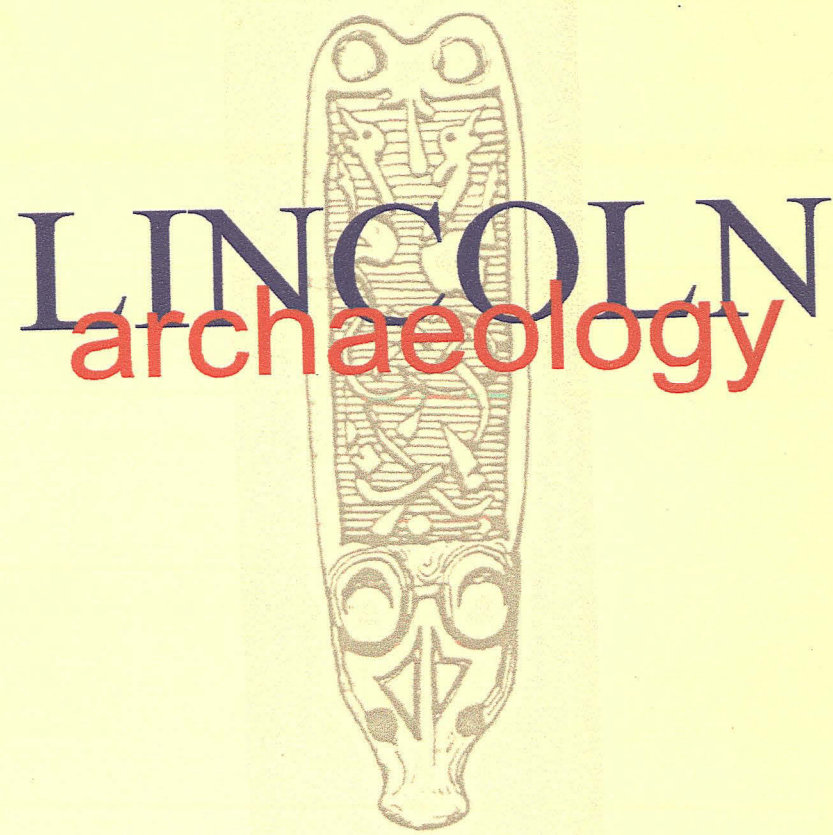


# A Report to Greetwell Developments

July, 2000



## Bunkers Hill, Lincoln

### Archaeological Evaluation

*By R Trimble*

Report No.: 426

**LINCOLN**  
archaeology

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# BUNKERS HILL, LINCOLN

Site Code: GBH99  
LCCM Accession No.: 222.99  
Planning Application No.:  
NGR: TF 0043 7273



PRN 50348 Triple ditch system  
80010 L181687 IAGP  
70220 L181691 RB  
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70222 L181695 MED  
70223 L181696 MED

## Archaeological Evaluation

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# BUNKERS HILL, LINCOLN

## ARCHAEOLOGICAL EVALUATION

### *SUMMARY*

This report, describing the results of a programme of trial trench evaluation on land at Bunkers Hill, Lincoln, has been compiled by CLAU for Greetwell Developments. The land (designated Area 5) forms part of an area scheduled for housing development in line with outline planning permission received in July 1999 (REF No. LD01/0120/89). The project was carried during the period 10 April 2000 to 18 May 2000 in accordance with a Lincoln City Council approved specification - produced by CLAU in July 1999.

The site lies c.3km north-east of Lincoln city centre at NGR TF 0043 7273 (approximate centre of Area 5), immediately adjacent to the City's boundary with the District of West Lindsey. Area 5 comprises a c.62 hectare block of land contained within a large field bounded to the north-west and north-east by properties fronting on to Wragby Road and Hawthorn Road respectively, to the east by Greetwell Lane (leading to Greetwell Farm), to the south-east by a small stream, and to the south and west by a quarry and adjacent fields. It has been subjected to several stages of archaeological evaluation as part of the current application for planning permission. These include a desk based preliminary archaeological assessment by John Samuels Archaeological Consultants in 1994 (including an Aerial Photographic Assessment by R Palmer), a topsoil magnetic susceptibility and gradiometer survey by Oxford Archaeotechnics Limited (Johnson, 1997), and fieldwalking by Lindsey Archaeological Services (McDaid, 1997).

The principal focus of archaeological interest in Area 5 was a cropmark defining a length of prehistoric triple-ditched boundary running approximately N-S across the evaluation area. The evaluation produced significant information regarding the character, state of preservation and date of construction of the triple-ditch system. It demonstrated the feature to be continuous across the evaluated area - extending beneath colluvium to the edge of the small stream forming the south-east field boundary. The evaluation also produced valuable new dating evidence - in particular from Trench 1 in the area to the North. Here, a group of sherds from high in the fill of the middle ditch could represent a single vessel of possible Late Bronze Age/ Early Iron Age date but of a type which may continue into the later Iron Age. Smithing slag and hammerscale found in a recut or pit (024) on the line of line of the east ditch were associated with sherds of pottery belonging, it is thought, to another vessel of possible Late Bronze Age/ Early Iron Age date.

In the area adjacent to the stream, the triple-ditched boundary was well preserved beneath thick layers of colluvium. Here, a set of comparatively shallow features, of possible Romano-British date, post-dated the boundary. These were then sealed by a succession of colluvial deposits, probably beginning during the Romano-British period and continuing to the present day - culminating in the present depth of up to 1.5m of deposits. In this area, the triple-ditched boundary was cut into a well preserved buried soil extending across low-lying ground adjacent to the stream.

The remainder of the evaluated area produced little of archaeological interest. It is therefore suggested that the principal areas of archaeological potential comprise the line of the boundary - in particular the well-preserved remains adjacent to the stream, and the area containing evidence of iron working to the north.



# **BUNKERS HILL, LINCOLN**

## **ARCHAEOLOGICAL EVALUATION**

### ***1.0 INTRODUCTION***

This report, describing the results of a programme of trial trench evaluation on land at Bunkers Hill, Lincoln, has been compiled by CLAU for Greetwell Developments. The land (designated Area 5) which has previously been investigated through a geophysical survey by Oxford Archaeotechnics (Johnson, 1997) and through fieldwalking by Lindsey Archaeological Services (McDaid, 1997), forms part of an area scheduled for housing development in line with outline planning permission received in July 1999 (REF No. LD01/0120/89). The project was carried during the period 10 April 2000 to 18 May 2000 in accordance with a Lincoln City Council approved specification - produced by CLAU in July 1999.

The information in this document is presented with the proviso that further data may yet emerge. Lincoln City Council cannot, therefore, be held responsible for any loss, delay or damage, material or otherwise, arising out of this report. The document has been prepared in accordance with the Code of Conduct of the Institute of Field Archaeologists.

### ***2.0 SITE LOCATION, TOPOGRAPHY & GEOLOGY (Figs.1 & 2)***

The site lies c.3km north-east of Lincoln city centre at NGR TF 0043 7273 (approximate centre of Area 5), immediately adjacent to the City's boundary with the District of West Lindsey. Area 5 comprises a c.62 hectare block of land contained within a large field bounded to the north-west and north-east by properties fronting on to Wragby Road and Hawthorn Road respectively, to the east by Greetwell Lane (leading to Greetwell Farm), to the south-east by a small stream, and to the south and west by a quarry and adjacent fields.

The site lies on the south-east slope of the Jurassic scarp known as the Lincoln Edge, on a geology consisting of (listed from most recent) Great Oolite Limestone with thin clays, Upper Estuarine Beds/Clays with thin limestones in upper parts, Lincolnshire limestone, Lower Estuarine beds, and Northampton sand and Ironstone (*1973 Geological Survey map of Great Britain (England and Wales), Solid and Drift, Sheet 114*). The topography of the site consists of generally flat and more elevated ground to the north (c.37m OD max.) sloping to the line of a small stream at the edge of the field to the southeast at c.30m OD. A footpath traversing the area from SE-NW follows the scarp at the edge of the valley.

### ***3.0 ARCHAEOLOGICAL & HISTORICAL BACKGROUND***

The site has been subjected to several stages of archaeological evaluation as part of the current application for planning permission. These include a desk based preliminary archaeological assessment by John Samuels Archaeological Consultants in 1994 (including an Aerial Photographic Assessment by R. Palmer), a topsoil magnetic susceptibility and gradiometer survey by Oxford Archaeotechnics Limited (Johnson, 1997), and fieldwalking by Lindsey Archaeological Services (McDaid, 1997).

The principal focus of archaeological interest in Area 5 is a cropmark (Palmer, 1994) defining a length of prehistoric triple-ditched boundary. The course of the cropmark, which runs approximately north-south, has been mapped in detail by geophysical survey (Johnson, 1997) over a distance of c.250m. The resulting gradiometer plot displays a strong response over the complex on the more elevated ground to the north, becoming less distinct on the south-east facing slope of the stream valley before disappearing altogether in the valley floor. The absence of the feature in the latter area can be attributed to the combined effects of erosion on the slope and masking by colluvial and alluvial deposits over the valley



floor (Johnson, 1997). An alternative explanation, prompted by the results of fieldwork in the area to the south of the stream, is that the ditched complex terminates at the edge of the valley (Armour-Chelu, 1998).

The triple-ditched boundary forms one of several sections of cropmark extending discontinuously for 5.7 kilometres between Greetwell to the south of the study area and Grange de Lings to the north, to produce the longest recorded section of prehistoric multiple-ditched boundary in Lincolnshire (see Bountwood, 1998). Previous investigations along the line of the cropmark include recent large-scale excavations by Lindsey Archaeological Services at Greetwell on adjacent land to the south of the site (Armour-Chelu, 1998), and excavations at Nettleham Glebe (Field, 1980) and Nettleham (Palmer-Brown, 1994). Pottery of middle Iron Age and late Iron Age/ Romano-British date was found in separate ditches at the Greetwell site. The discovery of Romano-British pottery in the fills of ditches here, and at Nettleham and Nettleham Glebe indicates survival of the earthwork and continued silting of the ditches into the Romano-British period (see Bountwood, 1998). The programme of fieldwalking across the area including Area 5 (McDaid, 1997) produced no evidence for prehistoric pottery associated with the triple-ditched boundary system.

To the centre of Area 5, the ditched boundary deviates west from its projected line for a distance of c.50m - appearing to respect a set of weak anomalies consisting of a c.9-10m diameter ring form set within a curvilinear or oval anomaly with dimensions of c.40 x 30m. A further "ring-like" anomaly c.14m in diameter lay to either side of the footpath following the scarp of the stream valley. Other extremely tenuous linear and curvilinear anomalies have been interpreted as being of probable agricultural origin (Johnson, 10-11).

Transcriptions of aerial photographs show a comparatively indistinct set of cropmarks immediately to the east of the triple-ditched boundary. These form a possible four-sided, internally divided, ditched enclosure interpreted as being of possible Romano-British date (Palmer, 1994). Although some of the cropmarks lay within the north-eastern extent of Area 5, the gradiometer survey produced no evidence for corresponding anomalies and a natural (i. e., geological) origin seems likely.

Fieldwalking over the field (Area A) containing Area 5 produced 7 fragments of Roman tile, 17 sherds of medieval pottery and 35 pieces of tile, together with 1 fragment of Roman or Medieval tile.

#### **4.0 AIMS & OBJECTIVES**

The objectives of the evaluation are set out in a CLAU specification of 5 July, 1999. Here, it was stated that trial trench evaluation should augment the results of previous phases of assessment/ evaluation. In accordance with this aim, the evaluation was designed to:

- *provide information on the presence/ absence, nature, date and quality of survival of archaeological deposits, remains, and artefactual evidence which might be contained within the site, and to assess their importance.*
- *provide information that would allow the local planning authority to reconcile development proposals with their policy for preserving archaeological remains and make an informed and reasoned decision in relation to specific condition(s) of planning consent.*
- *provide site specific archaeological information which (if necessary) would allow for the design and integration of timing and funding of any further archaeological work (or other mitigating strategy) which might be required in advance of or during any subsequent development programme.*
- *produce a project archive for deposition with an appropriate museum.*
- *provide information for accession to the County Sites and Monuments Record (SMR) and the Lincoln Archaeology Database.*



## 5.0 METHODOLOGY

Nine trial trenches were excavated within the limits of Area 5. These were positioned to examine the triple-ditched boundary as well as other geophysical anomalies representing suspected archaeological features. Further trenching in the vicinity of the small stream was designed to assess the potential for features and deposits sealed beneath layers of alluvium and/or colluvium. In general, trenches were approximately 30m long by 2m wide. Exceptions were Trench 4 (c.60m long) and Trench 3 (main section c.9m long). Trenches 8 and 9, which lay in close proximity to the stream, had to be widened at their upper levels to provide for stepped excavation through deep colluvial deposits (see below).

Trenches were set out on pre-determined co-ordinates, measured from fixed reference objects used during the geophysical survey by Oxford Archaeotechnics Ltd, using a Geodolite EDM Total Station. A 360 degree, tracked, mechanical excavator, with 2m wide ditching blade, was then used under archaeological supervision to remove the modern ploughsoil. In general machine-based excavation was only carried out to the top of the first significant archaeological horizon. Areas containing deposits of archaeological significance were then hand-cleaned prior the excavation of a representative proportion of features and deposits to permit assessment of their character, extent, and state of preservation, and to determine their position in the stratigraphic sequence.

Exceptions to the process described above were Trench 4, where the triple-ditched boundary was excavated by machine, and Trenches 8 and 9 where thick colluvial deposits were similarly removed along with, in Trench 8, the upper levels of the triple-ditched boundary and most of a buried soil.

All context descriptions were recorded on standard CLAU *pro forma* context sheets with sections and plans drawn on *permatrace* at a scale of 1:20. All features were photographed using colour print film. Archaeologically negative trenches were recorded in less detail through a combination of notes describing the visible geological strata and overall trench photographs.

An environmental sampling strategy was decided upon through on-site consultation with the project's approved environmental specialist (James Rackham). In accordance with his recommendations, bulk samples were obtained from the primary fills of ditches forming the boundary in Trench 1. In addition, a set of column samples was collected by James Rackham from ditches in Trench 8. It is anticipated that full analysis of the column samples will only be carried out as part of further work arising from consideration of the results of evaluation in relation to impact assessments in the light of the detailed development proposals. For a more detailed discussion of the sampling strategy, please refer to Appendix C.

## 6.0 RESULTS

The majority of weak anomalies produced by the geophysical survey were shown by trial trenching to have been caused by variations in the underlying geological strata. The principal focus of the evaluation therefore became the prehistoric triple-ditched boundary.

A small assemblage of unstratified material, including 24 prehistoric worked flints, a single sherd of Iron Age pottery, 15 sherds of Roman pottery and 23 sherds of Medieval pottery, was collected from across the surface of Area 5 (see Appendices B,C,D & E).

### 6.1 Geological Deposits

Solid limestone was encountered over the majority of the higher ground to the north - in Trenches 1,3, and 5, and over the north-eastern part of Trench 4. The stratigraphy in Trench 2 was slightly different - displaying shallow bands of limestone interspersed with clay. Over the south-western part of Trench 4, limestone brash sealed a layer of clay, which in turn sealed solid limestone.

Trenches 6 and 7, on the hill-slope to the south-east, revealed a mixed geology consisting predominantly of clay, with some patches of limestone brash and occasional outcrops of limestone. Trench 8, at the foot of the slope, exposed a thick clay layer rising in elevation towards the eastern end



of the trench, with sandier material - rich in iron sulphide, extending throughout the area to the west and into Trench 9 (068, 130).

The aforementioned geological strata are representative of the Jurassic ridge known on its western scarp as the 'Lincoln Edge'.

### *6.2 Buried Soil (Fig.8)*

A thick buried soil (contexts 113,109, 110,108, 104, 101, 135), sealed beneath colluvium and pre-dating the triple-ditched boundary, was encountered at the foot of the hill-slope in Trench 8. The soil was present over the majority of Trench 8 - extending beyond the limit of excavation to north, south, and west but lensing out over underlying strata on slightly rising ground to the east (see section above). The greater part of the soil was removed during machine-based excavation of the trench and was therefore recorded in section only. Localised examination of the south-facing section, at the interface between the buried soil and colluvial material, revealed an indistinct upper horizon of the soil profile (recorded as 135 - see Fig.8, Section 7).

It is likely that the soil is particularly well preserved across low-lying ground to the south-west of Trench 8 - extending to the line of the stream course.

