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	TOOTH WEAR - Codes are those used in Grant, A. 1982 The use of tooth	
SSZ	sheep size	OCIP	occipital	wear as a guide to the age of domestic animals, in B.Wilson,	
EQU	horse	ZYG	zygomatic	C.Grigson and S.Payne (eds) <i>Ageing and sexing animal bones from</i>	
CER	red deer	MAND	mandible	<i>Archaeological sites, 91-108.</i>	
CAN	dog	MAX	maxilla	Teeth are labelled as follows in the tooth wear column:	
MAN	human	ATL	atlas	h ldpm4/dupm4	f ldpm2/dupm2
UKN	unknown	AXI	axis	H lpm4/upm4	g ldpm3/dupm3
CHIK	chicken	CEV	cervical vertebra	I lm1/um1	
GOOS	goose, dom	TRV	thoracic vertebra	J lm2/um2	
LEP	hare	LMV	lumbar vertebra	K lm3/um3	
UNB	indet bird	SAC	sacrum		
MALL	duck, dom.	CDV	caudal vertebra	ZONES - zones record the part of the bone present.	
GULL	gull sp.	SCP	scapula	The key to each zone on each bone is on page 2	
		HUM	humerus		
		RAD	radius	MEASUREMENTS - Any measurements are those listed in A.Von den Driesch (1976)	
		MTC	metacarpus	<i>A Guide to the Measurement of Animal Bones from Archaeological</i>	
		MCL-4	metacarpus 1-4	<i>Sites, Peabody Museum Bulletin 1, Peabody Museum, Harvard, USA</i>	
		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		

ZONES - codes used to define zones on each bone

SKULL - 1. paraoccipital process	METACARPUS -	1. medial facet of proximal artciulation, MC3
2. occipal condyle		2. lateral facet of proximal articulation, MC4
3. intercornual protuberance		3. medial distal condyle, MC3
4. external acoustic meatus		4. lateral distal condyle, MC4
5. frontal sinus		5. anterior distal groove and foramen
6. ectorbitale		6. medial or lateral distal condyle
7. entorbitale		
8. temporal articular facet	FIRST PHALANX	1. proximal epiphysis
9. facial tuber		2. distal articular facet
0. infraorbital foramen		
	INNOMINATE	1. tuber coxae
MANDIBLE		2. tuber sacrale + scar
1. Symphyseal surface		3. body of illium with dorso-medial foramen
2. diastema		4. iliopubic eminence
3. lateral diastemal foramen		5. acetabular fossa
4. coronoid process		6. symphyseal branch of pubis
5. condylar process		7. body of ischium
6. angle		8. ischial tuberosity
7. anterior dorsal ascending ramus posterior M3		9. depression for medial tendon of rectus femoris
8. mandibular foramen		
	FEMUR	1. head
VERTEBRA		2. trochanter major
1. spine		3. trochanter minor
2. anterior epiphysis		4. supracondyloid fossa
3. posterior epiphysis		5. distal medial condyle
4. centrum		6. lateral distal condyle
5. neural arch		7. distal trochlea
		8. trochanter tertius
SCAPULA	TIBIA	1. proximal medial condyle
1. supraglenoid tubercle		2. proximal lateral condyle
2. glenoid cavity		3. intercondylar eminence
3. origin of the distal spine		4. proximal posterior nutrient foramen
4. tuber of spine		5. medial malleolus
5. posterior of neck with foramen		6. lateral aspect of distal articulation
6. cranial angle of blade		7. distal pre-epiphyseal portion of the diaphysis
7. caudal angle of blade		
HUMERUS 1. head	CALCANEUM	1. calcaneal tuber
2. greater tubercle		2. sustentaculum tali
3. lesser tubercle		3. processus anterior
4. intertuberal groove		
5. deltoid tuberosity	METATARSUS	1. medial facet of proximal artciulation, MT3.
6. dorsal angle of olecranon fossa		2. lateral facet of proximal articulation, MT4
7. capitulum		3. medial distal condyle, MT3
8. trochlea		4. lateral distal condyle, MT4
		5. anterior distal groove and foramen
RADIUS		6. medial or lateral distal condyle
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		

APPENDIX 4

TORKSEY CFT 94: CHARCOAL

Rowena Gale

INTRODUCTION

Samples of charcoal from stoke holes and kilns from a Late Saxon pottery were examined and identified to indicate the species and type of wood used to fuel the kilns.

