

January 1997

---

**GADBROOK PARK**  
**Cheshire**

**Archaeological Evaluation**

---

For the use of:

**Gifford and Partners**  
**and Wm Morrison PLC**

Gadbrook Park  
Nr Northwich  
Cheshire

---

Archaeological Evaluation

Checked by Project Manager. ..... Date
Passed for submission to client. ..... Date

© Lancaster University Archaeological Unit  
Storey Institute  
Meeting House Lane  
Lancaster  
LA1 1TH

January 1997

---

## CONTENTS

---

<b>Acknowledgements .....</b>	<b>3</b>
<b>Executive summary.....</b>	<b>4</b>
<b>1. Introduction.....</b>	<b>6</b>
1.1 Background.....	6
1.2 Topographic and Historical Background .....	6
<b>2. Methodology .....</b>	<b>8</b>
2.1 Project Design.....	8
2.2 Geophysical Survey .....	9
2.3 Sample Excavation.....	9
2.4 Environmental Analysis.....	10
2.5 Archive.....	10
2.6 Health and Safety .....	11
<b>3. Geophysical Survey Results by Geophysical Surveys of Bradford.....</b>	<b>12</b>
3.1 Survey Area .....	12
3.2 Display .....	12
3.3 General Considerations (Complicating Factors).....	12
3.4 Survey Results .....	12
3.5 Conclusion .....	13
<b>4. Sample Excavation Results .....</b>	<b>14</b>
4.2 Trench 1 .....	14
4.3 Trench 2 .....	14
4.4 Trench 3 .....	15
4.5 Trench 4 .....	16
4.6 Trench 5 .....	16
4.7 Trench 6 .....	16
4.8 Trench 7 .....	17
<b>5. Environmental Results by John Carrott, Allan Hall and Harry Kenward.....</b>	<b>19</b>
5.3 Analysis of Fill [7] of ditch [8] in Trench 2.....	19
5.4 Analysis of Fill [25] of ditch-like feature [23] in Trench 5 .....	20
<b>6. Finds.....</b>	<b>21</b>
<b>7. Discussion.....</b>	<b>22</b>
7.1 King Street .....	22
7.2 Field Boundaries.....	23
7.3 Brick Kiln Field .....	23
<b>8. Research Implications .....</b>	<b>24</b>
8.1 King Street .....	24
8.2 Brick Kiln .....	24

<b>9. Bibliography .....</b>	<b>26</b>
9.1 Secondary Sources .....	26
9.2 Maps.....	27
<b>Appendix 1 .....</b>	<b>28</b>
Project Brief	
<b>Appendix 2 .....</b>	<b>29</b>
Project Design	
<b>Appendix 3 .....</b>	<b>35</b>
Project Archive	
<b>Appendix 4 .....</b>	<b>36</b>
Finds Catalogue	
<b>Illustrations.....</b>	<b>37</b>
Fig. 1 Site Location Map	
Fig. 2 Study Area Map - Trench and Geophysical Survey Area Locations	
Fig. 3 Geophysical Survey Area A	
Fig. 4 Geophysical Survey Area B	
Fig. 5 Plan of eastern end of Trench 1	
Fig. 6 Plan and section of Trench 2	
Fig. 7 Plans of Trenches 3, 4 and 5	



---

## ACKNOWLEDGEMENTS

---

Lancaster University Archaeological Unit would like to thank Vic Sephton of Wm Morrison PLC and Shepherds for their considerable co-operation. We would also like to thank Gail Falkingham of Cheshire County Council and Tim Strickland of Gifford and Partners for their helpful advice.

Geophysical Surveys of Bradford undertook the gradiometer survey, under the co-ordination of John Gater, and assisted by K Holroyd and A Shields. Dr Allan Hall of the Environmental Archaeology Unit of York University assessed the marl pit, and undertook analysis of samples from the road side ditch. John Carrott, Allan Hall and Harry Kenward prepared the environmental report.

The trial trenching was undertaken by Graham Mottershead and Nicola Wilcoxon, and directed by James Wright, who wrote the report. Christine Howard-Davis inspected the finds, and the illustrations are by Dick Danks. The historical background is based on the archaeological assessment produced by the University of Manchester Archaeological Unit. The report was edited by Jamie Quartermaine and Rachel Newman. The project was managed by Jamie Quartermaine.

---

## EXECUTIVE SUMMARY

---

Prior to development, and acting on behalf of Wm Morrison Supermarkets PLC, Gifford and Partners commissioned Lancaster University Archaeological Unit to evaluate land at Gadbrook Park (NGR SJ 685723), to the south of Northwich, Cheshire. King Street (now the A530), a Roman road, ran through the site, and the evaluation was concentrated within a 25m wide corridor on either side of this road; trenches were positioned either parallel or at right-angles to the road. The evaluation included a gradiometer survey, undertaken by Geophysical Surveys of Bradford, to investigate the possibility of a kiln within a field, formerly known as Brick Kiln Field, to the east of King Street. In conjunction with the excavation programme a palaeo-environmental evaluation was undertaken by the Environmental Archaeology Unit of York University.

The geophysical survey encountered extensive disturbance, due to the presence of a newly laid gas main and other modern services, which severely restricted the survey. Only one, possibly significant, anomaly was identified, but it was considered that this too could be attributable to a modern pipeline.

The palaeoenvironmental evaluation was intended to analyse core samples from two marl pits; however, the coring could not be practically undertaken because of the aqueous nature of the deposits, which were, in any case, likely to have been too unstratified to warrant examination. Two samples from excavated features were processed, and the results show that there is the potential for good organic preservation in ditches of over c0.7m depth. The preserved biota consisted of a variety of plant and insect fragments; however, the samples contained no diagnostic material and were not stratigraphically secure.

Six trenches of 25m length were excavated by machine, of which one could not be recorded because of subsequent topsoil tipping, and so a seventh trench was excavated in its stead. In the three most northerly trenches (Trenches 2, 3 and 7), on the western side of the road, a ditch was observed which ran parallel to, and c3m away from, the present road; the ditch was therefore at least 225m long. It was not observed to the south of Trench 3, which would suggest that it terminates, although it is possible that it is located beneath the present hedge-line. The ditch was found, in the two most northerly trenches (Trenches 2 and 7), to be c3.32m wide and 0.91m deep below the present level of geological deposits. In both trenches the ditch had been recut at least once, to insert twentieth century ceramic field drains. A further 2.54m wide and 0.69m deep ditch was identified running approximately parallel to and c25m away from King Street; it was recorded in only one trench (Trench 7). It produced no artefactual material and is considered to have been a medieval or post-medieval field boundary.

In a third trench (Trench 1) rounded pebbles and redeposited clay were observed extending for a distance of c3.5m from the present road. These did not appear to represent *in-situ* metalling and may rather be the remains of a store of materials used during either the original laying of the road or its maintenance, or even dispersed road materials. No stratified finds were recovered from within or below these layers. Two further features were uncovered to the west of the road: a trackway and a shallow ditch. Both were at angles of c45° to the road, and although neither contained any dating evidence they correspond with orientations of present day field boundaries, recorded on the 1st edition OS map (1881).

To the east of King Street, in a field formerly called Brick Kiln Field, large quantities of burnt and fired clay were uncovered within Trench 5. Near to these deposits was a 0.74m deep ditch-like feature which widened from 2.80m in the west to 4.60m in the east of the trench. The lower fills of this ditch contained large proportions of burnt and fired clay, and fragments of burnt wood, suggesting that the feature was contemporaneous with the presumed kilns.

The evaluation has identified a potentially significant archaeological resource which is associated with the Roman road King Street. A road-side ditch was identified and may relate to the Romano-British phase of the road; however, no Romano-British artefacts were recovered from the excavated ditch segments and it can not be dated stratigraphically.

---

## 1. INTRODUCTION

---

### 1.1 BACKGROUND

- 1.1.1 Three planning applications were made by Wm Morrison PLC for improvements to the A530 and the construction of an industrial park at Gadbrook Park, Northwich, Cheshire (NGR SJ 685723). Gifford and Partners were appointed as the consulting archaeologists, and invited tenders for an archaeological assessment, consisting of a desktop study and fieldwalking, which was awarded to the University of Manchester Archaeological Unit (UMAU 1996). Subject to the results of the assessment, Gifford and Partners produced a brief for an archaeological evaluation (*Appendix 1*) of the site and invited tenders. Lancaster University Archaeological Unit submitted a project design (*Appendix 2*) which was accepted.
- 1.1.2 Geophysical Surveys of Bradford were contracted to undertake a gradiometer survey to the east of King Street and this was undertaken on 16th September 1996. The Environmental Archaeology Unit was contracted to undertake a programme of ecological assessment and visited the site on 25th September 1996. LUAU undertook a programme of sample excavation between 23rd and 27th September.
- 1.1.3 Following the completion of the evaluation, Gifford and Partners were contracted to undertake a watching brief in the course of the development, and is in progress at the time of writing. It is proposed that the results of the watching brief will be presented as an *addendum* to the present report.

### 1.2 TOPOGRAPHIC AND HISTORICAL BACKGROUND

- 1.2.1 **Topography and Geology:** The site is bounded to the north by the Northwich bypass (the A556), and to the west by the Trent and Mersey canal. The eastern boundary was formed by King Street (the A530) although a c25m wide strip running south from the A556 for a distance of c500m was included. The southern limit followed field boundaries. The total area is 24.5ha (Fig. 2).

The solid geology was of Keuper Marl overlain by a drift of boulder clay. The soils are mapped as of the Crewe Series, which are pelo-stagnogleys (Furness 1978, end map). Prior to the present development the site had been utilised for arable farming, and was divided into fields by hedges. The land was mostly flat, lying at c26m OD.

- 1.2.2 **History:** No prehistoric activity is known within the study area, and it is believed that the heavy clay soils would have been avoided in favour of the more easily worked sands and gravels of river terraces in the region. However King Street, the present A530, originated as a part of the Roman road between the Mersey crossing at Wilderspool, near Warrington, and Kinderton, near Middlewich, and it formed a part of the main north to south Roman route through Cheshire. The road was first described by the antiquarian William Camden in the late sixteenth

century, and in the late nineteenth century it was called a 'grand road' of over 18.29m (60ft) width, which could be followed for a distance of four miles, and in which the raised crest, or *agger*, distinctly marked its course (UMAU 1996).

- 1.2.3 Two of the three townships in which Gadbrook Park lies are mentioned in Domesday, but there are no known early medieval finds recorded. However, Domesday Book details that Shipbrook and Shurlach were among a barony of fourteen manors held by Richard de Vernon, of which Shipbrook was the mesne manor. While both Shipbrook and Shurlach contained demesne, they were worked by two serfs with one plough-team, and in Shipbrook there were also two villens with two plough teams. At Shurlach two villens with half a plough team, and a bordar, all worked the land. Shipbrook contained meadows and woods, whilst Shurlach had meadows and a fishery. The site of the castle of the barons of Shipbrook lay c1km away, and that of the mill is believed to be nearer the River Dane. On field-name evidence it is suggested that a medieval open-field system existed in both Shipbrook and Shurlach (UMAU 1996).
- 1.2.4 Rudheath, the third township in which Gadbrook Park lies, was extra-parochial (outside the boundaries of any parish) and therefore exempt from church rates. It was held directly by the earls of Chester. It became one of three secular 'sanctuary' sites in the county, where criminals could be given asylum in exchange for military service and other duties. Whilst common open fields may have been farmed in Rudheath from the early thirteenth century there are references from the fourteenth century to marl pits along the western boundary of the township.
- 1.2.5 Gadbrook Farm, to the south of the development area, was probably established by 1514, and it is likely that in or before the seventeenth century the development area was first enclosed. 'Brick Kiln Field' to the east of King Street, is a common name on the boulder clays of the county, and indicates the former presence of a kiln, in which bricks for local use would have been made. This name was first shown on the Rudheath tithe award of 1842.