### *6.3 The Triple-ditched Boundary (Figs. 3,4,5,6,7,8 - Plates 1-5)*

The triple-ditched boundary was thoroughly investigated at several points - with full transects across it in Trenches 1, 3, 4, 7 and 8. In Trench 9 (NW-SE) a single ditch (065 - probably the central ditch) was revealed - running lengthways through the trench.

The width of the boundary, as encountered in Trenches 1, 3, 4, 7 and 8, was approximately 12.8m (slightly oblique transect), 12.16m, 10.96m, 11.38m (more severely truncated), and 13.30m (very oblique transect) respectively. Allowing for differences in degree of truncation and variations in the angle of intersection between boundary and trench, the ditches appear to be contained within a corridor of fairly constant width (c.11-12m). Spacing between ditches was approximately equal in Trenches 3, 7 and 8 but slightly uneven in Trench 1 - the central and eastern ditches narrowing to give a 1.3m discrepancy in measurement between ditches. Spacing between ditches in Trench 4 was difficult to determine with accuracy owing to a possible recut of the central ditch (024 - Fig.5, Section 3).

Comparisons between ditches, with regard to dimensions and form and size, across transects revealed an overall marked uniformity. In general, ditches displayed v-shaped profiles with rounded/concave bases and broadly similar dimensions. In Trench 1 (from east to west - ditches 020, 021, 007) and 3 (from east to west 009, 011, 013) ditches ranged between c.1.4m and c.2.0m in width and between c.0.50m and 0.65m in depth (Fig.4). In Trench 4 (Fig.5), which had perhaps suffered increased truncation owing to its relative proximity to the scarp slope, dimensions ranged between 1.22m and 1.56m wide (ditches 029 and 035 respectively), and 0.42 (ditch 029) and 0.52m deep (ditch 035). There was tenuous evidence for banks between the ditches in Trench 3 (layers 018 and 025) but the deposits could equally be interpreted as upper layers of natural limestone brash.

Trench 7 was located on the upper levels of the hill-slope - close to the southern terminal of the triple-ditched boundary as depicted on the gradiometer survey plot. Here, the eastern (056), central (060) and western ditches (062) had relatively shallow depths of only 0.22m, 0.32, and 0.37m respectively (Fig.6).

Trench 8 was located at the foot of the hill-slope where the triple-ditched boundary was sealed by thick colluvial deposits (Fig.8). This material had protected the central (089) and western (090) ditches - preserving their full depths of c.1.05m and c. 1.00m respectively. The eastern ditch (091), at this point, survived to a depth of only 0.45m owing to its position on the lower slope of ground rising to the east. In Trench 8, ditch widths could not be determine with accuracy because of the oblique angle at which they were encountered and because of truncation of their uppermost levels during machine excavation of the trench.



Evidence for recutting of the boundary, or alternatively of a later pit, cut into the boundary was encountered in Trench 1 (Fig.4). Here, the hemispherically shaped southern terminal end of the possible recut or elongated pit (024) had cut away the east shoulder of the east ditch (007). The lower extent of the later cut (024) contained a charcoal rich primary fill (131) including 5 sherds of pottery - possibly from a single Late Bronze Age/ Early Iron Age vessel (see Appendix C), together with small fragments of smithing slag and flakes of hammerscale recovered from environmental samples. Small quantities of hammerscale were also found in samples from the fill (006) of the truncated east ditch (007), and in the primary fill (046) of the west ditch. This suggests iron-smithing taking place nearby. It should be noted that although the primary fill of 024 was conclusively shown to lie in a cut truncating the lower fills of 007, the relationships between later deposits contained in the features was not clearly defined. It is therefore possible that the later cut (024) was made into the ditch (007) when the latter was only partially silted and that the features silted up simultaneously after the deposition of 131. This scenario would explain the presence of hammerscale in ditch fills 006 and 046.

In Trench 4 (Fig.5), the central ditch (031) was cut to the east by a shallower feature (033) which could represent either a recut along the original line of the ditch (not visible in the section to the south), or the NE extent of a linear SE-NW cut formed by alignment with a separate feature (037) identified in the opposing section of the trench. Unfortunately, the similarity of fills between 031 and 033 did not permit an interpretation of their inter-relationship.

Fills on the limestone plateau to the north were broadly similar between ditches - with generally clayey basal primary fills (where identified) overlain by silt/sand containing frequent fragments of limestone - derived from adjacent natural materials. The upper levels of the fill (003) of the middle ditch (021) in Trench 1 contained 33 small fragments of pottery - possibly representing a single vessel for which a Late Bronze Age/ Early Iron Age date has been tentatively suggested (see Appendix C). Bulk samples from ditches 020, 021, and 007 in Trench 1 also contained numerous snail shells (see Appendix G).

Ditch fills in the area immediately adjacent to the stream were more varied. The middle ditch (089) in Trench 8 (Fig.8) was filled, first by a silty clay containing frequent mollusc shells (088), and then by a clayey silt (112). Samples from the middle ditch (089) contained large numbers of aquatic molluscs indicating that the ditch was at least water-filled seasonally (see Appendix G). Ditch 065, encountered in Trench 9, was filled by a similar clay (066) to that found in 089.

The sequence of deposition evident in the western ditch (090) in Trench 8 was much different and more complex. Here, a primary fill of clayey silt was sealed by a shallow 'crust' (094) consisting of fine layers of dark grey silt/sand, reddy brown clay/ silt, and light yellow brown clay/silt. The formation of this crust was attributed to post-depositional processes by the project's environmental consultant (James Rackham, pers comm). The ditch was then filled by a sequence of clayey sands and silts (095, 096, and 097).

It is clear that deposits in each of the ditches accumulated under very different environmental conditions. This may indicate a change in environment over time - with sedimentation in 089 occurring during a wet period and 090 silting up under drier conditions. Alternatively, but less likely, it might suggest very localised variations in environment - for example through modifications to the ditches system.

#### **6.4 Post-Boundary Activity**

A set of linear features and a possible post-hole post-dated the abandonment of the triple-ditched boundary at the east end of Trench 8. The linear features included a N-S ditch (092) cutting the western edge of 090 and continuing south to beyond the southern limit of excavation. Another ditch (121) cut the eastern side of 089 before terminating to the SE. The two features mentioned above were both recorded as being cut from the top of the buried soil but could have been cut from higher in the sequence (pers comm, James Rackham). They were filled mainly by sands and silts closely resembling later colluvial deposits (see below). A further cut (122), visible only in the NW-facing section of the trench, was probably cut through the lower levels of colluvium (see Fig.8). It was also filled with clayey silt (111 and 107). It could either represent a pit or a linear feature continuing in the form of the depression (128) visible in the opposite section.



A possible post-hole (118) cutting the buried soil to the west of 089 could not be stratigraphically related to other features owing to machine truncation of its upper levels. It has however, been tentatively placed in this phase of activity.

The phase of activity represented by this group of features was not dated but a Romano-British date can be advanced on the basis of their being sealed by the majority of colluvial material (see below).

#### *6.5 Colluvial Deposits (Figs. 7&8)*

Colluvial deposits, forming at the base of the hill-slope, attained a maximum depth of c.1.5m in Trench 8 (upper horizon at 29.65m OD - see *Plate 6*), reducing to 0.80m to the south-east of Trench 9 in proximity to the stream course (upper horizon at 28.88m OD). An intensive examination of colluvial deposits in a 1m wide section in Trench 8 (see Fig.8, section 7) revealed several distinct phases of accumulation. The following discussion and interpretation of this sequence of deposition is largely based upon comments made by James Rackham.

The earliest layer was a 0.82m thick, relatively inclusion-free clay/silt (123) - possibly representing shallow ploughing with only a light impact upon the underlying limestone on higher ground to the north. It is possible that a slightly darker band forming the uppermost c.150mm of 123 could have represented a period of stabilisation between episodes of colluviation. A stonier layer of silty clay (134) sealing 123, and an overlying silty sand (133) extending to beneath the present ploughsoil, were probably formed after the introduction of deeper ploughing methods - possibly during the post-medieval period. Deposits 105 and 106 (see Fig.8, section 6) in the opposing section broadly correspond to 123.

In Trench 9, slight variations within the colluvium were not recorded, except for distinctive sandy band of material (072) lying between clays forming within and/or over the triple-ditched boundary and the main body of colluvium represented by (071).

The lower extent of colluvium in Trench 8 (005, 006 and 023), produced a small assemblage of predominantly Romano-British pottery dated to the 2nd/3rd century AD (see Precious, Appendix D) with occasional fragments of Iron Age material (see Knight, Appendix C). This suggests that arable farming on adjacent land began during the Romano-British period and has continued to the present day.

#### *6.6 Post-Medieval/ Modern Deposits*

A c.150mm thick clayey soil (044/015), overlay the triple-ditched boundary in Trenches 1 and 3. It can be interpreted as the remains of medieval and/or post-medieval ploughsoil whose lower horizon truncates the boundary. There was, however, no conclusive evidence for the broad and shallow furrows usually associated with the typical medieval ridge and furrow field systems. The deposit in both trenches thinned from west to east before lensing out altogether - possibly reflecting differences in land-use between smaller fields as depicted on older Ordnance Survey maps.

A very small hollow recorded to the east of the triple-ditched boundary in Trench 1 (048) could be interpreted as a post-hole but is thought more likely to represent a natural fissure within the underlying of limestone. It was filled by material identical to 044.

Two shallow linear depressions (054 & 086) running SE-NW and E-W respectively across Trench 5 contained topsoil-like fills and were interpreted as being of agricultural origin and of recent date. The fill of 054 (053) included a clay pipe fragment.

Ceramic land drains were found in Trenches 3 and 5, the former aligning more or less with a SSE-NNW linear anomaly present on the gradiometer survey plot.



## 7.0 DISCUSSION

### *The buried soils*

A well preserved buried soil, cut by the prehistoric triple-ditched boundary, extends across low-lying ground adjacent to the small stream to the south-east. The majority of the deposit, where encountered in Trench 8, was removed by machine and recorded in section only. Its value as a source of information concerning ancient land-use and environmental was, therefore, only partially assessed.

### *The triple-ditched boundary/ iron smelting*

The evaluation has produced significant information regarding the character, state of preservation and date of construction of the triple-ditched system. The ditches attained a maximum depth of 1m or just over (090 and 089) where fully intact in Trench 8. Although there was no conclusive evidence for associated banks at this point, they could be represented by increased concentrations of limestone in deposits between the ditches. Tenuous evidence for banks was also located in Trench 3 (see above).

The evaluation has demonstrated the triple-ditched boundary to be continuous across the evaluated area - extending beneath colluvium to the edge of the small stream forming the south-east field boundary. Its course appears to disregard geology - cutting to equal depths across limestone in Trenches 1 and 3, limestone brash in Trench 4, mixed clay and stone in Trench 7, and sands and clays in Trenches 8 and 9. Deviations along its route seem instead to be determined by the nature of the topography: for example, in following the lower contour around a west facing slope near to the stream.

The evaluation has also produced valuable new dating evidence - in particular from Trench 1 in the area to the North. A group of sherds from high in the fill of the middle ditch (021) could represent a single vessel - very tentatively suggested as being of Late Bronze Age/ Early Iron Age but possibly later Iron Age in date (see Appendix C for discussion of dating). This may indicate an earlier date than previously envisaged for construction of the feature. Smithing slag and hammerscale found in a recut or pit (024) on the line of the east ditch (007) were associated with several sherds of pottery thought to belong to a single vessel - again of possible Late Bronze Age/ Early Iron Age date.

### *Land-use following abandonment of the triple-ditched boundary*

A series of shallow linear features (and possibly a post-hole) of possible Romano-British date succeeded the triple-ditched boundary in Area 8 and indicate continued (possibly agricultural) activity in the area. There was no evidence for comparable activity on higher ground to the north - possibly reflecting the effects of erosion through subsequent ploughing.

Colluvial deposits in Trenches 8 and 9 represent a record of subsequent land-use. It is likely that the build-up of material began during the Romano-British period and continued into the Post Medieval period - culminating in the present depth of up to 1.5m of deposits. Close examination of the deposit by James Rackham revealed some evidence for stabilisation layers representing temporary interruptions in arable land-use.

## 8.0 ASSESSMENT OF ARCHAEOLOGICAL POTENTIAL

### *8.1 Areas of High Archaeological Potential*

The trial trench evaluation, in conjunction with previous phases of evaluation, has identified two areas of significant archaeological potential.

#### *Trench 1- the Triple-ditched Boundary*

The discovery of possibly Late Bronze Age/ Early Iron Age pottery in association with the triple-ditched boundary may be of particular significance. The dating of linear boundary features is crucial to understanding of their function and development in the prehistoric landscape. Associated material is rare and the discovery of two vessels from separate features in Trench 1 would appear to suggest a concentration of activity in this area. There is therefore, the potential for the recovery of a comprehensive assemblage of pottery from the area.

*Low-lying ground in proximity to the stream*

Results of work in Trenches 8 and 9 indicate a high potential for well-preserved deposits beneath colluvium at the foot of the hill-slope and adjacent to the stream. The vast majority of linear boundary sites in the region are known only from cropmarks produced by substantially eroded ditches in ploughed fields (Bountwood, 1998) and the discovery of sites comparatively unaffected by later agricultural land-use is essential to the understanding of the form and function of the monuments. Although no conclusive evidence for bank material was located in the excavated areas, further investigation might reveal evidence of the original form of the boundary which would in turn permit a more complete interpretation of function.

The presence of a well preserved contemporaneous land surface offers the potential for the location of shallow and fragile features and surface artefact distributions, which would not normally survive on ploughed sites. There is also the potential for valuable environmental information contained within the buried soil itself. This may further enhance understanding of landscape development in the area.

A series of shallow ditches (possibly Romano-British), a possible post-hole, and colluvial deposits including evidence for phases of stabilisation periods, offer the potential for a continuous record of land-use until the present day.

**8.2 Areas of Intermediate Archaeological Potential**

There is the potential for specific areas of archaeological interest along the entire corridor of the triple-ditched boundary. For example, interruptions in this type of ditch system appear to form foci for increased archaeological activity (Field, 1980). The evaluation did not, however, locate any activity of this type.

**8.3 Areas of Low Archaeological Potential**

Over the remainder of the evaluated area there appears to be only a low potential for archaeologically significant deposits and features. On the higher ground, which forms the greater part of the site, the evaluation failed to locate any evidence for archaeological activity in addition to the triple-ditched boundary. Several weak anomalies representing potential features on the gradiometer survey plot were investigated and shown to result from either variation in geology or recent agricultural activity. This interpretation is supported by comparison with the triple-ditched boundary, which is depicted strongly on the gradiometer survey plot even where shown by excavation to be of relatively shallow depth. As for example, in Trench 4.



## 9.0 ACKNOWLEDGEMENTS

The author of this report would like to thank UCS Limited for the provision of site facilities and all CLAU staff and external specialists for their contributions towards completion of the project.

### Project Staff and Specialists

CLAU Contracts Manager	J. Hockley
Environmental Specialist	J Rackham (The Environmental Archaeology Consultancy)
Finds Officer	J Mann (CLAU)
Finds Supervisor	Y Rose (CLAU)
Iron Age Pottery	D Knight
Post Roman pottery and tile	J Young (LAS)
Prehistoric Flint	J Brown
Report Editor	M Jones (Lincoln City Council)
Roman pottery	B Precious
Site staff	R Trimble, M Jarvis, H Graham

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## **11.0 PROJECT/ARCHIVE DETAILS**

### **11.1 LHA NOTE DETAILS**

CLAU CODE: GBH99

PLANNING APPLICATION No.:

FIELD OFFICER: R Trimble

NGR: TF 0043 7273

CIVIL PARISH: Lincoln

SMR No.:

DATE OF INTERVENTION: 10.04.00 - 18.05.00

TYPE OF INTERVENTION: Evaluation

UNDERTAKEN FOR: Greetwell Developments

### **11.2 ARCHIVE DETAILS**

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

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

MUSEUM ACCESSION No.: 222.99

ACCESSION DATE:

#### ***The Site Archive Comprises:***

Context Records	137
Plan Sheets at Scale 1:20	10
Section Drawing Sheets at Scale 1:20	10
Colour Print Photographs	123
Set of Site Notes	1



## COLOUR PLATES



Plate 1 - Triple-ditched boundary in Trench 1 (2m scales), looking north-west.



Plate 2 - Triple-ditched boundary as seen in Section 3, Trench 4 (2m and 1m Scales), looking north.



