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**AN ARCHAEOLOGICAL EVALUATION
OF THE
AREA OF PROPOSED NEW LAKES
AT
GAINSBOROUGH GOLF COURSE
THONOCK, GAINSBOROUGH, LINCOLNSHIRE**

for

KARSTEN (UK) LIMITED

8 AUGUST 1995



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OF THE
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AT
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THONOCK, GAINSBOROUGH, LINCOLNSHIRE**

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Summary

In response to a planning application to construct two large lakes in connection with the new Gainsborough golf course at Thonock, Lincolnshire, the County Archaeologist provided a Brief for undertaking an archaeological evaluation. The purpose of this is to enable the Local Planning Authority to determine the application in respect of any archaeological implications.

After undertaking an archaeological assessment of the site it was decided that a field evaluation would be best achieved by the excavation of two trenches each 70m by 2m across the proposed development site. A pit and two parallel ditches containing Roman pottery of the 2nd to 3rd century were found. It was concluded that the pit was of an unknown function but the ditches might be the remains of trackways leading to the settlement. No evidence of any other activities or field boundaries was found. Although the remains found were considered to be of negligible importance, the evaluation was useful in confirming that the extent of the settlement was probably limited to the area previously identified. Unless it is thought useful to confirm the existence and alignment of the trackway through a watching brief during topsoil stripping, no further archaeological work is proposed.

1.0 INTRODUCTION

- 1.1 The site is centered at NGR SK 8364 9177 in an area of fine loamy soil over glacial till but with clayey soils over mudstone nearby.
- 1.2 Following a planning application to construct two adjacent lakes, an area about 1.17ha in total, the Local Planning Authority on the advice of the County Archaeologist, requested that an archaeological evaluation be undertaken. A brief was provided (see Appendix).
- 1.3 The reason for requesting the evaluation was that when the adjacent golf course was examined in 1993 a Roman settlement has been located about 170m to the west at its nearest point.
- 1.4 *John Samuels Archaeological Consultants* was commissioned by Karsten (UK) Limited to undertake an archaeological assessment of the proposed development site followed by subsequent field evaluation. The project was directed by Dr John Samuels BA PhD FSA MIFA assisted by Sue Ensor BA, MSc and Forbes Marsden BA. This report has been written by Dr John Samuels and Sue Ensor.
- 1.5 It is intended that this report conforms to the requirements of Planning Policy Guidance Note 16: Archaeology and Planning (DoE 1990), Management of Archaeological Projects (English Heritage 1991), Code of Conduct (Institute of Field Archaeologists, 1985), and Standard and Guidance for Archaeological Field Evaluations (Institute of Field Archaeologists 1993).

2.0 ARCHAEOLOGICAL BACKGROUND

- 2.1 The site is located about 2kms north-east of Gainsborough in what has been parkland associated with Thonock Hall described as a mid-Georgian house (Pevsner and Harris 1973, 399) but since demolished. Parkland to the west has become Gainsborough Golf Course and much of the remainder has been ploughed, apparently since 1974 and more recently has become another golf course. The gently rolling landscape reflects the underlying clay although areas of sandy soil and gravel can be seen in the ploughed fields. Towards the western edge of the golf course the land falls more steeply as the escarpment of the Trent Valley and there is an impressive earthwork here known as Castle Hills or Danes' Camp.
- 2.2 Documentary sources refer to the lost villages of Havercroft and Thonock but aerial photographs and place-names evidence indicate that these sites were further to the north and west of Thonock Hall (information supplied by RCHME).
- 2.3 Prior to the construction of the more recent golf course an evaluation of the site was undertaken comprising fieldwalking, aerial photographic analysis, geophysical survey and trial excavations. Aerial photographs showed that ridge and furrow from medieval ploughing had covered the whole area but had been flattened more recently and was no longer visible above ground. Fieldwalking located a surface scatter of Roman pottery covering about 5ha centred at SK 83359187. A geophysical survey of the same area using a sampling strategy identified a number of buried ditches forming two trackways and a series of interlocking fields and several intensive magnetic anomalies which were thought to be the result of Roman pottery kilns and ironworking (see Fig. 1). The distribution of these features conformed to the area of Roman pottery scatter.
- 2.4 To test the results of the geophysical survey trial excavations were carried out in two areas. A kiln was found, although apparently not for producing pottery, a pit and at least two of the ditches and trackway suggested by the survey. It was noticeable that the ploughsoil varied in depth from 0.28-0.35m to the north on the upper part of the slope increasing to 0.50m further down the slope. This was presumably the result of natural soil creep and the effects of modern ploughing. The pottery recovered showed that the site had been occupied in the 2nd and 3rd centuries although several 4th century coins were also found.
- 2.5 It was against this background that an archaeological evaluation was requested of the area of the proposed lakes. A desk-based assessment of the site was undertaken and a site visit. It was concluded that the area of Roman settlement was confined to the surface scatter of pottery already identified about 170m to the west at its nearest point.

- 2.6 However, conflicting evidence from metal detectorists has included claims of finding Roman material in the area of the proposed development.
- 2.7 The site has already been fieldwalked in good conditions as part of the previous evaluation and no artefacts found in the ploughsoil. No earthworks had been visible then.
- 2.8 Another site visit in July 1995 showed the area to be overgrown with weeds up to 1.50m high. However, bearing in mind the conflicting nature of the evidence, it was decided to undertake a field evaluation.

3.0 METHOD STATEMENT

- 3.1 A detailed brief had been provided by the County Archaeologists and the methods adopted took note of this and the purpose of an evaluation which is :
- i. To examine the nature, extent and condition of any archaeological remains which might exist.
 - ii. To provide sufficient information to enable the Local Planning Authority to make appropriate decisions for either preservation of remains *in situ* or any further work that may be required.
- 3.2 Previous ridge and furrow in the field which had been recently flattened precluded the use of magnetic susceptibility as a survey technique. The tall weeds would have prevented the use of geophysical survey which might also be limited to an extent by the presence of overhead cables on the western boundary. Although the weeds could have been cut down, it was felt in the circumstances that two machine trenches, each 70m by 2m would be the better approach. The basic rationale behind this approach was that if Roman remains existed they would probably be of the same nature as those further west consisting primarily of small ditched enclosures and trackways. These could be missed in a random distribution of smaller trenches; two long trenches would provide a better opportunity to locate linear features with a greater chance of crossing them. The location of the trenches was arbitrary and in total area they represented about 2% of the proposed site.
- 3.3 Topsoil and modern overburden was removed by machine using a toothless bucket. The surface was then cleared by hand and any archaeological features recorded.
- 3.4 A suitable sample of features was excavated and a drawn and written record made of all archaeological features and sections. Recording was by single context and photographs were taken in colour print, colour slide and black and white film.
- 3.5 Samples suitable for environmental analysis were taken.
- 3.6 The County Archaeologist was informed of the excavations and given the opportunity to examine the trenches.
- 3.7 Arrangements were made with Lincoln City and County Museums for an acquisition number and it is expected that the site archive and material will be deposited there.

3.8 A preliminary archaeological report on the excavations has been produced and a full report will be produced within 2 months. The importance of the archaeological remains has been assessed and an appropriate mitigation strategy proposed.

4.0 ARCHAEOLOGICAL EVALUATION

- 4.1 Two trenches each 70m by 2m were excavated (see Fig.3). Trench 1 was orientated approximately north-south in the northern half of the field. Trench 2 was skewed NE-SW in the southern half of the field.
- 4.2 The ploughsoil, a fine loamy soil, was removed from both trenches by machine using a toothless bucket under archaeological supervision. The depth of ploughsoil was generally about 0.25m but increased to 0.36 in places, particularly in Trench 2. In Trench 1 the ploughsoil was immediately above natural yellow-brown clay with some rounded pebbles. Ploughing had cut into the clay leaving narrow soil filled channels and several modern field drains were revealed. Occasional traces of a probably grey sandy clay subsoil were seen usually only 1 or 2cms thick but most of this had been removed by modern ploughing. However, at the north end of the trench, an oblong pit [104], about 0.6m by 2m and 0.5m deep was found cut into the natural clay. (see Figs 4 and 5). Filled with a grey sandy clay with some charcoal flecking it contained 24 sherds of Roman pottery, 7 fragments of oxidised iron and 1 small piece of burnt bone. The pottery suggests a date for its filling in the 2nd and 3rd centuries AD.
- 4.3 Trench 2 was the same as Trench 1 except that two parallel ditches [204] and [207] were found about 7.43m apart (see Fig. 6). The southernmost ditch [204] consisted of two apparent cuts (see Fig.7). The overall width of [204] was 4.76m but beneath was an earlier cut [206], 1.4m wide with a U-shaped profile to a maximum depth of 1m. The fill of [206] consisted of silty clay and contained 13 sherds of Roman pottery of 2nd and 3rd century date.
- The fill of the later cut [204] was grey sandy clay with some charcoal flecking identical to the possible subsoil already identified and contained 64 sherds of Roman pottery. The edges of the cut were irregular and the whole feature may have been due to water run off over the filled in ditch below.
- 4.4 The northern ditch [207] was 3.20m wide was only sampled to a depth of 0.15m and contained grey sandy clay with 1 abraded sherd of Nene Valley colour coated ware. As with its parallel ditch, this would seem to be an upper subsoil fill.
- 4.5 As with Trench 1 several modern field drains were found and scars cut into the natural clay caused by ploughing.
- 4.6 In a total length of 140m three archaeological features were found consisting of a pit and two parallel ditches, perhaps for a trackway. Each of these would seem to have been filled in during the 2nd and 3rd centuries AD and are peripheral to the Roman settlement found 170m to the west.

5.0 DISCUSSION

- 5.1 The principal area of the Roman settlement found in the earlier evaluation was located by a scatter of Roman pottery and confirmed by geophysical survey and trial excavations (see Section 2 of this report).
- 5.2 Although the geophysical survey and scanning suggested that some of the ditched features might continue further eastwards, the pottery distribution indicated that this was more likely to be outside the main area of settlement.
- 5.3 The recent evaluation trenches have confirmed this view. Little subsoil survives and the ground has been ploughed down to the natural clay. Therefore if any Roman settlement existed here, pottery might be expected to have been found in the ploughsoil. Likewise if the pattern of small enclosures located in the main area of settlement continued eastwards into the area of proposed development, they would have been found in the trenches. The features that were found are a small pit of unknown function and two parallel ditches about 14m apart. These are similar in form to these apparently defining trackways seen in the geophysical survey and could be a trackway leading to the settlement. The pottery found, much of it very abraded could be the result of manuring fields.
- 5.4 Criteria have been formulated to categorise the archaeological importance of a site based upon the present state of knowledge and an estimate of the status of the known or suspected archaeological remains. The categories are defined as :

National : Scheduled Ancient Monuments, or archaeological sites being scheduled and protected under the Ancient Monuments and Archaeological Areas Act 1979 or suitable for scheduling.

Regional : Sites listed in the County Sites and Monuments Record (SMR) or other sources which are of a reasonably well defined extent, nature and date and significant examples in the regional context.

Local : Sites listed in the SMR or other sources which are either of very low potential or minor importance.

Negligible Importance : Areas in which investigative techniques have produced negative or minimal evidence of antiquity or where large-scale destruction of deposits has taken place (e.g. by mineral extraction).

5.5 On this basis the area of the proposed development would seem to contain archaeological remains of negligible importance. However, the information gained from the evaluation has been useful in confirming the extent of the Roman settlement.

6.0 CONCLUSIONS

- 6.1 An archaeological evaluation of the second Thonock golf course in 1993 had identified the presence of a Roman settlement occupied probably in the 2nd - 3rd century AD.
- 6.2 The recent evaluation has confirmed that the settlement does not continue further eastwards as far as the area of proposed development. It has however identified several features which might be considered peripheral to the settlement. An oblong pit of unknown function and two parallel ditches, perhaps defining a trackway were found and from the dating evidence were contemporary with the settlement.
- 6.3 No evidence was found of any other aspects of the settlement which might be expected such as field boundaries.
- 6.4 The depth of ploughsoil here was shallower than in the area of the settlement and has removed most of the subsoil down to the natural clay. Any Roman settlement features which existed should have been seen either through pottery scatters in the ploughsoil or cut into the natural clay.
- 6.5 It is perhaps surprising that no other traces of field boundaries were found which the method of evaluation might have been reasonably expected to find.
- 6.6 The evaluation has been a worthwhile exercise to demonstrate the extent of the Roman settlement but the features found are of negligible importance and the area has a low potential for the discovery of any other remains. It is unlikely that the proposed development will cause any significant archaeological damage.