---

## 2. METHODOLOGY

---

### 2.1 PROJECT DESIGN

2.1.1 A project design (*Appendix 3*) was compiled in accordance with a brief (*Appendix 2*) produced by Gifford and Partners for the evaluation of land adjacent to King Street (A530), at Gadbrook Park, Northwich, Cheshire, that will be affected by a proposed industrial park.

2.1.2 The project design provided for the following:

- A magnetometer survey of an area that may contain an eighteenth century brick kiln, which involved the examination of a strip of land 260m x 30m wide on the eastern side of King Street.
- A programme of sample excavation to investigate the nature, extent, chronology and preservation of any archaeological deposits on both sides of King Street. This required the excavation of six trenches 25m x 1.6m wide by a combination of mechanical and manual techniques.
- A programme of environmental sampling to establish the ecological potential of two marl-pits, and to examine pollen, macrobotanical and insect remains.

2.1.3 ***Variations to the brief:*** In the course of the project, after Trench 3 had been opened by machine, the main development contractor inadvertently dumped several hundred tons of soil on top of it. As a result of discussions with the archaeological consultant, LUAU, the client, and the Cheshire County Council Planning Archaeologists, it was agreed that another trench (Trench 7) be excavated in its stead. The location of both the original and replacement trenches is shown on Figure 2. Although the original trench (3) had not been recorded, it had been cleaned sufficiently to provide some impression of the archaeological stratigraphy.

2.1.4 Trench 1 was widened at its eastern end to provide a more detailed examination of a deposit of river-rounded stones which were initially considered to be a metallised surface. The widened trench revealed a continuation of the deposits, which were manually excavated.

2.1.5 The site was visited by a member of the Environmental Archaeological Unit of York University to assess the environmental potential of one or more of the marl pits to the west of King Street. However, a rapid visual inspection showed the impracticality of sampling these features. The fill of the marls pits was found to be too aqueous to sample in the normal way, and the alternative was to obtain a sample by freezing the deposits using liquid nitrogen. It was considered that this would, in any case, produce results of only limited ecological value. The results gained from such expensive techniques would be unlikely to justify the cost involved and as a result of discussions between the archaeological consultant, the

Cheshire County Archaeologist, and LUAU, it was decided that this element would not be required.

- 2.1.6 In the place of the environmental sampling from the marl pits it was agreed by the Cheshire County Council Planning Archaeologists, LUAU and the archaeological consultant that there would be a limited ecological assessment undertaken of two road-side ditch fills and the results of this ecological work are presented below.

## 2.2 GEOPHYSICAL SURVEY

- 2.2.1 Geophysical Surveys of Bradford carried out a fluxgate gradiometer investigation of an area of just over 0.5ha to the east of King Street. This was positioned in 'Brick Kiln Field' to try to identify the presumed site of any such kilns.
- 2.2.2 The gradiometer survey was undertaken using a Geoscan FM36 instrument. This was carried by hand with the bottom sensor approximately 100mm-300mm from the ground. At each survey station the difference in the magnetic field two fluxgates within the instrument is conventionally measured in nanoTesla (nT) or gamma. The fluxgate gradiometer suppresses any diurnal or regional effects. Generally features up to 1m deep can be detected by this method.
- 2.2.3 Magnetic readings were logged at 0.5m intervals along one axis in 1m traverses giving 800m readings per 20m x 20m grid. The data were then transferred to a portable computer and stored on 3.5" floppy discs. The data were displayed at a scale of 1:500, as XY traces and dot-density plots, with interpretative diagrams at the same scale.
- 2.2.4 The results of the survey were severely affected by the presence of a gas pipeline, and associated ferrous objects, along the eastern limit of the area, whilst anomalies to the west were caused by lorries on the adjacent A530. Further electricity cables and/or ferrous pipelines made interpretation more difficult, and only one possible kiln-type response was noted. However, it was not certain whether this was caused by a kiln or by more ferrous material.

## 2.3 SAMPLE EXCAVATION

- 2.3.1 Under archaeological supervision a machine, fitted with a toothless bucket, removed topsoil and where necessary subsoil, in six trenches. Three trenches were excavated parallel, and three at right-angles, to King Street; two of the trenches were to the east of the road (Fig. 2). The trenches were manually cleaned, and potential archaeological features were hand excavated to resolve uncertainties and to recover stratified finds for dating purposes. All excavation was carried out stratigraphically, whether by machine or by hand, and excavation was undertaken to the depth of natural subsoils in all trenches. The trenches were mechanically backfilled.
- 2.3.2 A written, photographic, and drawn record was maintained of potential archaeological strata, and soil samples were taken where palaeo-environmental preservation was suspected. The recording methods employed by LUAU accord

with those recommended by English Heritage's Central Archaeology Service (CAS). Recording was in the form of *pro forma* Trench Sheets for each trench, which recorded the orientation, length, and depth of machining, and described the nature of the topsoil, subsoil (where applicable), and geological deposits. Where potential features were observed they were manually sampled, and a full textual, drawn, and photographic record was maintained. Any finds recovered were bagged and recorded by either the trench number or, where appropriate, by the number of the context from which they were recovered.

- 2.3.3 The positions of the trenches were recorded using a total station, and were subsequently superimposed with a map of the study area provided by the client.

## 2.4 ENVIRONMENTAL ANALYSIS

- 2.4.1 During the trial trenching bulk soil samples of 30 litres were retained from features believed to have the potential to reveal details of the palaeo-environment. From these, two 'GBA' samples (*sensu* Dobney *et al* 1992), from undated ditch fills, were submitted for evaluation of their bioarchaeological potential.

- 2.4.2 On inspection in the laboratory, neither appeared likely to provide useful assemblages of plant or insect remains, although there were traces of charcoal. On this basis large 'test' subsamples were processed using techniques described by Kenward *et al* (1980; 1986). For one sample, paraffin flotation was undertaken immediately; for the other a 'washover' was performed. In the latter case, the washover was found to be rich in insect remains and this fraction was subjected to paraffin flotation.

## 2.5 ARCHIVE

- 2.5.1 A full archive of the geophysical survey, sample excavation and environmental analysis has been produced to a professional standard in accordance with the current English Heritage guidelines (English Heritage 1991). The archive will be deposited with the County Museums Service with a copy of the report given to the CSMR. A copy of the archive will also be available for deposition with the National Monuments Record in Swindon. The present report represents a summary of the archive; the trench descriptions (*Section 5*) are based on site context sheets and only relevant site drawings have been reproduced in this report. A contents list of the project archive is presented in *Appendix 3*.

## 2.6 HEALTH AND SAFETY

- 2.6.1 Both Lancaster University and LUAU maintain Safety Policies, the latter based on the SCAUM (Standing Conference of Unit Managers) *Health and Safety Manual* (1991). In keeping with current Health and Safety at Work Regulations, prior to commencing on-site work, a risk assessment for each activity was completed. Due regard was given to all Health and Safety considerations during all aspects of the project, with service information provided by the client. However, it is LUAU standard practice to scan the positions of all trenches for underground cables using



a U-scan meter. No services were revealed during the course of the evaluation programme.

### 3. GEOPHYSICAL SURVEY RESULTS

by Geophysical Surveys of Bradford

---

#### 3.1 SURVEY AREA

- 3.1.1 An area of just over 0.5ha was investigated by fluxgate gradiometry, the entire available area is within a pipeline easement. The location of the survey is shown in Figure 2. For ease of display the survey has been subdivided into two areas, A and B.
- 3.1.2 The survey was set out and tied-in by Geophysical Surveys of Bradford. locational information has been lodged with the client.

#### 3.2 DISPLAY

- 3.2.1 The data are displayed at a scale of 1:500, as X-Y traces and dot-density plots, with interpretation diagrams at the same scale, in figures 3 and 4.

#### 3.3 GENERAL CONSIDERATIONS (Complicating Factors)

- 3.3.1 The survey area was restricted due to the gas pipeline and other disturbances within the pipeline easement. Ferrous pipes and objects produce distorting magnetic fields which can extend for several metres, depending on their size.

#### 3.4 SURVEY RESULTS

- 3.4.1 The results of the survey were severely affected by the modern disturbances referred to above, in *Section 3.3.1*. The new gas pipeline, although only approximately 150mm in diameter, distorted the magnetic fields up to 10m away, depending on the orientation of the pipe. Stray lengths of pipe near the edge of the trench, rather than in it, added to the noise levels. The distortions are clearly visible in both survey areas, A and B, especially when viewed as X-Y traces.
- 3.4.2 **Area A (Fig 3):** The data are dominated by iron spikes, typical of the type of responses that might be expected within a working pipeline easement. The results reflect stray modern ferrous debris, and similar material, scattered in the topsoil.
- 3.4.3 Strong anomalies along the western edge of the survey grid, adjacent to the A530, are responses associated with passing lorries.
- 3.4.4 **Area B (Fig 4):** The results from the southern section of this strip are dominated by two modern features. A narrow band of erratic anomalies crosses the pipeline easement and coincides with a marker post that refers to buried cables; however, it is possible that a small ferrous pipe is responsible. The other anomalies highlighted in the interpretation coincide with a large ferrous sheet that could not be moved.

- 3.4.5 To the north of a farm track, that divides this survey strip, are further strong magnetic anomalies that would appear to be associated with another ferrous pipeline or perhaps with cables. However, due to the narrow width of the available survey area, it is difficult to trace the anomalies over a greater length, something that would have helped confirm the interpretation. It is possible, therefore, that the anomalies do not extend any further and as such they represent an isolated feature. If this were the case, they might be associated with a kiln, though the geophysical evidence is not convincing; there are strong magnetic anomalies that are more indicative of ferrous material than *in situ* fired bricks.

### 3.5 CONCLUSION

- 3.5.1 The gradiometer survey revealed that most of the survey area is magnetically disturbed and as such in these areas it is impossible to assess the results with any high level of confidence. Only one anomaly was located that could possibly be interpreted as being associated with a kiln, but the strength and nature of the results suggested that the responses are the result of a third pipe or more cables. It is also possible that kiln-type responses were 'lost' in the noise. However, in the less disturbed areas, there are no responses that clearly indicate surviving kiln type features.

---

## 4. SAMPLE EXCAVATION RESULTS

---

- 4.1 Presented below are summary descriptions of the seven excavated trenches, based on context records which form the archive (*Appendix 3*). The finds have been subject to examination by an in-house specialist; and as the finds report is not lengthy it has been broken up for incorporation into the trench descriptions below.

### 4.2 TRENCH 1

- 4.2.1 **Introduction:** Trench 1 was 24.40m long and 1.95m wide, and was excavated immediately adjacent to the hedge beside King Street, and at right-angles to it (Fig. 2). This revealed possible metalling [29] at its eastern end, and the trench was therefore widened to 3.28m in order to provide a more effective examination of this deposit.

- 4.2.2 **Layers [27], [28], and [29]:** At the eastern end of Trench 1 (Fig. 5) the earliest layer [29], which directly overlay geological deposits, was made up of river-rounded medium-sized stones in a yellow brown clay matrix. This layer [29] had a width of c2.30m and could be observed for the whole width of the trench, but the stones were patchy. Although not observed in section, manual excavation of the deposit suggested that there was a thin layer of clay sandwiched in between two deposits of cobbles, which would suggest a degree of structure to the deposit. However, the patchy nature and relatively low density of the cobbles are not consistent with a Roman metallised surface, although it may reflect the dispersed materials from a road or similar surface.

- 4.2.3 Above layer [29] was another [28], which comprised a similar clay to that of [29], but which contained fewer, or no, stones. Overlying [28] was [27], a grey clay loam containing some river-rounded large stones.

- 4.2.4 **Clay layer [2]:** To the west of the above layers was a 3.48m wide reddish brown clay [2], which appeared to run parallel to King Street. However, when a 0.50m wide segment was excavated through the layer, it was decided that the extremely hard nature of the clay was consistent with it being of geological origin, and therefore no further action was taken.

- 4.2.5 **Finds:** The finds recovered during hand cleaning of the trench. All were post-medieval in date and comprised: four fragments of late seventeenth or eighteenth century pottery; one clay-pipe stem, one iron nail; one fragment of slate; and two small fragments of brick or tile. No finds were recovered from layers [27], [28] or [29].