**COLOUR PLATES (Cont.)**



*Plate 3 - Triple-ditched boundary in Trench 7 (2m scales), looking north.*



*Plate 4 - Triple-ditched boundary in Trench 8 with cut 092 in foreground (2m scales), looking north-west.*



**COLOUR PLATES (Cont.)**

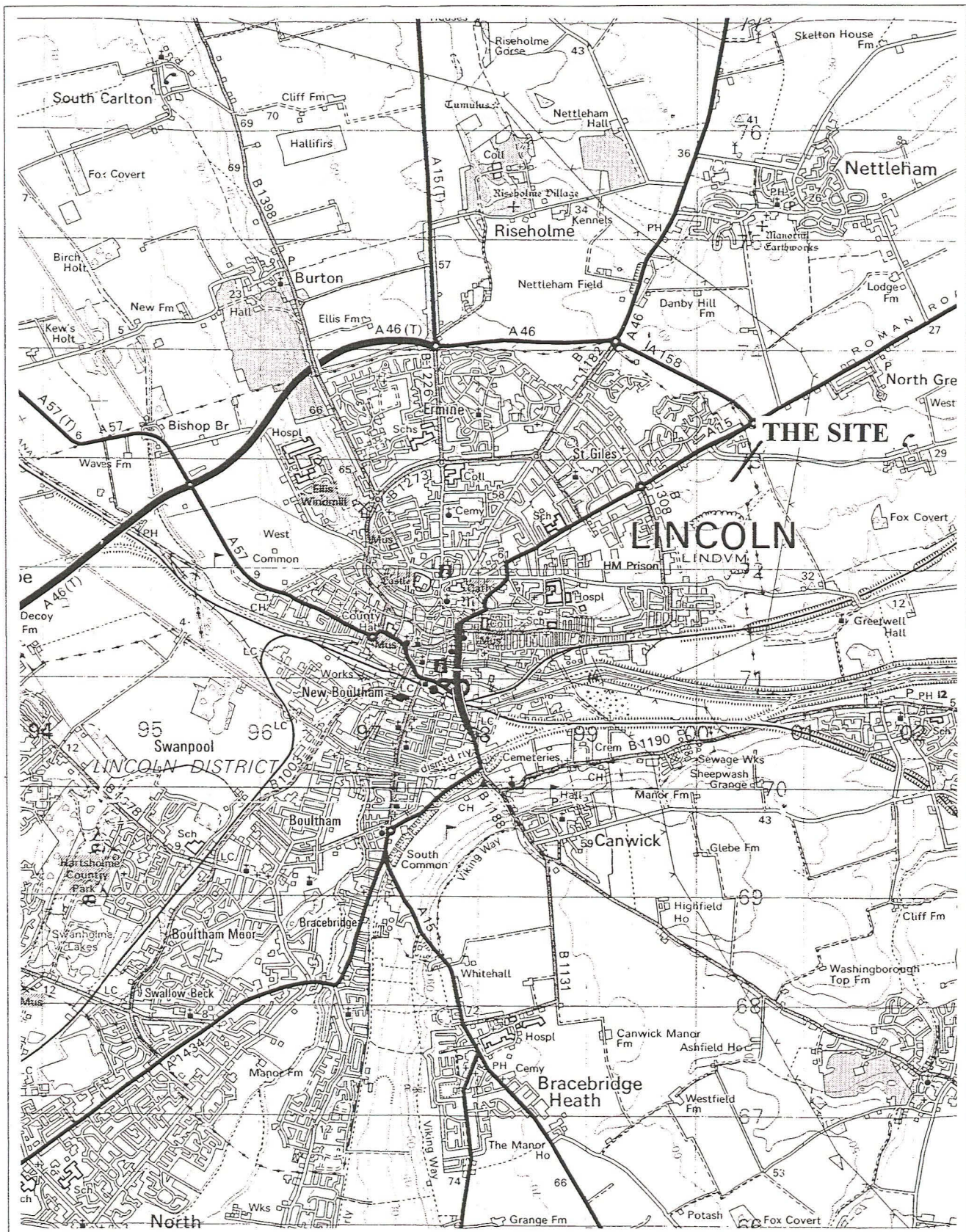


*Plate 5 - Probable central ditch in Trench 9 (065 - 1m scales), looking north-west.*



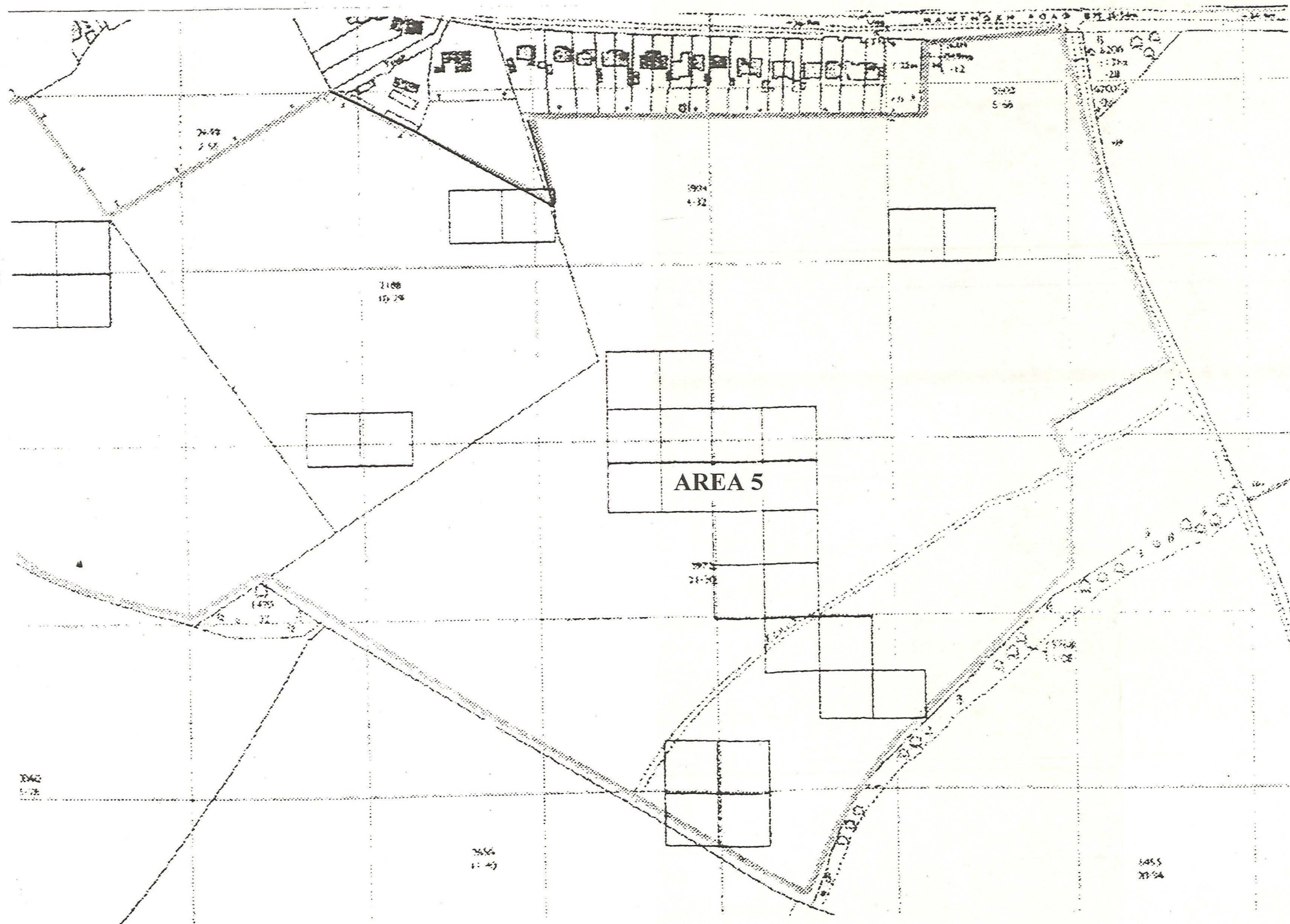
*Plate 6 - Removal of colluvium by machine in Trench 8 - work in progress, looking south-west*





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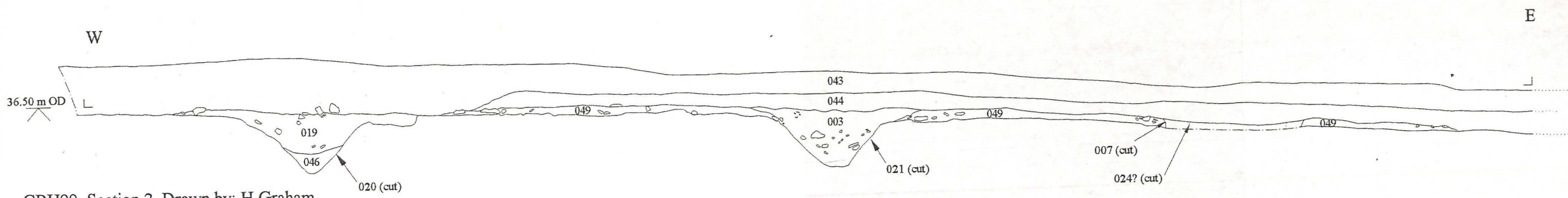


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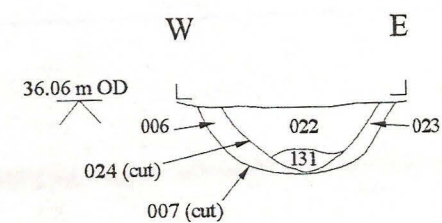




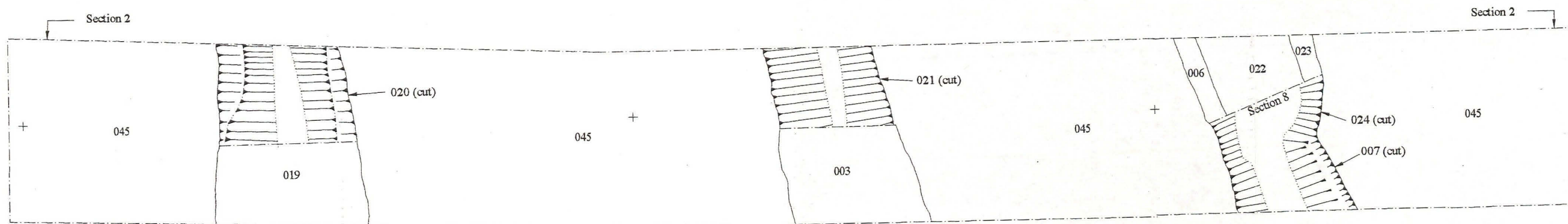




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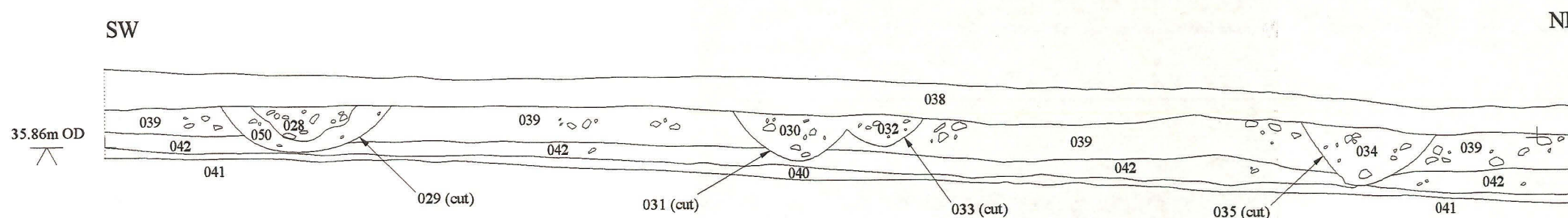
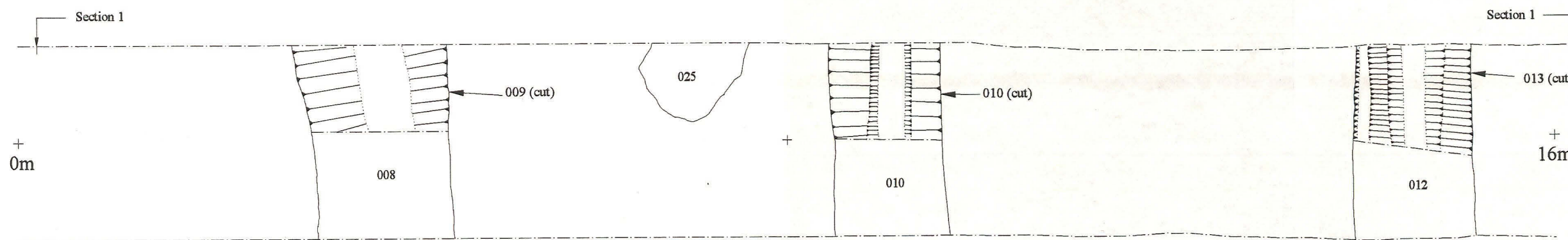
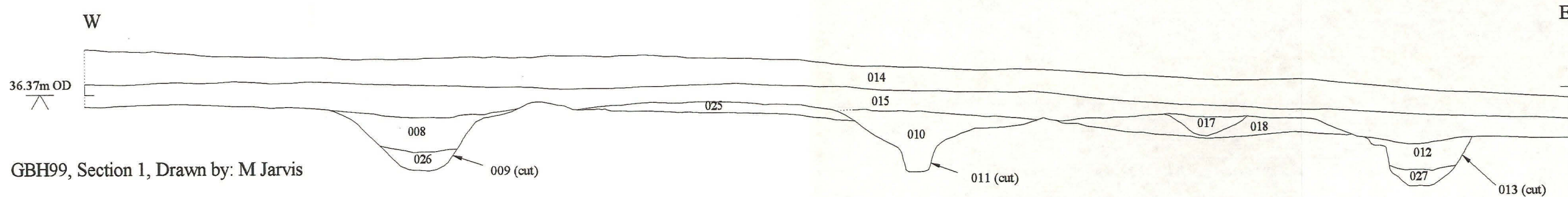
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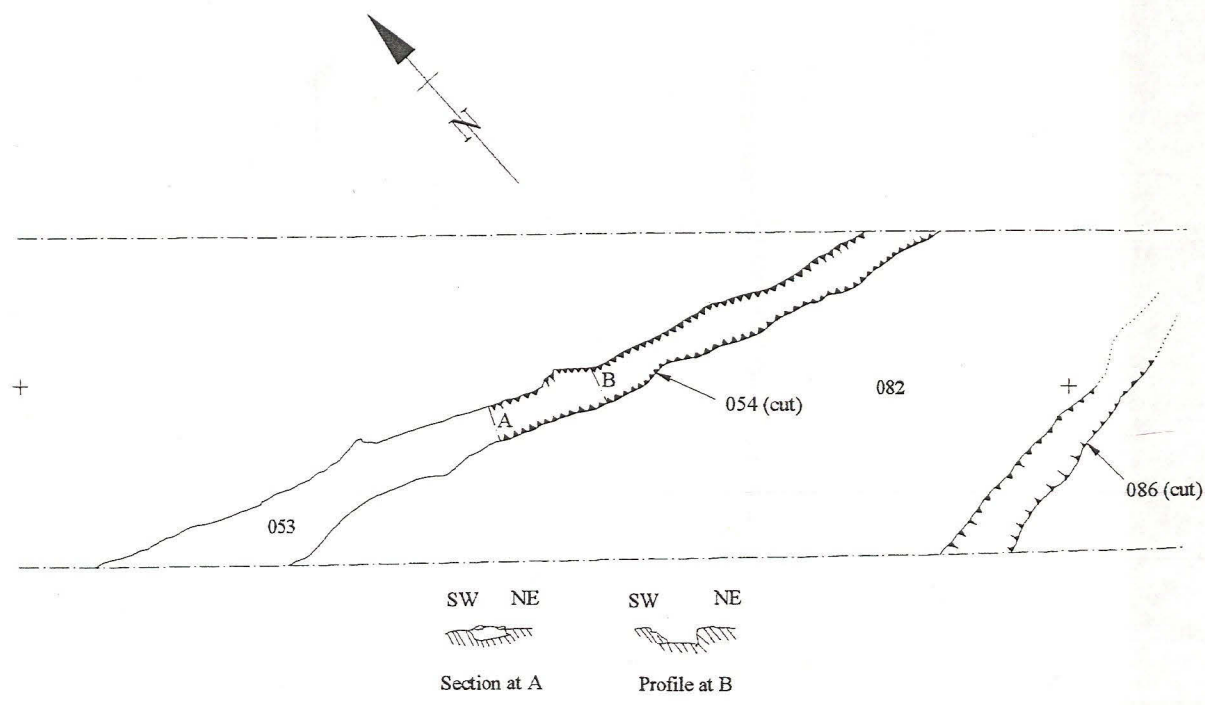
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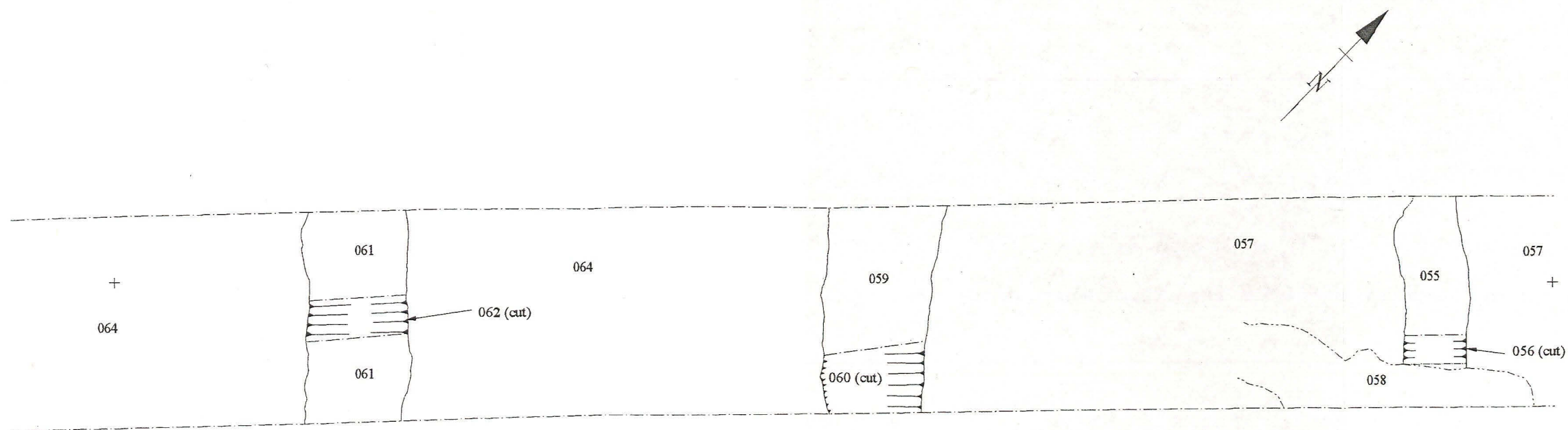