7.0 FIGURES

- | | |
|----------|--|
| Figure 1 | Geophysical survey of Roman settlement |
| Figure 2 | Location of proposed lakes and area of previous geophysical survey |
| Figure 3 | Location of evaluation trenches |
| Figure 4 | Trench 1 |
| Figure 5 | Trench 1, feature |
| Figure 6 | Trench 2 |
| Figure 7 | Trench 2, features |

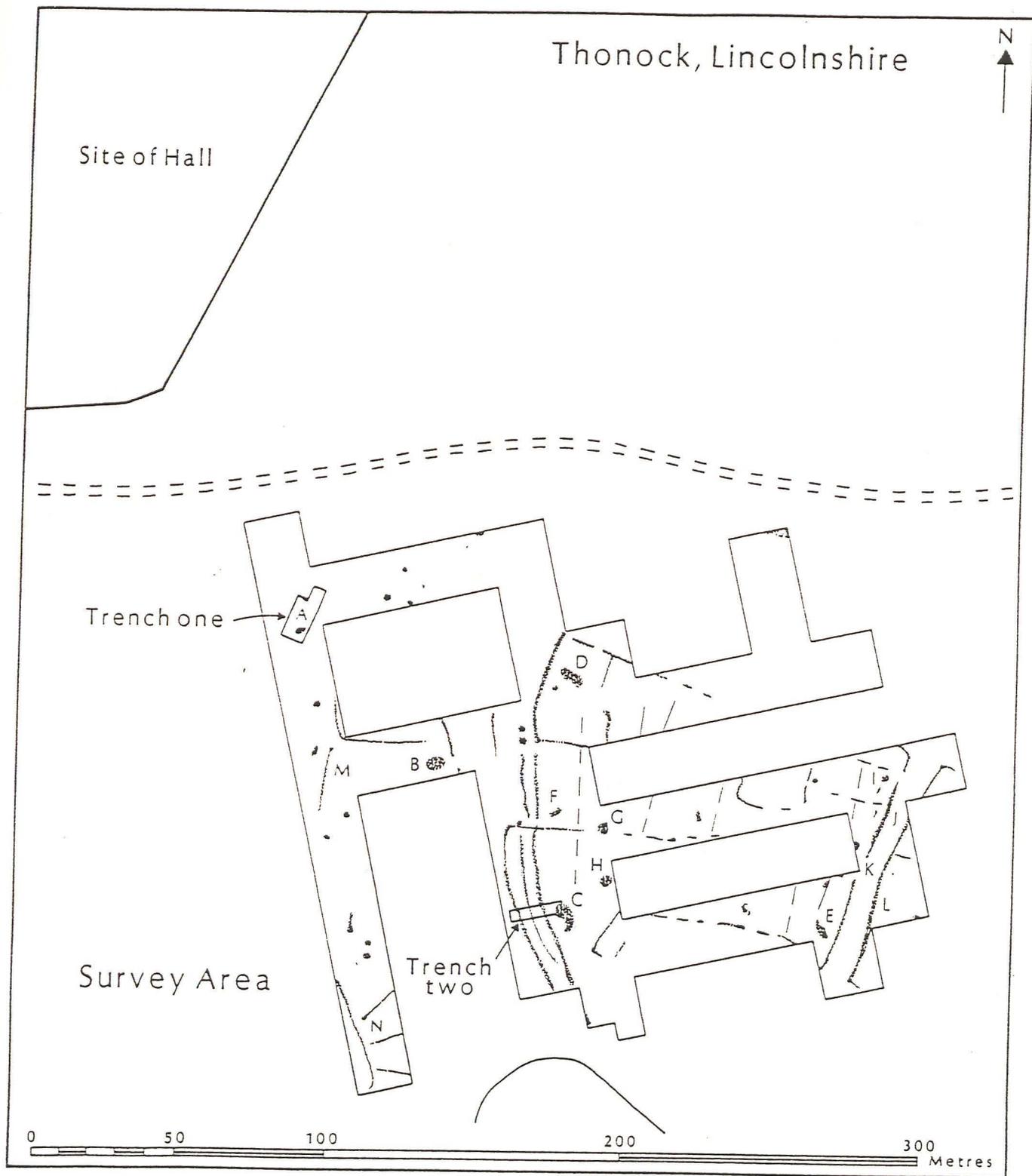
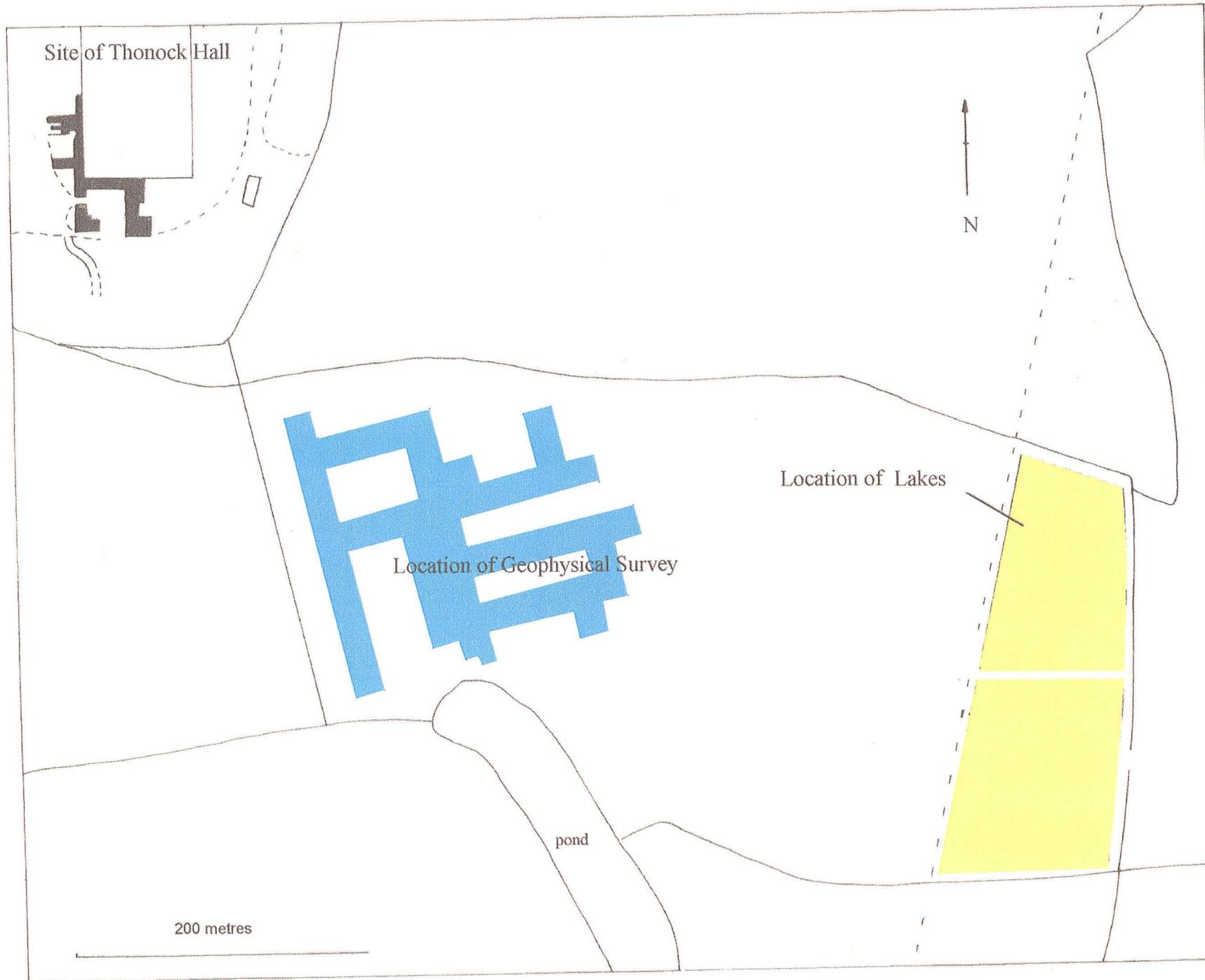