MATERIALS AND METHODS

The charcoal was well preserved: some of the largest pieces measured up to 80mm in the longest axis. The charcoal fragments were sorted into groups based on the anatomical features observed on a freshly exposed transverse surface (TS) using a X20 hand lens. Representative fragments were selected from each group for detailed examination at high magnification. These fragments were fractured to expose clean, flat surfaces in the transverse, tangential and radial longitudinal (TLS and RLS) planes and supported in sand. The diagnostic features were examined using an incident-light microscope at magnifications of up to X400 and matched to reference material.

Where possible, the age, dimensions and maturity (ie. sapwood or heartwood) of the wood were noted.

RESULTS

The results are summarised in Table 1.

Sample <2>, (105), stoke hole kiln 116, included mainly *Quercus* sp., oak, (heartwood). The fragments were large but none included a complete transverse radial span of the trunk or branch: the widest measured 30mm, with growth rings of up to 4mm wide indicating a moderate growth rate. These measurements suggested a minimum trunk/branch diameter 80mm.

Fragments of *Alnus* sp., alder, (stem) were also present. Stem diameters ranged from c. 17.5mm - 20mm, the narrowest included 5 growth rings and the widest included \pm 16 fairly narrow growth rings.

Sample <3>, (143), kiln stoke hole, large kiln, included mainly *Quercus* sp. (heartwood). Some fragments measured 20mm in radial TS but were incomplete and were evidently from fairly wide trunks or branches. Insect/larval channels were present on some pieces and, since few species will penetrate the heartwood of living oak, may infer the use of dead wood.

Two narrow stem/twig pieces included: one piece, *Quercus* sp., diameter incomplete but possibly 10mm; the second, *Ulex* sp./*Cytisus* sp., gorse/ broom, diameter 8mm, with a slightly broadened base where severed/ detached from parent. *Ulex* and *Cytisus* are anatomically similar.

Sample <5>, (214), ?residue from last firing, kiln 109, included

Fraxinus sp., heartwood. Some chunks were very large. One incomplete piece measured 30mm radially and 80mm tangentially: by extending the line of the circumference a minimum trunk/branch diameter of 130mm was estimated. This piece included at least 40 annual rings, of which many in the outer 10mm+ were very narrow, indicating a period of slow growth. The inner growth rings were wider (up to 2mm in width) suggesting a more moderate growth rate. The age of the tree may have exceeded 50 or 60 years. Two fragments were only partially carbonised.

NB. The dimensions of wood cells are considerably reduced during pyrolysis; the main factors influencing the scale of reduction include the structural characteristics of the wood (eg. cell wall thickness and moisture content) and the temperature of burning. The greatest loss occurs in the radial plane (Prior and Alvin 1983). Some light-weight woods, eg. *Alnus*, can be reduced to almost half their original volume (Gale unpub). The measurements given above are taken from charred material: when living, comparable measurements of these tissues would have been much larger.

COMMENTS

Quercus and *Fraxinus* made up the bulk of the fuel used in these kilns. Wood of both taxa included heartwood and was probably taken from trunks or branches (cord wood) from well established trees; there was no evidence of coppiced or pollarded stems. The presence of partially carbonised *Fraxinus* indicated that this species, at least, was used as wood fuel rather than charcoal: *Fraxinus* is noted for its ability to burn well when green (unseasoned). The high thermal capacity of *Fraxinus* and *Quercus* has ensured their preferred use for most industrial purposes since antiquity (Edlin 1949).

The remains of *Alnus* and *Ulex*/*Cytisus* faggots were identified from two kilns. The use of stems from a wide age range of *Alnus* (5 and 16+) provided inconclusive evidence of coppicing, although, one could argue that, if several of the kilns in this industrial complex were in operation simultaneously over an extended period of time, some form of woodland management would have been necessary to sustain the requisite supply of wood. *Alnus* makes a poor fuel unless used as charcoal. *Ulex*, however, makes an excellent fuel, particularly for ovens and kilns, since it burns fast, emitting intense heat (Edlin 1949) and it has been used, as such, since antiquity, for example, *Ulex* and *Pteridium* (bracken) were found in the kitchen area of a Saxon priory near Oxford (Lambrick 1985). In some areas, eg. Ireland, *Ulex* was cultivated and coppiced (Lucas 1960) but the evidence from Torksey is too slight to make such conclusions.

Quercus deadwood (see above) may have been used as tinder or kindling (with brushwood).