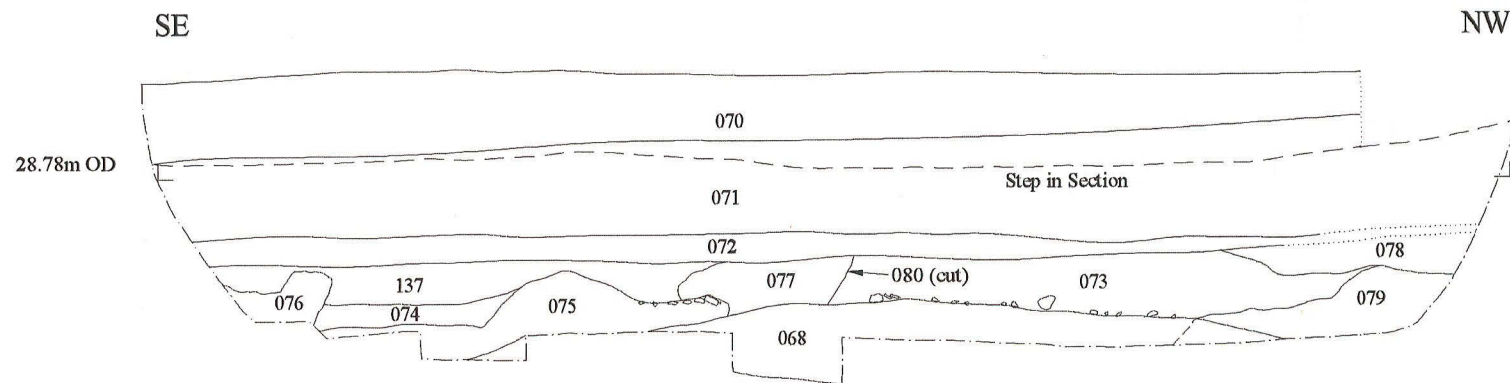


GBH99, Trench 5 - Plan 3, Drawn by: H Graham

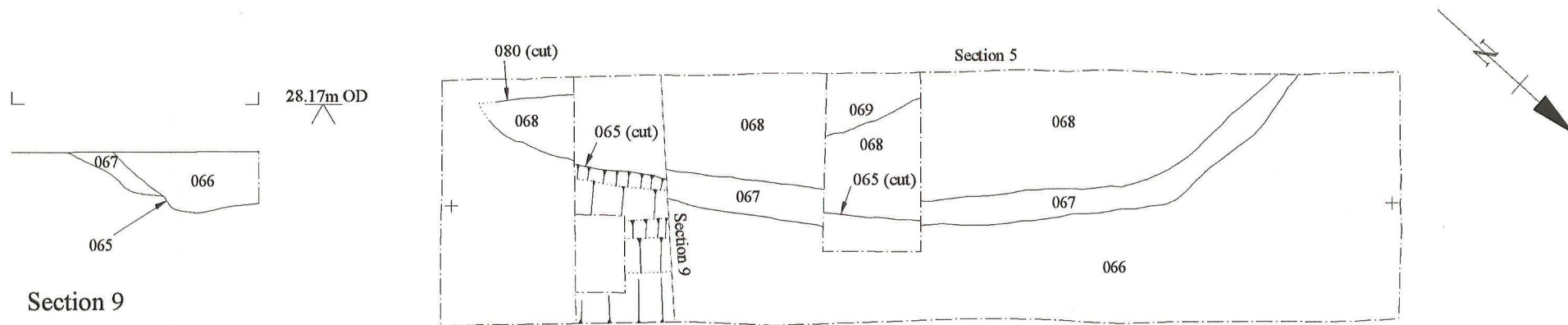


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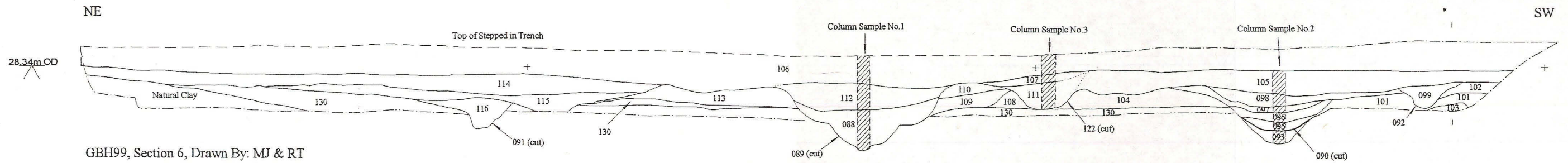
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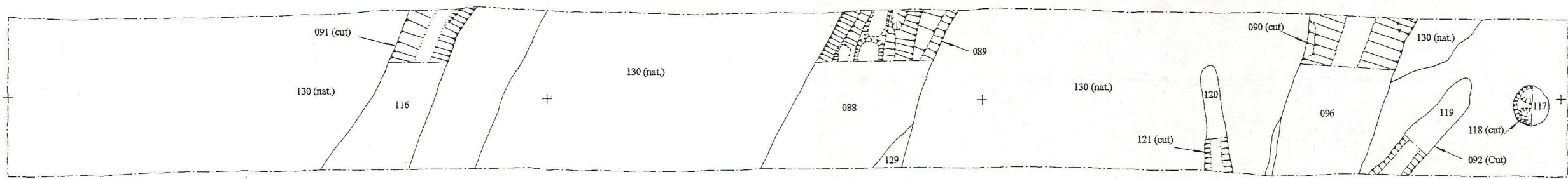
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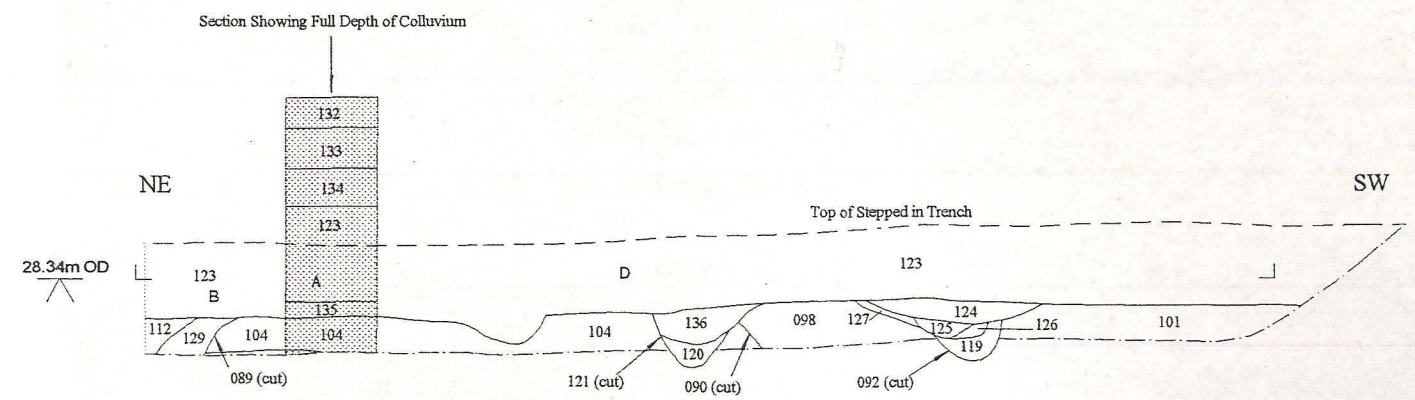




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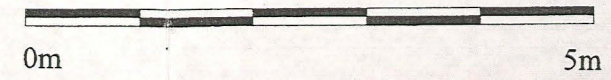


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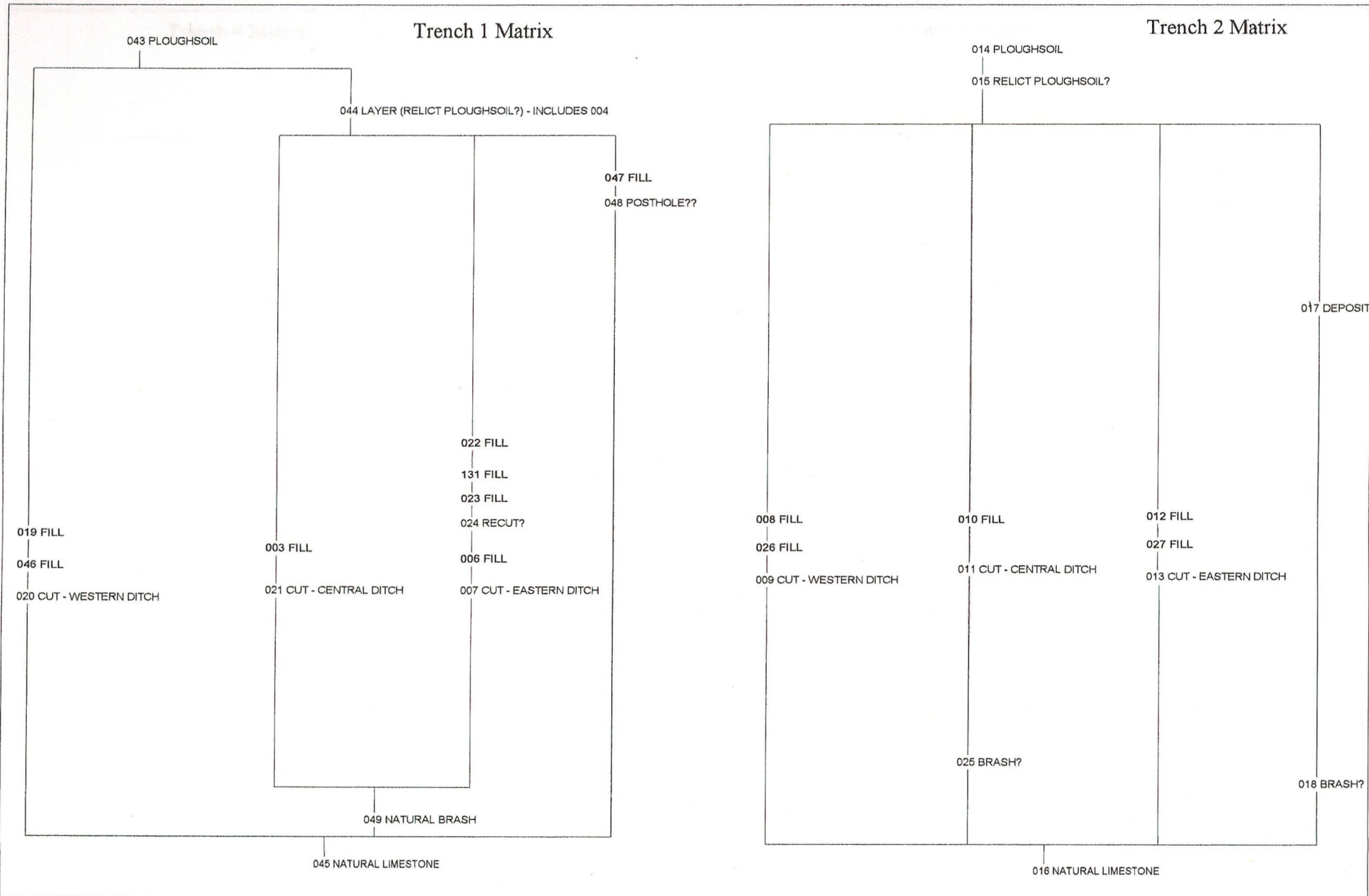


