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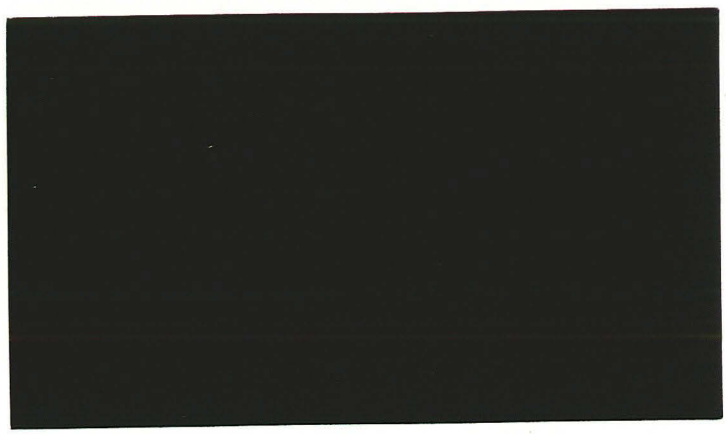
PRE-CONSTRUCT ARCHAEOLOGY

LINCOLN

ARCHAEOLOGICAL EVALUATION REPORT: LAND OFF SCHOOL LANE, OLD LEAKE, LINCOLNSHIRE

Site Code:	SLOB01
NGR:	TF 4060 5010
Planning Ref.	B/00/0026/00
Accession No.	2001.100



EVENT LI 2189
SOURCES LI 6892 LI 6893
13590 LI 81860
13591 LI 81861
13592 LI 81862

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Report prepared for Brown & co.
by Chris Clay

Pre-Construct Archaeology (Lincoln)
61 High Street
Newton on Trent
Lincoln
LN1 2JP
Tel. & Fax. 01777 228155

June 2001

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Summary

- *An archaeological trial excavation took place in advance of a residential development on land off School Lane, Old Leake, Lincolnshire.*

- *Previous investigations in this area have identified Anglo-Saxon and medieval settlement activity, and a preceding desk based assessment and geophysical survey of the current site identified its potential to yield archaeological and palaeoenvironmental remains that would require quantification by intrusive techniques.*

- *The excavations have produced evidence of activity spanning between the late Saxon period and the18th century. Most of this activity appears to have been of a domestic/agrarian nature; both for earlier and later periods.*

- *The palaeoenvironmental evidence from late Saxon and medieval earth-cut archaeological features demonstrates that these features incorporate well preserved charred and uncharred remains in the form of cultivated and non-cultivated seeds, animal bones, fish and shellfish remains and other domestic refuse*

- *Although salt making was a significant local industry during the medieval period, there is relatively little evidence that salt processing was undertaken at the current site, where occupation appears to have been primarily of a domestic/agrarian nature.*

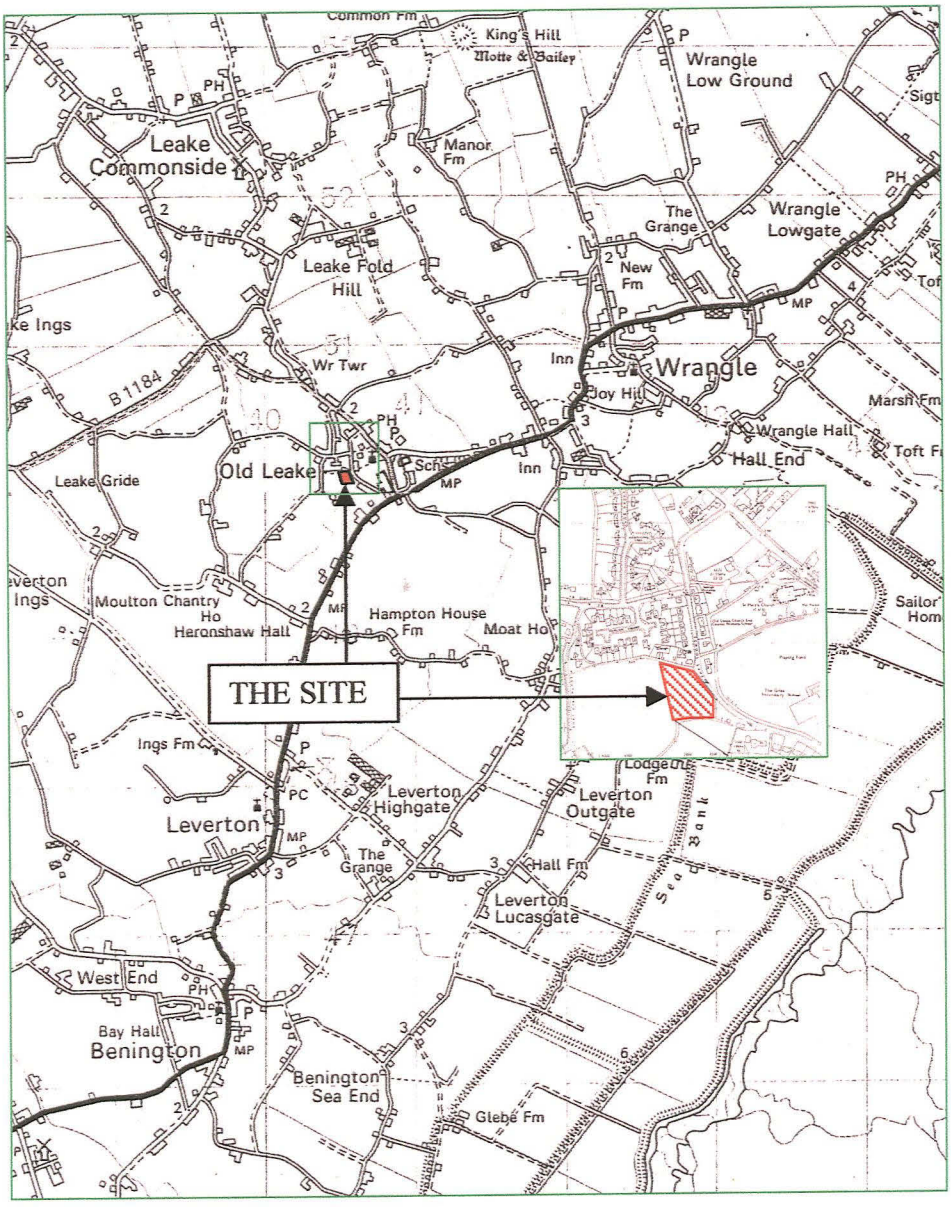

Fig.1: Location of site Scale 1:50000 (inset 1:5000)

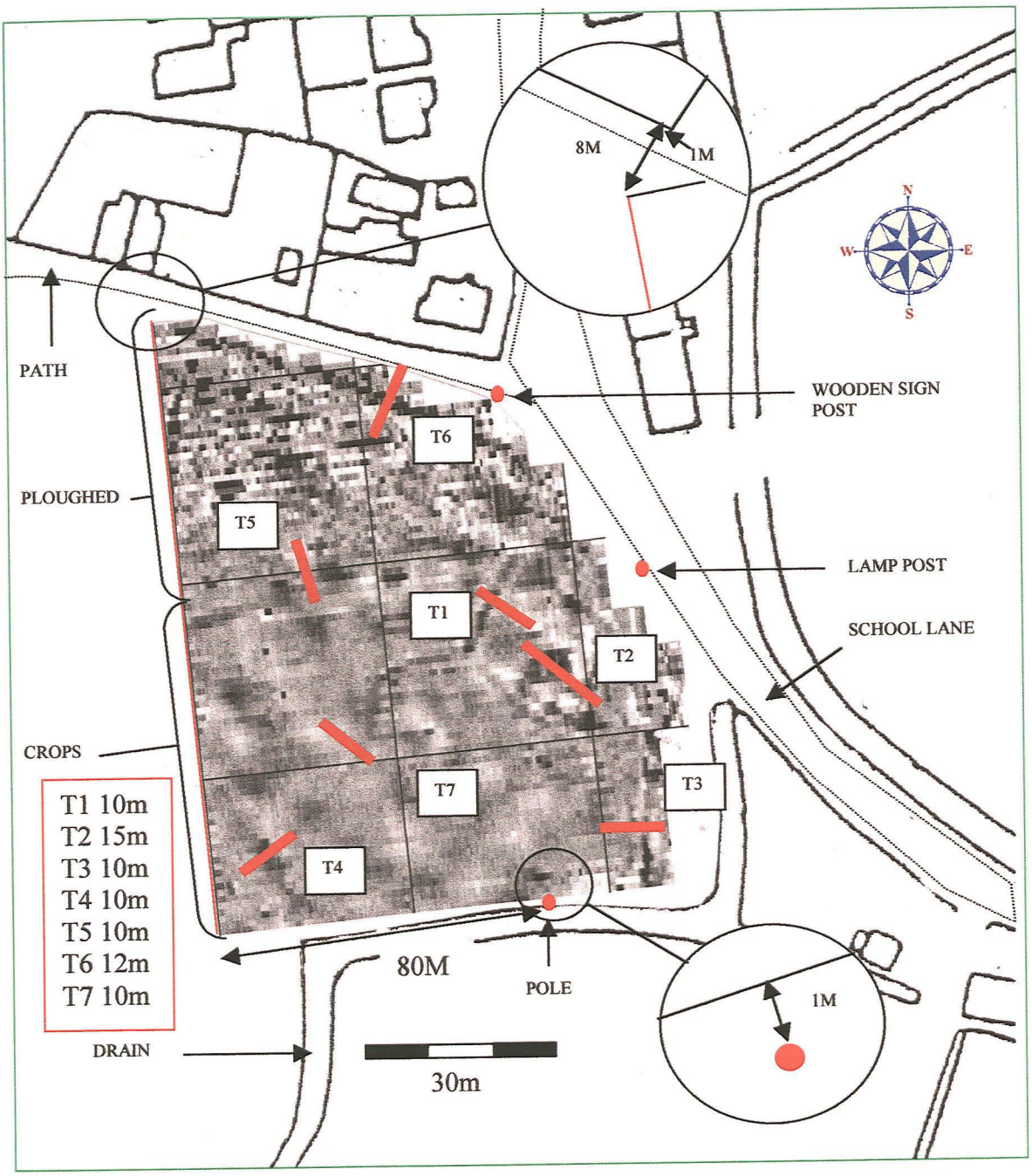

Fig.2: Location of trenches. Scale 1:1000

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1.0 Introduction

Pre-Construct Archaeology (Lincoln) were commissioned by Brown & Co., on behalf of their client, to undertake a programme of archaeological investigation and reporting, in advance of a residential development on land off School Lane, Old Leake, Lincolnshire.

This report details the results of a limited trial excavation, the objective of which was to determine the archaeological significance of magnetic anomalies that were detected during a preceeding fluxgate gradiometer survey. It is written to conform to national and local guidelines, as defined in the Lincolnshire County Council document *Lincolnshire Archaeological Handbook: A Manual of Archaeological Practice* (LCC, 1998), and it complies with the recommendations of the Community Archaeologist for Boston Borough Council.

2.0 Site location and description

Old Leake is situated in the fens of south Lincolnshire, approximately 8km north-east of Boston. The proposed development site is a 0.57ha component of a 3.25ha field, located on the south-west edge of the village, west of School Lane. It centres on NGR TF 4060 5010.

The modern ground surface is low-lying (approximately 2-3m OD) and comprises predominantly flat agricultural land. Most of the area is currently vacant, excluding the vestiges of a cauliflower crop, which extends east to west in a 15-20m wide strip through the centre of the site.

The site lies on a drift geology of Terrington Beds; consisting of salt marsh, tidal creek and river deposits, laid down from the Romano-British period onwards. This overlies a solid geology of Ancholme Group Clays (British Geological Survey, 1995).