### 4.3 TRENCH 2

- 4.3.1 Trench 2 was mechanically excavated, parallel to King Street, to a depth of 0.21m. A ditch was seen to run along the length of the trench, and in order to find the width of this feature and to be able to excavate a section across it, a short length of trench was machined at right-angles to the rest of the trench.

- 4.3.2 **Ditch [8]:** Ditch [8] was exposed for a length of 25.05m and a width of 3.32m (Fig. 6). A 0.50m wide segment excavated through it showed that there was a very gradual break of slope on the eastern side, which had a convex slope to the base of the cut. The base was horizontal and 0.32m wide. On the western side of the ditch the break of slope at the top was sharper, and the side sloped more steeply, with a step near the bottom, which is assumed to have been caused by a re-cut [13] during the laying of a ceramic field drain.
- 4.3.3 Lining the eastern side of ditch [8] was a 0.05m thick reddish brown sandy clay [9], although its edges were unclear. Filling the base of the cut and extending upwards to the east was fill [12], a mixture of yellow brown clay and grey clay loam or silty clay loam. Contained in this fill were large stones and some coal fragments. Again the boundary between fill [12] and fill [10], which lined the eastern side of the ditch, was unclear. The latter was a grey silty clay loam with a maximum thickness of 0.10m. Above fill [12] was fill [7], a dark reddish brown fine sandy clay. Lining the western edge of the cut for a thickness of 0.10m, fill [5] was a pale reddish brown sandy clay containing patches of pale yellow clay. Above fill [5] was fill [3], a reddish brown sandy clay which was similar to fill [5] but contained fewer patches of pale clay. Fill [6] was a mixture of reddish brown and dark brown sandy clay, and it surrounded a ceramic field drain. Overlying fills [10], [12], [6], and possibly [3] was fill [11], a mottled grey and yellow sandy clay containing some rounded stones. Fills [11] and [12] were similar with the amount and brightness of their respective mottling being the principal difference; it is assumed that the mottles are a post-depositional effect caused by repeated water-logging and drying. The uppermost fill [4] in the ditch was a reddish brown sandy clay with some dark patches, and had a maximum depth of 0.10m.
- 4.3.4  **Finds:** A fragment of a hand-made brick was recovered from fill [12]; this was broadly undatable but is believed not to be of Roman date (T Strickland pers comm). From fill [6] a piece of late eighteenth century glass was retrieved. Also from fill [6] was a fragment, broken into two, of flint. The white cortex suggests that the flint was derived from chalk, but the unpatinated and uneroded nature of the flint suggest that it had not been quarried long ago, and is unlikely to have been utilised in prehistoric times.

#### 4.4 TRENCH 3

- 4.4.1 **Introduction:** Trench 3 was excavated on the western side of King Street and at a right angle to it; it was immediately adjacent to the hedge bordering that road (Fig. 2). The trench was inadvertently covered by a large temporary store of soil soon after the excavation, but a ditch had been observed in its eastern end prior to this incident. Although the ditch was not properly recorded, it was observed to be about 4-5m away from the hedge and to be c2m-2.5m in width, which is broadly consistent with the observed roadside ditch in Trenches 7 and 2.

#### 4.5 TRENCH 4

4.5.1 **Introduction:** Trench 4 was machined roughly parallel to King Street, with its southern end 7.30m from the middle of the hedge and its northern end 8.46m from the middle of the hedge; a recently buried electricity cable made it impossible to position the trench nearer to the road. An overburden of 0.40m was mechanically removed.

4.5.2 **Ditch [15]:** This shallow ditch (shown on Fig. 7) was cut into a localised deposit of very stiff reddish brown clay which made it difficult to follow the ditch cut. The northern side of the ditch sloped gently, the southern side sloped more steeply, and the base was narrow and rounded. Ditch [15] was c1.65m wide and had been excavated to 0.38m below the level of geological deposits. Fill [16] was a greyish brown clay or clay loam containing some large rounded stones.

4.5.3 **Finds:** No finds were recovered.

#### 4.6 TRENCH 5

4.6.1 **Introduction:** Trench 5 was excavated parallel to and on the eastern side of King Street; it was positioned 1.90m from the centre of the hedge. An overburden of 0.44m depth was mechanically removed. Below the 0.27m deep topsoil was a homogeneous layer which contained much burnt and fired clay, and which overlay geological deposits. After machining two patches of burnt and fired clay were identified and thought to fill archaeological features; however, sectioning showed that neither were deeper than 0.05m.

4.6.2 **Ditch-like feature [23]:** Feature [23] extended west to east, and was 2.80m wide in the west and 4.60m wide in the east (see Fig. 7). A 0.50m segment was manually excavated revealing steeply sloping sides and a flat base at a depth of 0.74m below geological deposits. The lowest fill [26] was 0.14m thick, and comprised a sandy clay which was reddish brown with grey mottling. No finds or anthropogenic material were observed in this fill. It is therefore possible that fill [26] was a geological deposit, and that feature [23] was overcut. Above fill [26] was fill [25], a greyish brown fine sandy clay. There were horizontal dark grey bands running through this fill, and it contained much burnt and fired clay, and fragments of charcoal up to 10mm diameter. This fill was 0.34m thick, and was covered by fill [24], a greyish brown fine sandy clay containing very small stones and burnt and fired clay.

4.6.3 **Finds:** No finds were recovered.

#### 4.7 TRENCH 6

4.7.1 **Introduction:** Trench 6 was machined at a right-angle to King Street (Fig. 2). Its western end was as close as practical to the hedge bounding the eastern side of the road, and to the east was excavated up to the edge of disturbance for the trench of a newly laid high pressure gas main; the trench was 19m x 1.9m. Topsoil and some subsoil to a total depth of 0.40m were mechanically removed.

- 4.7.2 **Layer [32]:** Layer [32] extended the 1.70m width of the trench, and extended from the western end of the trench for 0.90m. It comprised a yellowish brown sand or silty sand with a hard consistency. It was thought to be the possible core of the *agger* of the Roman road, but excavation showed that it was slumping to the east under geological deposits, and it is evident that layer [32] was itself a geological deposit.
- 4.7.3 **Layer [30]:** Layer [30] was observed to run in a north/south direction, and prior to excavation it had a bluish grey colour similar to that caused by gleying. Excavation revealed that this layer was a very hard silty clay which, at a depth of 0.30m, became a grey colour. Covering layer [30] was layer [31], a pale yellowish brown, mottled with yellowish brown, fine sandy clay. Layer [31] was observed to be 7.50m wide, and extended beyond where layer [30] could be observed. It was felt that both these layers were of geological origin, possibly being periglacial, and therefore excavation ceased. A soil sample from [30] was retained, although this has not been analysed.
- 4.7.4 **Finds:** No finds were recovered.

#### 4.8 TRENCH 7

- 4.8.1 **Introduction:** This trench was not one of the original six trenches, but was excavated as a replacement following the inadvertent covering of Trench 3. It was 25.0m long and was at a right-angle to the road. A 0.3m depth of topsoil, and c0.10m depth of subsoil, were mechanically removed, revealing three separate features (shown on plan 4, Fig. 5). These are described from east to west.
- 4.8.2 **Ditch [21]:** Ditch [21] was parallel to King Street. It was exposed for a length of 1.90m (the width of the trench) and prior to excavation it was 2.53m wide. It was mechanically excavated to reveal its depth of 0.80m. Its profile was a rounded 'W' shape, with a ceramic field drain inserted into each of the two lowest parts of the cut. Fill [22] was a very moist dark greyish brown clay loam at the bottom, which became a brown or reddish brown fine sandy loam at the top. A sherd of nineteenth century pottery was recovered from the base of this fill.
- 4.8.3 **Trackway [13]:** This trackway ran at c75° to the trench. It was 2.98m wide, and was shown by excavation to have a flat base, at a depth of 0.12m below the level of geological deposits, and gently sloping sides. In the eastern side of the excavated segment was [17], a brown sandy loam containing lumps of bright yellowish brown sandy clay. Overlying this and occupying the rest of the segment was a grey sandy clay [14] which contained some rust-coloured patches.
- 4.8.4 **Ditch [18]:** Ditch [18] was c25m from King Street, and was approximately parallel to it, although uncertainty about the orientation of this ditch led to the excavated segment being positioned at an angle of 45° to the line of the ditch. The width of ditch [18] was 2.54m and its depth was 0.69m. There was a gentle break of slope at the top of the cut, and steeply sloping sides which had sharp breaks of slope to a nearly horizontal base of 0.94m width. The lower fill [19] was a grey brown fine sandy clay containing occasional medium rounded stones, and was

0.28m thick. There were horizontal bands of grey sandy clay, which could have been a post-depositional effect or could have been due to gradual silting of the ditch. Above fill [19] was fill [20], a grey brown fine sandy clay loam which contained occasional large rounded stones, mottles of strong yellowish brown, and many black flecks of manganese dioxide. Near the top of this fill was a ceramic field drain.

- 4.8.5 ***Finds:*** A sherd of nineteenth century pottery was recovered from the base of fill [22] in ditch [21].



## 5. ENVIRONMENTAL RESULTS

by Environmental Archaeology Unit (York University)

---

- 5.1 Environmental samples of two ditches were taken to investigate the ecological potential of the deposits. The first was from Trench 2, the base of a ditch [8] that ran parallel to King Street, and which was also identified in Trenches 3 and 7. The deposits at the base of the ditch were organic and had the potential for ecological investigation; however, the ditch had been disturbed by the laying of a ceramic drain. Although the excavation established that the drain cut was stratigraphically distinct from the ditch bottom, it is not possible to exclude the possibility of contamination.
- 5.2 The second sample was from a ditch-like feature [23] within Trench 5. The fill deposit had horizontal dark grey bands running through it and contained much burnt and fired clay, and fragments of charcoal up to 10mm in diameter.
- 5.3 **ANALYSIS OF FILL [7] OF DITCH [8] IN TRENCH 2**
- 5.3.1 An 8kg sub-sample was processed and the washover of about 200cm<sup>3</sup> examined. It was found to consist almost entirely of fine (<4 mm) woody and herbaceous detritus including tree leaf fragments, prickles of rose and blackberry, bud-scales of oak (*Quercus*) and fruits and seeds of a variety of plant taxa, especially blackberry (*Rubus fruticosus*) with rose (*Rosa*), hawthorn (*Crataegus monogyna*) and hazel (*Corylus*), together suggesting the presence of a hedge or scrub in the vicinity of the ditch, but with plants indicative of grassland (self-heal, *Prunella vulgaris*, and daisy, *Bellis perennis*), waterside or ditch margins (celery-leaved crowfoot, *Ranunculus sceleratus*, sweet-grass, *Glyceria*, water-plantain, *Alisma*, and bristle-scorpis, *Scirpus setaceus*) and perhaps disturbed ground (chickweed, *Stellaria media*, knotweed, *Polygonum aviculare*). There were no taxa which were, with certainty, cultivated. Most of the macrofossils were a little worn, consistent with a degree of transport prior to deposition in water.
- 5.3.2 Insect remains were concentrated from the washover by paraffin flotation. They showed variable preservation, typically fresh or slightly pale, but in a few cases retaining their original colour but having localised areas of considerable or complete decay. The assemblage recovered was of sufficient size to permit reconstruction of the depositional environment and something of the surroundings if material was identified closely. Aquatics were fairly well represented, with a wide range of species. Quiet or very slowly flowing water with at least some vegetation was indicated. The surroundings of the ditch appear to have been somewhat disturbed so that crucifers and probably also grasses were able to establish and there were indications of at least some scrub, but no good evidence of synanthropic insects consistent with the presence of buildings nearby. Scarabaeid dung beetles were not noted; they would have been expected had the surroundings been grazing land. There is no reason to suppose that the variable preservation indicates origin by redeposition or the presence of modern contaminants. The absence of cladocerans (water-fleas) from what is clearly an aquatic deposit is notable, although there is no immediate explanation for the phenomenon. The residue consisted of quartz sand with a little gravel.