Figure 1 : Geophysical Survey of Roman Settlement

Figure 2 : Location of Lakes and Area of Geophysical Survey



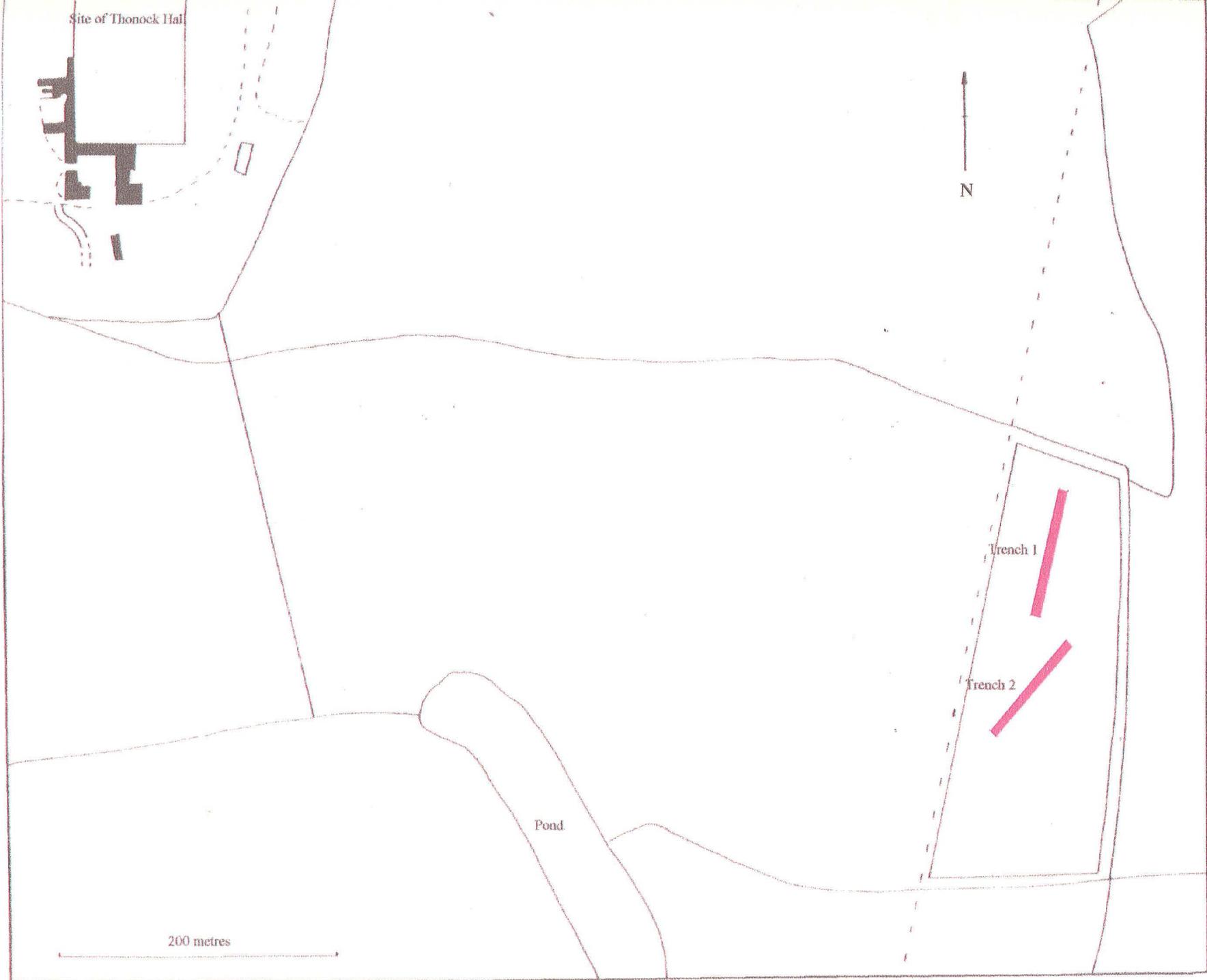


Figure 3 : Location of Evaluation Trenches

↑
N

Scale 1:20

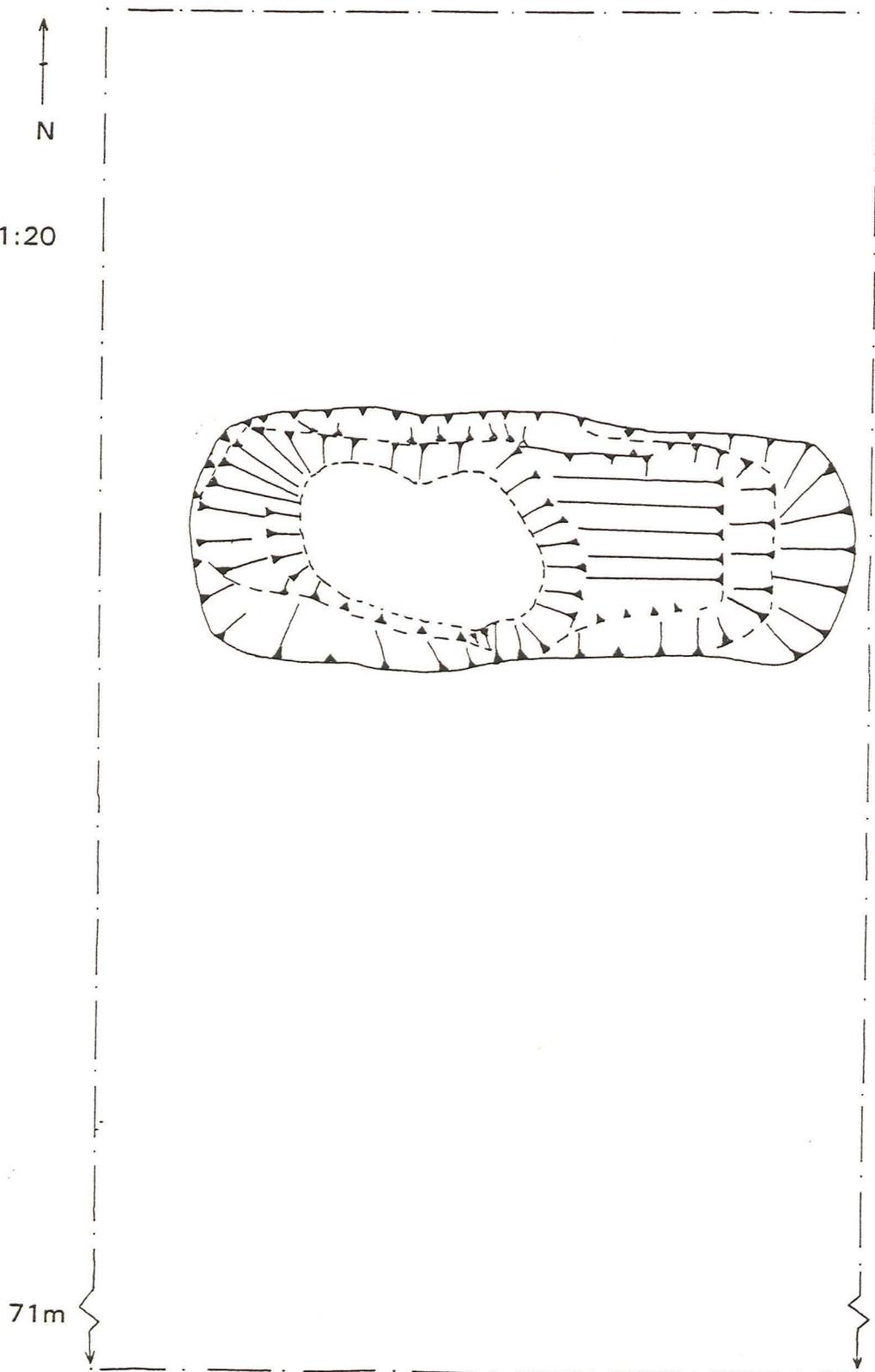


Figure 4 : Plan of Trench 1 showing Feature [104]