3.0 Planning background

Outline planning permission is sought for residential development. In consideration of the archaeological potential of the site, the Community Archaeologist for Boston Borough Council recommended the undertaking of a programme of archaeological investigation, to establish the potential of the site to yield archaeological remains, the potential threat to such remains from development, and to inform a reasoned planning decision that would seek to address the interests of both the developer and the buried archaeological resource. This process is consistent with the recommendations of *Archaeology and Planning: Planning Policy Guidance Note 16* (PPG16).

A desktop assessment for this site was compiled in May 2000 (Allen, 2000), and a fluxgate gradiometer survey was undertaken by Pre-Construct Geophysics in March 2001 (Rylatt & Bunn, 2001).

4.0 Archaeological and historical background

The first definitive archaeological evidence for settlement within the parish dates to the later Anglo-Saxon period. The name, Leake, is believed to derive from an Old English word, *lece*, meaning 'the brook' (Cameron, 1998). An evaluation of land off Church Road, 200m north-east of the current site, revealed features dating between the 9th-11th centuries (Palmer-Brown, 1996).

The Domesday Book records continued settlement activity during the early medieval period: in 1086, the area was a jurisdiction of Drayton, populated by 32 Freemen, 30 villagers and 15 smallholders. The Survey lists a total of 26 salt-houses (Morgan & Thorne, 1986), and salt making was a major industry in the Lincolnshire fenland from the Iron Age onwards.

Archaeological evidence, in the form of pottery scatters, indicates continuous settlement at Old Leake from the Anglo-Saxon period to the present day, excluding a possible depopulation in the 17th century (possibly an effect of the Civil War) (Allen, 2000).

A geophysical survey of the site identified a number of magnetic anomalies of potential archaeological significance (Rylatt & Bunn, 2001). Linear anomalies were detected, running along the northern and eastern edges of the survey, and were interpreted as realignments of field boundaries or neighbouring footpaths/roads. Extending south-west to north-east across the centre of the site was a curvilinear anomaly, which was interpreted as a possible palaeochannel. It was suggested that this feature was also associated with a sub-rectangular enclosure, detected at its north-eastern extremity.

5.0 Methodology

Seven evaluation trenches, each approximately 2m wide and 10-15m long, were investigated to assess the archaeological significance of the site. Each trench was located to examine specific anomalies detected by gradiometry:

Trench 1: (10m x 2m). Aligned north-west to south-east to traverse the north-western side of a putative enclosure

Trench 2: (15m x 2m). This was aligned approximately north-west to south-east, to examine the possible enclosure ditch, as well as an anomaly, thought to represent a pit or an area of burning.

Trench 3: (10m x 2m). This was located to traverse a suspected north-south boundary ditch in the south-east corner of the site.

Trench 4: (10m x 2m). Aligned north-east to south-west, to traverse a linear anomaly.

Trench 5: (10m x 2m). This was positioned to examine a tentative curvilinear anomaly. Aligned north-north-west to south-south-east.

Trench 6: (15m x 2m). Aligned approximately north-east to south-west, to traverse a linear anomaly; believed to represent an earlier phase of the footpath, which marks the northern edge of the site.

Trench 7: (10m x 2m). Aligned north-west to south-east, to investigate a possible palaeochannel.

Excavation was carried out using a JCB, fitted with a 1.6m wide toothless ditching blade. Topsoil and subsoil was removed in spits of approximately 0.2m, until archaeological and/or natural deposits were encountered. Further excavation was then carried out by hand to establish the profile, orientation, depth and (where possible) date of archaeological features. Features were drawn in plan and section at a scale of 1:20, and a colour photographic record was maintained, from which selected prints are reproduced in this report. The work was undertaken by a team of three experienced archaeologists, and supervised by the author, between the 8th and 14th of May 2001.

6.0 Results

The uppermost deposit in all seven trenches was a dark grey-brown ploughsoil of silty clay, between 0.25 and 0.4m deep.

6.1 Trench 1 (fig. 3)

One large ditch was exposed, orientated north-east to south-west, which corresponded with the position and orientation of geophysical anomaly 7.

A single ditch-like feature, [101], approximately 3.5m wide and 0.6m+ deep, was exposed at the north-west end of the trench, aligned north-east to south-west (see plate 2). The upper portion of the ditch had gently sloping sides, with both becoming steeper towards the limit of the excavation. The base of the feature was not established due to water inundation. Its upper fill, (102), comprised an homogenous brownish grey silty clay with occasional small stones and produced four sherds of mid/late 18th century pottery and two residual sherds of 13th/14th century Toynton Ware.

The south side of [101] cut through 0.15m of brownish grey silt, (107). This deposit was over a thin band of light grey silt, (103), with the latter lying beneath intermittent black organic silt, (105). Collectively, these deposits reflect natural accumulation within a former saltmarsh environment (J. Rackham, *pers. comm.*).

Beneath (103), was a deposit of mid orange brown alluvium, (104), 0.2m+ deep.

No other archaeological features were exposed in this trench.

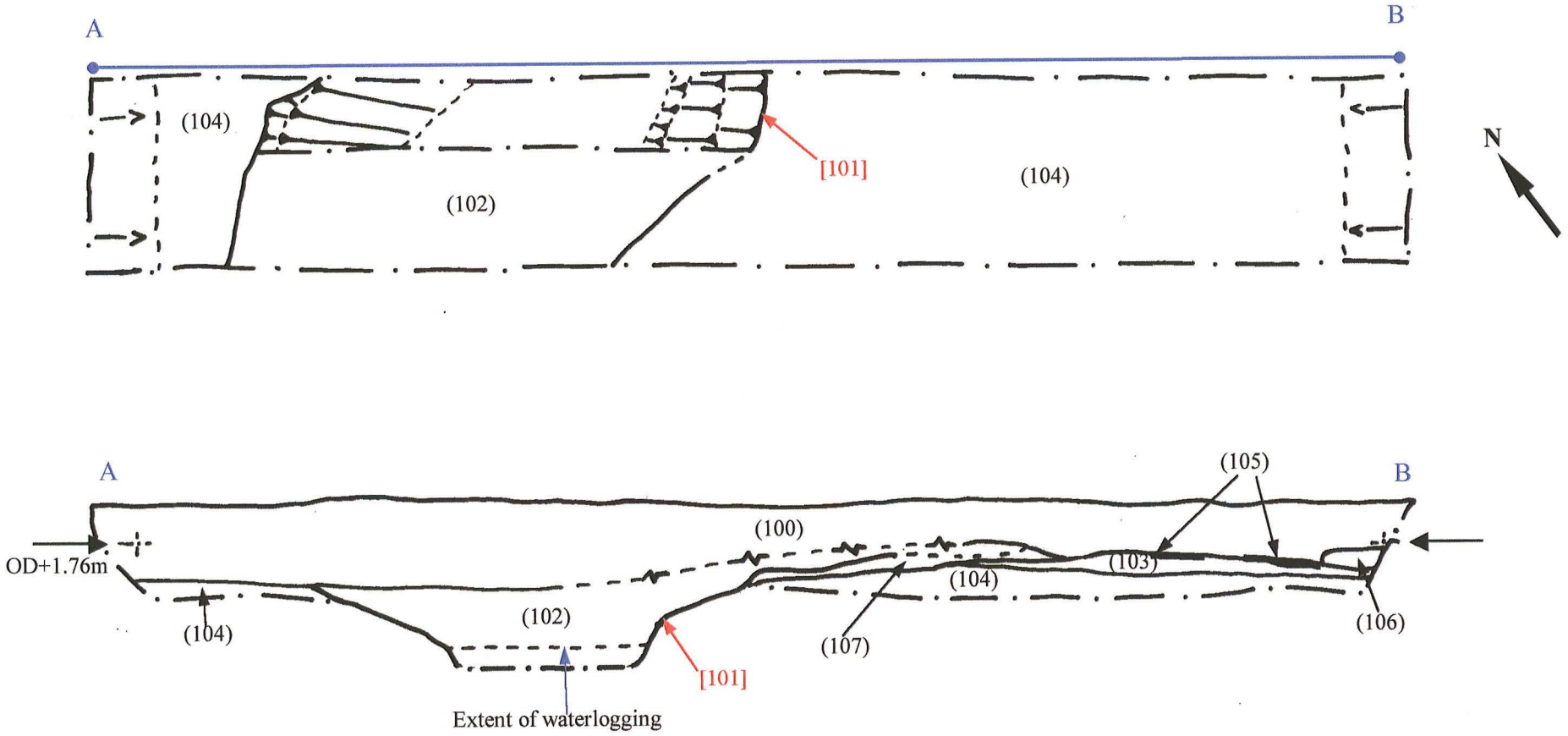


Fig.3: Trench 1 plan and section (scale 1:50)

6.2 Trench 2 (fig. 4)

One late Saxon feature was exposed at the north-west end of the trench. This was succeded by a similarly aligned, though undated, ditch, the fill of which incorporated in situ burnt material that has yielded a diverse range of palaeoenvironmental remains. At the south-east end of the trench, an undated feature was exposed beneath deposits of alluvium.

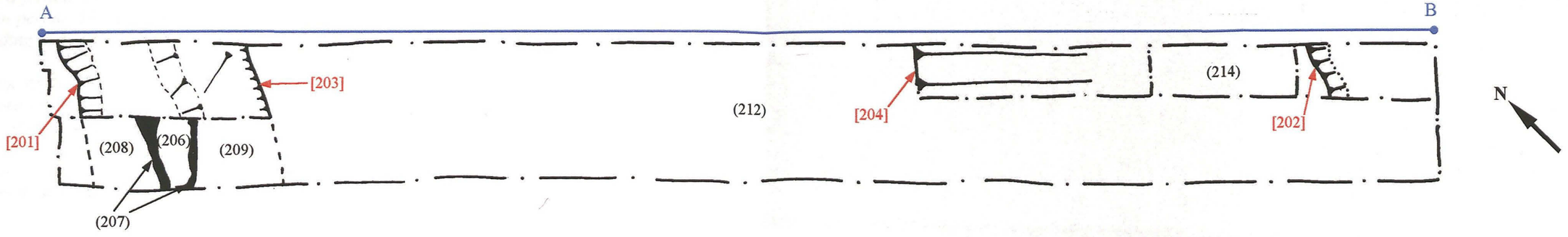
A steep-sided ditch-like feature orientated north-east to south-west, [203], was investigated at the north-west end of the trench. This was filled with light to mid-brown silty soil that incorporated occasional flecks of charcoal, (209). Two pottery sherds recovered from this material suggest a date in the 10th/11th century.

[203] was cut on its north-west side by a similarly aligned feature; represented by context [201]. The profile of this was broadly U-shaped, approximately 1.5m wide and 0.8m deep. Its primary fill, (208), consisted of compact brown-grey silty clay, above which was a substantial laminated fill of black, charcoal-rich silts, (207), interspersed with thin lenses of brown silt (see plate 5). This pattern is indicative either of in situ burning, or perhaps of burnt residue being intermittently thrown into a nearby ditch. A soil sample from this context contained the charred remains of both cereal and weed seeds, fired sandy silt as well as traces of possible hearth floor (see Appendix 12.3). Collectively, this assemblage would appear to reflect predominantly domestic activity, although an assessment of the fired earth from (207) has been taken to indicate possible evidence of salt making residue (see Vince, Appendix 12.4). It is suggested that the former interpretation is the correct one, although similar clay structures are in fact found on salt making sites. The upper ditch fill consisted of light brown silt, (206), that incorporated frequent small fragments of fired clay.

Both [201] and [203] were plough truncated, and the earlier feature, [203], was cut through an extensive deposit of brown alluvial silt, (205). This, and two earlier deposits, (210) and (211), appeared to reflect natural accumulation within a former wet environment that pre-dated feature [203]. Towards the south-east side of the trench these deposits sloped downwards, filling what appeared to be a shallow depression of unknown extent, [204]. This feature was not dated, and it may not have been archaeological (if it was, then it may have been the edge of a shallow dew pond).