In conclusion, the main fuel woods for these kilns appears to have been heartwood from narrow trunks or cord wood from *Quercus* and *Fraxinus* trees probably growing in natural woodland; *Fraxinus* was used green. Brushwood or charcoal from narrow stems of *Alnus* and *Ulex* (or *Cytisus*) was also used, perhaps as kindling: the evidence for the

existence of woodland management or coppicing/pollarding was inconclusive.

REFERENCES

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Lucas, A.T. 1960 Furze - a survey and history of its uses in Ireland. National Museum of Ireland Stationary Office

Prior, J. and Alvin, K. L. 1983 Structural changes on charring of woods of *Dichostachys* and *Salix* from Southern Africa. IAWA Bull. n.s. 4(4)

APPENDIX 2
 FIREWOOD AND CHARCOAL ANALYSIS

TABLE 1. Torksey CFT 94: charcoal from stoke holes and kilns.
 h=heartwood; s=stem. The number of fragments identified from each
 sample is indicated.

Sample	Context	Description	<i>Alnus</i> Alder	<i>Fraxinus</i> Ash	<i>Quercus</i> Oak	<i>Ulex/Cytisus</i> Gorse/Broom
2	105	Stoke hole, Kiln 116	6s	-	48h	-
3	143	Stoke hole, large kiln	-	-	43sh	1s
5	214	?Residue from last firing, Kiln 109	-	37	-	-

APPENDIX 5

FIRED CLAY AND SLAG ARCHIVE

By Jane Cowgill

FIRED CLAY

1. Identification

Context	Weight	Count	Type	Comments
006	39g	1	Oxidised	Possibly corroded
008	150g	6 pieces	Most oxidised	?Loomweight ?Wattle impression
086	63g	1	PNR Tile Disc	
092	78g	2	Oxidised	Possibly corroded
097	134g	2	Brick? oxidised	
097	43	1	Reduced ceramic	
126	12	1	Reduced	
134	28	1	Peg Tile	
125	12	1	Reduced	
131	20	1	Brick	

2. Recommendation

Clay and temper type should ideally be assessed by a ceramic specialist. It should be noted that there are both oxidised and reduced clays some of the former may be corroding, (check iron inclusions).

SLAG

Archive

Context	Weight	Count	Type	Comments
085	55g	1	Vitrified clay	Probably associated with an industrial process
082	34g	1	As above	
082	6g	1	Charcoal	
080	60g	1	Vitrified clay	As above
071	39	1	Secondary iron smithing slag	

Appendix 6: Context classification

Contexts in north-south service trench, east side of excavation
(between grid points 129/116 and 129/134)

Context	Description
[062]	Layer of reddish-brown sandy silt containing stones and charcoal flecks (poss. associated with [101] in main trench). ?Post-med. demolition layer/redeposited demolition material
[063]	Ash spread above gully [155]
[064]	Secondary infill within kiln [109]; contained much rubble
[065]	Fired kiln lining; sandy clay. ?Not a pottery kiln/reused as ?lime kiln
[066]	Thin layer/lens of ash-filled soil in top of feature [188]
[067]	Grey silty sand filling small pit-like feature, largely concealed behind west section
[068]	Grey/brown silty sand filling east-west linear gully
[069]	Grey/brown silty sand filling grave [094]
[070]	Grey/brown silty sand filling east-west linear gully
[085]	Greenish-brown silty sand on south side of gully [155]
[091]	Thick accumulation of dirty (?wind-blown) sand which seals all archaeological features
[093]	Mixed ashy sandy silt filling grave [174]
[094]	Grave cut
[095]	Shallow east-west linear gully
[108]	Fill within kiln oven [109]; pink, black, white sandy mortar, intermingled with charcoal. ?Secondary use of kiln
[109]	Cut for bowl-shaped kiln oven
[110]	Cut for large circular pit; pre-dates kiln oven [109]
[114]	Mixed silty clay-sand filling grave [115] (only part-excavated)
[115]	Grave cut
[153]	Thin lens of iron-pan overlying natural sand deposit [175]
[154]	Orange/brown silty sand in base of gully [155]
[155]	East-west linear gully, south side of trench
[156]	Upper fill of gully [155]
[174]	Grave cut
[175]	Clean orange/yellow soft sand, common to entire area; of natural origin, probably wind-blown
[176]	Grey/brown silty sand filling grave [177]
[177]	Grave cut
[178]	Grey/brown silty sand filling grave [179]
[179]	Grave cut
[180]	Grey/brown silty sand filling possible grave [181]
[181]	Grave-like cut, apparently containing no human remains
[182]	Grey/brown silty sand filling possible grave [183]
[183]	Grave-like cut, apparently containing no human remains
[184]	Grey/brown silty sand filling grave [185]
[185]	Grave cut
[186]	Grey/brown silty sand filling grave [187]
[187]	Grave cut
[188]	East/west ditch/gully: possible southern boundary of cemetery
[189]	Grey/brown silty sand filling ?post hole [190]
[190]	?Post hole
[210]	Uppermost backfill of kiln [109]; secondary infill comprising brown silty sand, intermingled with small stones and charcoal
[211]	Upper (secondary) fill of kiln oven [109]: Dark grey/black silty sand containing fired clay fragments; sim. to [064] but increased % of fired clay frags.
[212]	Same as [108]
[213]	Red/orange granular sand within kiln [109]; possibly derived as a result of weathering