- 5.3.3 Although the plant and insect remains show a remarkable consistency in interpretative terms, the value of this deposit for further analysis is currently limited by the lack of a dating framework (though remains from a fresh sample might be used for radiocarbon assay); in particular, it needs to be established that the insertion of the field drain above fill [6], as shown on the excavator's section, did not compromise the integrity of [7].

#### 5.4 ANALYSIS OF FILL [25] OF DITCH-LIKE FEATURE [23] IN TRENCH 5

- 5.4.1 A washover was taken from a 7kg subsample; it consisted of no more than a few cm<sup>3</sup> of herbaceous detritus, most of it rootlet fragments, perhaps of recent origin. There were minute traces of charcoal and wood <5 mm in maximum dimension and a single raspberry (*Rubus idaeus*) seed. The residue was of quartz sand.

---

## 6. FINDS

---

- 6.1 Very few finds were recovered from the site, a total of 13 fragments of artefacts, deriving from Trenches 1 (nine fragments), 2 (three fragments), and 7 (one fragment). Where discernible the material was post-medieval in date.
- 6.2 No stratified finds were recovered from Trench 1. All finds from this trench were post-medieval. Four relatively undiagnostic body sherds of black-glazed pottery could not be dated with precision, but the thin, hard-fired fabric suggests a date early in their range, possibly the late seventeenth or eighteenth century. Other artefacts, a hand-forged iron nail and a fragment of clay pipe stem, and two small fragments of brick or tile, could not be dated. The finds contribute little to any interpretation of the archaeological succession within Trench 1, except to imply post-medieval activity within the close vicinity.
- 6.3 Material from Trench 2 was of a similar nature. Undiagnostic hand-made brick from fill 12 (ditch 8) cannot provide any firm dating evidence, but the fragment of dark olive green wine bottle of late eighteenth century form from fill 6 (ditch 8) may well provide a *terminus post quem* for the insertion of an associated field drain. A fragment (2 joining pieces) of flint still bearing a fresh white cortex, and clearly unpatinated, appear unworked, but may well be imported to the site, as it is most likely to have derived from chalk or limestone.
- 6.4 Finally, the single fragment of nineteenth century pottery vessel from trench 7 (fill 22) provides a *terminus post quem* for the construction of field drains which lie at the base of ditch 21.
- 6.5 This small group of material is catalogued in *Appendix 4*. It does not significantly inform the interpretation of the site and is unlikely to have any potential to enhance further research into the site. It is therefore recommended that, with the clients consent, the assemblage be discarded.

---

## 7. DISCUSSION

---

### 7.1 KING STREET

7.1.1 Two features which may be related to the Roman King Street were uncovered, a ditch and a small spread of construction material.

7.1.2 **Possible road-side ditch:** This ditch was observed in three trenches (2, 3 and 7), an observed length of 225m, and was excavated in two of these. In Trench 2 this ditch was 3.32m wide and 0.91m deep, and in Trench 7 it was 2.53m wide and 0.80m deep, but in both trenches ceramic field drains had been laid which could have changed the width, depth, and profile of the pre-existing ditch. No finds were retrieved which could date the ditch and none were of Roman date. The palaeo-environmental analysis of the basal ditch deposits highlighted a good preservation of organic remains and demonstrated that the depositional environment was of a quiet or very slow flowing water with at least some vegetation. There was a lack of evidence for the presence of synanthropic insects, which would suggest a degree of remoteness from human habitation. The ecological potential of the deposit, was limited, however, by the paucity of dating evidence to provide a chronological context and because of the slight possibility of contamination from the inserted drain.

7.1.3 King Street was a major and early Roman road leading to the North West, crossing the River Mersey at Wilderspool near Warrington, and passing through Walton-le-Dale and Lancaster; it was probably one of the two routes used by Cerialis during the incursion into the north of England and southern Scotland in the early 70s (Shotter 1996, 28). Its route has been described by Margary (1973, 302-3), who also describes how the material for the *agger* of the road was derived from scoop-ditches at the side of the road (Margary 1973, 21). The distance from the centre of ditch [8] to the centre of the A530 was c12.10m, which is close to half the average distance of 25.60m (84ft) between the two scoop-ditches of main roads as suggested by Margary (1973, 500). This ditch was not observed in Trench 1, either because the ditch terminates or even possibly because the ditch was under the hedge in this area. It was also not observed in Trench 4, but the trench could not be positioned close enough to the A530 to expect to locate it. No road side ditch was seen to the east of King Street; which may suggest that it has not survived, or perhaps more likely is under the present road or hedge.

7.1.3 **Road material:** The rounded stones and redeposited clay in Trench 1 were inconsistent with a Roman metalled surface because of the patchy nature and relatively low density of the cobbles; however, it may have been material spread or washed out from a metalled surface and may reflect the existence of an adjacent road. Certainly the cobbled material would not be out of place in the context of a Roman road. The materials were directly above geological deposits, suggesting that topsoil and any subsoil may have been removed from a wide corridor prior to building the road. Margary (1973, 303-4) describes traces of metalling composed of gravel as hard as concrete on the Nantwich to Middlewich road at Red Hall, near Bradfield Green, c12km to the south.

### 7.2 FIELD BOUNDARIES

- 7.2.1 Other features recorded, ditches [18], [15], and [23], and trackway [13], are all probably of a medieval or later date.
- 7.2.2 Although trackway [13] appeared to be aligned with an existing gateway onto King Street, a local informant had no recollection of a trackway there, and the 1st edition OS map published in 1881 shows neither track nor field boundary in this position. Ditch [18] was adjacent to this trackway, and may have been a trackside field boundary; however, it was difficult, in the restricted width of the trench, to establish the precise orientation of this feature.
- 7.2.3 Ditch [15], in Trench 4, corresponds in orientation and location with a hedge shown on the 1st edition OS map which led north-east from Millington's Gorse to King Street, and the excavation evidence is consistent with such a function.

### 7.3 BRICK KILN FIELD

- 7.3.1 The gradiometer survey and Trenches 5 and 6 were intended to investigate the possible presence of a former brick kiln in the field to the east of King Street, which was called 'Brick Kiln Field' on the 1842 Rudheath tithe award. Only the western part of the field will be affected by the proposed development and so only a very small proportion of the field was investigated. The gradiometer survey was severely affected by magnetic disturbance and was not able to identify reliably any features that could be a former kiln. The one feature that was suggested may have a kiln-type response was in any case more consistent with a service, and it has been subsequently established that it is in the vicinity of a known gas pipe which crosses the A530 at that point.
- 7.3.2 The sample excavation was not able to identify any material associated with a kiln but did at least perhaps provide evidence of its former existence. Feature [23], observed to the east of King Street in Trench 5, was filled with much burnt and fired clay, which was also spread in this area beneath the topsoil. It is fair to assume that it was either contemporary with the brick kilns or was still open at the time of the brick manufacture, which are believed to be no earlier than late seventeenth century (UMAU 1996, 12). It is not possible to relate the burnt material or ditch [23] to any of the possible geophysical anomalies.
- 7.3.3 The presence of burnt and fired clay within the topsoil provides a good indication of a kiln within the field. While it is possible that this waste material was liberally scattered throughout the field, it is significant that Trench 6 (only c40m north of Trench 5) did not produce the same material and therefore would suggest that a kiln was in the vicinity of Trench 5.

---

## 8. RESEARCH IMPLICATIONS

---

### 8.1 KING STREET

- 8.1.1 The evaluation has identified the survival of road side ditches and possible metalling material. The palaeo-environmental analysis has demonstrated the survival of organic remains and this has the potential to inform the character of the depositional environment as the ditches were filled. The value of this ecological data, however, is limited by the paucity of appropriate dating evidence and any future work should anticipate the use of C14 dating as there is no guarantee of recovering artefactual evidence. The evaluation has established that the Roman road is likely to be under the present A530 although it is not known to what extent the Roman surfaces survive.
- 8.1.2 In national terms the identified deposits are not of particular rarity, there is no appropriate documentation, there are no other related sites in the vicinity of the study area, the condition of the road is unknown because it is under the A530 and it does not demonstrate diversity of character. It can therefore be described as being of regional rather than national importance.
- 8.1.3 Depending on the survival of the *agger*, the site has the potential to provide valuable comparisons with other identified sections of this Roman road, notably that further north near Stretton, but also other Roman roads in the region.
- 8.1.4 There is a general paucity of ecological data from Roman road environments and if the deposits from the road-side ditches could be reliably dated then there would be a case for the provision of further ecological analysis. This would have the potential to provide evidence of the environmental landscape and enable a reconstruction of the contemporary land-use. There is also the potential that a secure sample lies beneath the road. However, by the very nature of the road design, a sample from beneath the road is less likely to have been sufficiently water-logged to enable the preservation of organic material by comparison with the adjacent road-side ditches

### 8.2 BRICK KILN

- 8.2.1 The assessment (UMAU 1996) identified the existence for a brick kiln in the field to the east of King Street, on place name evidence. The evaluation has identified the waste material from a brick kiln and would appear to confirm the existence of a former kiln within the field. However, it was not able to identify location of a kiln within the study corridor and it is probable that the kiln will not be directly affected by the proposed road development.
- 8.2.2 The significance of the possible post-medieval brick kiln is that they are not of identified rarity, there is no known site-group association with this documented kiln, the survival is unknown and it is of regional rather than national importance. Only two brick kilns have been investigated in Cheshire, that at New Hall Farm, Davenham by the University of Manchester Archaeological Unit in 1996 and that at Becketts Wood, near the River Weaver (LUAU 1991). The identification of a

further kiln would have the potential to significantly add to our knowledge of this monument type in the region.

---

## 9. BIBLIOGRAPHY

---

### 9.1 SECONDARY SOURCES

Dobney, K, Hall, A R, Kenward, H K and Milles, A., 1992 A working classification of sample types for environmental archaeology, *Circaea, Assoc for Environ Archaeol* **9** (for 1991), 24-6

Dodgson, J McN, 1970 *The place-names of Cheshire*, *English Place-name Society* **45**, Oxford

English Heritage, 1991 *The Management of Archaeological Projects*, Second edition, London

English Heritage, 1993 *Archaeology on the Stainmore Path; the A66 project*, 15, London

Field, J, 1972 *English field-names: A dictionary*, Newton Abbot

Furness, R., 1978 *The Soils of Cheshire*

Gifford and Partners, 1996 *Invitation to Tender for an Archaeological Evaluation at Gadbrook Park, Cheshire, Phase II*, Unpubl

Hewitt, H J, 1929 *Medieval Cheshire*, *Chetham Society, new ser*, **88**

Kenward, H K, Engleman, C, Robertson, A, and Large, F, 1986 Rapid scanning of urban archaeological deposits for insect remains, *Circaea, Assoc for Environ Archaeol* **3** (for 1985), 163-72

Kenward, H K, Hall, A R and Jones, A K G, 1980 A tested set of techniques for the extraction of plant and animal macrofossils from waterlogged archaeological deposits, *Science and Archaeology* **22**, 3-15

LUAU, 1991 *Archaeological Studies (England) - Phase III, North Western Ethylene Pipeline Project; Surveys and Excavations Report*, Unpub Rep

Margary, I D, 1973 *Roman Roads in Britain*, London

Ormerod, G, 1882 *The History of the County Palatine and City of Chester*, **3**, revised and enlarged by T Helsby, London

Shotter, D, 1996 *The Roman Frontier in Britain*, Lancaster

UMAUI, 1996 *Archaeological Assessment, Gadbrook Park II*, Unpubl Rep

Watkin, W T, 1886 *Roman Cheshire: A description of the remains in the County of Cheshire*, Liverpool

### 9.2 MAPS



Plan of part of the Lordship of Rudheath in the parish of Davenham in the County of Chester 1842, with tithe apportionment

Ordnance Survey 6in to 1mile Cheshire sheet XXXIV surveyed 1874-7, published 1882