A slot was excavated at the extreme south-east end of the trench, and this exposed the north-west edge of a cut feature, [202], that appeared to pre-date deposits that were contained within the ?natural depression, [204]. Only a very small part of this feature was exposed, and all that can be said is that it exceeded 1.4m in plan. It contained an homogenous mixed fill of grey-brown silt and clay, (213) that was devoid of finds. This feature corresponds with a relatively short linear anomaly that was detected by gradiometry (south-west side, anomaly 8). The lack of dating evidence is not helpful.

The archaeology in this trench did not conform exactly to the pattern indicated by the preceding fluxgate gradiometer survey. A large localized anomaly (12a) was not represented in the soil. Whether this can be taken as evidence of localized increased magnetic susceptibility in the topsoil (eg bonfire) is uncertain.



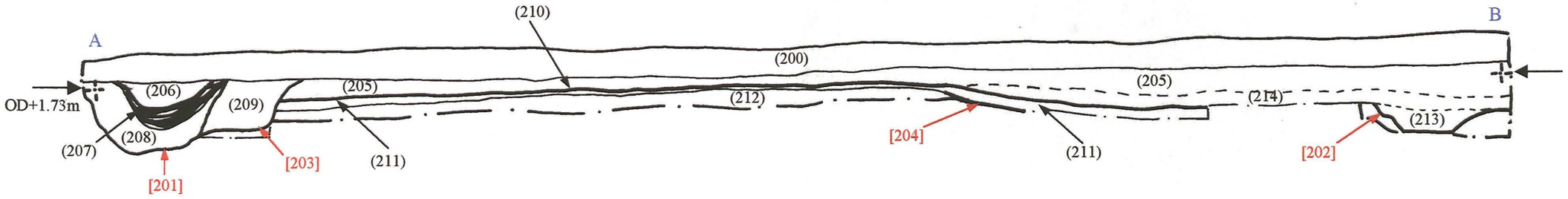


Fig.4: Trench 2 plan and section (scale 1:50)

6.3 Trench 3 (fig. 5)

A group of similarly aligned linear features was exposed in this trench. Each respected the alignment of a modern boundary, and, collectively these features represent a formal and sustained land division that was established from at least the late Saxon period. These features were expressed as two linear anomalies (3) during the preceding fluxgate gradiometer survey.

The largest ditch, [305], was at the east end of the trench (see plate 9). This was approximately 3.3m wide and 0.95m deep. It had irregular sides, and its profile was broadly U-shaped. It contained a complex of discrete silty fills, and these incorporated pottery that suggests backfilling during the 11th/12th century (residual sherds of possibly late Saxon pottery were also present). One side of a ditch pre-dating [305] was cut by its eastern edge. The surviving section of this, [307], appeared to have a similar profile to [305]. It contained a series of silty deposits (329, 330, 331) that were devoid of finds.

The west edge of [305] cut a much shallower feature, [304]. This contained three discrete deposits of grey/brown silt (320, 321, 322); the uppermost fill, (320), produced one sherd of late 9th – 11th century pottery. Little more can be said about this feature, as most of it had been removed by later activity, including truncation by a relatively shallow, flat-bottomed linear feature on its west side, [302] – see plate 7. This was 1.6m wide and 0.5m deep. It was filled with a series of dark grey and dark brown silty lenses, (313-316), containing flecks of charcoal, burnt clay and occasional mussel shells. An early to late 10th century sherd of Lincoln type shell tempered pottery was recovered from one fill, (315).

[302] cut through [303], which may have been a direct precursor. This, in turn, was cut through yet another feature, [306], the survival of which was minimal. The fills of [303] and [306] were similar, consisting of brown-grey clay-silts, probably resulting from natural accumulation induced by weathering. All three features were clearly visible in section, although the plan view was less apparent during initial machining.

Less than 0.4m west of [303] was another linear feature that was orientated north-south [301] – see plate 8. This was 1.55m wide and 0.6m deep, with an irregular profile. The base of this feature contained a series of brown-grey silt-based deposits (310, 311, 312), reflecting successive natural accumulations. The basal fill, (311), incorporated two sherds of a Lincoln type shell tempered ware, dating to the late 9th or 10th century. Overlying this, deposits (308) and (309) were more characteristic of deliberate backfilling, consisting of dark grey and black silts containing charcoal, fragments of fired clay and occasional shell fragments. (308) incorporated another sherd of Lincoln type shell tempered ware of late 9th/mid-10th century date. A soil sample from this context identified charred cereal and weed seeds, possibly reflecting crop processing in the vicinity of the feature (Appendix 12.3). It also revealed a strong aquatic element (freshwater snails, intact ostracods, burnt snail, and burnt frog/toad bones). The burnt nature of some of the bones suggests that this burning took place within the feature itself.

The earliest features in this trench were cut through a series of brown and grey natural alluvial deposits; represented by contexts (332) to (344).

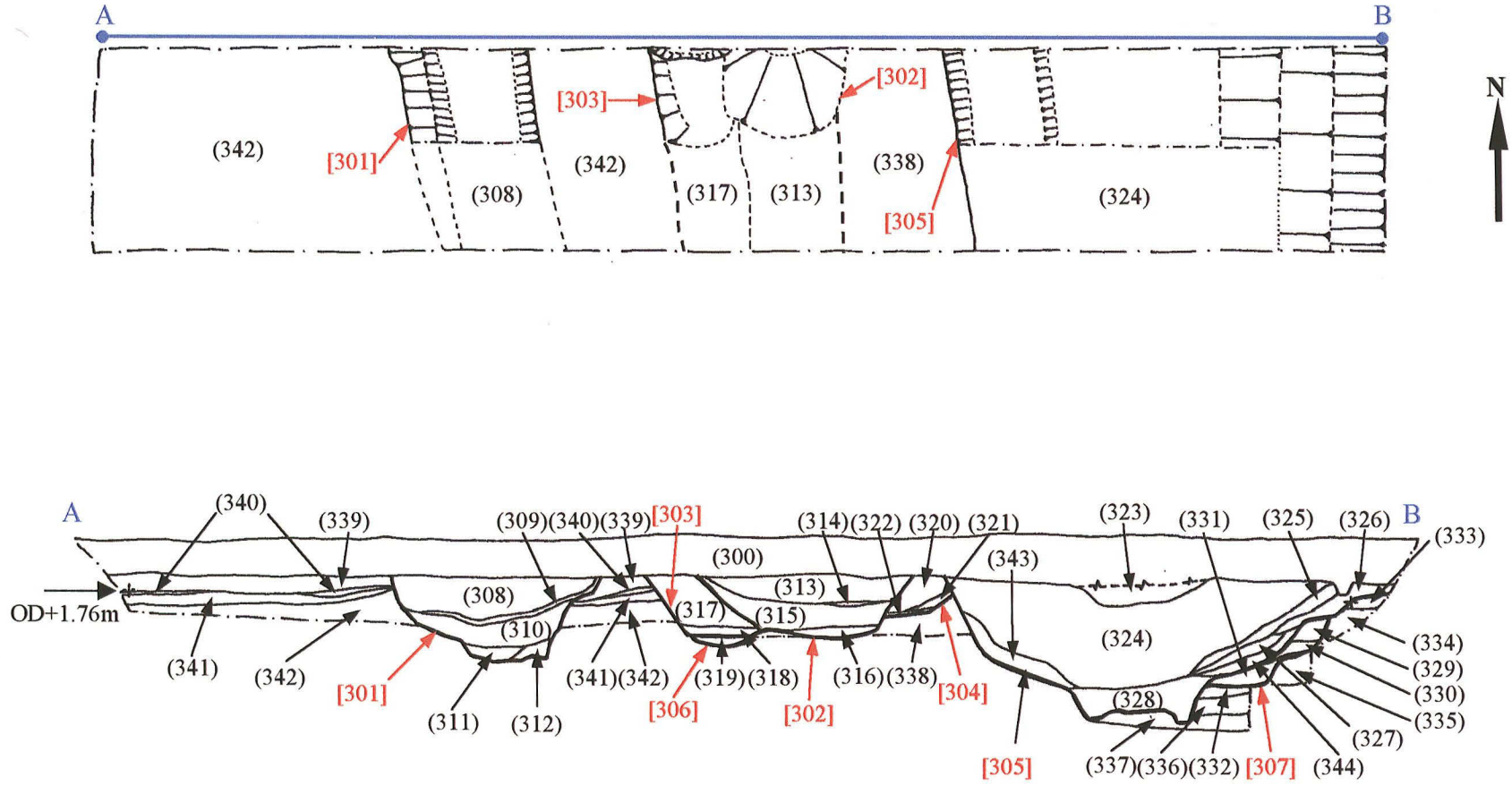


Fig.5: Trench 3 plan and section (scale 1:50)

6.4 Trench 4

A single modern ceramic land drain was exposed in this trench.

No archaeological features of significance were exposed. Directly beneath the ploughsoil, (400), was a series of alluvial deposits of clay-silt, (401), varying in colour from light grey to mid brown and brown-orange. These deposits were traversed by the vertical cut (approximately 0.35m wide) that was associated with a ceramic land drain.

6.5 Trench 5 (fig. 6)

Three pit-like features were examined on the south-west side of the trench, and a linear ditch-like feature extended longitudinally through it. Only two features were dated by associated finds: one by a single sherd of late Saxon pottery, the other by four 12th century pot sherds. An east-west linear feature corresponding with the position of magnetic anomaly 5 (tentative anomaly) was not exposed.

Three pits or possible pits were exposed on the south-west side of Trench 5. [530] was examined in section only at the south-east end of the trench, and appeared to be of sub-circular form, approximately 1.5m wide and 0.45m deep. It contained orange-brown silty soil, (530), which was devoid of any dating evidence.

An adjacent steep-sided feature, [504] was approximately 1.65m along its north-west to south-east axis (see plate 12). Its recorded depth was 0.55m, and its base was flat. The feature contained a mixed fill of dark grey/brown, and orange silts (521, 522, 523, 531). Four sherds of local pottery from (521)/(522) date the backfilling of the feature to the 12th century. A soil sample from (522) identified animal and fish bones, cereal grains, birdshell, cockle and mussel shells. Collectively, these inclusions are indicative of domestic settlement in the vicinity of the feature.

Approximately 2.25m north-west of the above was a third possible sub-circular pit, [502] – see plate 13. This was 1.5m by 0.7m in plan (incomplete dimensions), and was 0.45m deep. Its form and contents resembled [504], although the only pottery recovered comprised a single sherd of Stamford Ware, dating to the late 9th or early 10th century.

A potentially extensive linear feature, [505], extended longitudinally through the trench (see plate 11). This was approximately 1m wide with slightly meandering sides and an uneven, undulating base. It was truncated on its south-south-west side by pit [504]. Although undated, a sample was taken from the feature for environmental processing, and this has, for the most part, confirmed the natural origin of this feature.

It is noteworthy that [505] was not identified by the gradiometer survey as a discrete magnetic linear anomaly. There is in fact scant evidence of a linear anomaly that falls approximately within the projected alignment of the ditch, although this was considered to be too tenuous during interpretation of the gradiometer survey results

(see faint linear orientated north-south on Fig. 2, immediate east side of Trench 5). The poor magnetic resolution of this feature could be a reflection of its fill structure, which appeared to be devoid of charred material, pottery sherds or other inclusions that enhance soil magnetic susceptibility.