GBH99, Section 7, Drawn By: MJ & RT

Redrawn in reverse to site drawing

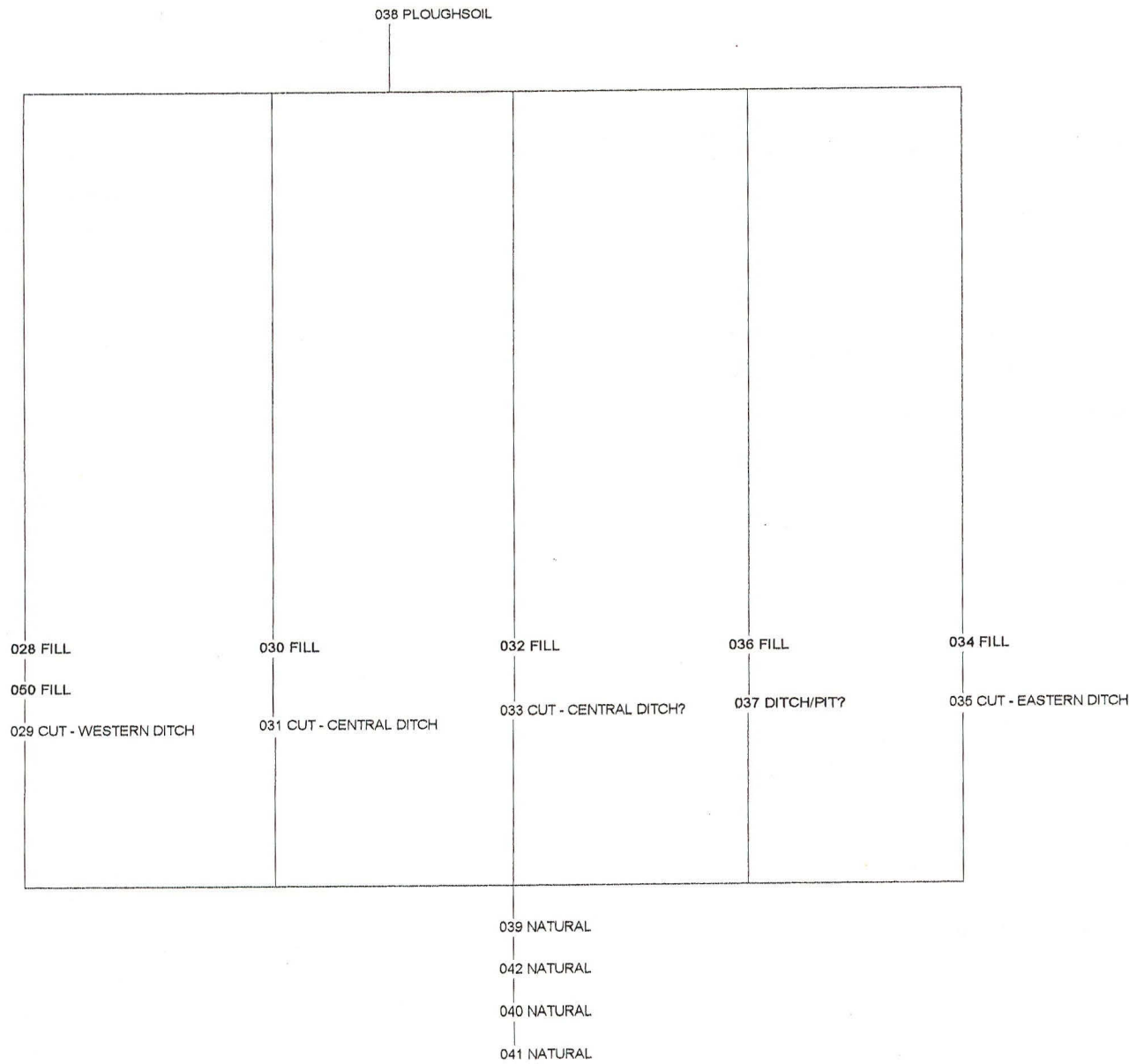




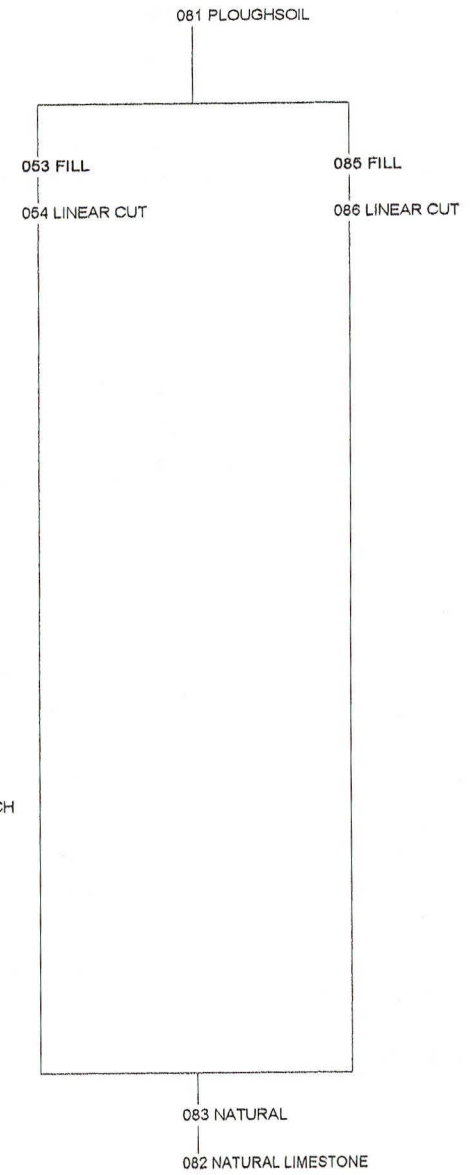




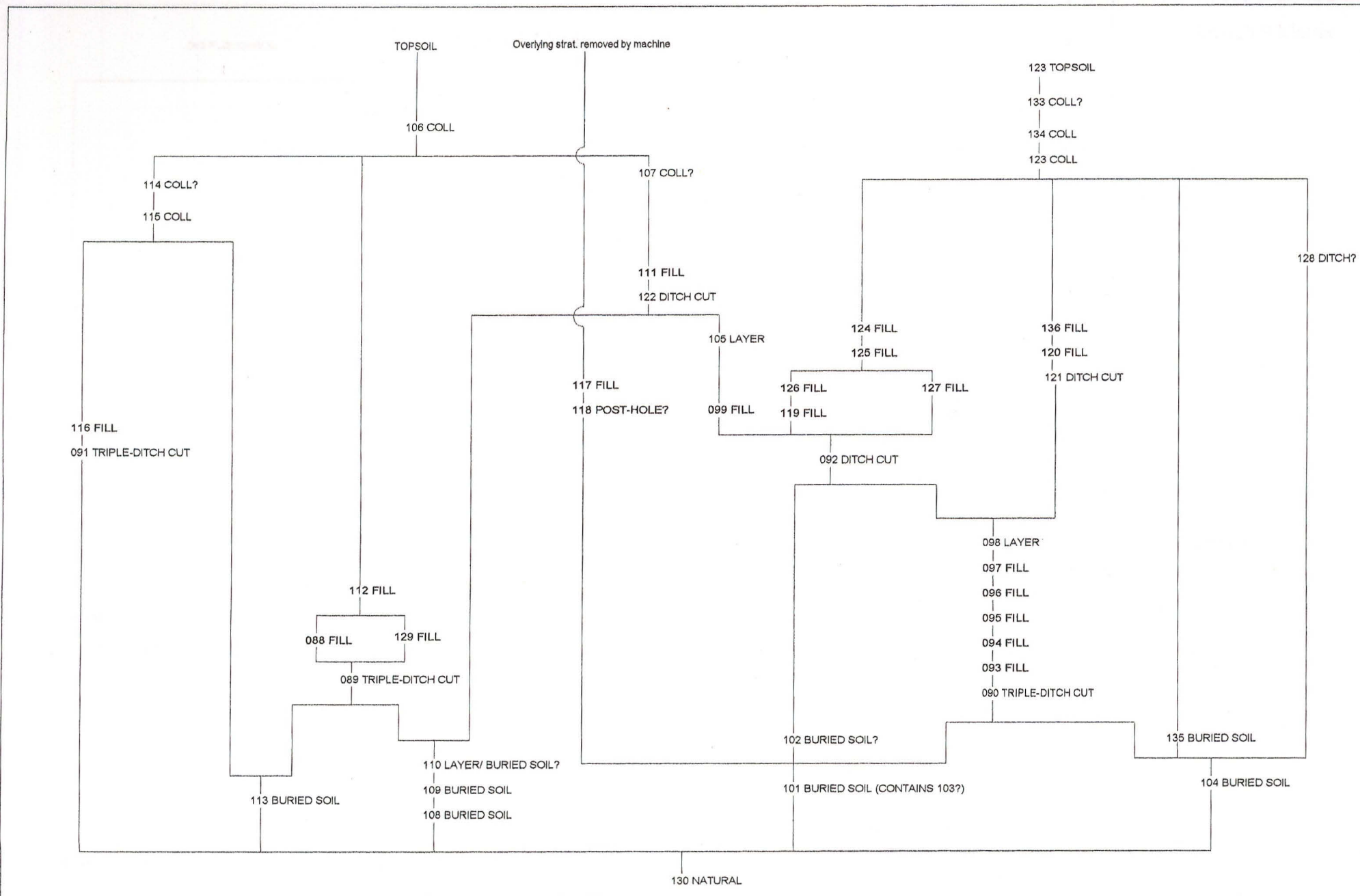
Trench 4 Matrix



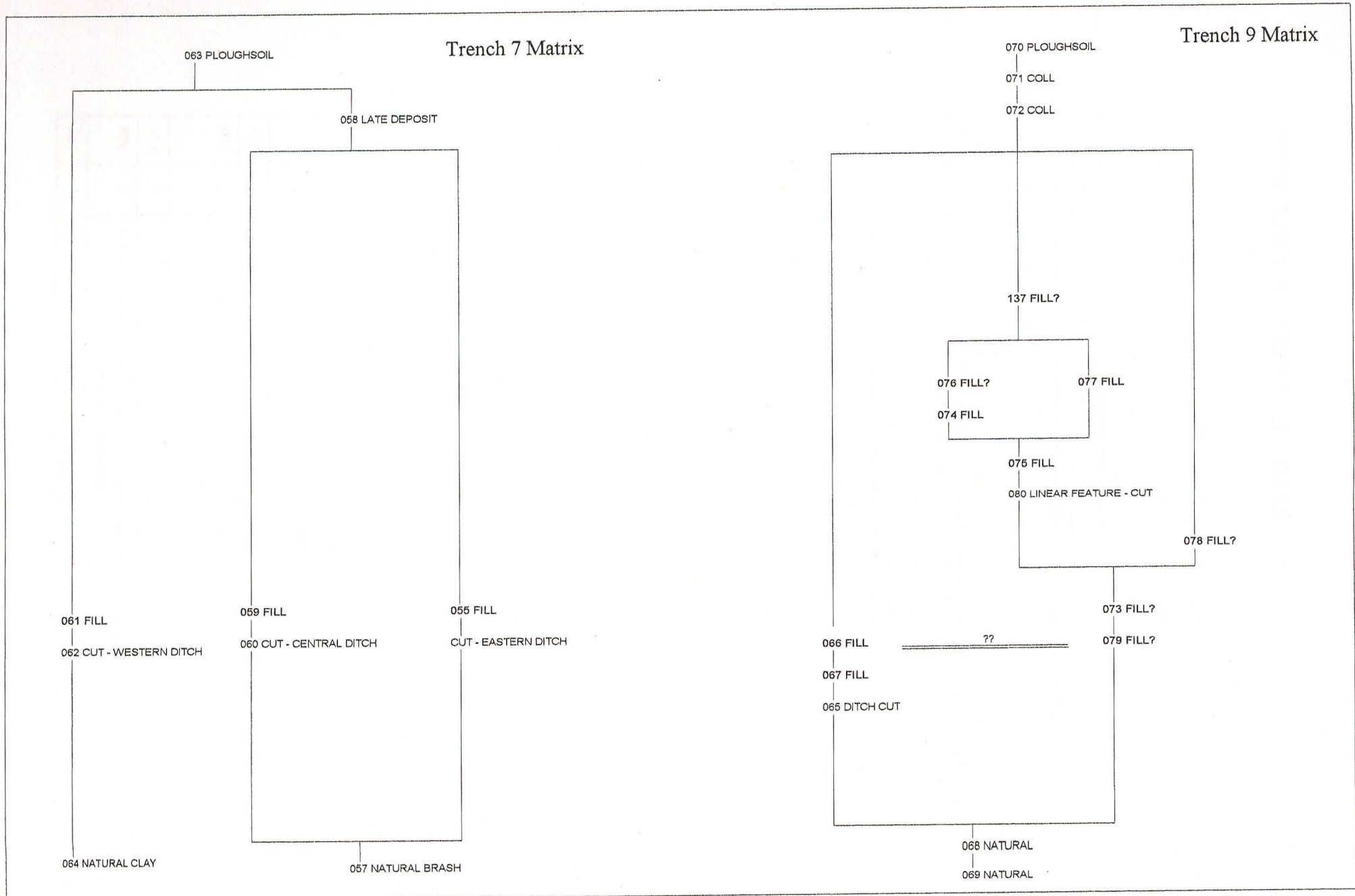
Trench 5 Matrix













## APPENDIX A - CONTEXT LIST

No.	Area	Type/Interp.	Description
001	-	Unstratified Finds	General from within Area 5
002	1	Unstratified Finds	N/A
003	1	Fill of 021	Compact, light orange-brown clayey silt containing freq sm l/s frags
004	1	Part of layer 044	See 044
005		Void No.	
006	1	Fill of 007	Mod comp, mid reddish brown sandy silt containing freq ang l/s frags to 100mm, freq grits and occ snail shells.
007	1	Cut of ditch	Linear, orientated NW-SE. V-shaped profile though with slightly rounded sides breaking to a concave base. Truncated to the NW by poss recut 024.
008	3	Fill of 009	Compact, mid reddy brown clayey silt containing very freq sm ang l/s frags and very infreq c/c flecks.
009	3	Cut of ditch	Linear with sides sloping at 45 degrees to a curving u-shaped base.
010	3	Fill of 011	Firm, mid reddy brown slightly clayey silt containing freq frags of l/s.
011	3	Cut of ditch	Linear with sides at 45 degrees turning near vertical. Flattish/ slightly rounded base.
012	3	Fill of ditch 013	Compact mid reddy brown slightly clayey silt with freq l/s inclusions and occ freq snail shells.
013	3	Cut of ditch	Linear, sides near vertical breaking to a curving u-shaped base.
014	3	Ploughsoil	Compact, mid brown clayey silt containing freq l/s and frags cereal crop stubble.
015	3	Layer	Compact, light-mid brown (red hue) clayey silt containing freq ang l/s frags.
016	3	Natural	Limestone brash.
017	3	Layer or fill	Compact, mid brown (red hue) clayey silt (20/80). No obvious inclusions
018	3	Layer	Compact, light yellow/ brown silt/ clay (60/40) containing freq l/s frags
019	1	Fill of ditch 020	Light orange-brown clayey silt (slightly paler and less clayey than 015)
020	1	Cut of ditch	Linear, orientated NNW-SSE. V-shaped profile with rounded upper edges and a flat narrow base. Maximum width 1.68m x 0.70m deep.
021	1	Cut of ditch	Linear, orientated NNW-SSE. V-shaped profile/ slightly concave sides sloping to a flattish base. Maximum width 1.40m x 0.65m deep
022	1	Fill of 024	Mod comp, mid reddish-brown sandy silt containing freq l/s frags to c.100mm, freq grits and occ snail shells.
023	1	Fill of 024	Mod comp, mid reddish brown sandy silt containing occ sm l/s.
024	1	Ditch Recut?	Linear, orientated SSE-NNW. Terminates within trench to SSE. Concave sides sloping at approx. 45 degrees to a concave/ rounded base. At least 1.4m long x 1.16m wide x 0.48m deep.
025	3	Layer	Identical in composition to 018.
026	3	Fill of ditch 009	Compact, light - mid yellow/ brown clayey silt containing very freq l/s frags and freq snail shells.
027	3	Fill of 013	Identical in composition to 026



028	4	Fill of ditch 029	Firm to loose compaction, light brown (red hue) slightly clayey silt containing freq sm ang l/s frags and infreq snail shells.
029	4	Cut of ditch	Linear (in section only) NW-SE orientated cut with concave sides at 45 degrees breaking gradually to a concave base.
030	4	Fill of ditch 031	Firm-loose compaction, light-mid brown (red hue) slightly clayey silt (80/20) containing freq sm ang l/s and infreq- occ snail shells.
031	4	Cut of ditch	Linear, orientated SE-NW. Concave sides at 45 degrees and gently rounded base.
032	4	Fill of 033	Firm - loose compaction, light - mid brown (red hue) clayey silt containing occ-freq sm ang l/s frags.
033	4	Cut of ditch	Linear ? ditch (could be same as 037). Concave sides at 45 degrees and gently concave U-shaped base. Relationship with 031 uncertain.
034	4	Fill of 035	Firm - loose compaction, light - mid brown (red hue) slightly clayey silt containing freq sm ang l/s frags.
035	4	Cut of ditch	Linear (NW-SE). Concave sides at 45 degrees with U shaped base.
036	4	Fill of 037	Firm - loose compaction, light - mid brown (red hue) clayey silt with freq l/s frags.
037	4	Cut of ditch or pit	Possibly linear cut (Orientated N-S?) with concave sides at 45 degrees and gently rounded U-shaped base.
038	4	Ploughsoil	Firmly compacted, dark grey/ brown clay/ silt containing freq l/s frags and remnants of cereal stubble.
039	4	Layer (Natural)	Loose, pale yellow/ brown sandy silt containing very freq (80%) ang l/s frags.
040	4	Layer (Natural)	Firm - loose compaction, pale yellow/ brown coarse sand/ silt (50/50 - very damp) containing freq l/s 'flakes'.
041	4	Natural	Solid Limestone
042	4	Layer (Natural)	Compact light yellow/ brown (orange hue) clay containing occ freq l/s frags.
043	1	Ploughsoil	Fairly compact brownish-grey silty clay cont freq l/s frags and ploughed in cereal crop. Generally 0.25m thick
044	1	Layer beneath 043	Soft but fairly compact, orange - brown silty clay containing sm sparse l/s frags and occ pebbles. Generally 0.15m thick, lensing out at c. 8m from eastern end of the trench.
045	1	Natural	Limestone brash.
046	1	Fill of 020	Soft, light greenish - grey silty clay mixed with sm l/s flakes/ crumbs.
047	1	Fill of 048	Compact, orange - brown silt/ clay. No inclusions.
048	1	Natural hollow or poss. post-hole	Irregular oval plan shape. Sides varying between steep and gradual, sloping to a slightly rounded base. 0.40m N-S x 0.30m E-W x 0.13m deep.
049	1	Layer (Natural brash?)	Mix of limestone fragments and orange - brown silt.
050	4	Fill of 029	Firm - loose, light - mid brown (red hue) slightly clayey silt containing sm ang l/s brash frags and infreq (land?) snail shell flecks/ fragments.
051		Void No.	
052		Void No.	
053	5	Fill of 054	Fairly loose, dark grey-brown silty loam with flecks of yellow brash. Contains freq l/s flecks and sm ang frags, and single clay pipe frag.
054	5	Shallow linear cut	Linear, orientated SE-NW. Irregular/ generally vertical edges. Dimensions:- 0.20m - 0.33m wide x 0.13m deep.
055	7	Fill of 056	Fairly compact, orange-brown clayey silt containing occ sm ang l/s frags.