## APPENDIX 1 PROJECT BRIEF

---

## APPENDIX 2 PROJECT DESIGN

---

Lancaster  
University  
Archaeological  
Unit

September 1996

### GADBROOK PARK II, NORTHWICH CHESHIRE

### ARCHAEOLOGICAL EVALUATION PROJECT DESIGN

#### ***Proposals***

*The following design is offered in response to a request from Gifford and Partners, on behalf of Wm Morrison PLC, for an archaeological evaluation with a brief for geophysical survey, trial trenching and palaeoenvironmental programme prepared by Gifford and Partners and agreed with the Principal Conservation Officer (Archaeology) of Cheshire County Council*

## 1. INTRODUCTION

- 1.1 The proposed development site lies to the south-east of Northwich adjacent to the A530, a former Roman road known as King Street. The total area is 24.5 hectares. An archaeological assessment has been undertaken by the University of Manchester Archaeological Unit (Gadbrook Park II, Northwich, Cheshire, An archaeological assessment, 1996), which identified the possible survival of the Roman road on the line of King street (site 1), as well as a ditch and bank (site 18), ponds (sites 6 and 17) and a possible brick kiln site. Following on from the assessment a brief for an evaluation has been prepared by Gifford and Partners on behalf of Wm Morrison PLC. The following project design is based on that brief.
- 1.2 The main site of archaeological significance is the Roman road; the present A530 is on an embankment and the assessment considered that this could reflect the survival of the agger of the Roman road. The assessment identified that there was the possibility of the survival of the road side ditches, but suggested that there was only a low chance of there being Roman road side settlement in this area.
- 1.3 Lancaster University Archaeological Unit
- 1.3.1 LUAU has considerable experience of the evaluation and excavation of sites of all periods, having undertaken a great number of small and large scale projects during the past 15 years. Evaluations have taken place within the planning process, to fulfil the requirements of clients and planning authorities, to very rigorous timetables. LUAU has the professional expertise and resource to undertake the project detailed below to a high level of quality and efficiency. LUAU and all its members of staff operate subject to the Institute of Field Archaeologists (IFA) Code of Conduct.

## 2. OBJECTIVES

- 2.1 The following programme has been designed, in accordance with a brief by Gifford and Partners (August 1996), to provide an accurate archaeological evaluation of the designated area, within its broader context. The principal purpose of the study is to identify areas of archaeological potential and to establish the location, extent, date, character, significance, condition, vulnerability and quality of these remains. It will assess the significance of any archaeological deposits and the likely impact of the development upon them. The required stages to achieve these ends are as follows.
- 2.2 **Geophysical survey**
- 2.2.1 To undertake a magnetometer survey of an area which may contain an eighteenth century brick kiln.
- 2.3 **Sample Excavation**
- 2.3.1 A limited programme of six trial excavations, as required by the brief, will be undertaken to establish the nature, extent, chronology, and preservation of any archaeological deposits encountered.
- 2.4 **Environmental Sampling**
- 2.4.1 A programme of environmental sampling to establish the ecological potential of the deposits, which can inform future decisions about this and other sites.
- 2.5 **Assessment and Analysis**
- 2.5.1 The artefacts should be assessed, and will examine the requirements for their conservation. A site matrix will be generated.
- 2.6 **Evaluation Report**
- 2.6.1 A written evaluation report will assess the significance of the data generated by this programme within a local and regional context.

## 2.7 **Archive**

- 2.7.1 A project archive will be generated in accordance with the Management of Archaeological Projects, 2nd edition (English heritage 1991).

## 3. **METHOD STATEMENT**

- 3.1 The following work programme is submitted in line with the summarised objectives of the archaeological work.

### 3.2 **Geophysical Survey**

- 3.2.1 This element of the evaluation will be undertaken by Geophysical Surveys (Bradford) Ltd who are the leading exponents of archaeological geophysics. They have proposed that the geophysical study area would be most effectively examined by magnetometer survey, as this would be particularly effective at locating a kiln site. It is required that a 260m x 30m wide strip, adjacent to King Street should be examined to identify if the kiln is within the developmental study area.

### 3.3 **Sample Excavation**

- 3.3.1 A limited programme of trial excavation will be undertaken, in order to fulfil the objectives of the evaluation. This will establish the presence or absence of archaeological deposits and, if established, will then test their date, nature, depth, vulnerability and quality of preservation. Six trenches, each 25m long and 1.6m wide, will be excavated to investigate the possible presence of Roman settlement activity associated with the Roman road. Three trenches will be orientated at 90 ° to the A530; two of these will be to the west of the A530 and one will be to the east. The other three trenches will be orientated parallel to the road. The trenches will be excavated by a combination of mechanised and manual techniques; the overburden will be removed by machine and all deposits will be excavated by hand, unless of a deep and homogeneous form.

- 3.3.2 To maximise the speed and efficiency of the operation the removal of overburden will be undertaken by a JCB type excavator fitted with a 1.6m wide toothless bucket. The mechanical excavator will be used to remove turf and topsoil, but will not excavate into any potential archaeological stratigraphy. All machine excavation will be undertaken under careful archaeological supervision. Manual excavation techniques will be used to evaluate any sensitive deposits, but will not penetrate into the deposits beyond that required to identify their nature, date, survival and extent.

- 3.3.3 All trenches will be excavated in a stratigraphical manner, whether by machine or by hand. Trenches will be accurately located by use of total station equipment, and archaeological features within the trenches will be planned by manual techniques.

- 3.3.4 LUAU will backfill all trenches opened but will not otherwise reinstate the study area. The trenches will be left open during the evaluation to enable their examination by the Principal Conservation Officer (Archaeology) of Cheshire County Council, and during this period movable fencing will be maintained around the open trenches.

- 3.3.5 **Recording:** All information identified in the course of the site works will be recorded stratigraphically, with sufficient pictorial record (plans, sections and both black and white and colour photographs) to identify and illustrate individual features. Primary records will be available for inspection at all times.

- 3.3.6 Results of the field investigation will be recorded using a paper system, adapted from that used by Central Archaeology Service of English Heritage. The archive will include both a photographic record and accurate large scale plans and sections at an appropriate scale (1:50, 1:20, and 1:10). All artefacts and ecofacts will be recorded using the same system, and will be handled and stored according to standard practice (following current Institute of Field Archaeologists guidelines) in order to minimise deterioration. Samples will be collected for technological, pedological, palaeoenvironmental and chronological analysis as appropriate. If necessary, access to conservation advice and facilities can be made available. LUAU maintains close relationships with Ancient Monuments Laboratory staff at the Universities of Durham and York and, in addition, employs artefact and palaeoecology specialists with considerable expertise in the investigation,

excavation and finds management of sites of all periods and types, who are readily available for consultation.

### 3.4 **Environmental Sampling**

- 3.4.1 The EAU (York) will take core samples from the two marl-pit/ponds, which will examine pollen, macrobotanical and insect remains. The analysis will proceed to MAP 2 assessment stage, but not to full analysis. Any requirement for further environmental work will be subject to a variation of costs.

### 3.5 **Assessment and Analysis**

- 3.5.1 An assessment will be undertaken of the site archive, incorporating all written, drawn and photographic records, artefacts and ecofacts. The requirements for artefact conservation will be assessed and discussed with a specialist conservator.
- 3.5.2 The palaeoenvironmental potential of deposits identified during the excavation will be assessed, and subject to agreement by the Consultant Archaeologist in conjunction with the Principal Conservation Officer (Archaeology), these may be forwarded to an environmental sub-contractor.
- 3.5.3 A site matrix will be produced to incorporate all contexts.

### 3.6 **Report Production**

- 3.6.1 **Evaluation report:** Initially a draft version of a written synthetic report will be made available to the Consultant Archaeologist, who will pass it to the Client and the Principal Conservation Officer (Archaeology) of Cheshire County Council for comment. Then five copies of the report will be submitted to the Consultant Archaeologist, for distribution to the Client, the Principal Conservation Officer, the Local Planning Authority, Cheshire SMR, and the NMR.
- 3.6.2 The report will include: a non-technical executive summary, a table of contents, acknowledgements, an introduction, a statement of the project aims, methodology, description of the geophysical survey and excavation results, a discussion of the results within a local context, a description of the artefacts and ecofacts, a statement of the archaeological importance of the remains, a full bibliography and an index of the archive. It will include a copy of this project design, and indications of any agreed departure from that design. It will present, summarise, and interpret the results of the programme detailed above and will include an assessment of the overall stratigraphy, together with appropriate illustrations, including detailed plans and sections indicating the locations of archaeological features. Any finds recovered from the excavations will be assessed with reference to other local material and any particular or unusual features of the assemblage will be highlighted. The potential of the site for palaeoenvironmental analysis will be considered.
- 3.6.3 This report will identify areas of defined archaeology, the location of trenches, and whether the results of the sampling were positive or negative. An assessment and statement of the actual and potential archaeological significance of the site within the broader context of regional and national archaeological priorities will be made. Illustrative material will include a location map, section drawings, and plans if appropriate; these will be at appropriate scales (1:50/1:20/1:10). The report will be in the same basic format as this project design; a copy of the report can be provided on 3.5" disk (IBM compatible format), if requested.
- 3.6.4 The report will be a document for the specific use of the client, for the particular purpose defined in the project brief and this project design. It will not be suitable for publication as an academic report without amendment or revision. Any requirement to revise or reorder the material for submission or presentation to third parties beyond the project brief and design, or for any other specific purpose, can be fulfilled but will require separate negotiation and funding.

### 3.7 **Archive**

- 3.7.1 The results of the fieldwork will form the basis of a full archive to professional standards, in accordance with current English Heritage guidelines (The Management of Archaeological Projects, 2nd edition, 1991). The project archive represents the collation and indexing of all the data and material gathered during the course of the project. The deposition of a properly ordered and

indexed project archive in an appropriate repository is considered an essential and integral element of all archaeological projects by the IFA in that organisation's code of conduct. LUAU conforms to best practice in the preparation of project archives for long-term storage. The archive will comply with the UK institute for Conservation (Archaeology Section) Guidelines for the preparation of excavation archives for long term storage (1990). The archive will be deposited with the Cheshire Museums Service. The actual details of the arrangements for the deposition/loan and long term storage of this material will be agreed with the landowner. Appropriate arrangements will be made with the designated museum at the outset of the project for the proper labelling, packaging, and accessioning of all material recovered. A synopsis of the archive will be lodged with the Cheshire Sites and Monuments Record.

### 3.8 Contingency

3.8.1 The costs incorporate day rates as a contingency for additional sample excavation, which should not exceed 200m<sup>2</sup>, which would be designed to clarify significant archaeological features. The contingency excavation will be undertaken in consultation with the Consultant Archaeologist.

3.8.2 **Watching Brief:** Contingency day-rate costs provide for the undertaking of a watching brief during earth moving operations, in areas which have identified archaeological potential. The areas will be subject to discussions between LUAU and Consultant Archaeologist in conjunction with the Principal Conservation Officer (Archaeology).

## 4. HEALTH AND SAFETY

4.1 LUAU conforms to all health and safety guidelines as contained in the Lancaster University Manual of Health and Safety and the safety manual compiled by the Standing Conference of Archaeological Unit Managers. A risk assessment will be completed in advance of the project's commencement. The work will be in accordance with the Health and Safety at Work Act (1974), the Council for British Archaeology Handbook no. 6, Safety in Archaeological Fieldwork (1989) and the Construction Design and Management Regulations (CDM) (1994).

## 5. ACCESS

5.1 It is understood that access agreements will be obtained by the Client. The precise location of any services within the study area will also be established, as will its legal status, and any other relevant designations within the surrounding area.

## 6. PROJECT MONITORING

6.1 Gifford and Partners and the Principal Conservation Officer (Archaeology) of Cheshire County Council will be informed of the start date of the project, and of the dates upon which site entry will be sought.

6.2 Three meetings to discuss progress have been budgeted for in the costings.

## 7. TIMETABLE

7.1 The project can be implemented in one week of written notice of the acceptance of this project design and costing.

7.2 The geophysical survey can be completed within one day.

7.3 The sample excavation will require five days for completion.

7.4 The report will require 20 days to complete.

8 **STAFFING AND TASK BREAKDOWN**

8.1 The project will be managed by Jamie Quartermaine BA, MIFA, Project Manager for LUAU. The sample excavation will be undertaken by James Wright BA MIFA.