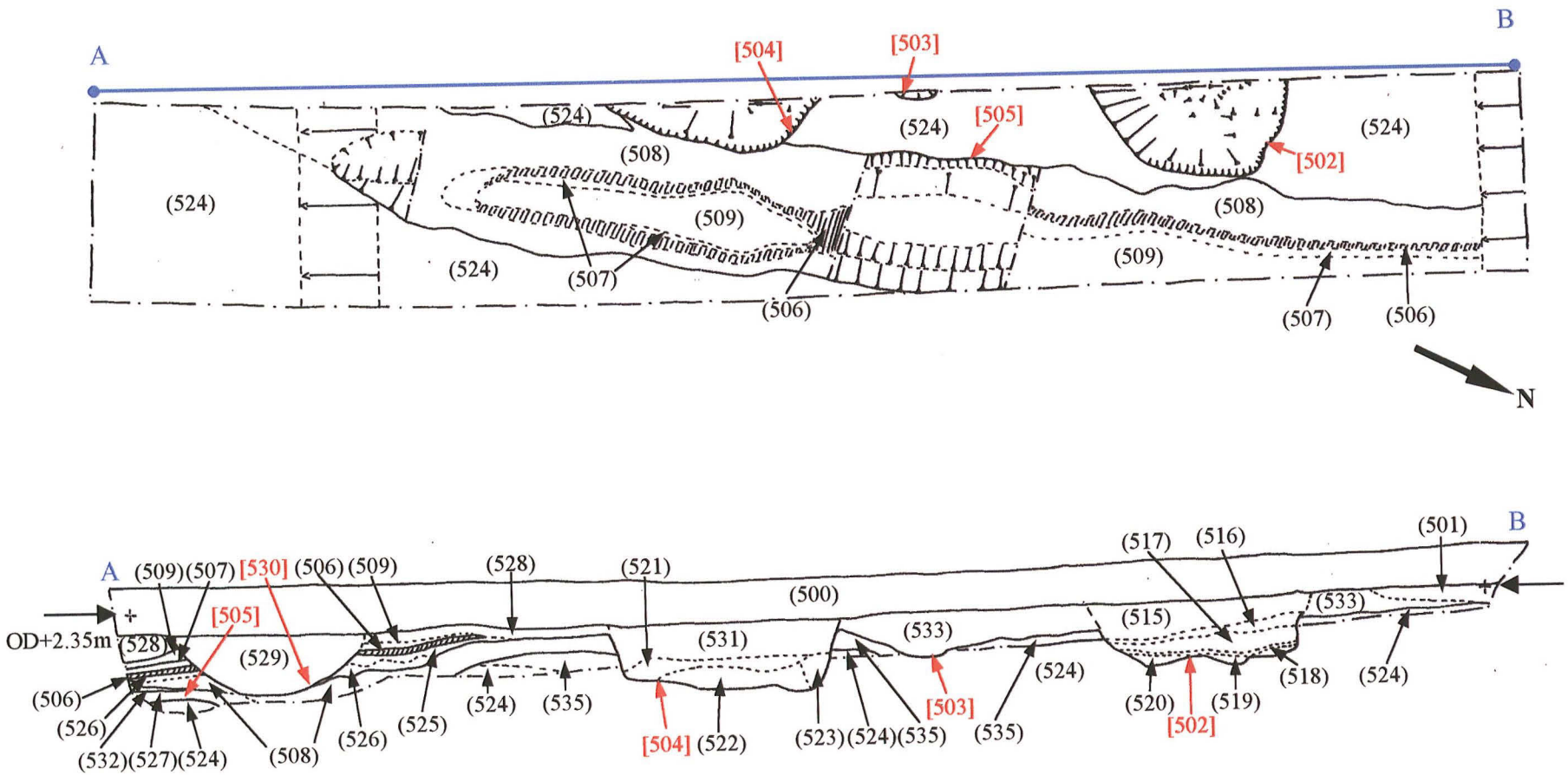


Fig.6: Trench 5 plan and section (scale 1:50)

6.6 Trench 6 (fig. 7)

A moderately substantial ditch was exposed, aligned approximately WWN to EES. This corresponded with the location of magnetic anomaly 4, which reflects the alignment of an existing path (see fig. 2). Its latest recut contained animal bone and 19th century pottery, indicating redundancy in relatively recent times (an earlier phase was not dated. A small, stratigraphically later, steep-sided feature was exposed on the north side of the above.

Beneath the ploughsoil, there were two archaeological features. One of these was a substantial ditch of at least two phases that was orientated EEN - WWS. The earliest phase, [607] was in excess of 2m wide, and its depth exceeded 0.7m (the base was not examined due to the high water table, although an auger sample showed that there remained approximately 0.2m of unexcavated fill; suggesting perhaps that the base of the ditch was flat). The south-west side of the ditch was moderately steep, and its bulk fill, (608), was a mid-grey, silty clay. Over this, the upper fill comprised light brown, slightly more silty clay, (606). A thin band of crushed marine shell (less than 0.05m thick) was noted at the base of this deposit.

The north-east side of [607] was truncated by a recut or realignment of the original ditch (see plate 14). This feature, [604], was approximately 3.1m wide. Its bulk fill comprised dark brown clay-silt, (605), that incorporated six sherds of 19th century pottery.

The north edge of the above was truncated by a steep-sided feature, [602]. This was sub-rectangular in plan (incomplete), measuring approximately 0.55m by 0.7m. Its grey-brown silty clay fill, (603), contained no finds. This feature could have been a small pit, or possibly the terminus of a trench. Its stratigraphic relationship with ditch [604], would suggest a date not earlier than the 19th century.

A ceramic land drain was exposed towards the centre of the trench, and this respected the alignment of the features described above.

The features in Trench 6 were cut through a mixed alluvial deposit of orange and brown clay-silt, (601). Visible only in section was 0.05m of light grey silt, (610), and this sealed the top of (601). A thin (maximum 0.02m) and intermittent deposit of black, slightly humic silt, (609), lay directly on over (610).

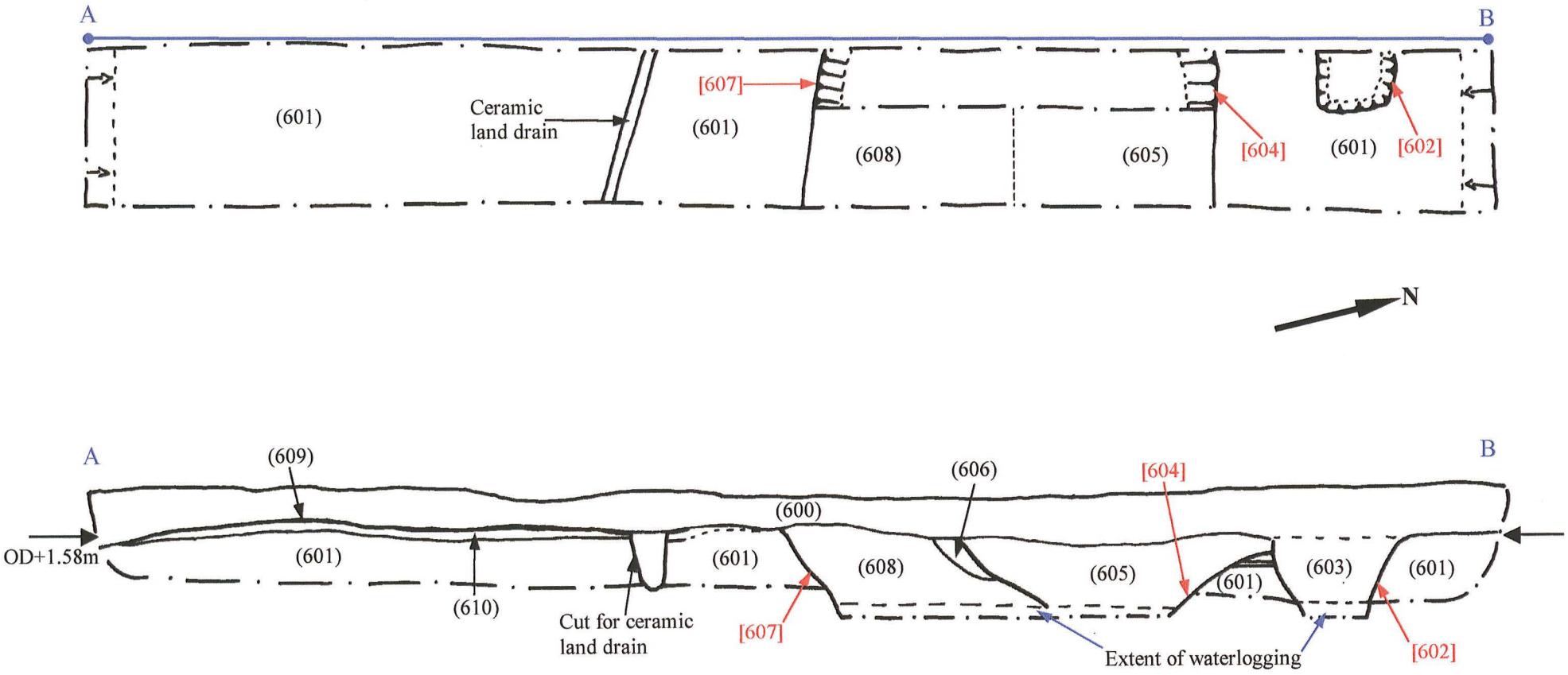


Fig.7: Trench 6 plan and section (scale 1:50)

6.7 Trench 7 (fig. 8)

An undated feature was exposed in the south-west section face, where it cut through alluvial deposits within what appeared to be a natural channel. An anomaly corresponding with the location of this feature was detected by the gradiometer survey (anomaly 9), and this was interpreted by the geophysicists as a possible natural palaeochannel.

The trench was machine excavated.

A small archaeological feature, [703], was examined in the south-west section face (common to that section only). This was approximately 0.2m deep, and was filled with dark grey-brown silty soil that incorporated fired clay fragments and occasional charcoal flecks, (704).

Beneath the above, a 'contained' group of deposits were examine within what appeared to be a linear feature that was orientated approximately north-east to south-west. The upper deposit, [701], comprised brown alluvial silt, and this sealed a deposit of very dark organic silt (705). Sandwiched between the two was a thin lens of light grey silt, (706). The feature was 'cut' through a deposit of mixed brown/grey alluvial silt, (702), and appeared to be of natural origin. The evidence from geophysics suggests this feature was a relatively narrow palaeochannel that traversed the site in a meandering north-east to south-west direction; possibly forming the north-west edge of a small enclosure towards the east side of the site (see fig. 2). The south-east edge of this feature did not fall within the excavation area.

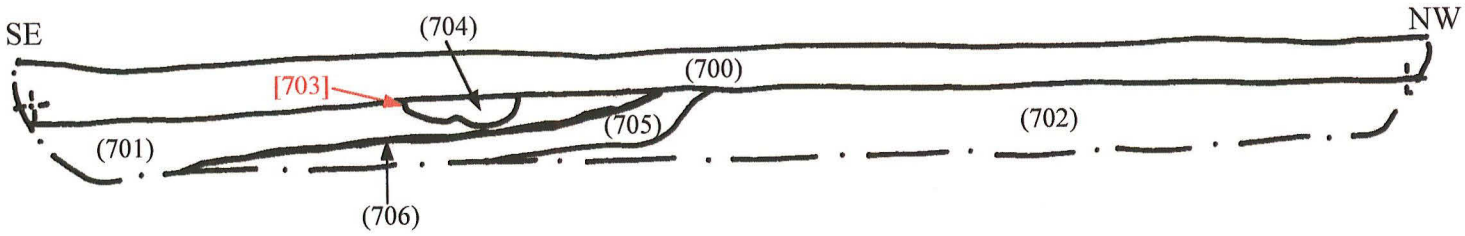


Fig.8: Trench 7, north-east facing section (scale 1:50)

7.0 Discussion and conclusions

The evaluation has demonstrated that the site contains relatively well preserved archaeological remains. Some of these remains reflect anomalies that were previously detected by geophysics; others were identified on a purely random basis.

Occupation appears to have commenced during the late Saxon period ($9^{th}/10^{th}$ century), as demonstrated by the earth-cut features that were examined in Trenches 2, 3 and 5. These features were often associated with burnt remains, and a selective examination of these remains has confirmed their potential to yield information relating to the structure of the local (domestic) economy, as well as to provide information relating to the local environment within which the site was set.