056	7	Cut of ditch	Linear, orientated SE-NW with steeply sloping sides and flat base (formed by solid l/s). 0.70m wide x 0.22m deep.
057	7	Natural	L/s brash.
058	7	Deposit	Compact grey-brown clayey loam contained within a linear E-W hollow.
059	7	Fill of 060	Fairly compact, orange-brown clayey silt containing occ sm ang l/s frags and occ larger l/s frags (c 300mm across) in lower extent.
060	7	Cut of ditch	Linear, orientated SE-NW with regularly sloping NE side and irregular SW side formed by ang l/s. Flat base. Width 0.95m narrowing to 0.55m at base x depth of 0.32m.
061	7	Fill of 062	Fairly soft, orange-brown slightly clayey silt containing occ sm ang l/s frags and a single larger fragment of 250mm.
062	7	Cut of ditch	Linear, orientated SE-NW with regular V-shaped profile. 1m wide x 0.37m deep.
063	7	Ploughsoil	Grey-brown loam mixed with large quantities of broken l/s and remnants of cereal crop. Average depth 0.25-0.30m.
064	7	Natural	Compacted, pale yellow fine silt containing ang slabs of l/s. Contains patches of orange-brown soil and soft olive brown clay.
065	9	Cut of ditch	Linear, orientated SE-NW with concave sides sloping at 45 degrees to a slightly concave base. Stepped profile on SW side of cut. NE side not fully exposed and upper extent uncertain. 1.50m+ wide x 500mm+ deep.
066	9	Fill of 065	Very compact, light yellow/ brown clay/ silt (80/20). Contains occ freq sm ang l/s and freq frags of snail shell.
067	9	Fill of 065	Compact, light yellow/brown clay/silt (60/40). Contains mod sm ang l/s frags and some redeposited 068.
068	9	Natural deposit	Firm/ friable, mottled light brown/yellow and dark brown slightly sandy clay. Contains occ l/s frags and freq dark concretion.
069	9	Natural deposit	Firm/ friable, pale yellow/ brown coarse sand/ clay (80/20). Contains occ sm, flat l/s frags.
070	9	Ploughsoil	Same as 132 in Trench 8.
071	9	Layer - colluvium	Firmly compacted light yellow/ brown sandy clay (30/70). Contains occ ang l/s frags (to 200 x 100 x 100mm) and infreq pot and tile.
072	9	Layer - colluvium	Firmly compacted light yellow/ brown (paler than 071) sandy clay (40/60). Contains infreq sm, ang l/s frags.
073	9	Layer/Fill of 065?	Firmly compacted, light-mid grey/brown clay containing occ sm-med l/s frags and freq sm snail shell frags.
074	9	Layer/Fill?	Firmly compacted light-mid brown silty clay (30/70). Contains occ frags of concretions from 068 and infreq sm snail shell frags.
075	9	Fill of 080	Firmly compacted light yellow/ brown clay. Contains very infreq sm snail shell frags and some 068 concretion. Also infreq sm l/s frags.
076	9	Fill of 080?	Firmly compacted, pale yellow-brown clay containing very infreq, very sm flecks of l/s and frags from 068.
077	9	Fill of 080?	Identical in composition to 076
078	9	Fill of 065? = 066?	Firmly compacted, light-mid brown sandy silty clay (10/10/80). Contains occ sm l/s frags and occ frags from 068.
079	9	Layer / Fill of 065?	Identical in composition to 076 and 077
080	9	Possible ditch	Linear?, orientated SE-NW. Only partly revealed at SW LOE.
081	5	Ploughsoil	Greyish-brown loam mixed with large quantities of l/s together with remnants



			of cereal crop. Average depth 200mm - 300mm.
082	5	Natural	Solid l/s.
083	5	Natural	Deep yellow and orange-brown brash and silt in patches over 082.
084		Void number	
085	5	Fill of 086	Fairly compact, mixture of dark grey-brown loam and yellowish-brown brash/silt. Contains freq sm ang frags and flecks of l/s.
086	5	Shallow linear cut	Orientated approx. E-W. Edges and base uneven. Width 0.30m x 90mm deep (max).
087	8	Unstratified finds	N/A
088	8	Fill of 089	Very compact. light grey-brown clay/silt (90/10). Contains freq snails shells throughout and occ sm frags l/s. Also infreq sm c/c flecks.
089	8	Cut of ditch	Linear, orientated NNW-SSE. East side slightly concave and sloping at 45 degrees. West side is stepped with 45 degree slope to flattish step then slightly steeper slope to base. A shallow U-shaped slot lies at its base.
090	8	Cut of ditch	Linear, orientated NNW-SSE. Slightly concave 45 degree sides breaking to a gently curved U-shaped base.
091	8	Cut of ditch	Linear, orientated NNW-SSE. Slightly concave 45 degree sides and a U-shaped base.
092	8	Cut of ditch	Linear, orientated NNW-SSE. U-shaped profile with sides at 70 degrees and a concave base.
093	8	Fill of 090	Friable/ firmly compacted, light-mid grey/ brown slightly clayey silt (20/80). Contains infreq sm l/s frags.
094	8	Fill of 090	Sequence of fine layers consisting of dark grey silt/sand overlain by reddy brown clay silt and finally light yellow brown clay/silt. Together the layers appear to form a "crust" between markedly different fills. in 090.
095	8	Fill of 090	Firmly compacted very pale brown slightly clayey silt (20/80). Contains occ sm ang l/s fragments (at base) and occ sm light brown clay flecks.
096	8	Fill of 090	Firmly compacted, mottled pale yellow/brown and red/brown clayey silt (30/70) with few inclusions except frags dark grey (natural?) stony material.
097	8	Fill of 090	Friable/ firm compaction, mottled pale yellow, brown and grey clayey sand (30/70).
098	8	Fill of 090	Friable, mottled light pale brown slightly clayey sand with occ pale yellow clay and freq sorted mineralisation. Very infreq, sm ang l/s.
099	8	Fill of 092	Firm compaction, light-mid grey/ brown sand/silt/clay (40/20/40). Contains occ sm l/s and occ patches of pale yellow clay.
100		Void number	
101	8	Layer - buried soil	Firm/ friable, dark brown (red hue) sand (50%), silt (40%), clay (10%). Contains occ streaks of light yellow/ brown clay (root channels), infreq, sm ang l/s frags
102	8	Layer	Firm compaction, light-mid brown clay (60%) soil. Contains infreq sm ang l/s frags, freq root channels filled with yellow/brown clay.
103	8	Layer or fill? Could fill similar to 117.	Firm-friable, dark brown sandy soil (identical to 101) containing very freq sm l/s frags
104	8	Layer - buried soil	Identical composition to 101
105	8	Layer	Very firm light yellow/ brown clay/ silt (40/60) containing occ sm l/s frags.
106	8	Layer - colluvium	Firm/ friable pale yellow/ brown sandy, slightly clayey soil. Very occ sm l/s frags.



107	8	Layer - colluvium?	Very firm, pale yellow/ brown clay silt (40/60) containing infreq/occ sm l/s frags and very occ traces of c/c.
108	8	Layer - buried soil	Firm, mid - dark grey/ brown sand/ silt/ clay (60/30/10). Contains root channels filled with yellow/ brown clay.
109	8	Layer - buried soil	Firm, mid - dark brown sand/ silt/ clay (70/10/20). Similar to 108
110	8	Layer - buried soil?	Firm/ friable, clayey sand (70/30). Contains freq iron sulphide inclusions.
111	8	Fill of 122	Firm, light - mid brown (yellow hue) clay/ silt (60/40). Contains occ sm l/s and freq iron sulphide lumps.
112	8	Fill of 089	Firm/ friable clay/ silt (60/ 40). Few inclusions - occ shell flecks and frags. Also iron sulphide frags.
113	8	Layer - buried soil	Firm/ friable, mottled sand/ silt. Contains occ to freq snail frags and occ iron sulphide.
114	8	Layer - colluvium?	Firm/ friable, clay/ sand (40/60). Contains freq iron sulphide lumps. Also infreq sm frags snail shell.
115	8	Layer - colluvium?	Very loose pale olive/ yellow sand/ silt (60/40).
116	8	Fill of 091	Identical in composition to 115 but freq iron sulphide lumps.
117	8	Fill of 118	Firm, pale brown clay/ silt (20/80). Contains occ ang l/s frags and dry pale yellow/ brown clay.
118	8	Cut - Post-hole?	Circular in plan with near vertical sides and undulating base. Dimensions:- 520mm diameter x 120 - 200mm deep.
119	8	Fill of 092	Identical in composition to 099.
120	8	Fill of 121	Firm/ friable sand/ silt (50/50). No inclusions apart from root channels.
121	8	Linear cut - ditch?	Orientated SW-NE with 45 - 50 degree concave sides sloping to a gently curving U-shaped base. c. 1.00m long - extending beyond LOE to NW.
122	8	Cut - linear? Poss same as 128 to NW	Plan shape uncertain - recorded in section only. Slightly concave sides sloping at 45 degrees to a flat base.
123	8	Layer - colluvium. See also 135	Firm - loose compaction, light - mid yellow/ brown clayey silt (30/70). Contains occ frags of l/s and infreq c/c flecks.
124	8	Fill of 092	Firm/ friable, light brown sandy silt (30/70). Contains occ v sm l/s frags, and infreq c/c flecks.
125	8	Fill of 092	Compact, light brown slightly clayey sand/ silt (10/30/60). Contains root channels filled with clay. No other visible inclusions.
126	8	Fill of 092	Firm/ friable light - mid brown clayey sandy silt (5/30/65). Contains infreq v small l/s frags and shell flecks.
127	8	Fill of 092	Near identical composition to 126 - but slight variation defined.
128	8	Cut - linear? Poss same as 122	Sides slope at 45 degrees to a concave base. Colluvium (123) appears to fill 128.
129	8	Fill of 089	Firm, mottled - pale yellow-brown clayey sandy silt (30/65/5) with freq flecks of iron sulphide, infreq sm flecks l/s and occ shell frags.
130	8	Natural	Varies across the trench. Yellow-grey clay to NE end as underlying ground level rises. Clay overlain by a sandy brash with frequent iron sulphide over the remainder of the trench.
131	1	Fill of 024	Moderately compact, mid reddish brown sandy silt and ang l/s to 30mm (50/50). Contains freq snail shells and c/c flecks and occ pot frags.

132	8	Ploughsoil	Moderately compact, dark greyish-brown clayey sand containing irreg shaped l/s to 20mm and freq stubble. Sharp lower horizon.
133	8	Layer - colluvium	Moderately compact, light yellowish-brown silty sand containing occ irreg l/s to 30mm. Diffuse lower boundary.
134	8	Layer - colluvium	Compact, light greyish - brown silty clay containing mod l/s to 50mm. Sharp lower boundary.
135	8	Layer - buried soil (upper horizon)	Moderately compact, sandy silt. Mottled - light brown and dark greyish - brown. Contains occ iron pan flecks.
136	8	Fill of 121	Moderately compact mid yellowish - brown silty sand containing occ yellow mottles and occ l/s flecks.
137	8	Fill of 080?	Identical in composition to 073.

### Key to Abbreviations

<i>ANG</i>	ANGULAR
<i>C/C</i>	CHARCOAL
<i>FRAGS</i>	FRAGMENTS
<i>FREQ</i>	FREQUENT
<i>L/S</i>	LIMESTONE
<i>OCC</i>	OCCASIONAL
<i>SM</i>	SMALL
<i>V</i>	VERY



## APPENDIX B - FLINT

By Jenny Brown

The site produced 4 pieces of natural and plough-bashed flint, and 28 pieces judged to have been humanly-modified. 24 pieces were unstratified surface finds, with a very few pieces from contexts as follows:

Context	Number of pieces
067	1
123	2
123B	1

There are too few pieces from contexts for any meaningful comments to be made on an individual context basis. The number of pieces in the complete collection is very small, but still enables some general comments to be made.

The whole collection is heavily corticated, completely obscuring the nature of the underlying flint. Flake <19> could be of Wolds-type flint, but recent damage to other pieces reveals dark brown to grey translucent flint with opaque patches and it seems most probable that the rest of the collection is of this material. Where present the cortex is water-worn, and with the small size of the pieces this suggests that the originating source has been reworked by river action. It is most likely that the flint was obtained from a source local to Greetwell, perhaps where the River Witham cut down through drift deposits, although these have not been seen by the author.

The debitage is dominated by flakes, and cores with flake removals. Flake <12> has an abraded butt, and that on bladelet <30> and flake <16> is abraded and rubbed.. This is a feature associated with more skilled flint-knapping techniques as it assists in controlled blade or flake production. The platform edge of core <5> is similarly prepared by abrasion and this core presents a regular appearance suggesting that it could have produced preformed removals. Two flakes, <15> and <16>, seem to originate from shaping discoidal cores which can be used by skilled knappers to produce predetermined pieces. The rest of the debitage does not exhibit the same level of knapping care and contains small squat flakes with broad platforms, such as pieces <9> and <28>, and small irregular flake cores <24> and <27>.

The tools are a horseshoe scraper <25>, which has been heavily used down its right-hand margin; a fragment of a small scraper <26>; a probable scraper fragment <29>; and what is almost certainly a fragment of an oblique petit tranchet derivative arrowhead <13>. There are also two thickish flakes, <19> and <4>, which seem to have been used along their distal ends.

The presence of an oblique arrowhead fragment <13> suggests a date in the Late Neolithic or possibly in the Early Bronze (Green, 1980, 114; Healey, 1980, 194) for this piece, and the rest of the collection could easily belong with it. The scraper fragment <26> appears to be from a small scraper, the size of which suggests a date in the Bronze Age or very late in the Neolithic. The complete scraper <25> and used pieces <4> and <19> are undatable but would fit readily with this dating. The debitage which exhibits more skilled and controlled flint knapping would also be appropriate at this date. Oblique arrowheads like <13> are generally thought to have been produced from pre-formed blanks knapped from bifacially prepared Levallois-type cores (Durden, 1995, 411). Such cores are the result of skilled controlled knapping using techniques suggested by some pieces in this collection. Small squat flakes produced using a hard hammer could result at any date from employing less skilled knapping techniques or when using a relatively intractable material, but are prevalent in the Late Neolithic/Early Bronze Age.

The impression formed by the collection is that one period of activity is represented, with some pieces demonstrating more skilled knapping than others. The presence of the fragments of a small scraper and of an oblique arrowhead suggest that a date in the Late Neolithic/Early Bronze Age is most appropriate.

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## APPENDIX B (Cont.)