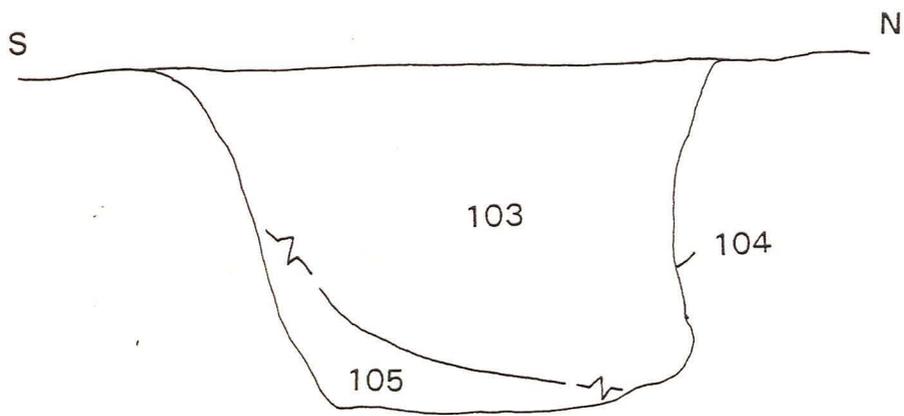


Figure 5 : Trench 1, feature 104

Scale 1:10

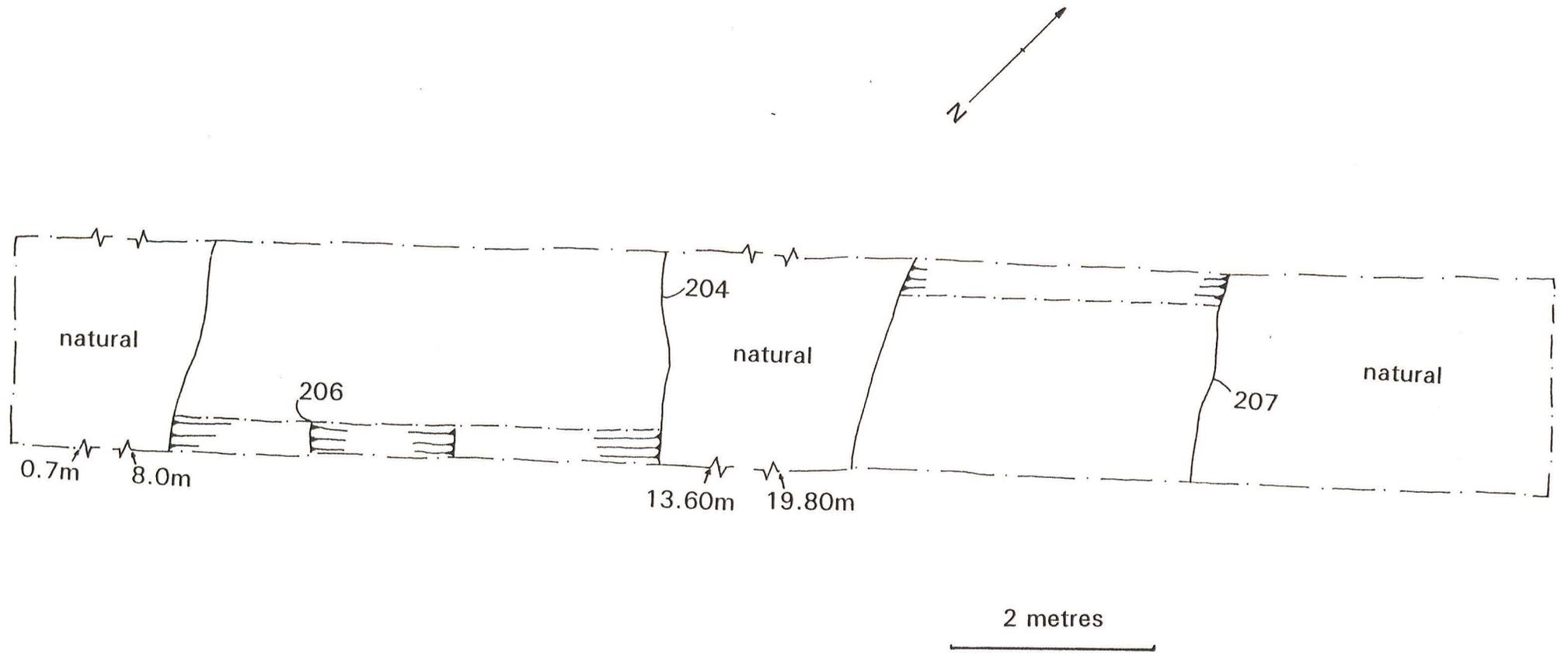


Figure 6 : Plan of Trench 2

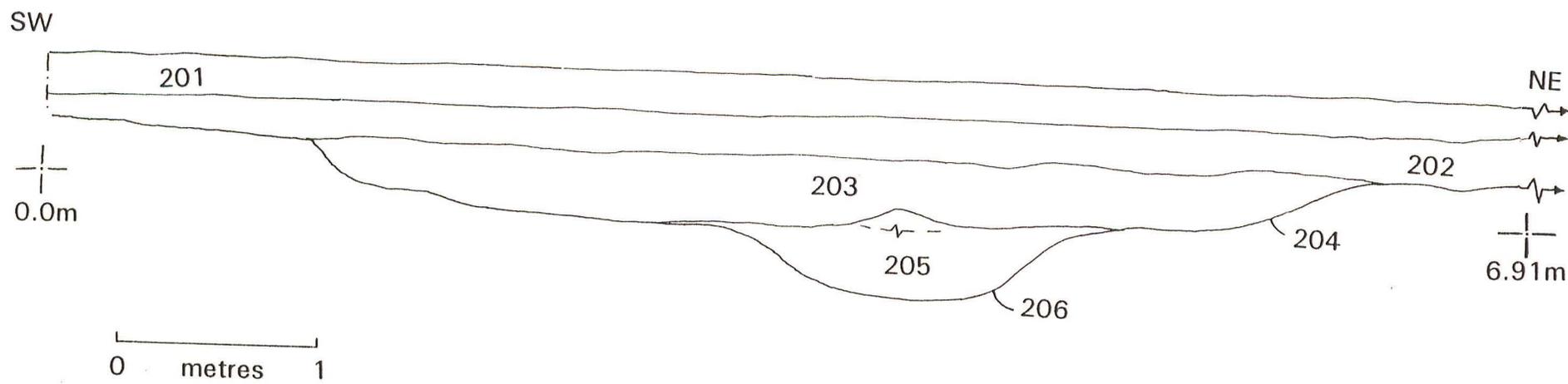


Figure 7 : Trench 2, Section

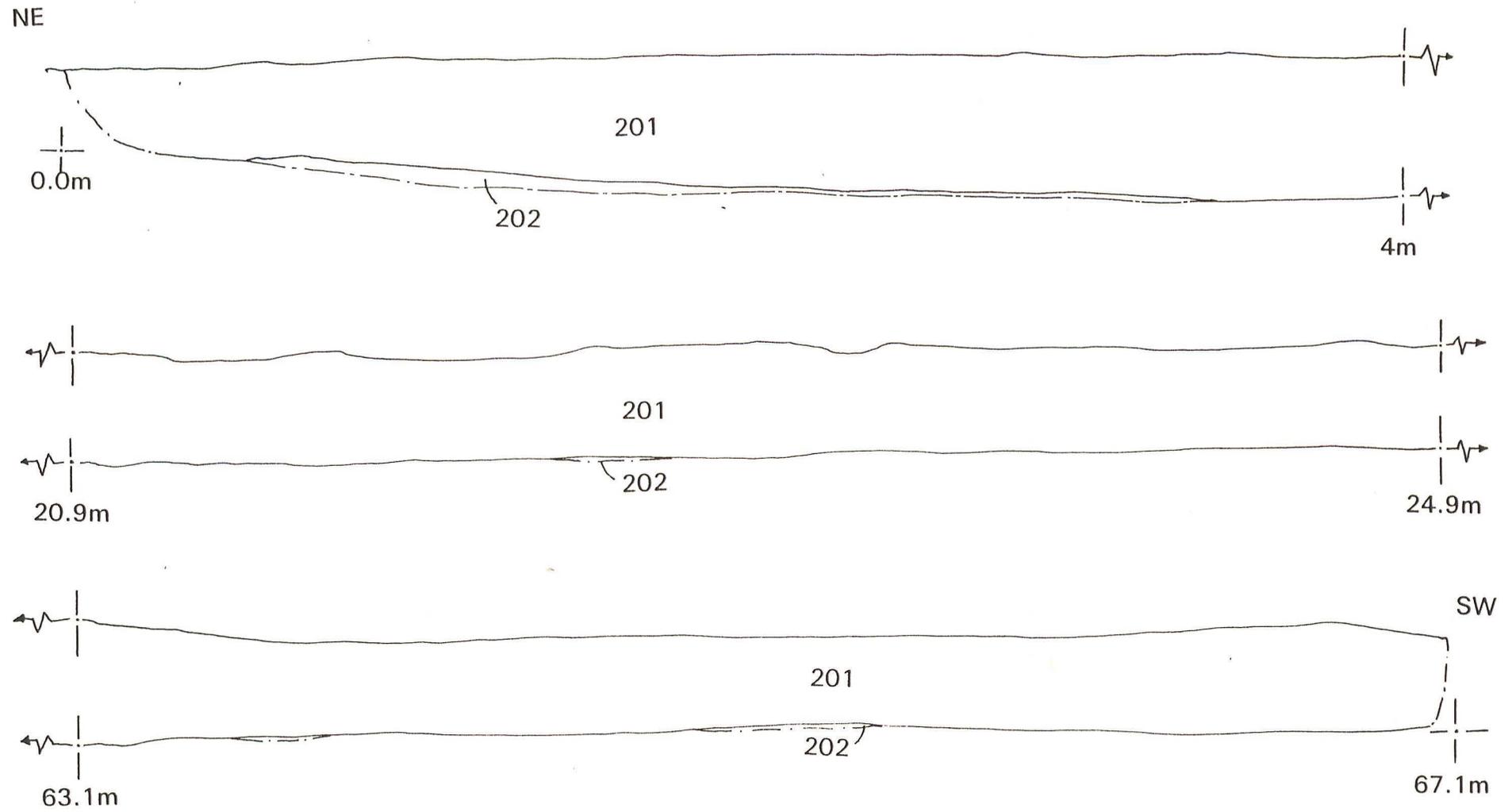


Figure 7a : Trench 2, Section

8.0 PHOTOGRAPHS

Thonock Golf Club Photographs.

Trench 1

TGC/95	T1	1	North end of T1 looking N.
TGC/95	T1	2	North end of T1 looking N.
TGC/95	T1	3	North end of T1 looking NNW
TGC/95	T1	4	North end of T1 looking NNW
TGC/95	T1	5	North end of T1 looking W
TGC/95	T1	6	North end of T1 looking W
TGC/95	T1	7	North end of T1 looking W
TGC/95	T1	8	North end of T1 looking SW
TGC/95	T1	9	North end of T1 looking S
TGC/95	T1	10	Looking S pre excavation of cut 104
TGC/95	T1	11	Looking E pre excavation of cut 104
TGC/95	T1	12	Looking E post excavation of cut 104
TGC/95	T1	13	Looking W post excavation of cut 104
TGC/95	T1	14	Looking S post excavation of cut 104
TGC/95	T1	15 to 34	West face of T1 (note 15 is missing)

Thonock Golf Club Photographs.

Trench 2

TGC/95	T2	1	North end of T2 looking E
TGC/95	T2	2	North end of T2 looking E
TGC/95	T2	3	North end of T2 looking SE
TGC/95	T2	4	North end of T2 looking SSE
TGC/95	T2	5	North end of T2 looking SSW
TGC/95	T2	6	North end of T2 looking SSW
TGC/95	T2	7	North end of T2 looking SSW
TGC/95	T2	8	North end of T2 looking SSW
TGC/95	T2	9	North end of T2 looking SSW
TGC/95	T2	10	North end of T2 looking SW
TGC/95	T2	11	North end of T2 looking W
TGC/95	T2	12	North end of T2 looking NW
TGC/95	T2	13	North end of T2 looking NW
TGC/95	T2	14	Cut 204 looking east
TGC/95	T2	15	Cut 204 looking east
TGC/95	T2	16	Cut 204 looking east
TGC/95	T2	17	Cut 204 looking east, close up
TGC/95	T2	18	Cut 204 looking north east
TGC/95	T2	19	Cut 204 looking south west
TGC/95	T2	20 to 36	North N West face of T2

Trench 1

APPENDIX B : ROMAN POTTERY FROM THONOCK, TGC 95
Dr J.R. Samuels

Thonock Pottery TGC 95

All of the diagnostic material would seem to be 2nd - 3rd Century. It is very similar in content to that recovered from the earlier excavations on the golf course although this sample contains smaller sherds. A number of the sherds join or come from the same vessel. The greywares may come from the nearby kilns at Knaith but the finer fabrics show a broader trading pattern. Most of the colour-coated wares are Nene Valley in origin although several sherds may come from elsewhere. Several sherds of Dalesware are typical of rural assemblages in this region. The number of Samian sherds is also typical of the region where rural sites are surprisingly rich in their ceramic assemblages.

None of the material is considered suitable for illustration.

No. U/S	TGC 95			
FABRIC/ FORM CATEGORY	KILN OR FABRIC SUB-CLASS	NO. OF SHERDS	MIN. NO. OF VESSELS	COMMENTS
Greyware		2	2	incl small flat rim jar sherd and 1 everted rim jar
		7	1	
Colour-coat	NV	3	1	
				(+ 4 post-medieval sherds)
Suggested date range : 2nd - 4th Centuries				

No. 103	TGC 95			
FABRIC/ FORM CATEGORY	KILN OR FABRIC SUB-CLASS	NO. OF SHERDS	MIN. NO. OF VESSELS	COMMENTS
Greyware		3	1	
Shell Gritted Fabric		1	1	
Suggested date range : 2nd - 4th Centuries				

No. 104	TGC 95			
FABRIC/ FORM CATEGORY	KILN OR FABRIC SUB-CLASS	NO. OF SHERDS	MIN. NO. OF VESSELS	COMMENTS
Greyware		7	4	
Orange Fabric		1	1	
Colour Coat		3	1	same fabric as in 105
Suggested date range : 2nd - 3rd Centuries				

No. 105	TGC 95			
FABRIC/ FORM CATEGORY	KILN OR FABRIC SUB-CLASS	NO. OF SHERDS	MIN. NO. OF VESSELS	COMMENTS
Greyware		1	1	
Dalesware		1	1	
Colour coat	?	1	1	
Suggested date range : 2nd - 3rd Centuries				

No. 106	TGC 95			
FABRIC/ FORM CATEGORY	KILN OR FABRIC SUB-CLASS	NO. OF SHERDS	MIN. NO. OF VESSELS	COMMENTS
Mortarium	Midlands	2	1	Flanged rim, quite fine black trituration grits + 2 fragments of poorly fired clay with charcoal - but not oven fabric.
Greyware		1	1	rim from a flanged bowl
Suggested date range : 2nd - 3rd Centuries				

No. 203	TGC 95			
FABRIC/ FORM CATEGORY	KILN OR FABRIC SUB-CLASS	NO. OF SHERDS	MIN. NO. OF VESSELS	COMMENTS
Greyware		40	11	2 lipped dishes 1 small wide- mouthed jars
Parisian ware (possibly)		1	1	no stamps, it might be a sherd of fine greyware
Orange fabric		2	2	
Dalesware		2	1	classic rim fragment
Colour coat	NV	11	2	Body sherds with an incised compass pattern
Samian		2	1	South Gaulich, rim from Drag 17 or 32
				+ 13 animal bone fragments
Suggested date range : 2nd-3rd Centuries				

No. 205	TGC 95			
FABRIC/ FORM CATEGORY	KILN OR FABRIC SUB-CLASS	NO. OF SHERDS	MIN.NO. OF VESSELS	COMMENTS
Greyware		3	1	all from a folded beaker
		1	1	
Colour coat	NV	2	1	
Beige fabric		3	1	probably an underfired greyware everted rim jar.
Cream fabric		1	1	possibly abraded colour-coat
Samian		3	1	? South Gaulich
Suggested date range : 2nd - 3rd Centuries				

No. 207	TGC 95			
FABRIC/ FORM CATEGORY	KILN OR FABRIC SUB-CLASS	NO. OF SHERDS	MIN. NO. OF VESSELS	COMMENTS
Colour coat	NV	1	1	
Suggested date range : 2nd - 3rd Centuries				

APPENDIX C : Soil Sample Analysis
R.C. Alvey, M.Phil

THONOCK Golf Club (TGC95)

Soil sample examined by R. C. Alvey from context (106), an oval pit at north end of Trench 1.

Sample contained:

1 Sherd Roman pottery
Charcoal fragments
Small rounded stones
15 grains of carbonised barley "Hordeum" Sp.
(+ 10 part grains)
3 grains of carbonised wheat "Triticum" Sp.

Contamination probable. Sample also contained modern grass root.

R. C. Alvey

TGC95

Soil Sample Context (106) North End T1

Bodysherd of RB pottery.

Charcoal

Rounded Stones

Hordeum Sp	Barley	15	Carbonised
	Length	Width	Thickness
	5.00mm	2.5mm	2.2mm
	5.10mm	3.0mm	2.6mm
	6.10mm	3.0mm	2.5mm
	5.10mm	3.1mm	2.4mm
	4.10mm	2.1mm	1.3mm

plus 10 part grains

Triticum Sp Wheat 3 Carbonised

not measurable

Modern grass root.

TGC/95 T1 1 North end of T1 looking N.



TGC/95 T1 2 North end of T1 looking N.

TGC/95 T1 3 North end of T1 looking NNW



TGC/95 T1 4 North end of T1 looking NNW

TGC/95 T1 5 North end of T1 looking W



TGC/95 T1 6 North end of T1 looking W

TGC/95 T1 7 North end of T1 looking W



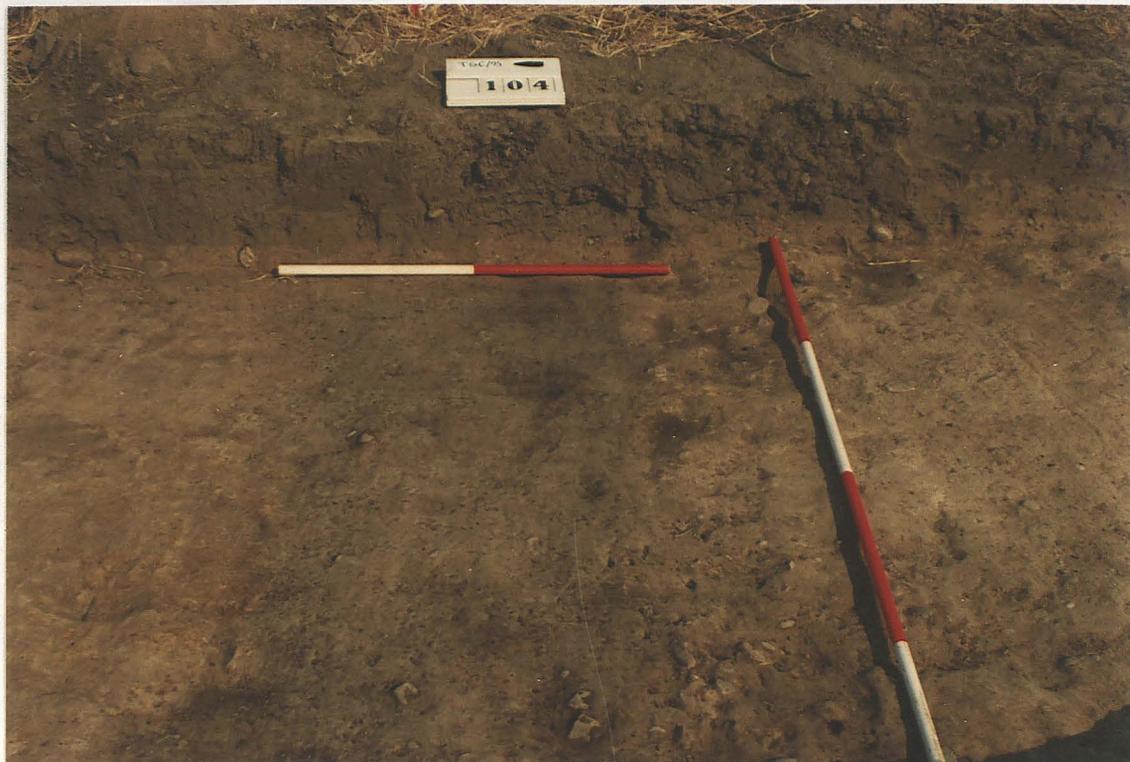
TGC/95 T1 8 North end of T1 looking SW

TGC/95 T1 9 North end of T1 looking S



TGC/95 T1 10 Looking S pre excavation of cut 104

TGC/95 T1 11 Looking E pre excavation of cut 104



TGC/95 T1 12 Looking E post excavation of cut 104

TGC/95 T1 13 Looking W post excavation of cut 104



TGC/95 T1 14 Looking S post excavation of cut 104







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22













Trench 2

TGC/95 T2 1 North end of T2 looking E



TGC/95 T2 2 North end of T2 looking E

TGC/95 T2 3

North end of T2 looking SE



TGC/95 T2 4

North end of T2 looking SSE

TGC/95 T2 5 North end of T2 looking SSW



TGC/95 T2 6 North end of T2 looking SSW

TGC/95 T2 7 North end of T2 looking SSW



TGC/95 T2 8 North end of T2 looking SSW

TGC/95 T2 9 North end of T2 looking SSW



TGC/95 T2 10 North end of T2 looking SW

TGC/95 T2 11 North end of T2 looking W



TGC/95 T2 12 North end of T2 looking NW

TGC/95 T2 13 North end of T2 looking NW



TGC/95 T2 14 Cut 204 looking east

TGC/95 T2 15 Cut 204 looking east



TGC/95 T2 16 Cut 204 looking east

TGC/95 T2 17 Cut 204 looking east, close up



TGC/95 T2 18 Cut 204 looking north east





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APPENDIX A :