Occupation appears to have continued into the medieval period, with features of this date being exposed in Trenches 1 (residual), 3 and 5. As with the earlier period of occupation, this appears to have related to domestic/agrarian activities.

Several features were not dated by associated finds.

Overall, it must be concluded that the site at School Lane offers some potential for furthering our understanding of the origins and continuity of the settlement at Old Leake. As such, the archaeology is of some local significance, and it is clear that any future investigations would result in a more satisfactory interpretation of the remains than has been possible here, given that the objective of the current programme is only to assess the general potential of the site in the face of a proposed development.

Clearly, if a development is to go ahead, then this will disturb archaeological remains, unless suitable preservation measures can be put in place to safeguard the interests of all parties.

8.0 Effectiveness of methodology

The methodology was appropriate to the development. The evaluation trenches were accurately located and, in most cases, have confirmed the results of the geophysical survey. The evaluation has allowed the archaeological potential of the site to be fully addressed.

9.0 Acknowledgements

Pre-Construct Archaeology (Lincoln) would like to thank the commissioning body, Brown & Co, and also their client, Mr. John Allen, for his co-operation during the fieldwork.

10.0 References

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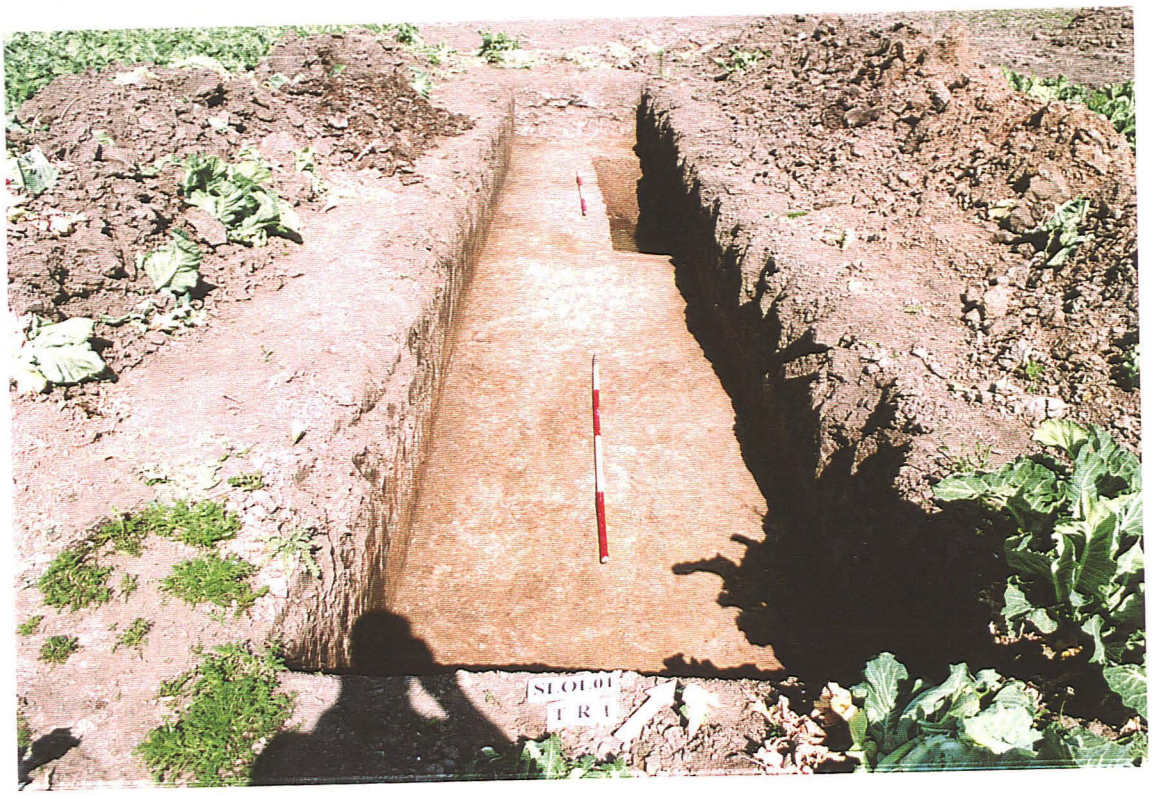
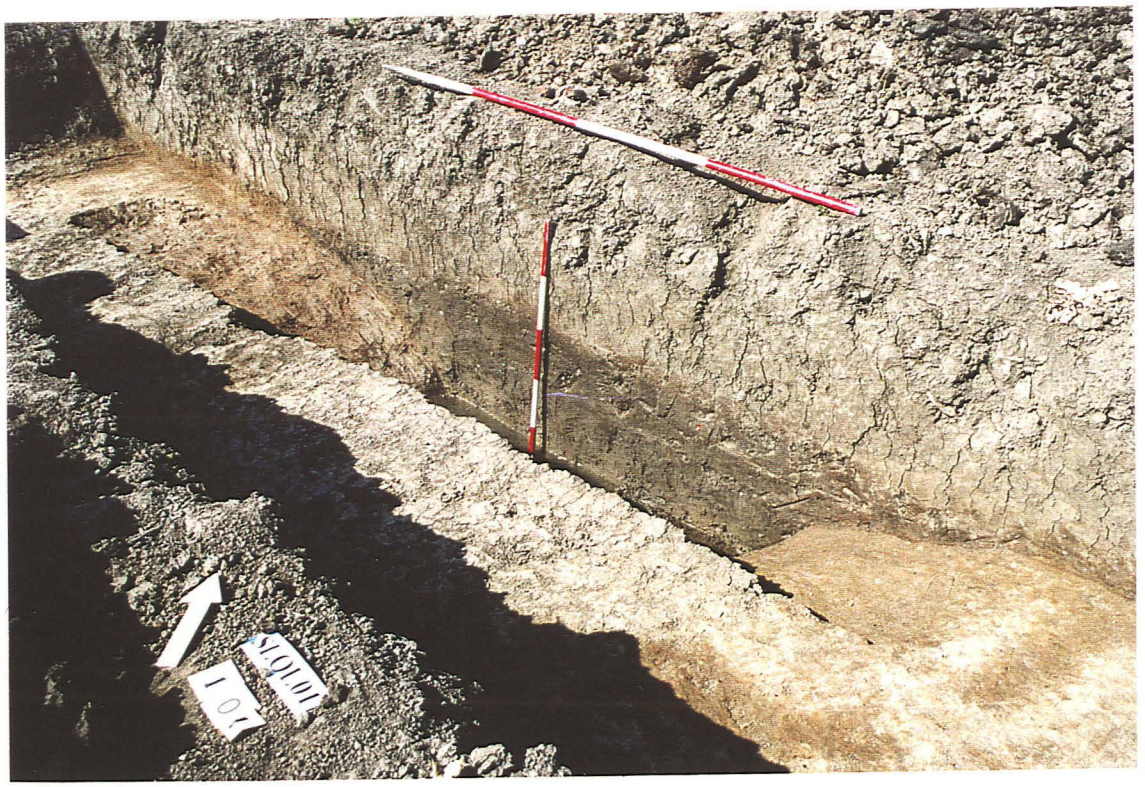
11.0 Site archive

The primary records for the site are currently in the possession of Pre-Construct Archaeology (Lincoln). The paper and photographic element of this report will be deposited with Lincoln City and County Museum within six months.