### Spot Identification of Individual Pieces of Flint

Site	Context	Find Code	Form	Material	Corticated	Heated	Used or Tool	Comment	Length (mm)	Breadth (mm)	Date
GBH99	1	4	FLAKE	?	V. HEAVILY	-	?USED	-	-	-	PREHISTORIC
GBH99	1	5	CORE	DARK TRANSLUCENT FLINT	V. HEAVILY	-	-	SINGLE PLATFORM; BL + FLKE REMOVALS. EDGE PREP	-	-	PREHISTORIC
GBH99	1	6	FLAKE	?	V. HEAVILY	-	-	-	20	24	PREHISTORIC
GBH99	1	7	FLAKE	GREY TRANSLUCENT FLINT	HEAVILY	-	-	MECHANICAL DAMAGE	-	-	PREHISTORIC
GBH99	1	8	FLAKE	HONEY TRANSLUCENT FLINT	HEAVILY	-	-	MECHANICAL DAMAGE	30	18	PREHISTORIC
GBH99	1	9	FLAKE	?	HEAVILY	-	-	LARGE PLATFORM + PROMINENT BULB OF PERCUSSION	16	20	PREHISTORIC
GBH99	1	10	FLAKE	?	HEAVILY	-	-	-	9	12	PREHISTORIC
GBH99	1	11	FLAKE	HONEY TRANSLUCENT FLINT	LIGHTLY	-	-	MECHANICAL DAMAGE	21	20	PREHISTORIC
GBH99	1	12	FLAKE	DARK TRANSLUCENT FLINT	HEAVILY	-	-	ABRADED BUTT	-	-	PREHISTORIC
GBH99	1	13	?	DARK TRANSLUCENT FLINT	HEAVILY	-	OBLIQUE ARROWHEAD FRAGMENT	SOME MECHANICAL DAMAGE	-	-	LATE NEO/EBA
GBH99	1	14	FLAKE	?	HEAVILY	-	-	MECHANICAL DAMAGE	-	-	PREHISTORIC
GBH99	1	15	FLAKE	?	V. HEAVILY	-	-	FROM DISCOIDAL CORE	26	18	PREHISTORIC
GBH99	1	16	FLAKE	?	HEAVILY	-	-	FROM DISCOIDAL CORE?	-	-	PREHISTORIC

GBH99	1	17	FLAKE	?	HEAVILY	-	-	-	21	10	PREHISTORIC
GBH99	1	18	CHUNK	?	HEAVILY	-	-	MECHANICAL DAMAGE	-	-	PREHISTORIC
GBH99	1	19	FLAKE	?	HEAVILY	-	?USED	-	20	33	PREHISTORIC
GBH99	1	20	CHUNK	DARK TRANSLUCENT FLINT	HEAVILY	-	-	-	-	-	PREHISTORIC
GBH99	1	21	CHUNK	DARK TRANSLUCENT FLINT	HEAVILY	-	-	MECHANICAL DAMAGE	-	-	PREHISTORIC
GBH99	1	22	CORE FRAGMENT	BROWN TRANS/OPAQUE FLINT	HEAVILY	-	-	-	-	-	PREHISTORIC
GBH99	1	23	FLAKE	?	HEAVILY	-	-	-	-	-	PREHISTORIC
GBH99	1	24	CORE	DARK TRANSLUCENT FLINT	HEAVILY	-	-	SMALL SINGLE PLATFORM; FLAKE REMOVALS	-	-	PREHISTORIC
GBH99	1	25	FLAKE	DARK TRANSLUCENT FLINT	HEAVILY	-	HORSESHOE SCRAPER	-	-	-	PREHISTORIC
GBH99	1	26	FLAKE	HONEY TRANSLUCENT FLINT	HEAVILY	-	SCRAPER FRAGMENT	RIGHT-HAND HALF? OF SMALL SCRAPER	-	-	LATE NEO/EBA
GBH99	1	27	CORE	?	HEAVILY	-	-	1 PLATFORM. SMALL. FLAKE REMOVALS	-	-	PREHISTORIC
GBH99	67	28	FLAKE	BROWN TRANS/OPAQUE FLINT	HEAVILY	-	-	LARGE PLAIN PLATFORM + PROM BULB OF PERCUSSION	-	-	PREHISTORIC
GBH99	123	29	FLAKE	HONEY TRANSLUCENT FLINT	HEAVILY	-	SCRAPER FRAGMENT	-	-	-	PREHISTORIC
GBH99	123	30	BLADE	?	HEAVILY	-	-	ABRADED + RUBBED BUTT	-	-	PREHISTORIC
GBH99	123B	31	FLAKE	BROWN TRANSLUCENT FLINT	HEAVILY	-	-	-	29	20	PREHISTORIC



# ***APPENDIX C - IRON AGE POTTERY***

*By David Knight*

## **1. Introduction**

The pottery from Bunker's Hill was scanned with the aim of providing a basic quantification of Iron Age sherds by context, information on the range of fabrics, forms, and styles of surface treatment, and details of typological affinities and dating. Insufficient time was available for more detailed analyses. The terminology employed here follows that recommended in the guidelines of the Prehistoric Ceramics Research Group (PCRG 1997).

## **2. Contexts**

43 Iron Age sherds (117g) have been identified, from the following contexts:

### *Triple Ditches:*

*Trench 01:* 33 (72g) slightly to moderately abraded body sherds were retrieved from high in the fill [003] of the middle ditch [021], just beneath the topsoil. These small sherds were recovered from a very restricted area of the feature, and were thought by the excavator probably to derive from a single vessel that had been broken by ploughing. No joins could be discerned, but the closely comparable fabrics of the sherds would support the suggestion of a single vessel. Another two rims and three body sherds (11g) in a similar slightly to moderately abraded condition were recovered from context 131. Some of these join, and there seems little doubt that all derive from the same vessel. The context has been interpreted as most probably the primary fill of a recut of the eastern ditch [007], but it could represent the primary fill of a pit dug on the line of this ditch.

*Trench 09.* The upper clay fill [066] of the middle ditch [065] yielded a small deeply scored and moderately abraded body sherd (10g). This brown oxidised clay extended either side of the ditch, and may be of alluvial origin. It is possible, therefore, that the sherd had been washed in at a later date.

### *Colluvial Layers:*

Three plain sherds were recovered from colluvial layers sealing the triple ditches in trenches 1 and 8. These comprise a tiny abraded body sherd (1g) from layer 004, a body sherd (3g) with four flakes detached from its outer surface from layer 105 and a slightly abraded rim (13g) from layer 106.

### *Unstratified:*

A single abraded plain body sherd (7g) was recovered from the surface of Area 5.

## **3. Fabrics**

Sherds were examined under a x10 and x30 lens, with the aim of establishing the variety and frequency of inclusions within the clay matrix. The identifications have not been checked by thin-sectioning.

The Iron Age fabrics are characterised by poorly sorted moderate (10-19%) to common (20-29%) coarse (1-3mm) to very coarse (>3mm) plate-like shell, up to a maximum of c.15mm diameter in the coarser vessels. Sherds are soft and commonly have a hackly fracture. Most have a sandy feel, but the rim from context 106 and the body sherd from context 105 have smooth textures. Surfaces and cores are generally unoxidised, ranging mainly from grey to black throughout, but some surfaces display buff or orange-brown mottles, implying irregular firing. The shell inclusions may have been added deliberately as temper, possibly from a local source. Plentiful raw materials would probably have been available in the



Jurassic limestone and clay beds which outcrop locally (Geological Survey of Great Britain, 1:50,000 Sheet 114), and there seems no need, therefore, to invoke a non-local production source. Similar shelly fabrics occur widely on Iron Age sites elsewhere in Lincolnshire, notably at Lincoln (Darling 1988, 9-12) and Dragonby (May 1996, 417-9), although dating must hinge upon the evidence of form and surface treatment, described briefly below.

#### 4. Forms and Method of Manufacture

All of the sherds appear to derive from hand-made vessels. Most sherds are too small for the vessel form to be reconstructed, but there are suggestions of both round-shouldered and ovoid or related forms.

The large collection of sherds from layer 003 of ditch 021 includes five non-joining girth sherds which could derive from a single vessel with a pronounced rounded girth. As noted above, the remaining sherds from this context might also derive from this vessel. None of the sherds, unfortunately, preserves evidence of the rim and base form or the neck profile. At least one other round-shouldered vessel is implied by the five partially joining sherds from context 131. This was provided with a short neck, probably slightly everted, and a rim with a rounded lip, pinched out slightly externally.

One other rim sherd was recovered from context 106. This is rounded externally, recalling faintly more finely moulded bead forms, with traces internally of a very shallow channel. It most probably derives from a neckless ovoid or possibly ellipsoid (barrel) form, but too little survives for the profile to be determined with certainty.

#### 5. Surface Treatment

All of the recorded vessels are plain, with the exception of a small body sherd from context 066 which preserves several deeply scored lines, apparently intersecting at random, on its exterior. This is related in the following section to the Iron Age scored ware tradition (*cf.* Elsdon 1992). The rim sherd from context 106 was smoothed externally.

#### 6. Typological Affinities and Dating

Dating is complicated by the small size of the collection and the rarity of distinctive forms or styles of surface treatment. The most diagnostic sherd is the single scored fragment from context 066. This compares closely with Iron Age scored ware, current in this region from the fifth/fourth centuries BC to earlier first century AD (*cf.* Elsdon 1992; *e.g.* Ancaster Quarry, Lincs.: May 1976, fig.69).

There are hints of an earlier date for some of the pottery, although a considerably larger assemblage would be required to verify this conclusion. The most interesting vessel is a round-shouldered vessel with short concave neck from context 131. Such vessels are particularly characteristic of the Late Bronze Age/Early Iron Age ceramic tradition in this region, dating broadly from the ninth to fifth/fourth centuries BC (*e.g.* Billingborough, Lincs: Chowne *et al* forthcoming), although related forms continue in use well into the later Iron Age. The round-shouldered vessel from context 003 might also imply an early date.

It is interesting that both of the vessels which invite comparison with common Late Bronze Age/Early Iron Age ceramic types from the region could derive from the filling of the triple ditches – fragments of a plain round-shouldered vessel from high in the fill of the middle ditch and sherds from a vessel of comparable form from either the primary fill of a ditch recut or, less likely, of a pit along the line of the eastern ditch. Too much emphasis should not be placed upon these associations, bearing in mind the longevity of many first millennium BC ceramic forms, but the presence of these vessels raises the possibility of an early origin for these boundary features. The later Iron Age scored sherd could have been washed in at a late date in the filling of the central ditch, and hence is of limited value for dating purposes.



### Acknowledgements

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## **APPENDIX D - ROMAN POTTERY**

*By B J Precious*

**The Pottery has been recorded according to the Study Group for Roman Pottery (SGRP) guidelines, using codes currently in use at the City of Lincoln Archaeological Unit, and sherd count as a measure.**

A total of 21 sherds was recovered from the site, most of which (15 sherds) were recovered from Context 1, with two very small fragments weighing less than 1g from Context 123A. The latter and the other three contexts, 123, 106 & 106/Column B, produced only undiagnostic sherds broadly dating to at least the 2nd century. A single sherd from Context 1, a wide-mouthed bowl in GREY, provides reasonable dating evidence for occupation from at least the 3rd century. However, post-Roman wares were also found with this material.

Except for a single, very abraded sherd from a probable Dressel 20 amphora, all the pottery from the site is in local greyware (GREY), a high proportion of which have darker cores giving a 'sandwich' appearance to the fabric (GRSAN). However, although probably locally made, these fabrics are unlike the pottery manufactured at the known Lincoln kilns. Only two rim sherds came from the site, a wide-mouthed bowl and a curve-rimmed jar. Most of the remaining body sherds came from closed forms, probably jars, although one thin-walled sherd is more likely to be from a beaker.

### **Condition**

The majority of the sherds are abraded, some very worn, but in a stable condition. There were no sherd links from the site but similar fabrics, grey with orange cores, were found in Contexts 1, 106 & 106/Column B.

### **Statement of Potential**

The above group provides poor but adequate dating evidence for occupation of the site from the 2nd to at least the 3rd century.

### **Storage and Curation**

The pottery should be retained for further study.



## APPENDIX D (Cont.)

### Roman Pottery Archive

CONTEXT	FABRIC	FORM	DEC	VESSNO	DWGNO	COND	COMMENTS	JOIN	SHS
1	GREY	CLSD				ABR	BSS		2
1	GREY	CLSD					BS THIN WALL		1
1	GRSAN	CLSD					BS THIN WALL; ORANGE CORE; AS IN 106		1
1	GREY	JCUR				ABR	RIM FRAG		1
1	GRSAN	J					BASE;PALE GRY MARGINS MED GRY CORE		1
1	GRSAN	J		1		ABR	BSS BASAL; DK GRY CORE		6
1	GRSAN	BWM		1			RIM BS FINE THIN WALL; SHRT NECK; DK GRY CORE		2
1	DR20?	A?				VABR	BS; FAB AS DR20 COLOUR ODD		1
1	ZZZ						MOST ABRADED		
1	ZDATE						3C/POST RO		
123A	GREY					VABR	CRUMBS!		2
123A	ZZZ						<1 GRAM; FAB CF ROMAN GREY		
123A	ZDATE						RO		
123	GRSAN	BK				ABR	BS V THIN WALL ; ABUND COARSE SAND; SCALE INT		1
123	ZZZ						1 SH GRSAN ONLY DK GRY CORE		
123	ZDATE						2C+		
106	GRSAN	J		2		ABR	BSS THIN WALL; ORANGE CORE; AS IN 001; SAME	106/COL B	2
106	ZZZ						GRSAN ONLY; ABOVE CLAY		
106	ZDATE						2C+		
106/COLB	GRSAN	J		2		ABR	BS THIN WALL; ORANGE CORE; AS IN 001; SAME	106	1

106/COLB	ZZZ						GRSAN ONLY; COLUMN B FROM TOP 450MM		
106/COLB	ZDATE						2C+		
							<b>TOTAL</b>		<b>21</b>

**Key to Fabric Codes**

*DR20*            DR20 AMPHORAE  
*GREY*            MISCELLANEOUS GREY WARES  
*GRSAN*           SANDWICH FABRIC MIDDLETON  
*ZDATE*           DATE OD ASSEMBLAGE  
*ZZZ*                COMMENTS

**Key to Form Codes**

*A*                 UNCLASSIFIED AMPHORAE  
*BK*                UNCLASSIFIED BEAKER  
*BWM*             WIDE MOUTHED BOWL  
*CLSD*            JAR - FORM  
*J*                  UNCLASSIFIED JAR  
*JCUR*            CURVED JAR



# APPENDIX E - POST-ROMAN POTTERY

By Jane Young (Lindsey Archaeological Services)

## 1. Introduction

A total of 33 sherds of post-Roman pottery was recovered from the site. The material ranges in date from the medieval to the early modern period. The pottery was examined both visually and using a x20 magnification, then recorded using locally and nationally agreed codenames.

## 2. Condition

The material is in a variable condition with most sherds having some degree of abrasion. A small number of sherds are very abraded.

## 3. Overall Chronology and Source

A range of 12 different, identifiable post-Roman pottery types was found on the site, the types and general date ranges for these fabrics are shown in Table 1. Identifiable vessel forms are mainly jugs, but jars and bowls are also present.

**Post-Roman pottery codenames and total quantities by sherd count and vessel count where appropriate**

codename	full name	earliest date	latest date	sherds	vessels
BL	Black-glazed wares	1550	1750	7	7
LLSW	Late Lincoln Glazed ware	1350	1500	2	2
LPM	Early Modern wares (general term)	1750	1900	1	1
LSW1/2	12th-13th century Lincoln Glazed ware	1100	1300	1	1
LSW2/3	13th to 15th century Lincoln Glazed Ware	1200	1450	2	2
LSW3	14th to 15th century Lincoln Glazed Ware	1280	1450	8	8
MEDLOC	Medieval local fabrics	1150	1450	2	2
MEDX	Non Local Medieval Fabrics	1150	1450	2	2
MP	Midlands Purple ware	1380	1600	3	3
NOTLBG	Nottingham Light-bodied Gritty ware	1380	1480	1	1
PMX	Post-medieval Non-local fabrics	1500	1800	1	1
TB	Toynton/Bolingbroke wares	1450	1750	3	3

Most of the material dates to the medieval period, with a smaller element dating to the late medieval to early modern period. As the material is unstratified, dates have been given in the archive for individual vessels.

## 4. Summary and Recommendations

The material recovered is a small collection with limited usefulness. Nevertheless it indicates that medieval pottery assemblages from Greetwell can be extremely variable. No further work is needed on the assemblage; however, it should be retained to be included in any survey of pottery in the area.

## APPENDIX E (Cont.)

### Post-Roman Pottery Archive

Context	Code Name	Form Type	Sherds	Vessels	Decoration	Part	Description	Date
001	LSW3	jug	1	1		BS		14 to 15th
001	LSW3	jug	1	1		BS		14 to 15th
001	LSW3	jug	1	1		BS		14 to 15th
001	LSW3	jug	1	1		BS		14 to 15th
001	LSW3	jug	1	1		BS	? ID	14 to 15th
001	LSW3	jug	1	1		base		14 to 15th
001	LSW3	bowl?	1	1		base		14 to 15th
001	LLSW	jug	1	1		BS		14 to 15th
001	LLSW	jug	1	1		BS		14 to 15th
001	TB	jug	1	1		LHJ		15 to 16th
001	TB	jar/jug	1	1		base		15 to 16th
001	TB	jar/jug	1	1		BS		15 to 16th
001	NOTLBG	jug/jar	1	1		BS	? ID;glaze	14 to 15th
001	MEDLOC	jug	1	1		handle	very abraded;no glaze	13 to 15th
001	MEDLOC	jar	1	1		rim	unglaze quartz fabric;?? LLSW	13 to 15th
001	MEDX	jug	1	1		BS	very abraded;fine quartz fabric	
001	MEDX	?	1	1		BS	medium quartz fabric with fe;very abraded	13 to 15th
001	PMX	?	1	1		BS	vitrified light red/buff gritty fabric grey surfaces;could be a very odd MP	15 to 17th
001	R	?	1	1		handle	? Nene Valley;not noted by B Precious	Roman



001	BL	jar?	1	1		BS	slipped white fabric	late 17 to 18th
001	BL	jar?	1	1		BS		mid 17 to 18th
001	BL	jar?	1	1		BS		mid 17 to 18th
001	BL	jar?	1	1		BS	light fabric	mid 17 to 18th
001	BL	jar?	1	1		base		mid 17 to 18th
001	BL	?	1	1		BS	tiny frag	mid 17 to 18th
001	BL	bowl?	1	1		base		mid 17 to 18th
001	LPM	?	1	1		handle	black basalt	18th
001	MP	jug?	1	1		handle		15 to 16th
001	MP	?	1	1		BS		15 to 16th
001	MP	?	1	1		BS		15 to 16th
001	LSW1/2	jug	1	1		BS		12 to 13th
001	LSW2/3	jug	1	1	applied vert strip	BS		13 to 15th
001	LSW2/3	jug	1	1		BS		13 to 15th
001	LSW3	jug	1	1		BS		14 to 15th

# **APPENDIX F - CERAMIC BUILDING MATERIAL**

*By Jane Young (Lindsey Archaeological Services)*

## **1. Introduction**

A total of 28 fragments of ceramic building material ranging in date from the Roman to the post-medieval period was recovered from the site. With one exception all the material recovered is roof tile.