Archaeological Assessment July 1995

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- 2.0 Archaeological Assessment
- 3.0 Discussion
- 4.0 Conclusions

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- Appendix D : Specification for Archaeological Evaluation

Summary

Karsten (UK) Limited commissioned John Samuels Archaeological Consultants to undertake an archaeological assessment of an area of land at Gainsborough Golf Club Course, Thonock, Lincolnshire, prior to the proposed creation of two lakes. An assessment of the archaeological implications of the proposed development is made, along with recommendations for further archaeological evaluation.

1.0 INTRODUCTION

- 1.1 This report has been prepared by *John Samuels Archaeological Consultants* for Karsten (UK) Limited. It provides an assessment of the archaeological implications of proposed lake creation at Gainsborough Golf Club Course, Thonock Golf Course, near Gainsborough, Lincolnshire (see Figure 1).
- 1.2 Thonock is located approximately 2kms north-east of Gainsborough in former parkland associated with Thonock Hall, which is now demolished.
- 1.3 Karsten (UK) Limited retained *John Samuels Archaeological Consultants* to undertake an archaeological assessment and based upon its results, an archaeological evaluation of the whole golf course site, of which the area of the proposed lakes is one small portion.

2.0 ARCHAEOLOGICAL ASSESSMENT

- 2.1 The archaeological assessment of the whole golf course site took the form of a desktop survey (which forms Appendix A in this report) as well as other archaeological investigation.
- 2.2 The whole of the golf course site was fieldwalked in good conditions on clayey ploughed soil in November 1992, but nothing was found in the area of the proposed lakes. A geophysical survey was carried out on this area by Geophysical Surveys of Bradford (see Figure 1). Subsequently, excavation trenches were opened, whose locations were determined by the geophysical survey results. The excavation located a Roman settlement (Samuels & Palmer-Brown, 1993).
- 2.3 Aerial photographs were examined by Roger Palmer of Air Photo Services. No remains of archaeological significance were discovered, except the remains of medieval ridge and furrow, which is no longer visible on the ground. The aerial photographic report may be found in Appendix B of this report.
- 2.4 Metal detectorists who had been active in the area were consulted. However, the discussions produced conflicting evidence which was not satisfactorily resolved. In effect there was no clear evidence of finds from the area of the proposed lakes.
- 2.5 Primary records such as the County Sites and Monuments Record and various documentary sources reveal no evidence for earlier settlement within the area. There are references to medieval settlements, in particular the lost villages of Havercroft and Thonock, but from aerial photographic and place-name evidence these would seem to be further to the north and west.

3.0 DISCUSSION

- 3.1 The archaeological assessment has not identified any archaeological remains within the area of the proposed development except for ridge and furrow from medieval ploughing seen on aerial photographs but no longer visible at ground level.
- 3.2 The nearest edge of the area of Roman settlement identified previously from pottery found in fieldwalking is about 170m to the west. The geophysical survey which was subsequently undertaken indicated that the focus of activity is about 360m to the west of the proposed development and this was confirmed by the trial excavations.
- 3.3 It is noticeable that the area of Roman settlement is confined to a gently sloping south facing hillside in a slight natural hollow. Topographically the area of the proposed development is more exposed and on heavier clayey land.
- 3.4 However, conflicting evidence from the metal detectorists has included claims of finding Roman material in the area of the proposed development.
- 3.5 The County Archaeologist has requested that an archaeological evaluation of the site should be undertaken and a brief provided (see Appendix C).
- 3.6 The purpose of the evaluation will be to examine the nature, extent and condition of any archaeological remains which may exist within the area of the proposed development. The results will be presented in a form which will enable the planning authority to decide the most appropriate course of action.
- 3.7 A range of techniques for undertaking the evaluation has been considered. Although various forms of geophysical survey would normally be proposed in similar situations, none are considered suitable here. The existence of overhead power cables will reduce the area suitability for magnetometry to such an extent as to make any results meaningless. Magnetic susceptibility, which sometimes identifies areas of human activity, will also be inappropriate because of the ridge and furrow and its subsequent flattening which will mark any potential results. Therefore, it is proposed that two trenches, each 70m x 2m, will be excavated and a specification is provided (see Appendix D).
- 3.8 Arrangements will be made with Lincoln City and County Museum for suitable accession numbers and deposit of copies of the project archives.

4.0 CONCLUSIONS

- 4.1 There is no evidence for archaeological remains in the area of the proposed reservoirs, but following the County Archaeologist's recommendations it is proposed that two trail trenches each 70m x 2m be excavated in the area of the proposed lakes. A specification for the work has been provided.

Appendix A :

Archaeological Assessment Report, April 1993

**AN ARCHAEOLOGICAL ASSESSMENT
OF LAND FOR PROPOSED GOLF COURSE
AT THONOCK, GAINSBOROUGH, LINCOLNSHIRE**

**Commissioned by
KARSTEN (UK) LIMITED**

Dr. John Samuels BA, PhD, MIFA

Monday 19th April, 1993

AN ARCHAEOLOGICAL ASSESSMENT OF LAND FOR PROPOSED GOLF COURSE AT THONOCK, GAINSBOROUGH, LINCOLNSHIRE

1.0. INTRODUCTION

1.1. It is proposed that a golf course be constructed on approximately 250 acres of land to the east and south of the site of Thonock Hall.

1.2. Within the proposed site the land is level to the east falling off steeply to the north and more gently to a river valley to the south and rising to more level ground. The soil is generally sandy with areas of more clayey soil reflecting the changing subsoil geology.

1.3. On the advice of the County Archaeologist an archaeological assessment was requested for the proposed development and Dr. John Samuels was appointed by Karsten (UK) Limited to undertake this.

2.0. ARCHAEOLOGICAL ASSESSMENT

2.1. The Royal Commission on Historical Monuments of England (RCHM) provided a copy of relevant information from their archive from their survey of West Lindsey (see Appendix A). This referred to the lost villages of Havercroft and Thonock but from aerial photographs and place-name evidence both sites would seem to have been further to the north and west of the proposed development site.

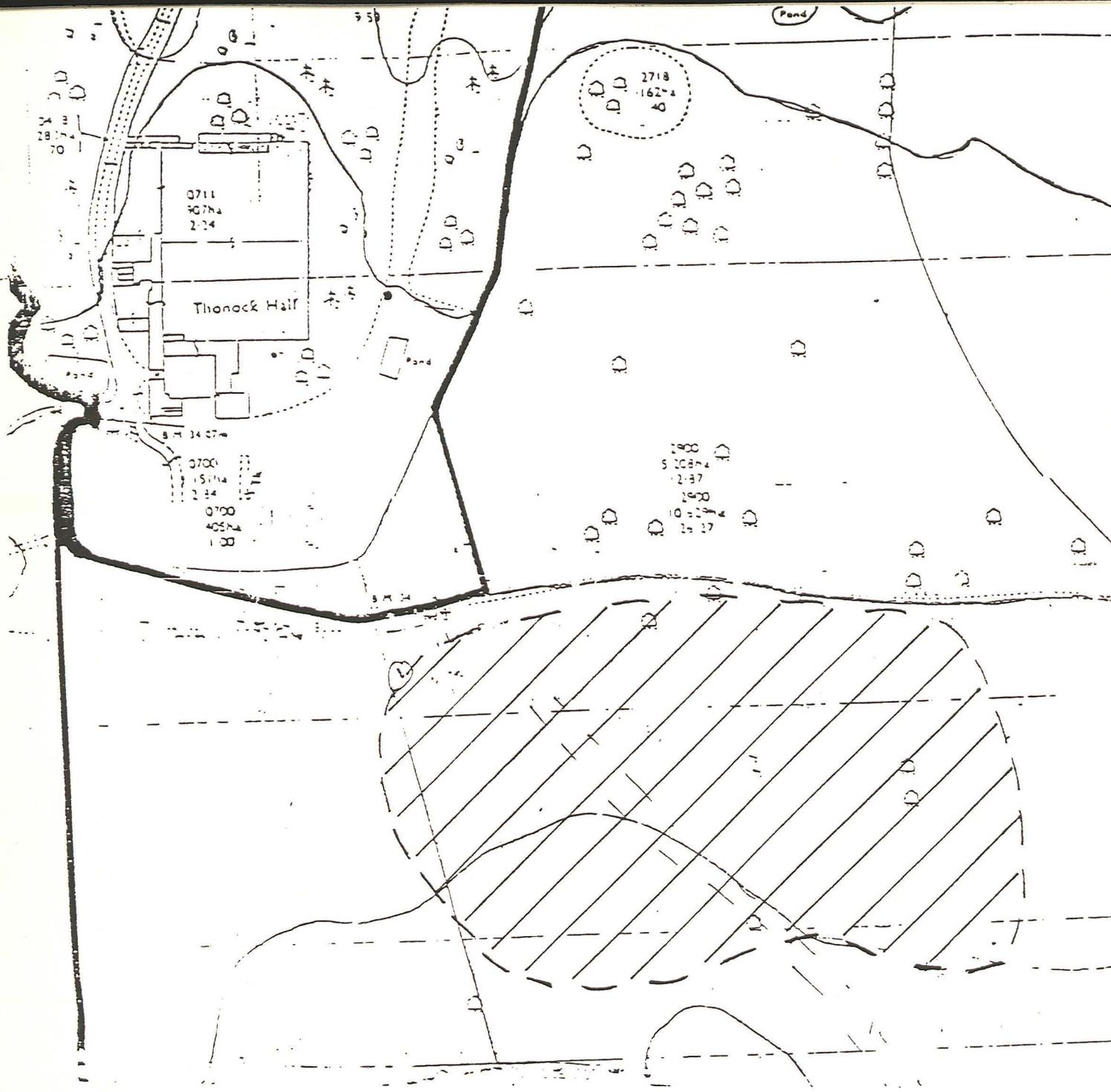
2.2. Local information suggested that metal-detector users had found Roman coins within the proposed development site although no precise location was provided.

2.3. Therefore the whole of the area was fieldwalked at 50.00m intervals. When a scatter of Roman pottery was found the intervals were reduced to 20.00m with 50.00m collection points. The scatter of Roman pottery covered an area of about 5ha. south east of the site of Thonock Hall.

2.4. The pottery is mainly grey ware of types produced in Lincolnshire in the late 2nd to early 3rd century AD. There are a few sherds of colour-coated pottery from the Nene Valley and several fragments of Mancetter- Hartshill mortaria. None of the sherds are heavily abraded and may have been brought to the surface by more recent deep ploughing.

2.5. Elsewhere in the area of the proposed development isolated sherds of Roman and medieval pottery and worked flint were found but not considered to be of any significance. The location of all finds has been plotted at 1:2,500.