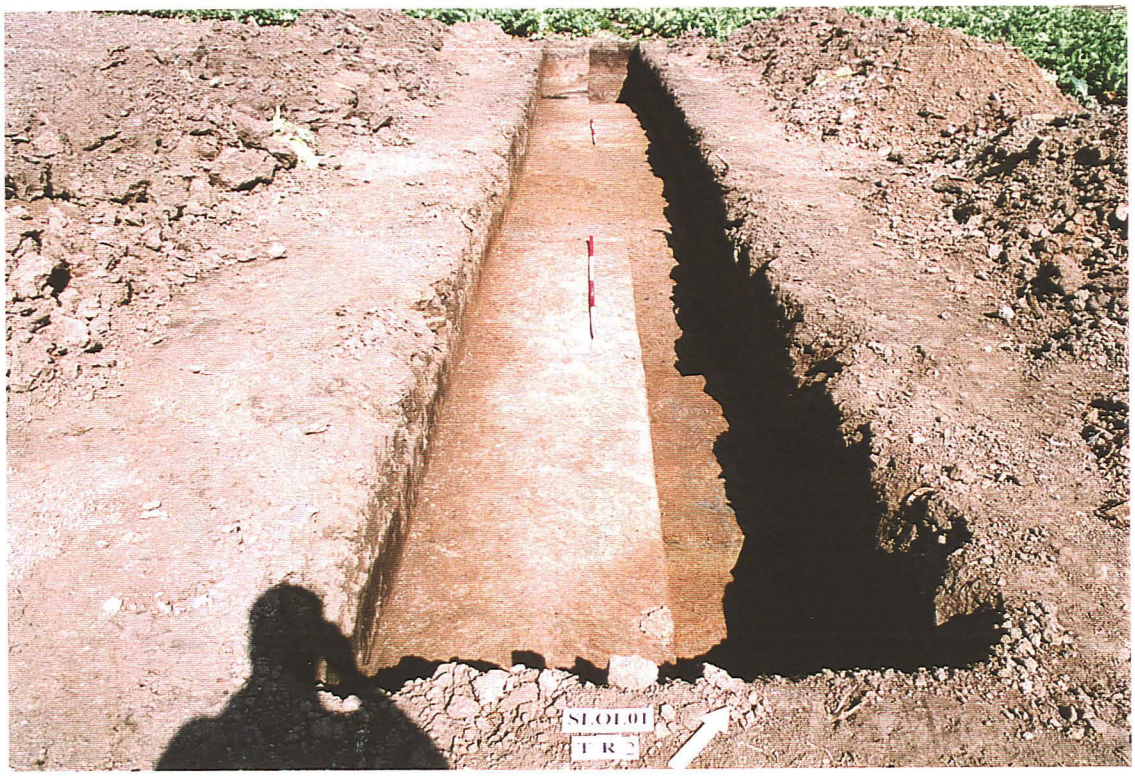
Appendix 1 Colour plates



P1. General view, T1, looking north-west

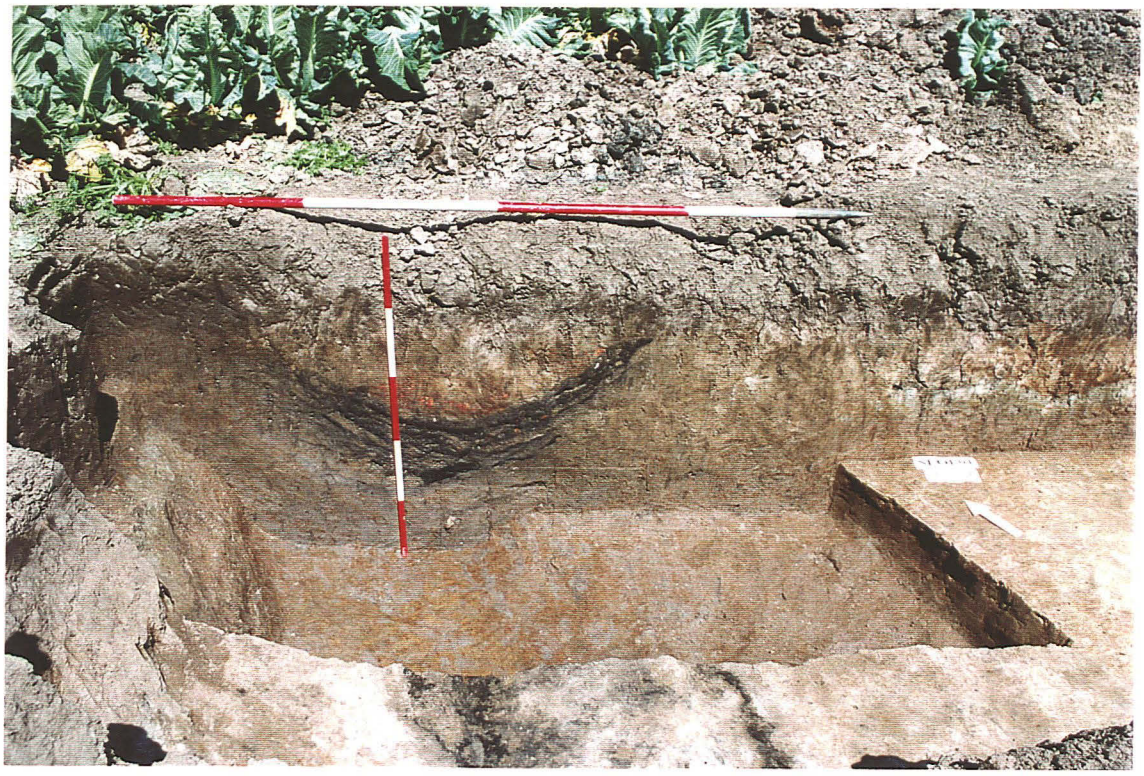


P2. Ditch [101], T1, looking north



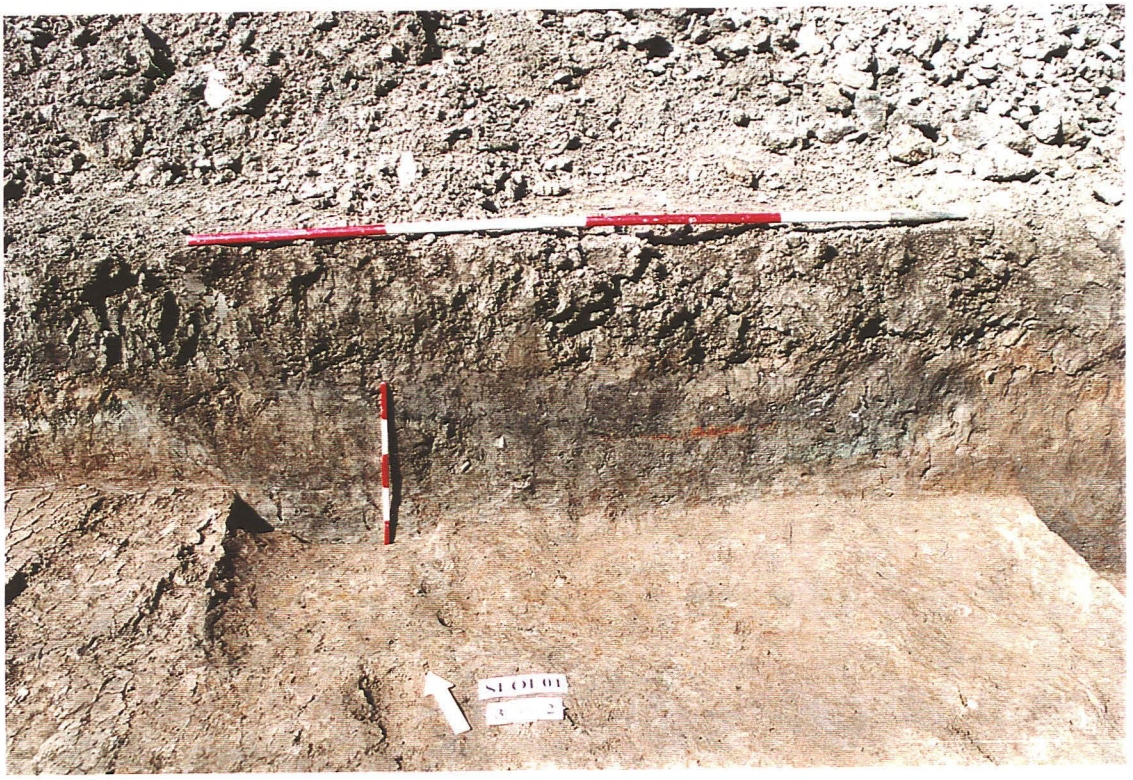
P3. General view, T2, looking north-west

P4. ?natural depression [204], looking north



P5. Section through ditch [203], looking north (note the burnt deposits towards the base of the feature that incorporate burnt turf)

P6. General pre-excavation shot, Trench 3, looking east



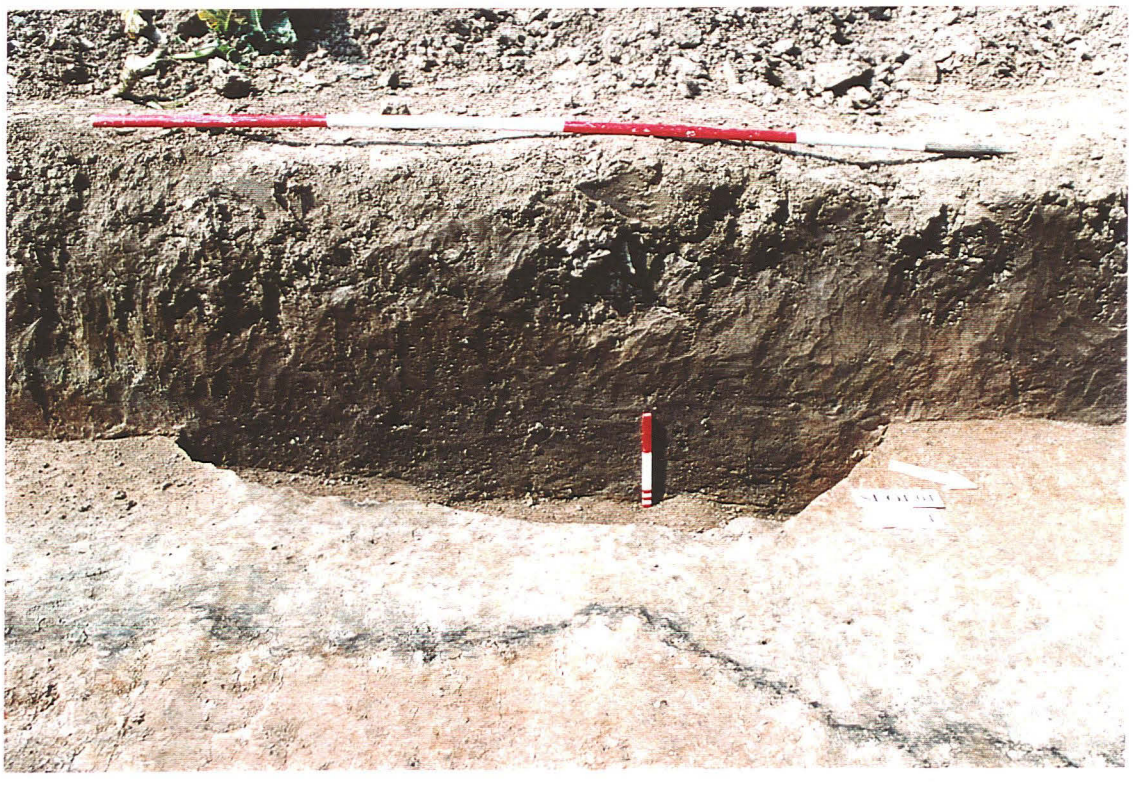
P7. Late Saxon feature [302], Trench 3, looking north

P8. Late Saxon feature [301], Trench 3, looking north

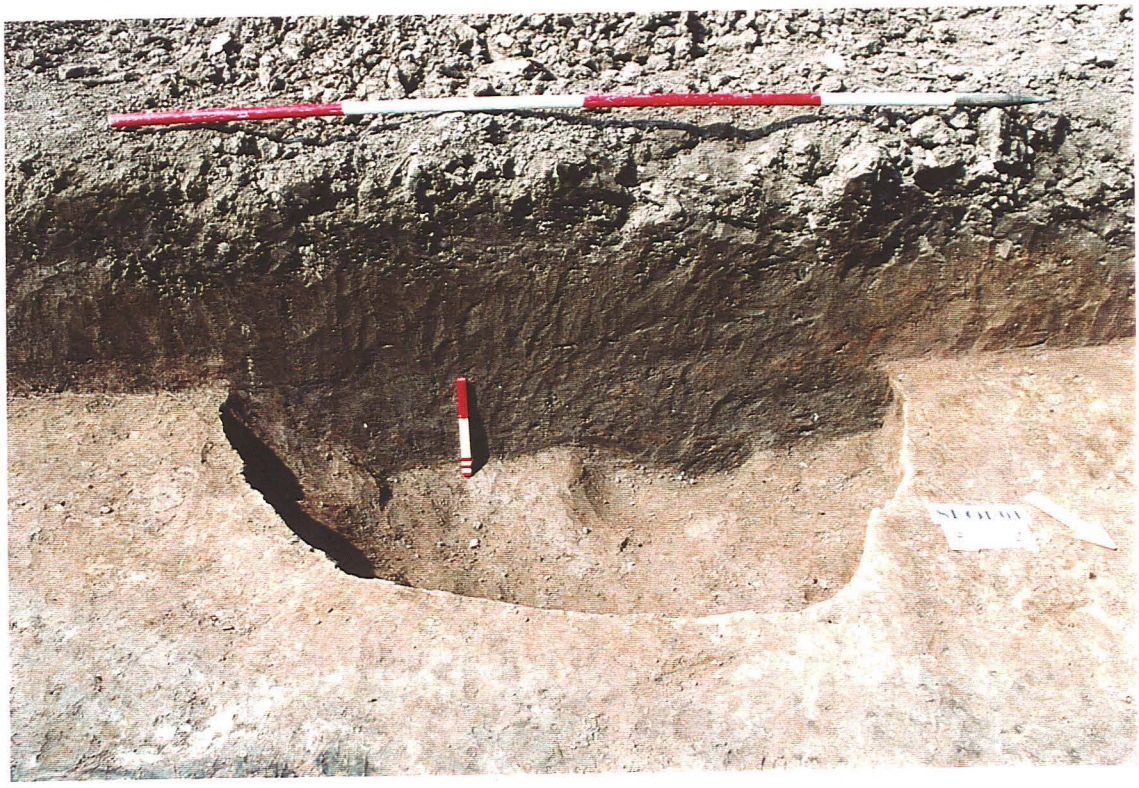
P9. 11th/12th century ditch [305]. Trench 3. looking north