## **2. Condition**

The material is in a poor condition with a variable amount of abrasion. Most fragments are small to medium-sized.

## **3. Range and variety of material**

The material has been identified to common type levels only. Table 1 shows the broad range of ceramic building material present on the site.

**Table 1 : Tile codenames and total quantities by fragment count and weight**

codename	full name	period	frags	weight
GRID	Glazed ridge tile (unidentified ware)	med	1	80
PNR	Peg, nib or ridge tile	med to early modern	1	85
PNRDISC	peg, nib or ridge tile (discarded)	med to early modern	12	425
RBRK	Roman brick	Roman	1	85
RTILDISC	Roman tile (discarded)	Roman	11	185
TEGDISC	Tegua (discarded)	Roman	2	145

Roman and medieval tile were equally represented by fragment count, although the average fragment size of the medieval material was larger.

## **4. Statement of potential**

Most of the undiagnostic medieval and Roman tile has been discarded. All of the discarded medieval and Roman tile fabrics fell within the range to be found in Lincoln. The presence of both Roman and medieval tiles may indicate the presence of buildings in the area, however the material may have been brought onto the site from elsewhere.



## APPENDIX F (Cont.)

### Ceramic Building Materials Archive

Context	Code Name	Frag	Weight	Description	Date
002	PNRDISC	1	70	vitified	med to post-med
123D	RTILDISC	1	20		Roman
004	PNR	1	85	odd fabric	med to post-med
071	RTILDISC	2	10		Roman
001	PNRDISC	11	355		med to post-med
001	RTILDISC	8	155		Roman
001	TEGDISC	1	85	part flange	Roman
001	TEGDISC	1	60	vitified;part flange	Roman
001	RBRK	1	85		Roman
001	GRID	1	80	scar of applied strip	medieval

*APPENDIX G*

*ENVIRONMENTAL ARCHAEOLOGY ASSESSMENT*

*By James Rackham*



## **Bunkers Hill, Greetwell – GBH99**

### **Environmental Archaeology Assessment**

#### ***Introduction***

Evaluation excavations conducted by the City of Lincoln Archaeology Unit at the site of a proposed housing estate at Bunkers Hill concentrated upon the excavation of a triple ditch system revealed by crop marks. During the course of the evaluation four samples were taken from the fills of the ditches and a pit uncovered in Trench 1. A series of three column samples, primarily for mollusc analysis, were taken through the fills and subsequent colluvial slopewash of three ditches in Trench 8 excavated in the valley adjacent to the modern stream. The samples are listed in Table 1. For this assessment a selection was made of three samples from each of the two longest columns from Trench 8 which were washed and processed.

In addition to the samples taken shells and animal bone were collected during hand excavation.

#### ***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 and 3.

#### ***Results***

A few uncharred seeds, recent rootlets and occasional worn egg capsules were recorded in a number of the samples indicating low levels of contamination. Some uncharred straw and chaff blowing across the site during sampling has also been incorporated into the samples. Some of the samples produced several to many shells of the burrowing blind snail, *Cecilioides acicula* (see Table 3). This taxon is believed to have been introduced (Evans 1972; Kerney and Cameron 1979) and since it is known to burrow to depths of 2 metres (Evans 1972) it must be viewed as a probable contaminant in the sampled



contexts.

**Table 1:** Bunkers Hill, Greetwell. Samples taken during the evaluation

sample no./depth	trench	context	sample vol. l.	sample wt kg	feature type	Date
1	1	046	17	21	primary fill western ditch	
2	1	003	17	21	ditch fill	IA
3	1	006	18	21.5	primary fill eastern ditch	
4	1	131	16	20	fill of pit cutting E ditch	LBA/EIA?
140-150	8	106			col. 1 – colluvium	
130-140	8	106			col. 1 – colluvium	
120-130	8	106			col. 1 – colluvium	
110-120	8	106	9	8	col. 1 – colluvium	Roman/ post Roman
100-110	8	106/112			col. 1 – colluvium	
90-100	8	112			col. 1 – colluvium/ditch fill	
80-90	8	112			col. 1 – colluvium/ditch fill	
70-80	8	112	9	8	col. 1 – colluvium/ditch fill	
60-70	8	112			col. 1 – colluvium/ditch fill	
50-60	8	088			col. 1 – ditch fill	Prehist?
40-50	8	088			col. 1 – ditch fill	
30-40	8	088			col. 1 – ditch fill	
20-30	8	088	9	7	col. 1 – ditch fill	
10-20	8	088			col. 1 – ditch fill	
0-10	8	088			col. 1 – ditch fill	
90-100	8	105			col. 2 – colluvium	
80-90	8	105	7	7	col. 2 – colluvium	Prehist
70-80	8	098			col. 2 – colluvium	
60-70	8	098			col. 2 – colluvium	
50-60	8	097	6	6	col. 2 – ditch fill	
40-50	8	096			col. 2 – ditch fill	
30-40	8	095			col. 2 – ditch fill	
20-30	8	095			col. 2 – ditch fill	
10-20	8	093	8	8	col. 2 – ditch fill	
0-10	8	093			col. 2 – ditch fill	
70-80	8	106			col. 3 – colluvium	Roman
60-70	8	106			col. 3 – colluvium	Roman
50-60	8	106			col. 3 – colluvium	Roman
40-50	8	107			col. 3 – colluvium	Roman
30-40	8	111			col. 3 – ditch fill	Roman
20-30	8	111			col. 3 – ditch fill	Roman
10-20	8	111			col. 3 – ditch fill	Roman
0-10	8	111			col. 3 – ditch fill	Roman

Measurements for the column samples are taken from the base of the column

Archaeological finds are sparse in the samples that have been assessed (Table 2). Only context 131 produced a range of finds including flake and spheroidal hammerscale, badly leached probable iron smithing slag (pers comm. J.Cowgill), pottery, abundant charcoal and fragments of burnt bone and mussel shell. The other samples yielded only a little charcoal, one or two flakes of hammerscale, and in context 046 a charred cereal grain. Apart from context 131 the four samples taken from Trench 1 do not suggest any local



occupation. Context 131 indicates the local smithing of iron and the occurrence of pottery tentatively assigned to a possible late Bronze Age/early Iron Age tradition makes this a potentially early iron smithing record of some importance. The charcoal surviving in the sample is sufficient for a radiocarbon determination and could provide support, or otherwise, for the suggested LBA/EIA date.

**Table 2:** Archaeological and Environmental finds from the assessed samples

samp.no ./depth	cont.	samp. vol. l.	res. vol. lt	flot vol. ml	pot £/#	ham'er scale no.	slag wt g	char- coal *	grain *	snail */\$	other
1	046	17	5	60		1		1	1	5/3	
2	003	17	12	4				1		5/3	tiny frag. brick/tile
3	006	18	10	25		2		2		5/3	one piece burnt flint
4	131	16	9	120	6/1	++	10	4		5/3	mussel shell and burnt bone fragments
110-120	col. 1	9	0.15	<1	1/5			1		2/1	charred hazelnut shell
70-80	col. 1	9	0.15	3				1	?	5/3	tiny piece of coal
20-30	col. 1	9	0.75	2				2		4/3	
80-90	col. 2	7	0.1	<1	20/18			1		2/2	coal in flot
50-60	col. 2	6	0.3	1				1		2/3	burnt bone fragment
10-20	col. 2	8	0.75	1				2		3/3	ostracod

£/# - no sherds/weight in g.

\* 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; 4=26-50 taxa

++ - >25 but not counted

The three column samples were primarily sampled for molluscan evidence. The objective of the sampling was to establish whether there was any change in the local environmental conditions during the infilling of the ditches and the subsequent deposition of over one metre of colluvial sediments above. For the purposes of this assessment three samples were selected from columns 1 and 2 (see Table 1) for study to establish the quality and quantity of snails surviving in the soils. The processing produced a few finds (Table 2) including a 2<sup>nd</sup>-3<sup>rd</sup> century abraded grey ware sherd from 110-120 in column 1, and a shell tempered probable Iron Age sherd from 80-90cm in column 2 (pers comm. B.Precious and M.Darling). Small quantities of charcoal were present in all the column samples and a fragment of burnt bone (50-60, column 2) and charred hazelnut shell (110-120, column 1) were also recorded.

### *Snails*

The primary environmental evidence from the site is molluscan. The ditch and pit samples from Trench 1 are very rich in snail shells (Table 2). The smaller samples taken in columns in Trench 8 contain snail shells but their abundance is variable, with the lower ditch fills producing a greater density of shells than the colluvial deposits above (Table 2). Preliminary identification of the molluscan taxa present in the samples has been made and these data are presented in Table 3.

In the samples from Trench 1 two major habitat types are represented. A shade loving/woodland fauna and an open country/grassland assemblage (Table 3). Without



quantification of the different taxa it is difficult to assess the main elements of the local environment but it is clear even from the data at this level that the sample from context 131 has a higher woodland component than the other samples from Trench 1. During scanning it was noted that woodland taxa dominate the molluscan assemblage in this context. A damp marsh element local to the ditches is also present in the samples.

**Table 3:** Molluscan taxa recorded from the samples

Sample	1	2	3	4	20-30	70-80	110-120	10-20	50-60	80-90
Context	046	003	006	131	col 1	col 1	col, 1	col 2	col 2	col 2
<i>Ceciliooides acicula</i>	+	+++	+	+		+	+	+	+	+
<i>Helicella gigaxi</i>	+									
<i>Helicella</i> sp.	+	+	+	+	+	+				+
<b>Open country/grassland</b>										
<i>Helicella itala</i>		+	+							
<i>Vertigo pygmaea</i>	+	+		+		+				
<i>Vertigo</i> sp.	+			+	+	+		+	+	+
<i>Pupilla muscorum</i>	+	+	+	+		+			+	
<i>Vallonia costata</i>	+	+	+	+	+	+	+			
<i>Vallonia excentrica</i>	+	+	+	+	+	+	+	+	+	+
<i>Vallonia</i> sp.						+		+		
<i>Truncatellina cylindrica</i>			+	+	+					
<b>Catholic</b>										
<i>Trichia hispida</i>	+	+	+	+	+	+		+	+	+
<i>Cochlicopa</i> sp.	+	+	+	+				+		
<i>Helix hortensis</i>	+									
<i>Helix nemoralis</i>				+						
<i>Helix</i> sp.			+		+	+	+	+	+	+
<b>Shade loving/woodland</b>										
<i>Discus rotundatus</i>								+		
<i>Retinella nitidula</i>	+		+	+						
<i>Retinella radiatula</i>	+	+	+	+						
<i>Retinella pura</i>		+	?							
<i>Oxychilus cellarius</i>			+	+						
<i>Oxychilus</i> sp.				+						
<i>Vitrea crystallina</i>			+	+						
<i>Helicigona lapicida</i>	+			+						
<i>Acanthinula aculeata</i>	+		+	+						
<i>Punctum pygmaeum</i>	+	+		+				+	+	
<i>Carychium tridentatum</i>	+									
<i>Carychium</i> sp.			+	+	+	+		+	+	
Clausilidae	+		+	+					+	
<b>Marsh</b>										
<i>Carychium minimum</i>	+									
<i>Vertigo antivertigo</i>					+	+				
<i>Succinea</i> sp.					+	+		+		
<i>Lymnaea truncatula</i>	+	+	+	+	+	+		+	+	
<b>Aquatic</b>										
<i>Lymnaea palustris</i>		+								
<i>Planorbis leucostoma</i>					+	+++				
<i>Valvata cristata</i>						+				
<i>Pisidium</i> sp.						+				

+ - present; +++ - abundant

habitat groupings broadly taken from Evans, 1972; Macan 1977; Ellis 1969; Kerney and Redfern 1979



The snail assemblages from Trench 8 are less rich than those from Trench 1. One of the major ecological groups in the assemblages from the ditch fills beneath the colluvium is a marsh and aquatic element, the latter in part characteristic of ditches and ponds that tend to dry out (Macan 1977). The woodland element in these deposits is much less significant than in the samples from Trench 1 and an open country/grassland habitat is suggested by the terrestrial snails. The two lower samples in column 2 have a small woodland element, but without quantification it is difficult to assess its significance.

#### *Excavated finds*

A few finds were collected by hand during the excavation. These include a number of shells of *Helix nemoralis* and *Helix hortensis* in contexts 004, 008, 012, 023 and 131. Fragments of animal bone were recovered from contexts 001, 008, 010 and 067. All were severely eroded and in poor condition and included teeth of cattle (001), a scapula of cattle or red deer (010) and a radius of cattle (067). The fragment from 008 is not identifiable. The poor preservation of these bones is due to severe leaching in the calcareous soils and recovery of such material if further excavation at the site is required will only yield presence data for the identified taxa. Detailed analysis will not be possible.

#### *Discussion*

On top of the hill at Trench 1 the fills of the archaeological features are associated with a molluscan fauna comprising both woodland and open country elements which without quantification it is difficult to interpret. A dominance of woodland taxa in context 131 does, nevertheless, suggest a less open landscape at the time this deposit was forming than those filling the ditches. In Trench 8 the lowest fill of column 1 that was assessed (20-30cm) is dominated by open country and marsh taxa. Deposits 50cm above continue to indicate open country conditions but the aquatic and marsh elements are now dominant and it is probable that the valley floor had become much wetter. In the assessed sample from the colluvial sediments above only a few shells of open country and catholic taxa were recovered. In column 2 the aquatic and marsh elements so abundant at 70-80 in column 1 are not recorded in the assessed samples. This may be due to the selection of the samples but could indicate that the two ditch sequences represent different time frames. A few shells of woodland taxa in column 2 also contrasts with the data from column 1.

#### *Recommendations*

Archaeologically the finds from context 131 are important if the feature is dated to the Late Bronze Age/Early Iron Age. A radiocarbon date may help to establish this with greater certainty and provide the information needed to decide whether further archaeological fieldwork should be undertaken in the immediate vicinity of this feature. Specific identification of the charcoal should be undertaken before it is submitted for dating.

The primary aim of the environmental sampling was to assess the value of the molluscan evidence surviving in the deposits and its potential for studying local changes in the environment at the site. The samples from Trench 1 are rich in snails and quantification



of the species in these assemblages is likely to clarify the interpretation of the environment contemporary with the different ditch and pit fills. Preliminary assessment of the samples from the columns in Trench 8 does suggest that, despite the relative paucity of snails in some of the samples, there are differences between the assemblages that relate to changes in the local environment. These differences may permit a pattern of change to be interpreted and an assessment made of the contemporaneity of the fills. For instance an absence of the aquatic element in column 2 might indicate that this ditch and that in column 1 may not have been open at the same time. The presence of ceramics in the samples of both columns (other sherds were noted during sampling) should allow the establishment of a chronology for the fills and colluvial deposits, an important requirement if further analysis is undertaken. Undiagnostic grey ware fabrics from colluvial layer 106 in the upper half of the sample columns broadly dating to at least the 2<sup>nd</sup> century AD (Precious – pottery report) indicate that these upper colluvial sediments were deposited in the Roman period or later. A much poorer assemblage of snails from the upper fills of column 1 (110-120) might indicate that the deposits closer to the modern ground surface have been subject to greater leaching and shell survival is not so good as in the lower deposits.

It is recommended that the remainder of the column samples are processed and studied along with those already washed but it may be appropriate to limit any further study to the samples in the bottom metre of the columns.

#### *Acknowledgments*

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## ***APPENDIX H - BULK FINDS***

*By R Trimble (From information provided by J Mann)*

An unstratified modern, wooden bead was collected from the surface of Area 5.