2.6. To understand better the form of remains represented by the Roman pottery scatter and to ensure that no further remains existed within the area, an enhanced aerial photographic survey was undertaken by Air Photo Services (see Appendix B). Apart from ridge and furrow which has since disappeared through ploughing, no significant archaeological remains were identified.



SHADING INDICATES AREA OF
 ROMAN POTTERY SCATTER

Scale 1:2,500

2.7. In a further attempt to locate any buried remains related to the Roman pottery scatter and, if possible, delimit their area a geophysical survey was undertaken by Geophysical Surveys of Bradford (see Appendix C).

2.8. The results were impressive and can be seen on the Summary Interpretation plot. Two areas of intensive magnetic anomalies marked A are probably Roman pottery kilns. Areas marked B-E are slightly less intensive anomalies but may be further kilns, iron working furnaces or dumps of pottery or iron slag. Much less intense are the anomalies marked F-H which may be the result of more industrial activity but could also be the pits left by uprooting trees when the parkland was ploughed up more recently. A series of linear anomalies have been caused by buried ditches which form two trackways with a series of small interlocking fields or house plots. The broken nature of these has probably been caused by the ridge and furrow of medieval ploughing which has also created its own magnetic anomalies. Areas described as ferrous/modern could be odd pieces of metalwork that have fallen off modern agricultural machinery or fragments of modern drainage pipes.

3.0. CONCLUSIONS AND RECOMMENDATIONS

3.1. The assessment has identified the existence of a Roman settlement with associated pottery manufacture and iron working covering an area of about 5 ha.

3.2. It is suggested that given the large scale of the proposed golf course that this area can be set aside and there should be no below-ground disturbance.

3.3. No further archaeological activity is required for the remainder of the proposed development.

Dr. John Samuels BA, PhD, MIFA

Monday 19th April, 1993

APPENDIX B:

Aerial Photographic Assessment Report

AIR PHOTO SERVICES

CHRIS COX MA MIFA ROG PALMER BA MIFA
7 EDWARD STREET CAMBRIDGE CB1 2LS
PHONE/FAX 0223 316393

THONOCK, GAINSBOROUGH,
LINCOLNSHIRE

AERIAL PHOTOGRAPHIC ASSESSMENT

DECEMBER 1992

COMMISSIONED BY

JOHN SAMUELS
6 OLD NORTH ROAD
NEWARK, NOTTS, NG23 6JE

THONOCK, GAINSBOROUGH, LINCOLNSHIRE

Aerial Photographic Assessment

Rog Palmer BA MIFA

INTRODUCTION

Aerial photographs from three sources have been used in this assessment. All those covering the development area were verticals but three sets of oblique photographs show the golf course immediately west of the area. The National Library of Air Photographs holds other obliques taken of features close to the golf course and the lack of oblique photographs within the assessment area suggests that nothing was visible from the air at the times of these flights. A list of photographs examined is appended.

PHOTO INTERPRETATION

The assessment area was fully covered by runs of overlapping stereoscopic vertical photographs taken on eleven different dates at scales between 1:5000 and 1:15000. Of these, one set, taken on 31 July 1963 at 1:10000, proved most revealing although additional details came from some of the other photographs. Prints were examined stereoscopically using a 1.5 x magnification stereoscope which was adequate for interpretation of the features present in the area. Interpretative overlays were made of the most informative photographs and these were computer rectified and combined to produce a 1:10000 map of the area.

ARCHAEOLOGICAL COMMENT

Most of the area (both the present assessment area and the complete golf course extent) can be seen to have had past use as medieval strip fields (see figure). Ridge and furrow, shown schematically on the map, forms an arable system of a type common to the East Midlands. Some headlands can be identified between furlongs, while others appear to be overlain by modern field boundaries.

The photographic record shows an increasing amount of land being taken into arable cultivation since 1945. Much of the ridge and furrow was in earthwork condition at that date but has since been totally flattened with the only upstanding remnants now surviving in parts of the present golf course. Some fields have always remained 'blank' on the photographs. Three of these have been arable for much of the photographic record (north-west of the lake centred SK829918, SK831919 and SK832919). They show no evidence of former ridge and furrow nor do they produce crop or soil response to any sub-surface disturbances despite the fact that positive evidence, suggesting appropriate photographic timing and soil/crop conditions, has been showing in adjacent fields. Another field has been converted to arable more recently (now mapped as two fields but previously a pasture area centred on the southern part of the lake, SK834915). Despite suitable lighting or crop

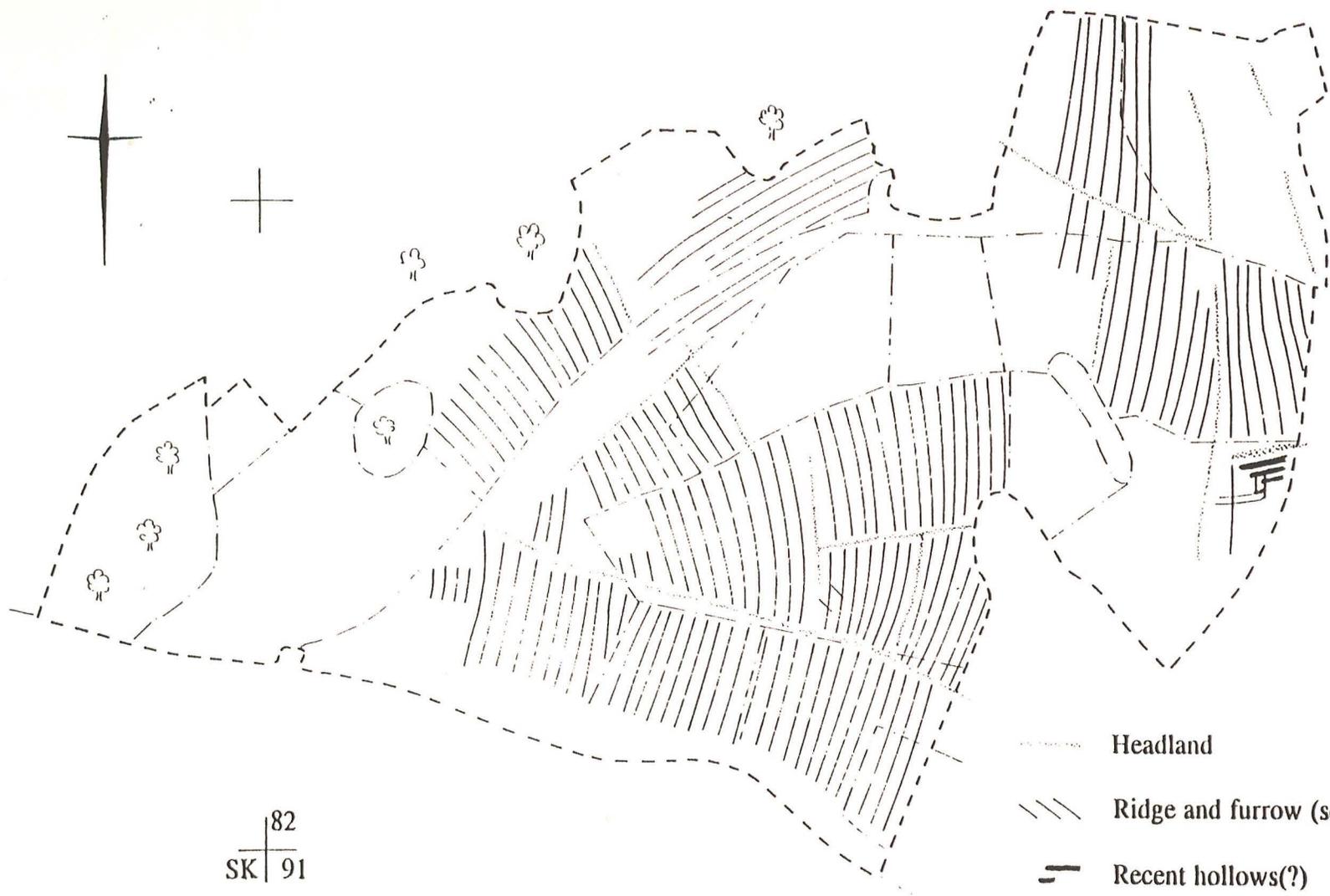
conditions on dates of photography this latter area has never shown traces of ridge and furrow. Both areas adjacent to the lake may have been former grazing land.

The air photographs show very poor response of the crop to sub-surface disturbances and this is probably related to the soils and geology of the area. The majority of marks observed, other than the earthwork field systems, appear likely to be of recent agricultural origin. Plough-flattened ridge and furrow produces some very slight crop marks but little else can be attributed to any previous occupation of the area. Marks seen on the photographs appear attributable to activities such as subsoiling and the removal of trees with no definite geological marks and certainly nothing of definite archaeological origin being identified.

The Soil Survey map suggests that the soils and geology in this area are unsuited to the production of crop marks over buried features. Crop marks identified during photo examination are all likely to reflect recent activity and may be due to the inclusion of more humic fill in disturbed subsoil which may rapidly leach to a uniform 'blandness'. Cut archaeological features may be present in the area and are suggested by the surface finds. These features may be 'sealed' by once-overlying ridge and furrow yet due to the above described environmental conditions no crop marks are visible.

Three features require more detailed comment (see figure):

- SK82959142 (HSL/UK/71.83:1154). Two parallel short lengths of possible ditch show as crop marks. These do not appear on other photographs and are of unknown origin or cause although are probably non-archaeological.
- SK83609158 (CPE/UK/2563:3309). Two parallel 'ditches', showing as soil marks, form a right angle which is suggestive of a corner of an enclosure. No traces were seen on other photographs. Overlying ridge and furrow is just visible on the same photograph. The 'ditches' are unlikely to be archaeological features and are possibly agricultural.
- SK83639163 (OS.85.244:231). Three, probably four, features lie parallel to one another and to a headland to their immediate north. These show on photographs of this date only and are therefore suspect. They appear to be either slight hollows or bands of very retarded crop growth and lie on one axis of what appears to be a system of land drains (and/or recent subsoiling) which forms a grid system covering most of the field. The features abut a modern track to their east but there is no evidence for continuation beyond this nor for any humpiness along the track. Despite their similarity to medieval fish ponds it is unlikely that these are archaeological in origin but may be caused by recent agricultural activity.



82
SK | 91



AIR PHOTO SERVICES: 1992

84
| 92

- Headland
- /// Ridge and furrow (schematic)
- Recent hollows(?)
- Positive crop or soil mark
- Modern boundary
- - - Limit of survey

AERIAL PHOTOGRAPHS EXAMINED

The following vertical photographs were examined stereoscopically:

Source: National Library of Air Photographs (RCHME):

106G/LA/228:1072-1076	1:15000	17 April 1945
106G/LA/228:2072-2076	1:15000	17 April 1945
106G/LA/228:1056-1058	1:15000	17 April 1945
106G/LA/228:2072-2058	1:15000	17 April 1945
106G/LA/228:2084-2086	1:15000	17 April 1945
CPE/UK/1880:3408-3414	1:10000	6 December 1946
CPE/UK/2012:4104-4109	1:9800	16 April 1947
CPE/UK/2563:3308-3312	1:10000	28 March 1948
CPE/UK/2563:3323-3325	1:10000	28 March 1948
CPE/UK/2563:4323-4324	1:10000	28 March 1948
58/B/30:5121-5125	1:5000	13 May 1948
541/176:4005-4010	1:10000	30 September 1948
58/1435:204-212	1:5000	13 May 1954
58/1435:288-295	1:5000	13 May 1954
58/5853:18-19	1:10000	31 July 1963
58/5853:52-54	1:10000	31 July 1963
OS.68.218:210-217	1:7500	14 June 1968
OS.68.218:246-249	1:7500	14 June 1968
OS.68.218:269-274	1:7500	14 June 1968

Source: Lincolnshire County Council:

HSL/UK/71.83:1154-1156	1:12000	2 June 1971
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Source: Ordnance Survey:

85.244:229-232	1:5000	15 July 1985
85.244:236-240	1:5000	15 July 1985
85.244:268-269	1:5000	15 July 1985

Cover searches showed there to be no photographs of the area in the Cambridge University Collection of Air Photographs.