P10. General view. Trench 4. looking south-west

P11. General post-excavation view, Trench 5, looking north

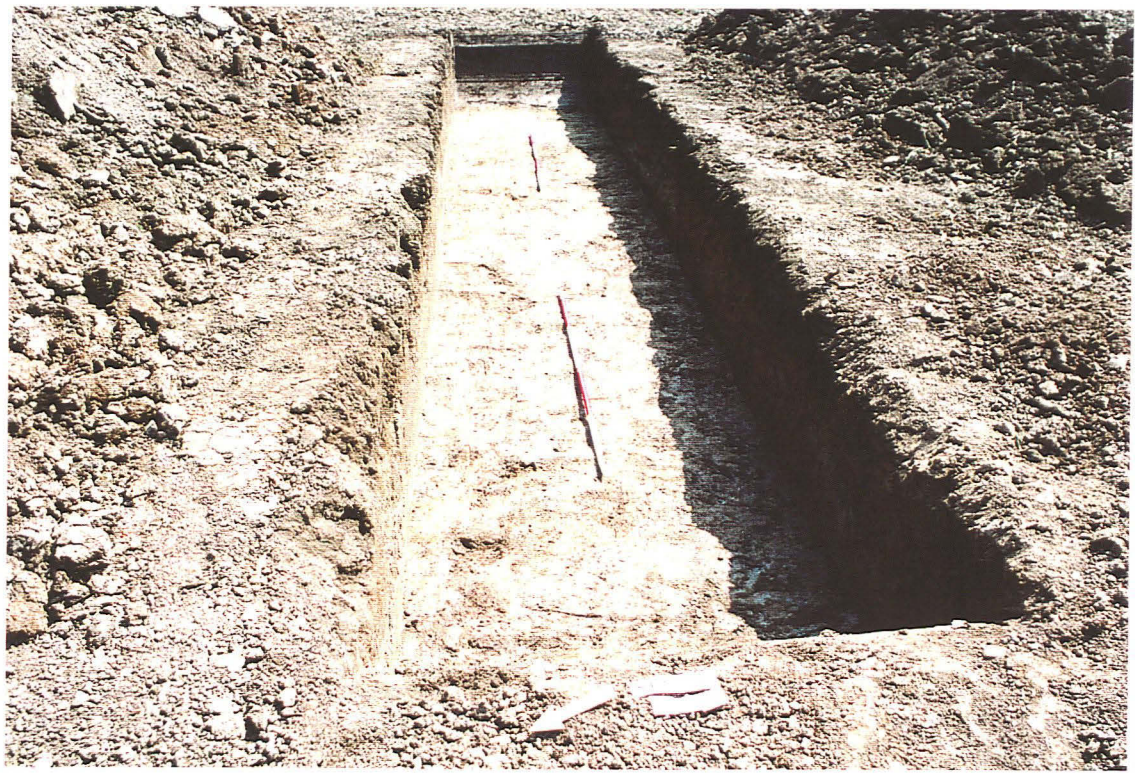


P12. 12th century feature [504], looking west



P13. Late Saxon feature [502]. Trench 5, looking south-west

P14. Trench 6, pre-excavation view, looking south (ditch [604] in foreground)



P15. General view of Trench 7, looking south-east

Appendix 12.2

Archive Report on the Pottery from an Evaluation at School Lane, Old Leake, Lincolnshire (SLOB01)

Jane Young
Lindsey Archaeological Services

Introduction

A small group of 31 sherds of pottery representing 30 vessels was recovered from the site. The material ranges in date from the late Saxon to the early modern period. The pottery was examined both visually and using a x20 magnification, then recorded on an Access database using locally and nationally agreed codenames.

Condition

The pottery recovered was in variable condition with most sherds showing some small degree of abrasion. Several vessels have exterior soot residues and one vessel has an internal deposit.

Overall Chronology and Source

A range of 18 different, identifiable pottery ware types were found on the site, the type and general date range for these fabrics are shown in Table 1. A limited range of vessel types was recovered including examples of bowls, jugs, jars and a collared pitcher.

Table 1: Pottery codenames and date range with total quantities by sherd and vessel count

codename	full name	earliest date	latest date	sherds
BERTH	Brown glazed earthenware	1550	1800	1
BL	Black-glazed wares	1550	1750	3
BS	Brown stoneware	1680	1850	1
EMLOC	Local Early Medieval fabrics	1150	1230	2
EST	Early Stamford ware	870	1010	1
LPM	Early Modern wares (general term)	1750	1900	1
LSH	Lincoln Shelly ware	850	1000	6
LSX	Non-local late Saxon fabrics	870	1080	2
MEDLOC	Medieval local fabrics	1150	1450	1
SLOOL	South Lincs Oolitic (generic)	1050	1500	1
SLOQ	South Lincolnshire Oolite & Quartz	1050	1500	1
SNEOT	St Neots-type ware	870	1200	1
ST	Stamford Ware	970	1200	2
TB	Toynton/Bolingbroke wares	1450	1750	1
THETT	Thetford-type fabrics	1000	1150	1
TORKT	Torksey-type ware	850	1100	2
TOY	Toynton Medieval Ware	1250	1450	3
WS	White stoneware	1700	1770	1

Almost all of the material dates to between the late 9th and 12th centuries (see Table 2) with a small number of sherds of later date present in Trenches 1 and 6.

Table 2: Vessel counts by chronological period

period	Trench 1	Trench 2	Trench 3	Trench 5	Trench 6	Total sherds
late 9th to 11th		2	10	1		13
12th			2	4		6
13th to 15th	3				1	4
16th to 18th	3				3	6
19th					2	2
Total sherds	6	2	12	5	6	31

Table 2 shows that the earlier vessels were recovered from Trenches 2, 3 and 5. A suggested date for the deposition of each context is shown in Table 3.

Table 3: Suggested deposition date of pottery groups from stratified contexts

context	date	sherds
102	mid to late 18th	6
209	10th to 11th	2
308	late 9th to mid 10th	1
311	late 9th to mid 10th	2
315	early/mid to late 10th	2
320	late 9th to 11th	2
324	mid/late 11th to mid 12th	1
325	late 9th to mid/late 11th	1
331	mid/late 11th to 12th	1
517	late 9th to early 10th	1
521/522	early to mid/late 12th	4
605	19th	6

Late Saxon

Of the thirteen vessels identifiable as Late Saxon types, eight date to the period before the late 10th century. The competence of manufacture, together with the diagnostic rim type present in context 311 suggests that at least five of these vessels predate the mid 10th century. The inturned bowl rim in context 315 is not found in deposits dating to before the early/mid 10th century in Lincoln and continues in use until the end of the 10th century. The remaining five vessels are all in reduced quartz-tempered fabrics and have no diagnostic features. For a small assemblage an unusually wide range of fabric types is present.

Early to late Medieval

Overall, nine of the pottery vessels recovered from the site can be dated to the medieval period, between the 12th and 15th centuries. The assemblage includes six vessels of 12th century date, mainly from unknown production centres. Only the two mid/late 11th to 12th century glazed Stamford ware sherds of this period can be sourced. The absence of recognisable ware types amongst the early medieval material suggests that the vessels are not of late 12th century date. Two of the later vessels are of Toynton-type, possibly of Boston manufacture and the third is a local coarseware jar.

Post-medieval

A small number of post-medieval pottery types were recovered from the site, these include both coarsewares and industrial finewares.

Summary and Recommendations

This is a small but important assemblage of post-Roman pottery. The ceramic assemblage suggests that there are peaks of activity in the late Saxon and early medieval periods. Although the assemblage is too small to draw any major conclusions from, the presence of a wide range of local and regional fabric types of late Saxon date is interesting.

The assemblage should be kept for future study, especially as part of any characterisation of the fabrics for a type series.

Pottery Archive SLOB01

context	cname	sub fabric	form type	sherds	vessels	decoration	part	description	date
102	BL		bowl	1	1		rim		18th
102	BL		jar	1	1		BS		late 17th to 18th
102	TOY	? Boston	bowl	1	1		BS	int glaze	13th to 14th
102	TOY	? Boston	jug	2	1		BS		13th to 14th
102	WS		?	1	1		base		mid to late 18th
209	SNEOT		small jar	1	1		BS	soot;thin walled	
209	TORKT		small jar	1	1		BS	fine-med quartz;OX/R/OX	
308	LSH	E	jar	1	1	square roulette on shoulder	BS	soot;? Not Lincoln manufacture;thin walled	
311	LSH	E	small jar	1	1	square roulette on shoulder	rim	soot;? Not Lincoln manufacture;thin walled;EVERA1 rim	
311	LSH	E	jar	1	1	square roulette on shoulder	BS	interior deposit;? Not Lincoln manufacture;thin walled;fabric incl echinoid spine	
315	LSH		medium jar	1	1		rim	soot;? Lincoln	
315	LSH		bowl	1	1		rim	inturned rim;? Lincoln as com to mod subround quartz 0.4-1.6mm	
320	LSX	light reduced;med sandy;hard	bowl	1	1		BS	? ID;could be LS/SNLS;subround quartz(.4-.6mm) in light grey/buff fabric	
320	LSX	light oxid;med sandy;medium hard		1	1		BS	moderate to comm subround quartz (.2-.4) in clean light brown matrix sim to NOTTS mod fe	

context	cname	sub fabric	form type	sherds	vessels	decoration	part	description	date
324	ST	B	collared pitcher	1	1		rim	everted rim;glaze	
325	TORKT		small jar	1	1		rim		
329	LSH		jar	1	1		rim	EVERA3;? Lincoln manufacture	
329	THETT		?	1	1		base	scrap;? ID	
331	ST	B	jar/pit	1	1		BS	glaze	
517	EST	E/F	jar	1	1		BS	soot;unglaze;? ID;thin walled	
521/522	EMLOC	light firing;fine sandy;hard	jar/jug	1	1		BS	abundant fine quartz mod larger rounded up to 1mm occ fe incl fe cemented sandstone micaceous clay;no glaze	
521/522	EMLOC	light firing;fine sandy;hard	jug	1	1		BS	abundant fine quartz mod larger rounded up to 1mm occ fe incl fe cemented sandstone micaceous clay;splashed glaze	
521/522	SLOOL		jar ?	1	1		BS		
521/522	SLOQ		jar	1	1		BS	soot	
605	BERTH		hollow	1	1		BS	int & ext glaze	16th to 17th
605	BL		bowl	1	1		base		18th to 19th
605	BS			1	1		base		
605	LPM		dish	1	1		rim		19th
605	MEDLOC	oxid;med-coarse sandy;hard	jar ?	1	1		BS	comm mixed quartz up to 0.8mm mod fe v occ limestone	
605	TB		bowl	1	1		rim	reeded everted rim	

Tile Archive SLOB01

Jane Young *Lindsey Archaeological services*

context	cname	full name	frags	description	date
605	PNR	Peg, nib or ridge tile	1	fabric not Lincoln;flat roofer	med to post-med

School Lane, Old Leake – SLOL01

Environmental Archaeology Assessment

Introduction

Evaluation excavations conducted by Pre-Construct Archaeology at School Lane, Old Leake in advance of development proposals revealed ditches, channels and other features of late Saxon and medieval date. During the course of the evaluation a small collection of animal bone was recovered by hand and four soil samples were taken (Table 1).

Table 1: Samples submitted for environmental assessment

site	sample	context	volume in l.	description	date
SLOL01	1	506	3	? natural flood deposit	Undated
SLOL01	2	308	16	Dumped deposit within ditch	Late Saxon
SLOL01	3	207	16	Burnt fill of possible enclosure ditch	Med.?
SLOL01	4	522	14	Lower fill of probable pit	12th cent.

Methods

The soil samples were processed in the following manner. Sample volume and weight was measured prior to processing. The samples were washed in a 'Siraf' tank (Williams 1973) using a flotation sieve with a 0.5mm mesh and an internal wet-sieve of 1mm mesh for the residue. Both residue and float were dried and the residues subsequently re-floated to ensure the efficient recovery of charred material and mollusc shells. The dry volume of the flots was measured, and the volume and weight of the residue recorded.

The residue was sorted by eye, and environmental and archaeological finds picked out, noted on the assessment sheet and bagged independently. A magnet was run through each residue in order to recover magnetised material such as hammerscale and prill. The residue was then discarded. The float of each sample was studied under a low power binocular microscope. The presence of environmental finds (ie snails, charcoal, carbonised seeds, bones etc) was noted and their abundance and species diversity recorded on the assessment sheet. The float was then bagged. The float and finds from the sorted residue constitute the material archive of the samples.

The individual components of the samples were then preliminarily identified and the results are summarised below in Tables 2-4.

Results

A few uncharred seeds suggests a low level of contamination by recent material, but the bulk of the plant remains are charred.

Context 506.

This sample provisionally identified on site as a 'flood deposit' produced no archaeological material whatsoever. In fact the whole sample, a silty sand, washed through the 1mm mesh sieve leaving no residue. The flot from the sample was tiny and although it included a few small fragments of charcoal and a single charred cereal grain there is very little to indicate any

activity. The inclusions could well have derived from later deposits and moved down through the soil or been washed in. The silty sand character of the deposit tends to suggest a marine sediment or deposit adjacent to a stream channel rather than an extensive flood event that would be characterised by much finer sediments.