8.2 The geophysical survey will be undertaken Geophysical Surveys (Bradford) Ltd.

8.2 The Environmental sampling will be undertaken by the Environmental Archaeology Unit (York).



---

## APPENDIX 3

### PROJECT ARCHIVE

---

The Project Archive comprises:

**1. Final report**

**2. Administration and correspondence:**

- 2.1. Project design.
- 2.2. Archaeological assessment

**3. Fieldwork**

- 3.1. Field Data
  - 3.1.1 Environmental sample form
- 3.2. Excavation Data
  - 3.2.1. Trench description
  - 3.2.2. Context index
  - 3.2.3. Context record
- 3.3. Photographs:
  - 3.3.1. Photographic record form
  - 3.3.2. Negatives and slides
- 3.4. Survey Data
  - 3.4.1. Section record
  - 3.4.2. Plan record
  - 3.4.3. Survey forms
  - 3.4.4. Map of the area
  - 3.4.5. Section drawings:
    - Sheet 1: Plans of Trenches 2, 5 and 6, Sections of Trenches 1, 5 and 6
    - Sheet 2: Plans of Trench 3 and East end of Trench 1; Sections 2 and 4
  - 3.4.6. Geophysical survey report (Geophysical Surveys of Bradford)
  - 3.4.7. Environmental Report (EAU)

**4. Electronic media**

## APPENDIX 4 FINDS CATALOGUE

It is proposed, with the clients consent, to discard the limited assemblage recovered from the evaluation. The assemblage for discard is itemised below:

Artefact No.	Trench No.	Context	Artefact Description	Period
1	1	-	Black-glazed body sherd	late 17th/18th C
2	1	-	Black-glazed body sherd	late 17th/18th C
3	1	-	Black-glazed body sherd	late 17th/18th C
4	1	-	Black-glazed body sherd	late 17th/18th C
5	1	-	Clay pipe stem	Post-medieval
6	1	-	Hand forged iron nail	Post-medieval
7	1	-	Slate fragment	Post-medieval
8	1	-	Brick or tile fragment	Undated
9	1	-	Brick or tile fragment	Undated
10	2	Fill 12	Fragment of hand-made brick	Undated
11	2	Fill 6	Fragment of dark olive green wine bottle	Late 18th C
12	2	Fill 6	Fragment (broken into two) of flint, with fresh white cortex - unworked	Undated
13	7	Fill 22	body sherd	19th C

---

## ILLUSTRATIONS

---

- Fig. 1 Site Location Map
- Fig. 2 Study Area Map - Trench and Geophysical Survey Area Locations
- Fig. 3 Geophysical Survey Area A
- Fig. 4 Geophysical Survey Area B
- Fig. 5 Plan of eastern end of Trench 1
- Fig. 6 Plan and section of Trench 2
- Fig. 7 Plans of Trench 3, 4 and 5