- of the kiln sides, prior to infilling
- [214] c. 10cm of charcoal in kiln [109]: ?remnant of last firing (?to produce lime mortar)
 - [215] Orange/brown sand (c. 4cm thick): eroded lining of kiln [109]
 - [216] Pit fill: grey/brown silty sand
 - [217] Grey/brown sandy silt containing fragments of fired clay; fill within ditch/gully [188]
 - [218] Pit-like feature, partly behind east section (earlier than ditch/gully [188])
 - [222] Cut, east-west linear gully; later than grave [174]

**Contexts in north-south service trench, north-west side of excavation
(between grid points 89/121 and 89/129)**

- [001] Topsoil
- [002] Greyish-brown sandy soil filling large grave cut for horse burial, probably of modern origin
- [003] Cut, horse burial (possibly cut through topsoil)
- [004] Yellowish-brown clay-silt containing frequent limestone fragments; upper fill of palisade trench [007]
- [005] Layer of soft grey/brown silty sand overlying demolition debris associated with kiln [043]/[116]. Probably = [008]
- [006] Light grey/brown silty sand, part-filling palisade trench [007]
- [007] North-south, straight-sided, regular palisade-type trench; post-dates pottery kiln [116]
- [008] Grey/brown silty sand containing frequent pot sherds and charcoal flecks + kiln debris - upper fill of kiln [116]; post-dates demolition
- [018] Possible collapsed wall, falling within palisade trench [007]; flat angular limestones falling into and butting east edge of trench
- [019] Yellow/orange silty sand (compact) within trench [007]; redeposited natural sand/backfill
- [020] Grey sandy silt below [019] in palisade trench
- [037] Soft light grey ashy sandy silt filling pit [032]; pre-dates kiln [116]
- [038] Pit on south side of (and cut by) kiln [116]
- [039] Upper fill of slot/gully, orientated N/E - S/W; not excavated
- [040] Cut for the above
- [041] Fill of part-excavated pit, south side of area; well-defined mid-grey/brown silty sand
- [042] Cut for the above
- [043] Lining, kiln [116]; red fired clay in bowl-shaped profile; large central pedestal; west-facing stoke hole ([107])
- [044] Natural yellow/orange, soft sand ? of wind-blown origin (same as [175])
- [092] Grey/brown (30% red-orange patches) compact silty sand mixed with frequent fired clay fragments, charcoal; demolition material (fill) of kiln [116]
- [104] Complete globular jar in kiln [116], resting on/within [105]. In post-exc., vessel given small find number - 4.
- [105] Loose grey silty ashy sand below [092] in kiln; remnant of spent fuel from last firing
- [106] Same as [105] in kiln flue
- [107] Limestone lining of kiln flue, largely truncated by palisade trench [007]. Flue deepens towards the west (?due to raking action when ashes removed). Flue floor = fired clay
- [116] Cut for pottery kiln
- [127] Layer of light grey/brown silty sand, north side of area; later than kiln, earlier than palisade trench
- [139] Moderate density, light grey/brown sandy silt containing frequent small flat limestone frags. Similar to [018]; possibly upper fill of pit [042]
- [140] Layer of light grey/brown silty sand, south side of trench; cut by pit [042] and by palisade trench [007]