Obliques: source: National Library of Air Photographs (RCHME):

SK8291/1/327-339	9 October 1980
SK8291/2/343-350	9 October 1980
SK8291/3/351-354	9 October 1980

APPENDIX C :

Brief for Archaeological Evaluation

BRIEF FOR AN
ARCHAEOLOGICAL EVALUATION,
produced by
ARCHAEOLOGY SECTION,
LINCOLNSHIRE COUNTY COUNCIL

SITE: Gainsborough Golf Club
COMPANY: Michael Gerry Associates
DATE: July 1995
LOCATION: Gainsborough Golf Club, Belt Road, Thonock, Gainsborough

LAKES
PLANNING APP. NO.: W/023/0393/95

1. Summary

- 1.1 This document is the brief for archaeological work to be undertaken on a scheme of golf course development at Thonock, Gainsborough by Karsten UK for Gainsborough Golf Club. It sets out the requirements for a full field evaluation to be carried out of the area which should help to define the character and extent of the archaeological remains. Evaluation offers an efficient and effective way of retrieving such information. Guidelines on such matters are set out in D.O.E. Planning and Policy Guidance Note 16 (1990), see paragraph 21.
- 1.2 This brief should be used by archaeological contractors as the basis for the preparation of a detailed archaeological project design. In response to this brief contractors will be expected to provide details of the proposed scheme of work, to include the anticipated working methods, timescales and staffing levels.
- 1.3 The detailed specification will be submitted to the company above subject to approval of the Archaeological Officer of Lincolnshire County Council. If more than one, the client will be free to choose between those specifications which are considered to adequately satisfy this brief.

2. Site location and description

- 2.1 The site is located to the west of Gainsborough being centred on national grid reference SK 8364 9177. The underlying geology is Keuper Marl and Boulder Clay/Till and the site is at an approximate altitude of 30m. The present land use is one of rough grassland being adjacent to a new golf course.

3. Planning background

- 3.1 An application has been submitted to the local planning authority for full planning permission for the construction of two lakes. This application is subsequent to the original application for the second golf course which was subject to archaeological requirements.
- 3.2 The scheduled ancient monument of Castle Hill Wood, often referred to as Danes Camp

or Danish Camp, lies adjacent to the golf course. ~~Local plan policies are set out in the~~ West Lindsey Local Plan Deposit Draft and attention is drawn in particular to Policy SA8.

4. Archaeological background

4.1 Little is known of the historical origin of settlement in Thonock. Until recently pre-medieval evidence was limited to stray finds of a Roman coin and some pottery of a similar date. Early reference to the Castle Hill suggests it is a Danish Camp but Everson (1991) suggests it is likely to be of early Norman origin.

4.2 In 1993, after determination of the application for outline planning consent and in line with condition 8 of that consent a field evaluation was carried out. This consisted of field walking and a geophysical survey. The evaluation was then followed by a mitigation strategy which consisted of small scale excavation and preservation *in situ*. This work located an enclosure ditch and traces of a second to the east. The area was clearly a Romano British settlement with refuse pits being revealed. There was evidence for the quarrying of sand or clay as well as a kiln of unknown function. Surface finds suggest an Anglo-Saxon presence in the area but this was not confirmed by the excavation.

5. Objectives of an archaeological evaluation

5.1 The purpose of the archaeological evaluation should be to gather sufficient information to establish the presence/absence, extent, condition, character, quality and date of any archaeological features, structures, deposits, artefacts or ecofacts.

6. Requirements for work

6.1 In order that the planning authority has sufficient information upon which to base its decision, prior to this scheme of development being undertaken a full archaeological field evaluation must be carried out. If any archaeological discovery is made it will be accommodated within the scheme and preservation *in situ* be given due consideration. Preservation by record is considered an action of last resort.

6.2 Where relevant, the archaeological evaluation should attempt to address the relationship

between any upstanding structure and the buried archaeology.

- 6.3 If upstanding earthwork remains or buildings form part of the archaeological record these must be considered part of the evaluation phase. Such remains should be surveyed to a standard and level of accuracy in line with the recording of the buried remains.

7. Stage of works and techniques

- 7.1 For this field evaluation the specification will be expected to contain a reasoned discussion of field techniques selected. The rejection of a particular technique must be explained. Consideration should be given to additional aerial survey, field-walking, site survey, geophysical survey and the observation of geotechnical test-pits (if appropriate) as well as the undertaking of archaeological test-pits as possible field evaluation techniques. When preparing the specification account must be taken of the local geology, topography and land-use as it affects the feasibility of the various techniques.

- 7.2 Bearing in mind the ground conditions and the techniques used previously it is expected that a combination of geophysical survey and trial trench excavation will be required. It is worth noting the presence of an electric transmission line across the area of interest.

- 7.3 The evaluation should also take into account environmental evidence and provide an assessment of the viability of such information should further archaeological work be carried out.

8. Methods

- 8.1 In consideration of methodology the following details should be given in the contractor's project design:
 - 8.1.1 a projected timetable for the various stages of work;
 - 8.1.2 the staff structure and numbers, including a list of all specialists and their respective roles;
 - 8.1.3 a statement on Health and Safety policy and site security;
 - 8.1.4 a full description of the field survey techniques to be used, including such

details as plotting conventions, ~~transect spacing~~ presentation of geophysical and statistical data and the plotting of aerial photographs.

8.2 Excavation is a potentially destructive technique and the specification should include a detailed reasoning behind the application of this technique. The following factors should be borne in mind:

- 8.2.1 the most recent archaeological deposits are not necessarily the least important and this should be considered when determining the level to which machining will be carried out;
- 8.2.2 the machine should be used to remove topsoil down to the first archaeological horizon;
- 8.2.3 the use of an appropriate machine with a wide, toothless ditching blade;
- 8.2.4 the supervision of all machine work by an archaeologist;
- 8.2.5 when archaeological features are revealed by machine these will be cleaned by hand;
- 8.2.6 a representative sample of every archaeological feature must be excavated by hand (although the depth of surviving deposits must be determined, it is not expected that every trench will be excavated to natural);
- 8.2.7 all excavation must be carried out with a view to avoiding features which may be worthy of preservation;
- 8.2.8 any human remains encountered must be left in situ and only removed if absolutely necessary. The contractor must comply with all statutory consents and licences under the Burial Act 1857 and subsequent legislation regarding the exhumation of human remains. It will also be necessary to comply with all reasonable requests of interested parties as to the method of removal, reinterment or disposal of the remains or associated items. Attempt must be made at all times not to cause offence to any interested parties.

8.3 It is expected that an acceptable recording system will be used for all on-site and post fieldwork procedures. The recording procedure must take into account the long-term archival requirements of archaeological records. Due attention must be given to the drawn and photographic record. Both artefacts and ecofacts must be handled in a way sympathetic with the requirements of the document "Guidelines for the transfer of project archives" produced by City and County Museum, Lincoln and in line with national

guidelines as detailed therein. Prior to fieldwork commencing discussions should take place with City and County Museum regarding archive deposition. At this time an accession number will be issued and should be used throughout the project.

9. Post-fieldwork programme

9.1 After completion of the fieldwork phase of the project the following procedures should be undertaken:

- 9.1.1 that, after agreement with the landowner, arrangements are made for long term storage of all artefacts in City and County Museum, Lincoln;
- 9.1.2 that a site archive is produced and should be deposited with the artefacts as detailed in 9.1.1;
- 9.1.3 a full report is produced and deposited with the appropriate bodies, see 10.1 below.

10. Reporting requirements

10.1 The final evaluation report should be a straight-forward account of the fieldwork carried out. Ideally it should be produced within two months of the completion of the fieldwork phase. If this is not possible then the County Archaeological Officer must be consulted at the earliest possible opportunity. The report should include:

- 10.2.1 computer generated plots of geophysical survey data and interpretation;
- 10.2.2 distribution plots, analysis and interpretation of field walking and other data;
- 10.2.3 plans of the trench layout;
- 10.2.4 section and plan drawings, with ground level, Ordnance Datum, vertical and horizontal scales as appropriate;
- 10.2.5 plans of actual and potential deposits;
- 10.2.6 specialist descriptions of artefacts and/or ecofacts;
- 10.2.7 a consideration of the evidence within the wider landscape setting;
- 10.2.8 a consideration of the archaeology within its local, regional and national context;

- 10.2.9 a critical review of the effectiveness of the methodology;
- 10.2.10 a projected timetable for the completion and final location of the site archive (if not already undertaken).

10.3 A short note should be prepared for publication in the Archaeological Notes of the county journal Lincolnshire History and Archaeology.

11. Monitoring arrangements

11.1 Curatorial responsibility for this project lies with the Archaeological Officer of Lincolnshire County Council. He should be given at least seven days notice, in writing, of the proposed date of commencement of site work and may exercise his prerogative of monitoring fieldwork.

12. Additional information

12.1 This document attempts to define the best practice expected of an archaeological evaluation but cannot fully anticipate the conditions that will be encountered as work progresses. If requirements of the brief cannot be met they should only be excluded after attainment of the written approval of the Archaeological Officer of Lincolnshire County Council.

12.2 Contact addresses:

Mr E Marcroft
West Lindsey District Council
Planning Department
26 Spital Terrace
GAINSBOROUGH
DN21 2HG

Tel: 01427 615411 or Fax: 01427 810623

Mr M Gerry
Michael Gerry Associates
23 West Parade
LINCOLN
LN1 1NW

Tel: 01522 545449 or Fax: 01522 544389

Mr S Carney
Archaeological Officer
Lincolnshire County Council
12 Friars Lane
LINCOLN
LN2 5AL

Tel: 01522 575292 or Fax: 01522 530724

Mr T Page
City and County Museum
12 Friars Lane
LINCOLN
LN2 5AL

Tel: 01522 530401 or Fax: 01522 530724

Brief set by Archaeology Section, Lincolnshire County Council.

References

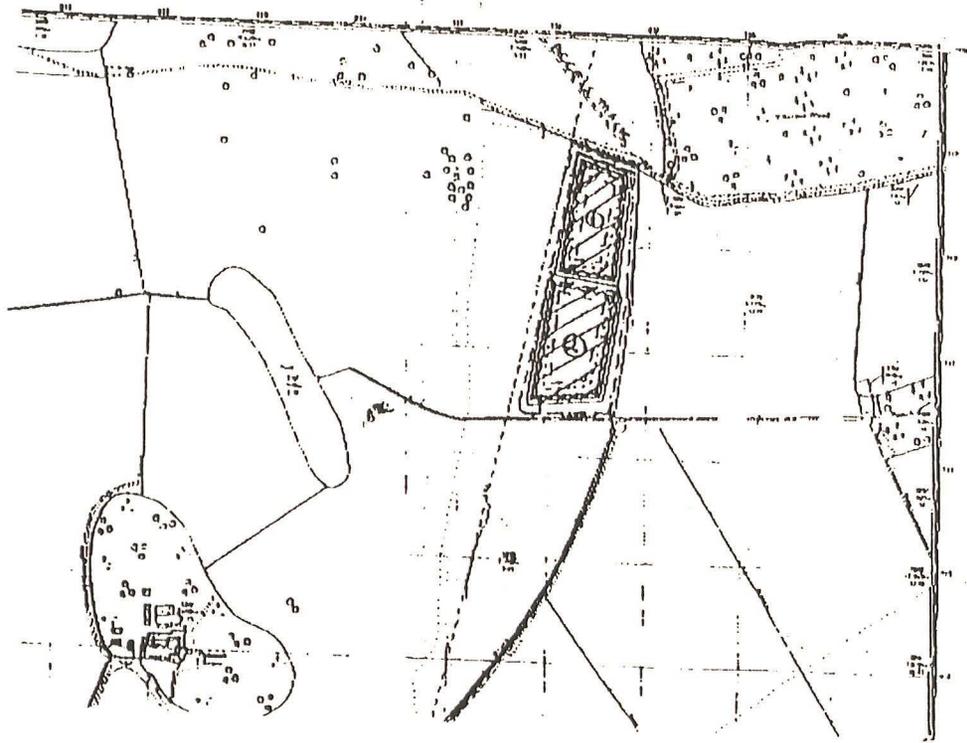
Everson, P L 1991 *Change and continuity: Archive notes* RCHME: London