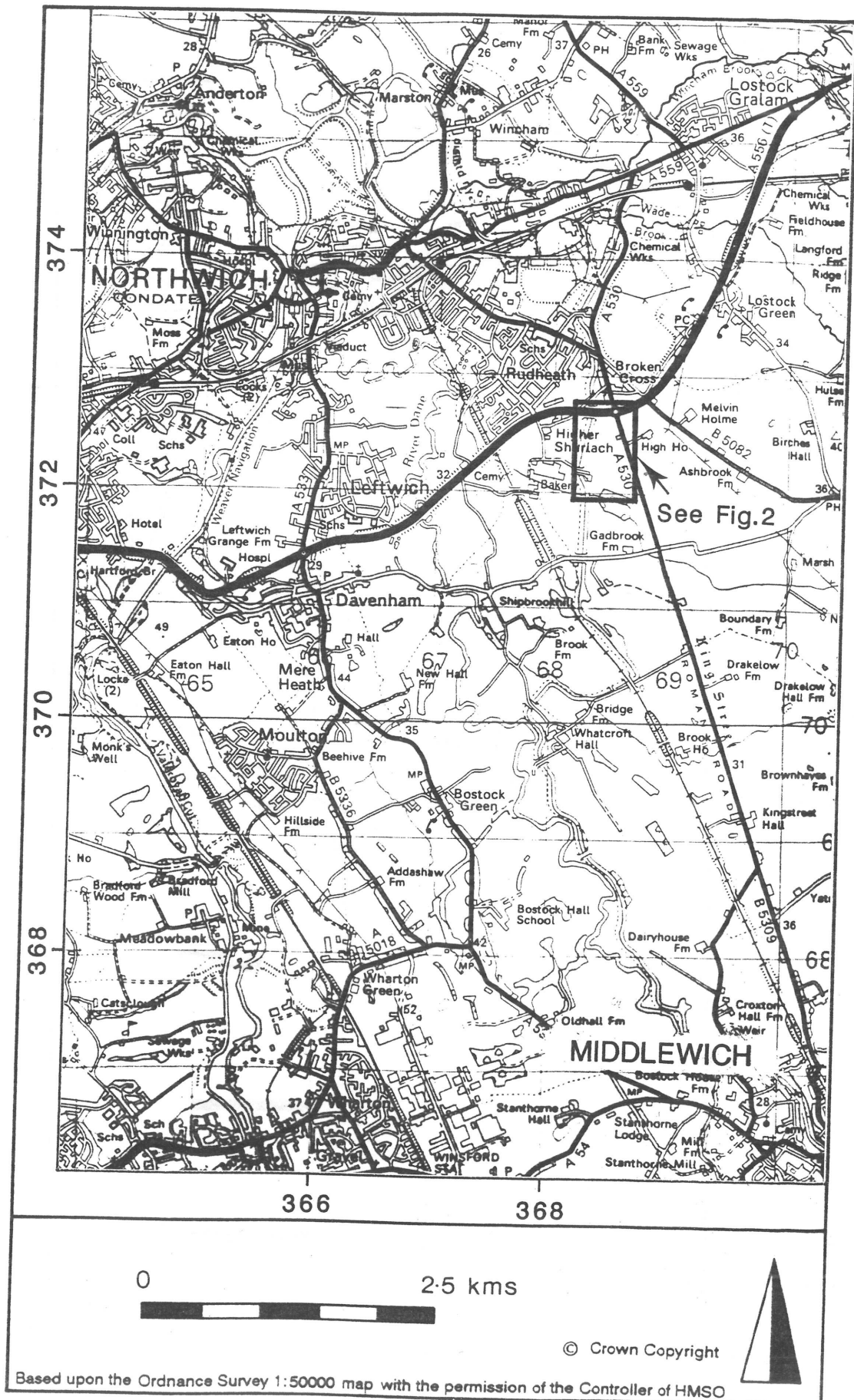


Fig.1 Site location map

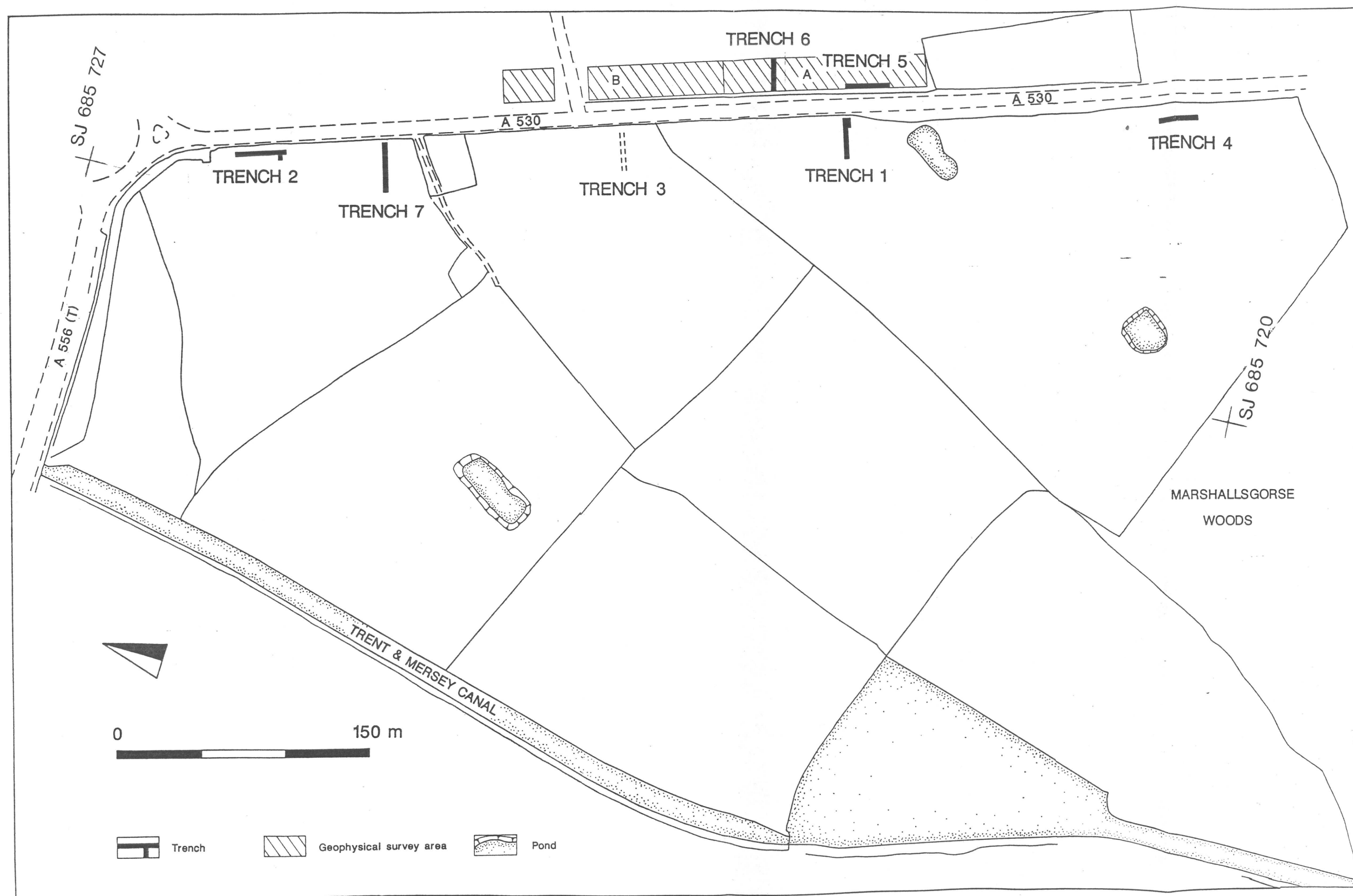


Fig 2 Study Area Map - Trench and Geophysical Survey Area Locations

# GADBROOK PARK, Northwich Area A

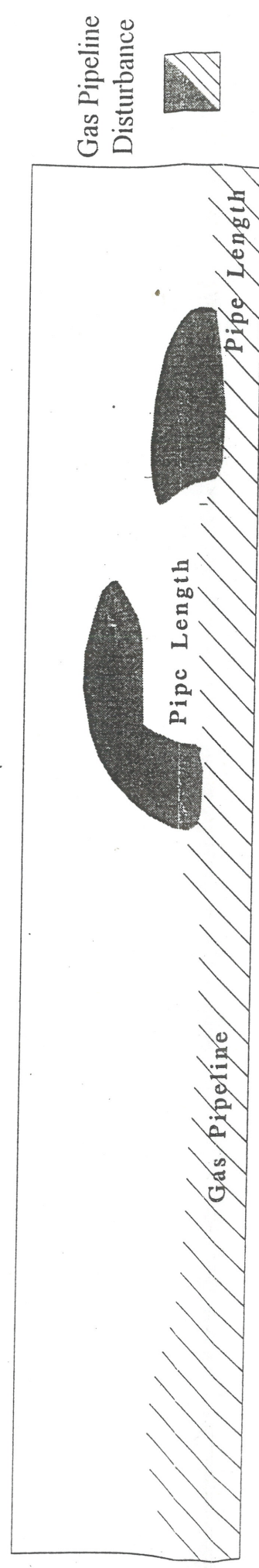
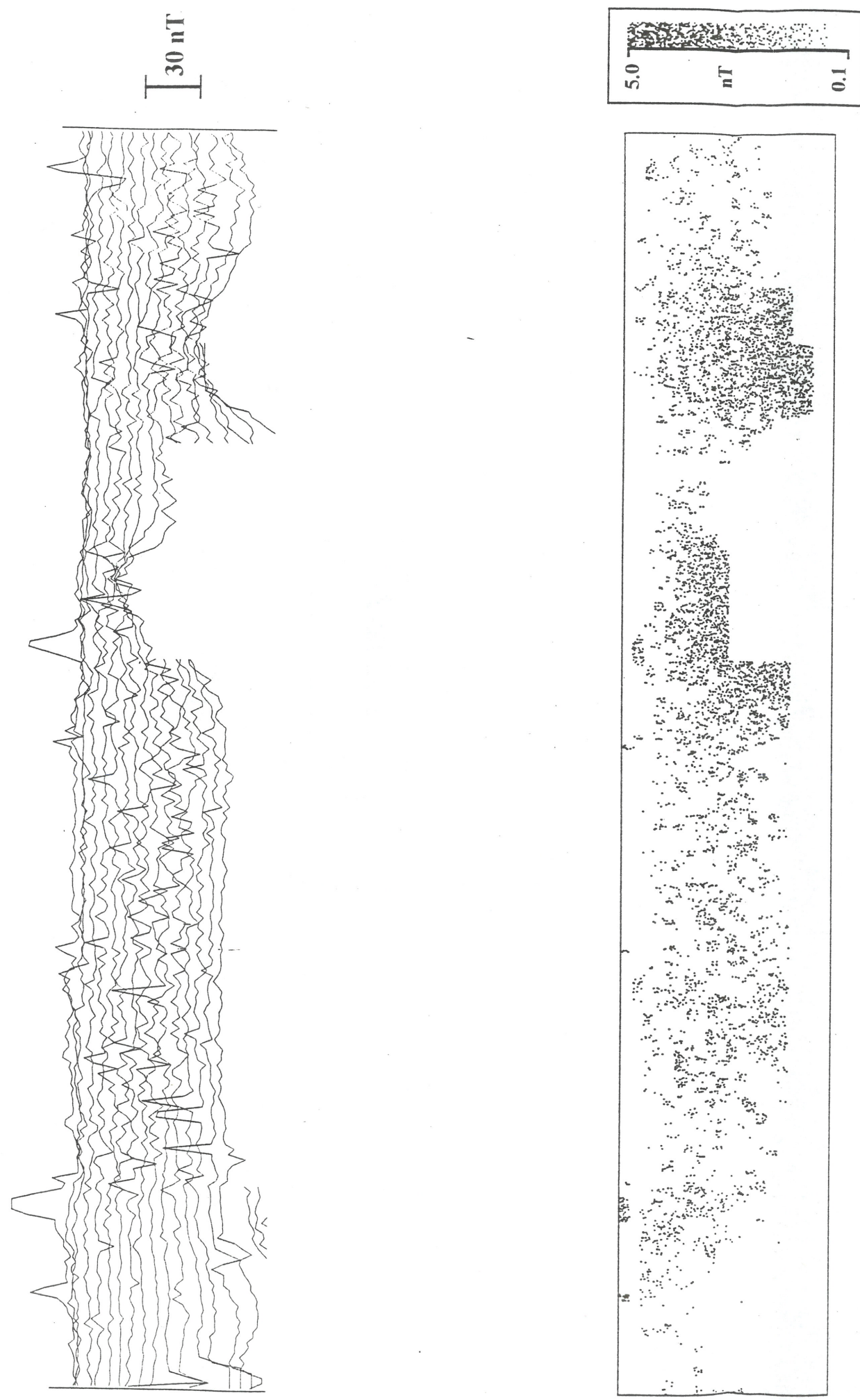
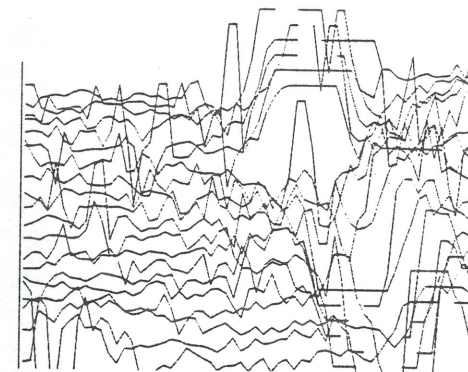
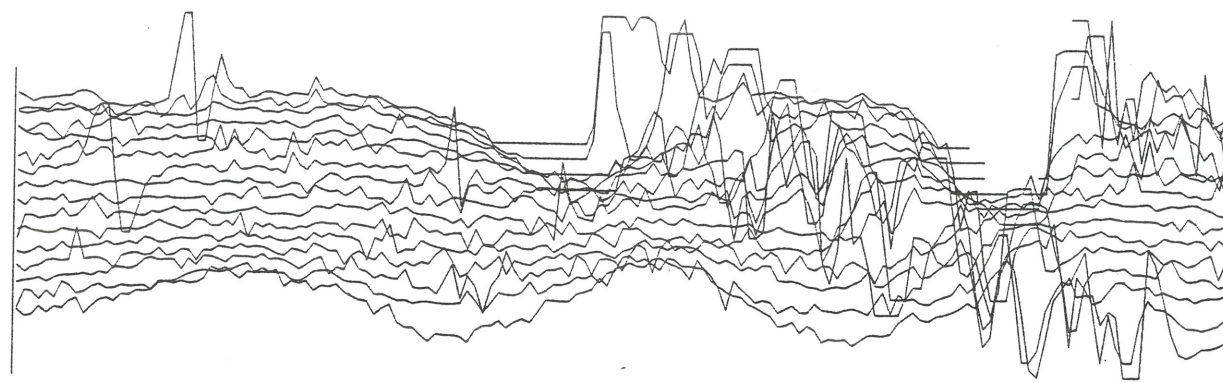


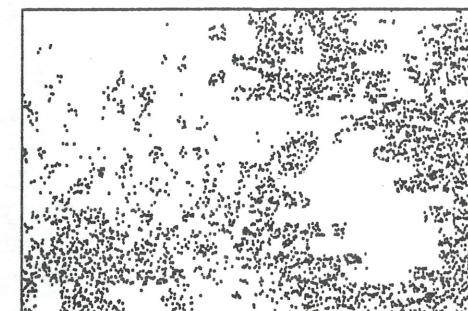
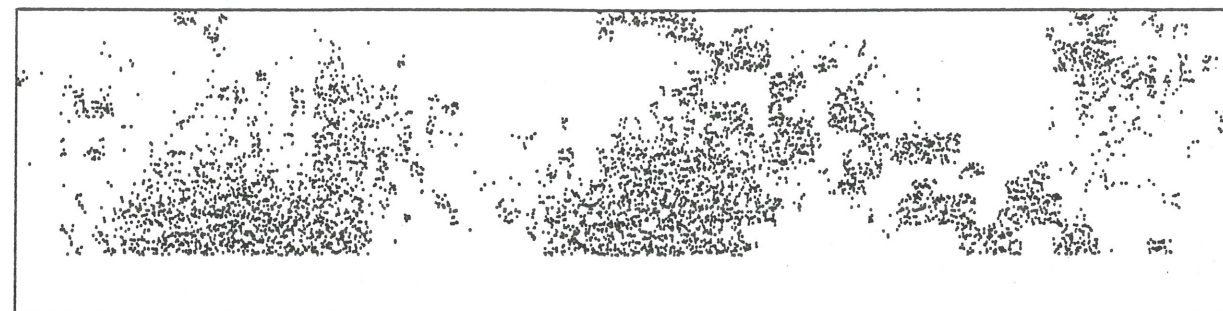
Fig 3 Geophysical Survey Area A



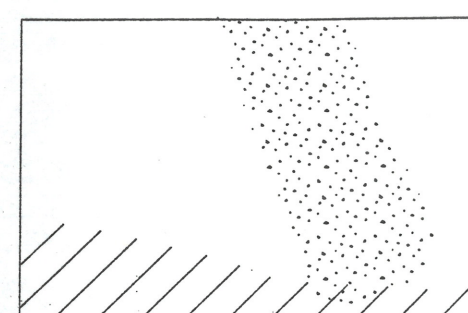
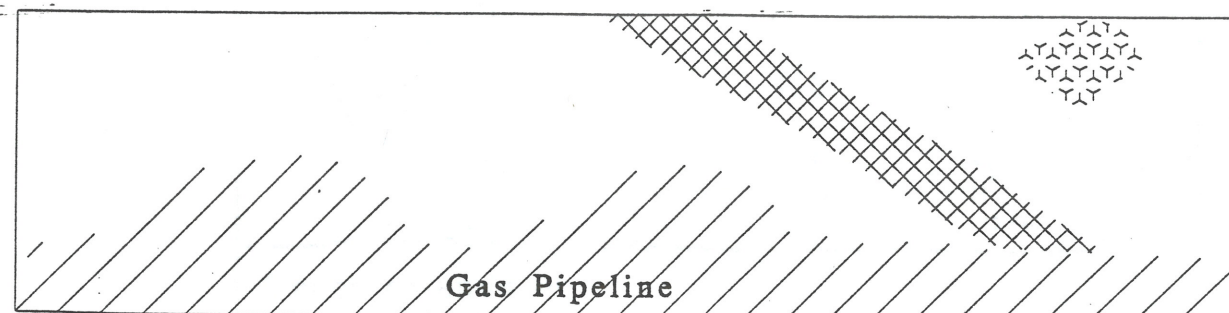
# GADBROOK PARK, Northwich Area B







30 nT



5.0  
nT  
0.1



-  Gas PipelineDisturbance
-  Other Pipe or Cables
-  Metal Sheet
-  ?Ferrous Pipe