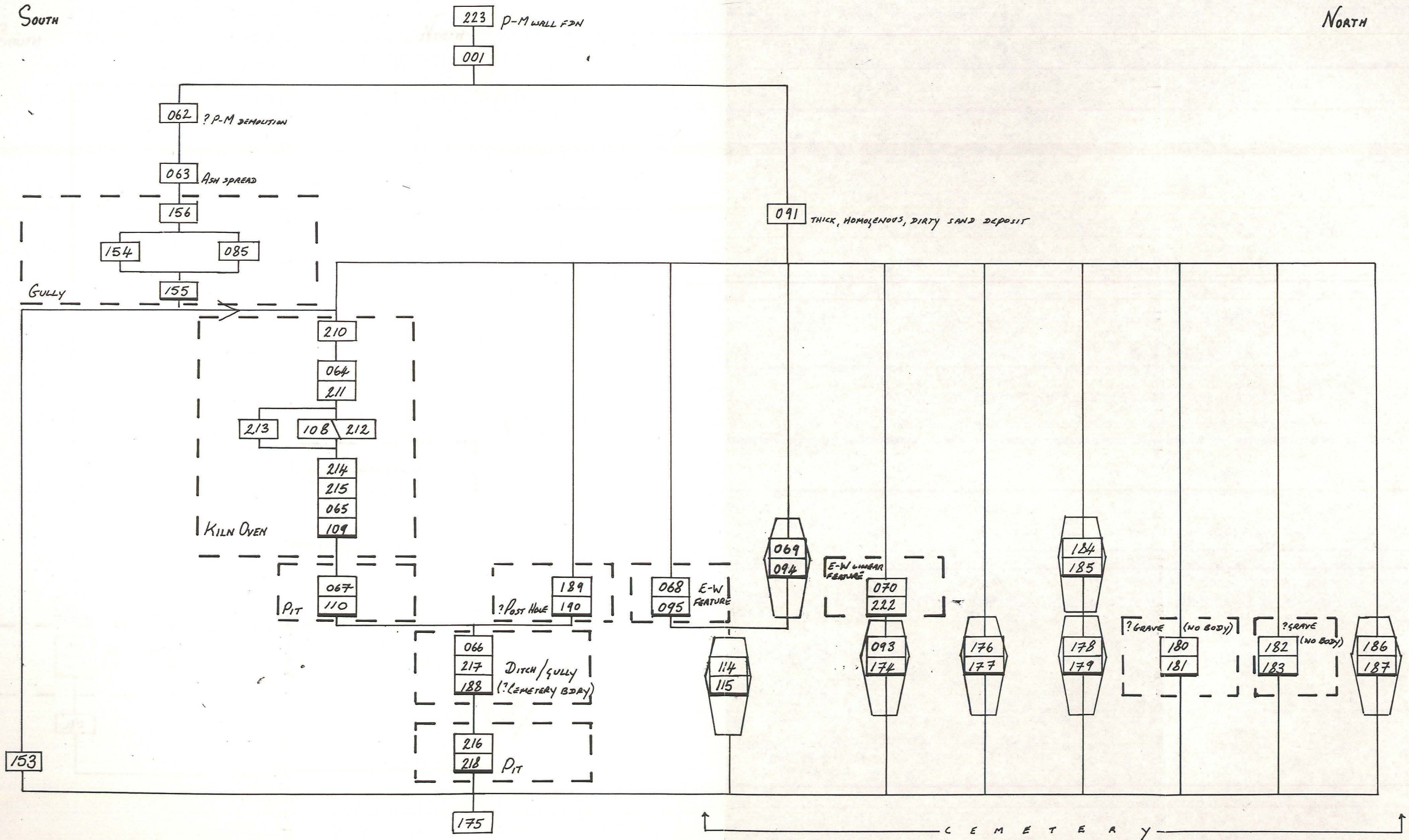
Context in central area (between grid points 110/110 - 135/110)