Lincolnshire County Council Sites and Monuments Record

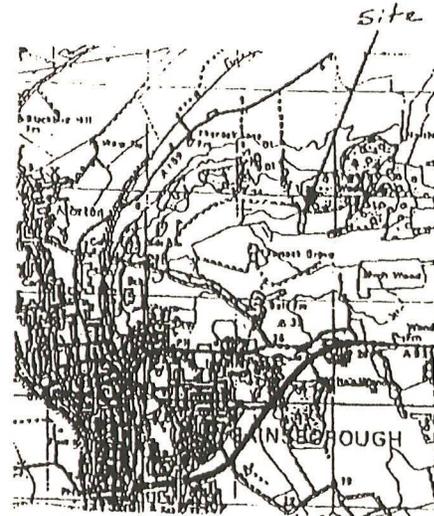
Samuels, J and Palmer-Brown, C 1993 *A newly discovered Roman settlement at Thonock, Gainsborough Draft*

APPENDIX 1 - Location Plan

13-JUL-1995 15:16 FROM MICHAEL GERRY ASSOCIATES TO KARSTEN(UK)LTD P.19



Site Plan 1:50000



Location Plan 1:50,000

2.3/95

FOX PLANT (OWMBY) Ltd
CAENBY HALL LINCOLN LN2 3BU Tel: 0673 878444

TITLE karsten (UK) Ltd
Proposed Reservoirs at Thorock Golf Club

Dwg No: DWG-10131 95/L5

Date 24-2-95

SURVEY

Job

Scale
AS SHOWN

APPENDIX D :

Specification for Archaeological Evaluation

John Samuels Archaeological Consultants

*6, Old North Road
Cromwell
Newark
Nottinghamshire NG23 6JE*

Telephone 01636 821727

Fax 01636 822080

Mobile Phone 0831 163822

SPECIFICATION FOR ARCHAEOLOGICAL EVALUATION
OF THE AREA OF PROPOSED NEW LAKES
AT GAINSBOROUGH GOLF COURSE
THONOCK, GAINSBOROUGH, LINCOLNSHIRE

FOR

KARSTEN (UK) LTD

July 1995

Contents:

- 1.0 Introduction
 - 2.0 Aims and Objectives
 - 3.0 Methodology
 - 4.0 Personnel
- Figures

THONOCK GOLF COURSE, GAINSBOROUGH, LINCS :
SPECIFICATION FOR ARCHAEOLOGICAL EVALUATION

1.0 INTRODUCTION

1.1 Following a planning application to construct two lakes, the County Archaeologist has requested that an archaeological evaluation be undertaken and supplied a detailed brief.

1.2 An archaeological assessment has been carried out and although no archaeological remains have been identified within the area of proposed development, two trenches will be excavated to examine the nature extent and condition of any remains which may exist.

1.3 The County Archaeologist's brief has been noted and any comments here are intended to amplify or clarify those requirements.

1.4 The archaeological work proposed conforms to the requirements of Planning Policy Guidance Note 16: Archaeology and Planning (DoE 1990), Management of Archaeological Projects (English Heritage 1991), Code of Conduct (Institute of Field Archaeologists 1985), and Standard and Guidance for Archaeological Field Evaluations (Institute of Field Archaeologists 1993).

2.0 AIMS AND OBJECTIVES

2.1 The aims and objectives are:

- i) To examine the nature, extent and condition of any archaeological remains which might exist.
- ii) To provide sufficient information to enable the planning authority to make appropriate recommendations for either preservation or further work that might be required.

2.2 To that end a range of archaeological evaluation techniques were considered. It was decided that trial excavation would be the most suitable course of action in this case. The reasons for this are discussed below.

2.3 Fieldwalking had been carried out on this area as part of a scheme of archaeological fieldwork for a former planning application. The fieldwalking was carried out in good conditions and a concentration of Roman pottery was found towards the site of the former Hall. No artefacts of archaeological interest were retrieved from the current application area.

2.4 Geophysical survey was carried out over the area of the pottery concentration. The survey's eastern edge was approximately 100m to the west of the current application area. Results showed that the main focus of activity was to the west of the survey area, and that magnetic anomalies extended eastwards. The anomalies indicated the presence of linear ditches heading away from the focus of activity. The survey results were confirmed by subsequent excavations.

2.5 The excavation and geophysical survey confirmed that the fieldwalking results were probably an accurate portrayal of activity over the whole site. The main focus was the Roman settlement to the northwest and magnetic anomalies heading eastwards from it represent evidence for associated field systems.

2.6 Metal detectorists had initially provided what was potentially the only evidence of finds retrieval on the development area. However, more detailed discussions, including some held with the County Archaeologist, produced conflicting evidence which could not be relied upon or used as a contributory factor in formulating an evaluation strategy.

2.7 Primary records such as the Sites and Monuments Record and various documentary sources reveal no evidence for earlier settlement within the area. There are references to Medieval settlements, in particular the lost villages of Havercroft and Thonock, but from aerial photographic and place-name evidence these would seem to be further to the north and west.

2.8 Although various forms of geophysical survey would normally be proposed in similar situations, it was felt to be inappropriate in this case for a number of reasons. The excessive weed growth, particularly of thistles up to 1.5m high would have to be cleared to allow survey to be undertaken. Magnetic

susceptibility, which sometimes identifies areas of human activity will be inappropriate because of the ridge and furrow and its subsequent flattening which will mask any potential results. However, the most notable reason was because, based on the evidence from fieldwalking and geophysical survey, the archaeological potential of the development site was clearly low.

2.9 'Random' trench locations were subject to the constraints of the contractor's topographical requirements. It was preferable that the trenches were located centrally within the development area to avoid weakening the soil structure where edges were to be cut during creation of the lakes.

2.10 A sufficiently large area needed to be excavated for meaningful results to be gained, and 280sq m of the total site was considered a generous sample size.

2.11 It was desirable to test the level of colluviation on this part of the site, and so fewer trenches which could provide longer soil profiles in section were preferable to a series of shorter trenches.

2.12 The excavation of 2 70m x 2m trenches satisfies all the objectives.

3.0 METHODOLOGY

3.1 On the basis of the present information it is proposed that two trenches should be excavated to examine the nature, extent and condition of any buried remains in the area of the proposed lakes.

- i) Trench 1 : 70 x 2m in the area of the northern lake.
- ii) Trench 2 : 70 x 2m in the area of the southern lake.

The suggested approximate position of each trench is shown in Figure 1.

3.2 Topsoil and modern overburden will be removed by a JCB or similar machine using a toothless bucket and any archaeological features excavated by hand to a maximum depth permitted by Health and Safety Legislation.

3.3 A suitable sample of features will be excavated by hand. A drawn and written record will be made of all archaeological features and sections. All archaeological features will be recorded by single context recording forms. Photographs of all archaeological features will be taken using colour print, colour slide, and black and white film.

3.4 Should any material be found suitable for environmental analysis, it will be sampled.

3.5 Each of the trenches will be backfilled and re-instated to a condition previously agreed with the client.

3.6 The County Archaeologist will be informed of the excavations and will be given the opportunity to examine the trenches. Contingency arrangements will be made for specialist assistance if necessary.

3.7 The excavations will be completed within two weeks. A preliminary archaeological report on the excavations will be produced within two weeks of completion of the excavations and a full report produced within two months. The importance of any archaeological remains will be assessed either on the basis of the non-statutory criteria (PPG 16 Annex 4) or as of national, regional, local or negligible importance as appropriate.

3.8 Upon completion of the project, arrangements will be made for the archival record and report to be deposited at the County Sites and Monuments Record. Within six months of the completion of site work a summary report will be completed for submission to the Local Planning Authority, and the results will be made available to the County Sites and Monuments Record.

4.0 PERSONNEL

4.1 The project will be directed by Dr John Samuels, BA, PhD, FSA, MIFA with assistance from Forbes Marsden, BA, Sue Ensor, BA, MSc, Fred Coupland, BA, PIFA and Janine Buckley, BA. If environmental analysis is required, this will be undertaken by R. Alvey, M. Phil.

4.2 John Richard Samuels BA, PhD, FSA, MIFA

John Samuels has been an independent archaeological consultant since 1989. He has a BA (Hons) in history from University College, Cardiff (1974) and a PhD in archaeology from the University of Nottingham (1983). He has been a member of the only professional body for archaeologists, the Institute of Field Archaeologists, since its foundation in 1983 and is a member of the Prehistoric Society, The Society for Medieval Archaeology, The Vernacular Architecture Group and the Society for the Preservation of Ancient Buildings. He has been an executive committee member of various archaeological specialist and advisory bodies and is currently chairman of Newark Castle Trust, and executive committee member of : the Trust for Nottinghamshire Historic Churches, the Nottinghamshire Building Preservation Trust, Council for British Archaeology Regional Group 14 and editor of East Midlands Archaeology.

He has published over 40 academic articles in learned journals and publications and since 1962 has been involved in numerous archaeological excavations of all periods throughout Britain as well as site and historic building surveys. Appointed as the Archaeological Field Officer for the M180 Motorway in 1975, he has been successively Assistant Director of Liverpool University Rescue Archaeology Unit, lecturer in archaeology and local history for the WEA and University of Nottingham and Field Monuments Warden for English Heritage. He is an honorary Research Fellow in the Department of Archaeology at the University of Nottingham.

Since 1989 he has been an archaeological consultant for a wide range of projects from housing and office developments to golf courses and major trunk road schemes. In many cases archaeology has been a significant aspect of an Environmental Assessment and Dr. Samuels is also an advisor to the Department of Transport on the revised Manual of Environmental Assessment. Among the various road schemes in which he is involved is the upgrading of the A303 past Stonehenge, without doubt the most archaeologically sensitive area in Britain.

Dr. Samuels has also been appointed by the Redundant Churches Fund and English Heritage to advise upon the restoration of historic monuments. He is also the Chairman of Newark Castle Trust which is undertaking a long-term project to excavate and better display this important castle to the public.

4.3 Forbes Marsden BA

After a 23 year career with Home Brewery as Manager of the Hotel and Catering Division and subsequently as a consultant in food hygiene, Forbes Marsden had been involved with local history as an interested amateur. Forbes is currently enrolled on the Advanced Certificate of Archaeology at the University of Nottingham.

For the past five years he has worked on various archaeological projects with John Samuels Archaeological Consultants including Newark Castle, Cromwell Church, M2 widening, M1 widening, Loughborough bypass, A23 widening, Huntsman's Quarry and Willoughby-on-the-Wolds Church.

His experience now ranges from archaeological excavation to archival research and he has a particular interest in cartographic sources.

4.4 Sue Ensor BA, MSc

Sue Ensor has a BA (Hons) in archaeology from the University of Nottingham (1990) and an MSc in human osteology, palaeopathology and funerary archaeology from the Universities of Bradford and Sheffield (1994).

She has been involved in archaeological excavations of all periods throughout the region, and since 1990 she has supervised the annual excavations at the Lunt Roman Fort, Warwickshire, undertaken by the University of British Columbia. She has been commissioned to write specialist palaeopathological reports for a number of organisations including the University of Bradford, and the Newark Castle Trust. She has also had work published in the British Archaeological Reports and Nottingham University publications.

In 1989 she received an Eric Fletcher Award from the Society for Medieval Archaeology. She is a part time lecturer in archaeology at Newark and Sherwood College, and a voluntary specialist medieval roof guide for Lincoln Cathedral.

4.5 Fred Coupland BA, PIFA

Fred Coupland has been involved in archaeology since 1984 and obtained his BA (Hons) in Ancient History and Classical Archaeology at the University of Sheffield in 1988.

Although his particular interest is Romano British and Roman Military History, he has wide experience in all aspects of fieldwork which has led him to many interesting site in a supervisory capacity and on several occasions he has worked at Hadrian's Wall.

Having worked at one time in the cycle manufacturing industry, Fred is a keen cyclist and has raced in this country and on the continent.

4.6 Janine Buckley BA

Janine gained a BA in Archaeology from Nottingham University in 1995, having been involved in archaeology from when still at school. Since joining the practice, Janine has gained experience in field and desktop archaeological assessment and evaluation work on road schemes, and other developments. Her post graduate studies have included courses in archaeological survey and field archaeology run by University College, London. She has taken part in the Newark Castle Trust excavations for 3 successive years, and will return for the final season this year as an assistant supervisor.

Figure 1: Location of Proposed Lakes Top Dressing Store and Area of Geophysical Survey