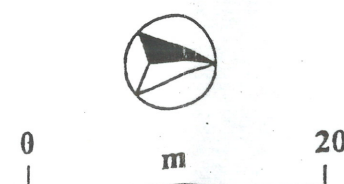


Fig 4 Geophysical Survey Area B

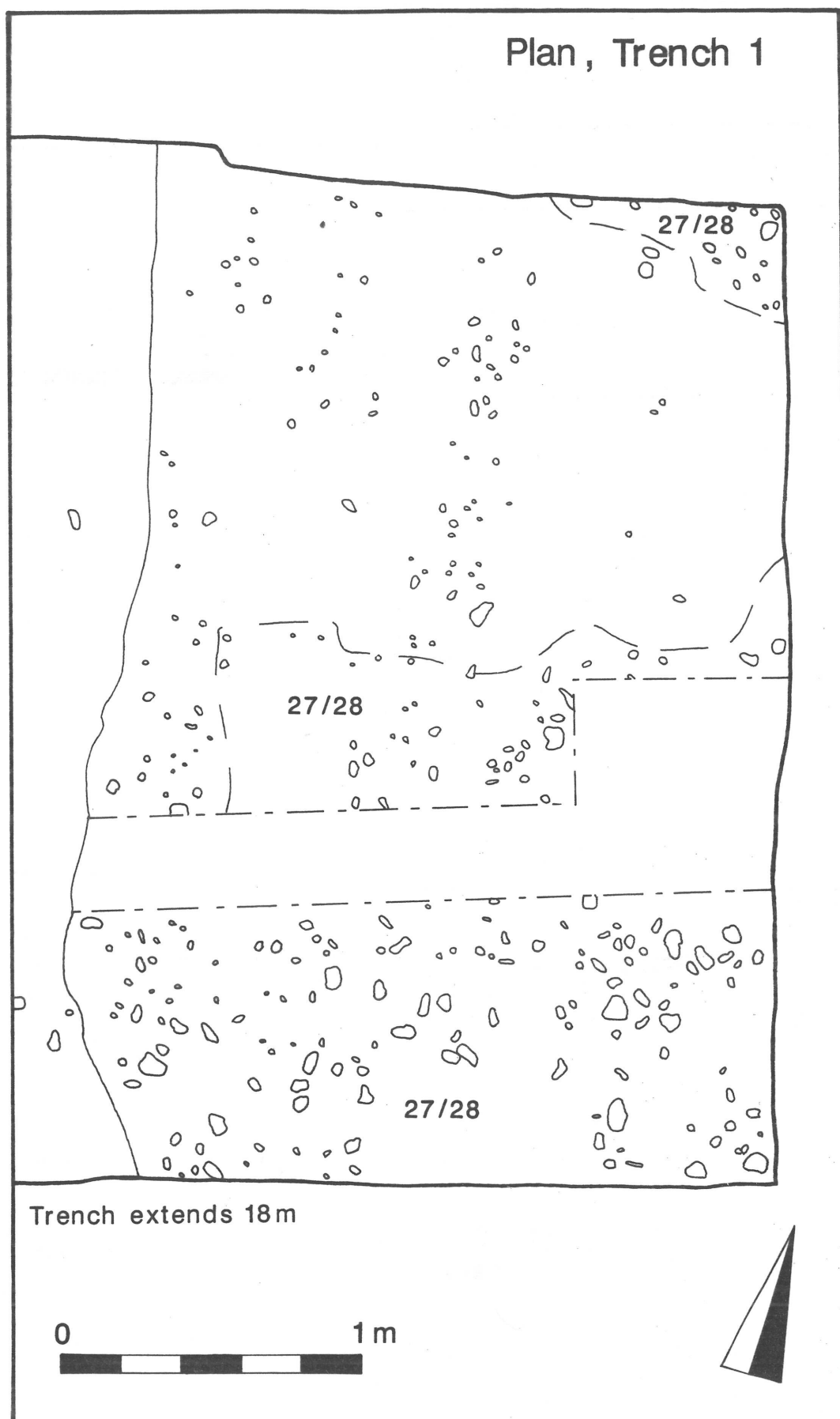
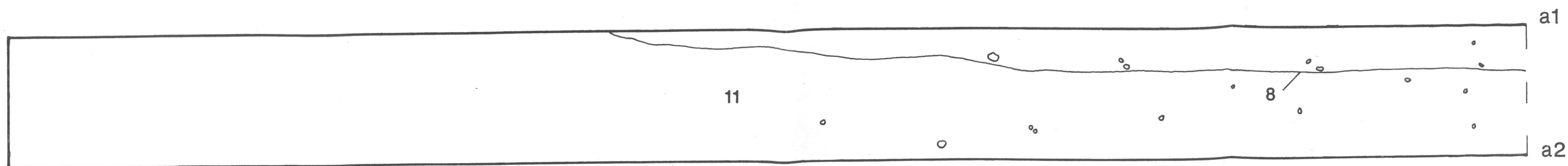
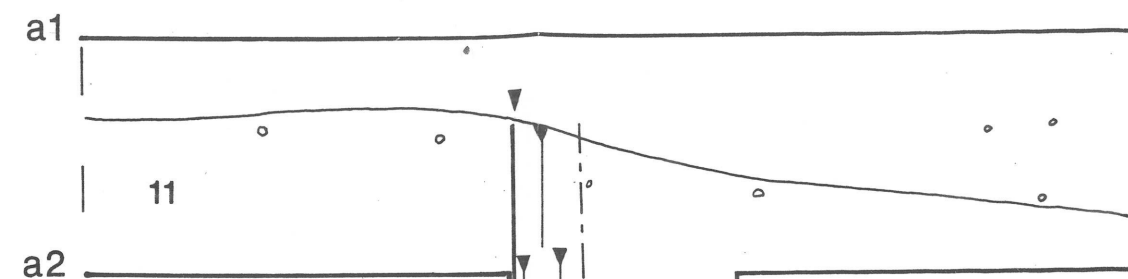


Fig.5 Plan of Eastern End of Trench 1

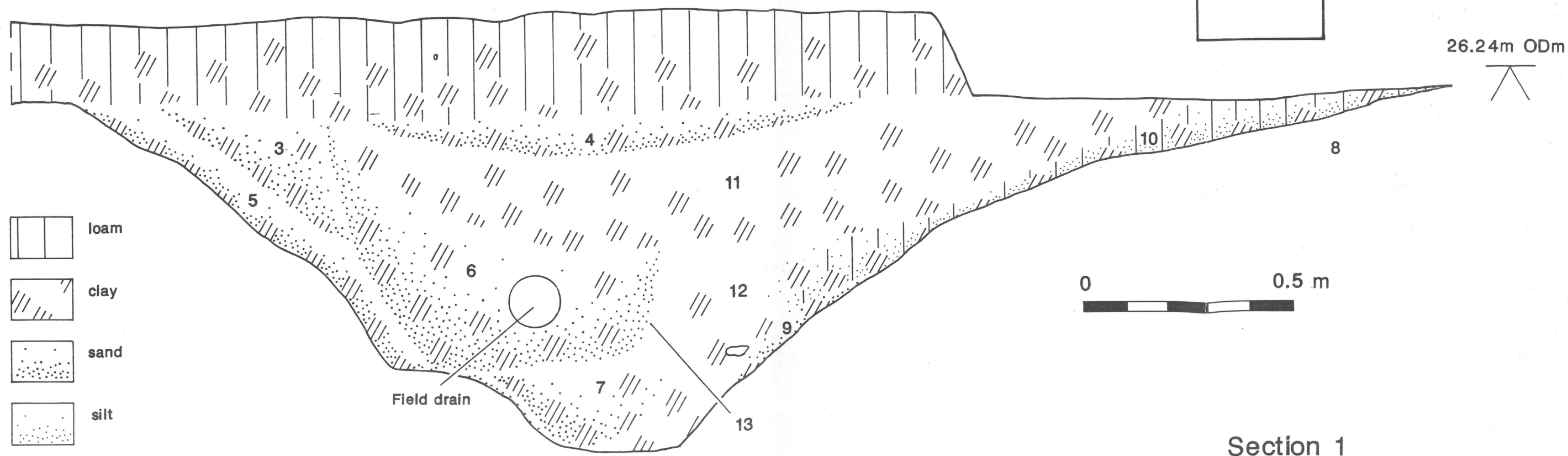




0 2.5 m

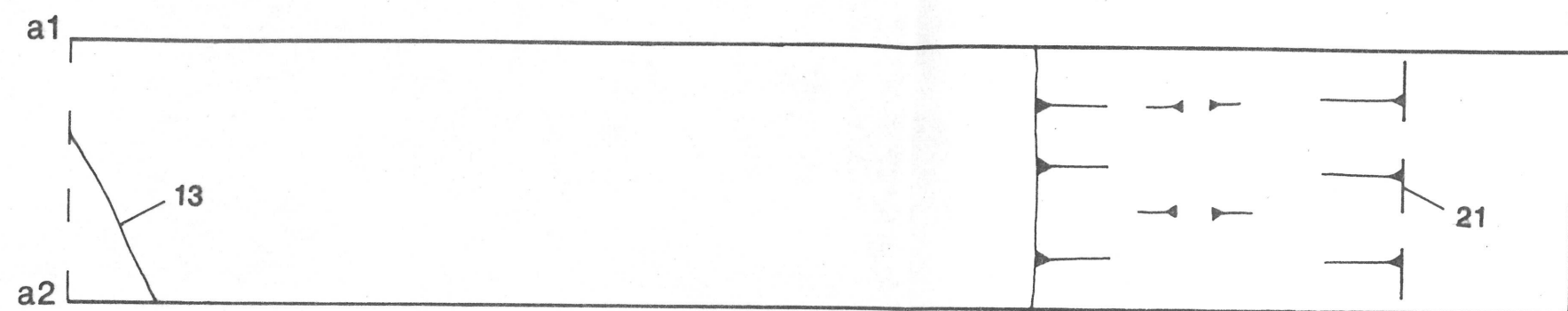
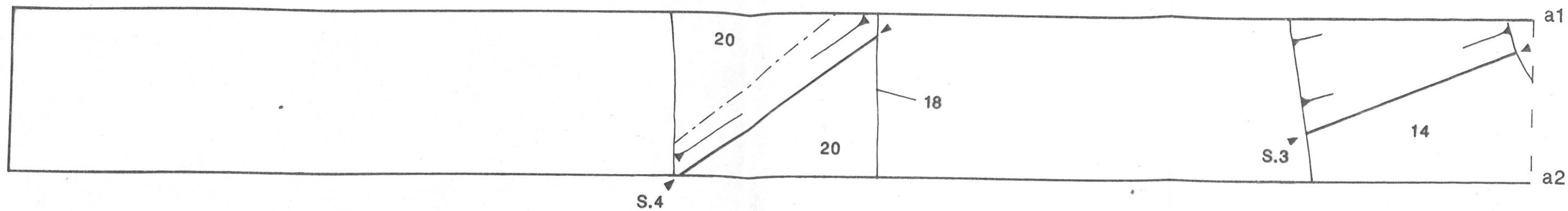


Plan, Trench 2

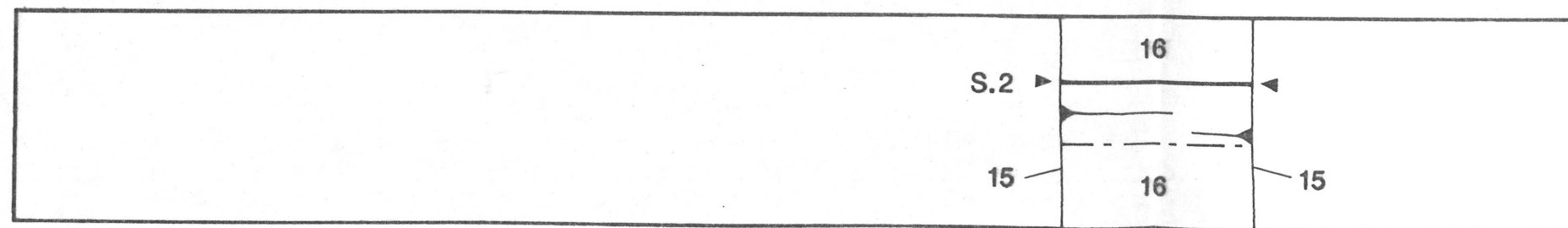


Section 1

Fig.6 Plan and Section of Trench 2

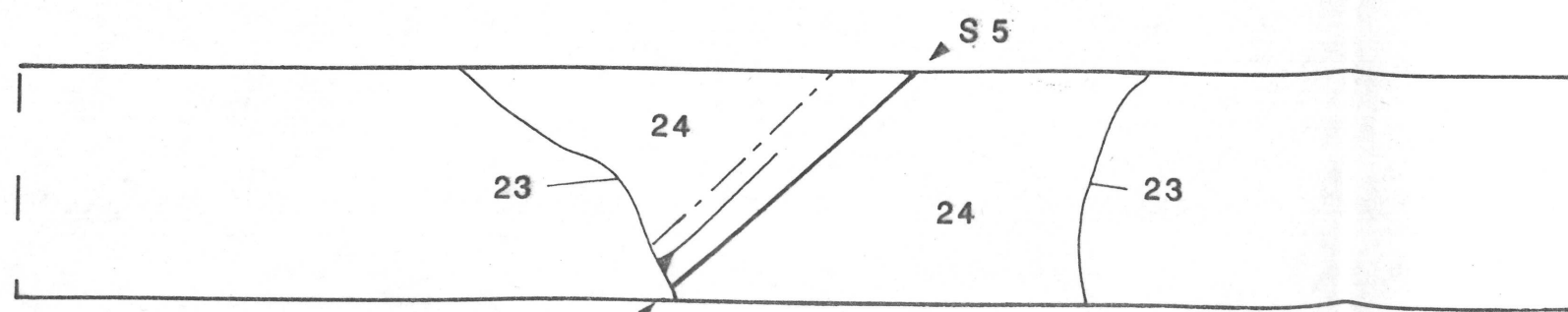


Plan, Trench 3



Trench extends 12.75m

Plan, Trench 4



Trench extends 14.5m

Plan, Trench 5

Fig 7 Plans of Trenches 3, 4 and 5