- [101] Redeposited Keuper Marl/Mercia Mudstone. ?Remains of modern surface, same as [062]
- [102] Fill of modern rectangular feature, east side of area
- [103] Cut for the above
- [111] Fill, modern pit (containing brick + mortar)
- [112] Cut for the above; sub-square in plan
- [113] Cut, modern feature (fill removed as [086])
- [117] Shallow cut in floor [083] containing rubble + mortar: ?repair to floor
- [118] Redeposited Keuper Marl/Mercia Mudstone; bedding to floor [083], filling depression
- [119] North-south line comprising two upright slabs set in floor [083]: partition within ?med. building
- [120] ?Remains of N-S wall (part of med. building)
- [121] Fill of small post hole (on same alignment as [119], [120]. Probably modern
- [122] Cut for the above
- [124] Five possible stake holes on E-W alignment, cut into [083]: ?partition
- [125] Fill of kiln oven
- [126] Upper stoke hole fill in [097]. Very disturbed
- [128] Fill of sub-square feature on east side of kiln stoke hole associate with large central kiln.
- [129] Cut for the above
- [130] Fill of modern post hole (containing base of timber post in situ)
- [131] Cut for the above
- [132] Fill of shallow north-south scoop, east side of main trench
- [133] Cut for the above; possibly associated with [135]
- [134] Fill of sub-square modern feature; brick inclusion could be post packing
- [135] Cut for the above
- [136] Fill of modern sub-square pit
- [137] Cut for the above
- [138] Fill of oval-shaped pit containing large flat stone. Pit cut through kiln destruction
- [141] Cut for the above
- [142] Fill of kiln flue/collapsed structure: collapsed wall of flue
- [143] Fill of flue/stoke hole (same as [097]): large central kiln
- [144] Fill of post pit in south section
- [145] Cut for the above: pre-dates building, post-dates kiln
- [148] Fill of depression containing partition line [119]: consolidation
- [149] Small bowl-shaped cut feature ?associated with building construction.
- [150] Natural wind-blown/glacial sand
- [151] Fill, same as [096]: fills rectangular pit [152]
- [152] Cut for the above
- [157] Stoke hole cut, large central kiln
- [158] Demolition material associated with kiln/furnace [224]
- [159] Remains of fired clay lining associated with the above
- [160] Natural wind-blown/glacial sand (reddened in area of large central kiln oven)
- [161] Fill of unexcavated post hole: possibly related to kiln [224]
- [162] Cut for the above
- [163] Fill of post hole; possibly related to kiln [3224]
- [164] Cut for the above
- [165] Base of kiln oven/flue: incorporates remains of large central pedestal
- [166] Same as above
- [167] Cut, kiln stoke hole (same as [157])
- [168] Three small stake holes within stoke hole [157]
- [169] Cut of possible bowl furnace: edges burnt in situ
- [170] Fill, modern linear feature
- [171] Cut for the above; shallow linear feature, orientated S/W - N/E
- [172] Fill, shallow gully, orientated N/E - S/W
- [173] Cut for the above
- [191] Pit fill

- [192] Cut for the above; small pit in south section of main trench
- [193] Fill of ?bowl furnace [169]
- [194] Fill of truncated feature, seen only in section
- [195] Cut for the above
- [196] Same as [086]
- [197] Same as [087]
- [198] Fill of truncated pit
- [199] Cut for the above
- [200] Fill of small round pit/post hole associated with stone building phase
- [201] Cut for the above
- [202] Pit cut revealed as slight depression in [160]
- [203] Fill of posthole
- [204] Cut for the above
- [205] Cut of pit
- [206] Black layer of tarmac over east end of site (modern farmyard surface)
- [207] Duplicated number (as [149])
- [208] Fill of north/south gully
- [209] Fill of [208] contains many fired clay fragments
- [220] Band of cobbles seen in north section, possible drain edge associated with post-med building
- [221] Straight slot, ?edge of drain. Aligned with [220]
- [224] Cut for fire/hearth base
- [225] Fill of small pit (not excavated)
- [226] Fill of small cigar-shaped feature. Not excavated further
- [227] Cut of modern levelling layer. Widespread truncation
- [228] Modern brick wall of farm building
- [229] Modern north/south brick wall
- [230] Old topsoil layer
- [231] Construction cut for wall [129]
- [232] Backfill of the above after wall [229] built
- [233] Rubbly layer sealing brick wall [229]
- [234] Layer of sand and silt. Widespread truncation
- [235] Modern north/south brick wall
- [236] Cut for the above
- [237] Cut of shallow scoop with modern fill
- [238] Firm layer over natural
- [239] Modern brick rubbly fill of small pit (not excavated)
- [240] Cut of modern sub-rectangular pit
- [241] Fill of backfilled boundary ditch on alignment with hedge
- [242] Cut for north/south linear feature (?ditch)
- [243] Fill of modern posthole
- [244] Cut for the above
- [245] Fill of modern posthole
- [246] Cut for the above
- [247] Fill of modern posthole
- [248] Cut for the above
- [249] Fill of small pit
- [250] Cut for the above
- [251] Square-shaped pit fill

Appendix 7 Selected site matrices

CFT 94: MATRIX OF DEPOSITS IN N-S SERVICE TRENCH, EAST SIDE OF SITE
(BETWEEN GRID POINTS 129/116 AND 129/134)



CFT 94: MATRIX OF DEPOSITS IN NORTH-WEST SERVICE TRENCH (BETWEEN GRID POINTS 89/121 - 89/129)

SOUTH

NORTH