Contexts 207 and 308.
Both these deposits are characterised by an abundance of charred cereal grain, many charred weed seeds and frequent straw/reed stem charcoal. Most of the charred weed seeds are fairly large and this assemblage may reflect a stage in the crop processing procedures. Both are dumps within ditch features. The charred assemblages are very similar although 308 has some wood charcoal, while 207 is almost devoid of wood charcoal. In other respects the samples differ. Most of the residue of 207 is fired sandy silts, some reduce fired others oxidised. Some of the fired earth has an organic temper and some appears to have surfaces suggesting perhaps a fired hearth floor. In contrast 308 has only a small amount of fired earth. Both these samples have animal bone and some marine shell, and with the presence of pottery and bird eggshell in 308, indicates an input of domestic rubbish.

Table 2: Finds from the samples

sample	cont.	vol	residue vol in ml.	pot *	fired earth wt g #	fuel ash slag$	glass	bone wt g.	marine shell wt g.	comment
1	506	31	0							
2	308	16	200	5/11	15	++		24	13	bone point
3	207	16	1500		948	++		24	<1	
4	522	14	1000	3/4	<1		1	7	1	

(* sherd count/weight; # sorted from >7mm only;
$ frequency + =1-10 or present; ++ =11-50; +++ =51-150)

Context 308 contains a strong aquatic element with several freshwater snail taxa and a number of intact paired ostracod (a freshwater crustacean) valves, the latter at least suggesting *in situ* deposition. The presence of burnt shells of *Vertigo angustior*, a snail of marshy habitat, and burnt bones of frog or toad may indicate *in situ* burning within the ditch.

Table 3: Environmental finds from the samples

samp	cont	flot vol in ml.	char coal *	char'd grain *	char'd chaff *	char'd seed *	egg-shell wt. g	fish *	snail */#	
1	506	<1	1	1						?wheat – one grain
2	308	40	4	4	1	4	<1	2	3/2	Straw/reed charcoal, wheat, barley, oat?, mussel, cockle, periwinkle, sheep, rodent, frog/toad, small fish, ostracods
3	207	85	5	5	1	5		1	1/1	Straw/reed charcoal, poss. peat charcoal, barley, wheat, oat?, mussel, sheep, pig, eel, small and medium fish
4	522	1	2	1		2	<1	1	1/1	Wheat, mussel, cockle, sheep, house mouse?, frog/toad, small fish

* frequency 1=1-10; 2=11-50; 3=51-150; 4=151-250; 5=>250 items; # diversity 1=1-3; 2=4-10; 3=11-25 taxa
+ particularly abundant taxa relative to other shells; £ waterlogged material in flot

Context 522.
This context appeared to be the lower fill of a pit, but since only a small part of the feature was exposed in the evaluation trench this interpretation must be tentative. The evidence from the sample, while less dense than that from the ditch deposits, does indicate that the feature was receiving domestic rubbish. Pottery, a tiny fragment of glass, animal and fish bone, charred cereal, charcoal, bird eggshell, cockle and mussel fragments all indicate domestic debris or food waste.

Table 4: Terrestrial and freshwater mollusca from the samples

Sample	2	3	4
Context	308	207	522
Open country			
Cecilioides acicula	+	+	+
Vertigo pygmaea	+	+	
Vallonia excentrica	+	+	
Marsh and aquatic			
Vertigo angustior	+*		
Lymnaea peregra	+		
Physa heterostropha	+		
Planorbis vortex	+		
Planorbis laevis	+		
Valvata cristata	+		

habitat groupings broadly taken from Evans, 1972; Macan 1977; Ellis 1969; Cameron and Redfern 1976; * – some shells burnt

In the snail fauna from context 308 there is clear evidence for an aquatic element, although whether this fauna is *in situ* or introduced with vegetation collected from marshy and aquatic habitats has not been established. It is possible that the fauna reflects the ditch environment. The few other taxa suggest an open grassland habitat.

Animal Bone
A small collection of animal bones, 28 fragments, was recovered during the evaluation. These bones have been identified and recorded following the procedures of the Environmental Archaeology Consultancy (see attached Key) and the catalogue is attached to this report.

All the material was in a good state of preservation although three bones show evidence of dog gnawing and six had been visibly butchered, one a pig humerus was sawn through the midshaft. The fragments included bones of cattle, sheep or goat, pig and fox, or possibly a small dog, and a goose sized bird. No juvenile material was recognised although one tooth of cattle derived from an immature animal.

Discussion
There is no evidence in any of the samples to give any indication that salt production was taking place at the site. In contrast the environmental assemblages are more indicative of domestic occupation with some possibility that the later stages of crop processing may have been taking place on site. This would indicate an agricultural rather than industrial context for the site, with the late Saxon and medieval assemblages from 308 and 207 being very rich in charred plant remains. Such debris would suggest that other occupation features are present

on the site and further evidence for the nature of this occupation and the activities associated with it seems likely.

The environmental evidence indicates a range of dietary waste including wheat, barley, oat, mussel, cockle, periwinkle, small fish, eel, cattle, sheep and pig. There is evidence of charcoal being used as a fuel and possibly also some charred peat from context 207. All the material identified in this assessment is in good condition and fairly well preserved.

Recommendations

The occurrence of two such rich samples in the evaluation is unusual and should further archaeological fieldwork be undertaken then environmental sampling should be a priority. Detailed identification and analysis of charred assemblages like those from the evaluation should permit a confident interpretation of the origin of the deposits and the possible function or activities taking place on site. The range of food debris is likely to reflect the character and status of the site, and the extent of the local exploitation of coastal resources. Spatial patterns in the environmental evidence can be expected to reflect the distribution of activities across the site.

Any future programme of work should ensure that bulk samples (generally 20-30 litres in size in lidded 10 litre plastic tubs) are collected from a series of dateable deposits, including a range of different feature types. Animal bones should be recovered during hand excavation and where they occur in abundance more extensive intrusive excavation or bulk sampling for subsequent coarse sieving is recommended.

If mitigation establishes that no further field work is required then the only further work that should be considered is the identification and reporting of the charred plant remains from contexts 308 and 207, and possibly the identification of the few fish bones.

Acknowledgments

I should like to thank Alison Foster for the sample processing.

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Appendix 12.4

Assessment of burnt and fired clay from site SLOL01

Alan Vince

Two collections of burnt and fired clay were submitted for assessment. In a previous assessment of burnt and fired clay from a medieval salt-production site it was recognised that there were differences between 'daub', and 'turf', both of which played a part in the production process (Vince 2001).

Catalogue

Context 102

Seven fragments of brick. All these bricks were produced in a wooden former into which the clay was thrown, giving rise to flow lines within the fabric. The base and sides of the mould may have been dusted with silt and organic matter (straw or hay?) to stop the clay adhering to the former. The top of the bricks have then been scraped flat with a knife or wooden tool. The appearance and manufacturing technique of these bricks is entirely consistent with a late- or post-medieval date and the use of local resources.

A single fragment of 'burnt turf' (as defined in Vince 2001) was also present. The fabric of this fragment was coarser in texture than that of the bricks and includes a moderate amount of muscovite. This fragment is abraded and about 20mm long in its maximum dimension. As such it may well have been moved some distance from the site of salt-production.

Context 207

Fifteen fragments of 'burnt turf'. Some of these retain a single face, which is normally undulating and criss-crossed by thin grass stem impressions. One fragment may have two such faces. Unlike the Spalding collection, there is no evidence for spade cutting of the turf nor for the occasional extremely high firing temperatures which the turf could be exposed to. On the other hand, not one of the pieces has any evidence for a flow structure in the fabric, which would indicate that the clay was moulded when plastic rather than lifted as a block from mudflats, nor is there any impression which might be a wattle nor any evidence for the final smoothing layer which is often the finishing stage of wattle and daub construction.

Conclusions

The burnt clay from context 207 is tentatively identified as burnt turf, which was used in the process of salt extraction described in the 17th century and has been demonstrated both at Wainfleet (McAvoy 1995) and at Spalding to have been in use in the medieval period. Given the early date of this collection it would be rash to take the evidence of the burnt clay in this context as proof of salt production, let alone for the use of the same processes as were used at Spalding, Wainfleet and elsewhere, On the other hand, there is a strong possibility that this was indeed the case and every opportunity should be taken to collect more burnt clay from medieval contexts on the site.

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12.5 List of archaeological contexts

Context	Description
Trench 1	
100	Topsoil
101	Ditch cut
102	Fill of [101]
103	Saltmarsh/flood deposit
104	Alluvium
105	Saltmarsh/flood deposit
106	Possible feature
107	Saltmarsh/flood deposit
Trench 2	
200	Topsoil
201	Ditch recut
202	Early ditch cut
203	Ditch cut
204	Shallow natural depression
205	Alluvium
206	Upper fill of [201]
207	Burnt fill of [201]
208	Fill/lining of [201]
209	Fill of [203]
210	Saltmarsh/flood deposit
211	Saltmarsh/flood deposit
212	Alluvium
213	Fill of [203]
214	Alluvial fill of [204]
Trench 3	
300	Topsoil
301	Ditch cut
302	Ditch recut
303	Ditch recut
304	Ditch cut
305	Ditch recut
306	Ditch cut
307	Ditch cut
308	Fill of [301]
309	Fill of [301]
310	Fill of [301]
311	Fill of [301]
312	Fill of [301]
313	Fill of [302]
314	Fill of [302]
315	Fill of [302]
316	Fill of [302]
317	Fill of [303]
318	Fill of [303]
319	Fill of [306]
320	Fill of [304]
321	Fill of [304]
322	Fill of [304]
323	Fill of [305]
324	Fill of [305]
325	Fill of [305]
326	Slump deposit in [305]
327	Slump deposit in [305]
328	Fill of [305]
329	Fill of [307]
330	Fill of [307]

Context	Description
Trench 4	
400	Topsoil
401	Alluvium
402	Land drain cut
403	Fill of [402]
Trench 5	
500	Topsoil
501	Alluvium
502	Pit cut
503	Natural depression
504	Pit cut
505	Natural feature
506	Organic fill of [505]
507	Fill of [505]
508	Fill of [505]
509	Fill of [505]
510	Fill of [505]
511	Fill of [505]
512	Fill of [505]
513	Fill of [505]
514	Fill of [505]
515	Fill of [502]
516	Fill of [502]
517	Fill of [502]
518	Fill of [502]
519	Fill of [502]
520	Fill of [502]
521	Fill of [504]
522	Fill of [504]
523	Fill of [504]
524	Natural alluvial deposit
525	Fill of [505]
526	Fill of [505]
527	Fill of [505]
528	Fill of [505]
529	Fill of [530]
530	Pit cut
531	Fill of [504]
532	Fill of [505]
533	Natural alluvial deposit
534	Natural alluvial deposit
535	Natural alluvial deposit
Trench 6	
600	Topsoil
601	Alluvium
602	Pit/ditch cut
603	Fill of [602]
604	Ditch recut
605	Fill of [604]
606	Fill of [607]
607	Ditch cut
608	Fill of [607]
609	Saltmarsh/flood deposit
610	Saltmarsh/flood deposit
Trench 7	
700	Topsoil
701	Alluvium

331	Fill of [307]
332	Natural alluvial deposit
333	Natural alluvial deposit
334	Natural alluvial deposit
335	Natural alluvial deposit
336	Natural alluvial deposit
337	Natural alluvial deposit
338	Natural alluvial deposit
339	Natural alluvial deposit
340	Natural alluvial deposit
341	Natural alluvial deposit
342	Natural alluvial deposit
343	Slump deposit in [305]
344	Slump deposit in [305]

702	Alluvium
703	Pit cut
704	Fill of [703]
705	Saltmarsh/flood deposit
706	Saltmarsh/flood deposit