

Land to the East of Biggleswade Bedfordshire

Stage 1 Field Walking

Stage 2 Scan and Detailed Geophysical Survey

Archaeological Evaluation Report



Oxford Archaeology

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RPS Town Planning and Consultants on behalf of Martin Grant Homes Ltd and Taylor Woodrow Developments Ltd

LAND TO THE EAST OF BIGGLESWADE, BEDFORDSHIRE

NGR: TL 2057 4516 (centered)

STAGE 1 FIELD WALKING STAGE 2

SCAN AND DETAILED GEOPHYSICAL SURVEY ARCHAEOLOGICAL EVALUATION REPORT

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SUMMARY

Oxford Archaeology carried out a field evaluation at Land to the East of Biggleswade on behalf of Martin Grant Homes Ltd and Taylor Woodrow Developments Ltd. The evaluation comprised field walking (Stage 1) as well as scan and detailed geophysical survey (Stage 2). This document details the results of the field walking, summarises the overall evaluation and includes the scan and detailed geophysical survey reports as appendices. The evaluation has highlighted the probable presence of prehistoric activity to the centre of the site.

1 Introduction

1.1 Location and scope of work

- 1.1.1 In April 2003 Oxford Archaeology (OA) carried out field walking across agricultural land at Land to the East of Biggleswade, Bedfordshire. Subsequently OA commissioned Northamptonshire Archaeology to carry out a scan (magnetic susceptibility) and detailed (gradiometer) geophysical survey at the site. This work forms a Stage 1 and 2 non-intrusive evaluation. The evaluation has been carried out at the instruction of RPS Town Planning and Environmental Consultants on behalf of Martin Grant Homes Ltd and Taylor Woodrow Developments Ltd. The work was carried out to the specifications of a brief set by and a WSI agreed with Martin Oake Bedfordshire the County Archaeological Officer for Bedfordshire.
- 1.1.2 Martin Grant Homes Ltd and Taylor Woodrow Developments Ltd propose to develop Land to the East of Biggleswade for residential areas together with public open space and community facilities. A new eastern relief road (ERR) is also proposed, which will link an area of new housing close to the A6001 and the southern part of the town, with the B1040 Biggleswade Road to the north. Junctions along this length of link road will provide vehicular access to the proposed residential areas. The proposed development will be contained along its eastern side by the proposed eastern relief road and the existing urban fringe of Biggleswade to the west.
- 1.1.3 Martin Oake the County Archaeological Officer for Bedfordshire has advised that the proposal area is archaeologically sensitive. But at present there is insufficient information available on archaeology to enable an assessment of the potential impact of the development to be made or to allow an appropriate mitigation strategy to be developed. Therefore, further information on the archaeology of the site is required

before any planning application can be determined. This information will be acquired through an archaeological field evaluation. This is in line with Local Plan policy and the guidance contained in PPG16 *Archaeology and Planning*.

1.1.4 This document details the results of the field walking and summarises the results of the geophysical survey. The scan (magnetic susceptibility) and detailed (gradiometer) geophysical reports and recommendations are included as appendices.

1.2 Geology and topography

- 1.2.1 The development site lies to the immediate east of Biggleswade. The site covers an area of approximately 74.24 hectares (183.4 acres). It is bounded to the north by agricultural land and the B1040, Potton/Biggleswade Road, and to the west by existing school grounds and residential development presently being constructed along with existing housing areas. Agricultural land lies immediately to the east and south of the development site.
- 1.2.2 The land proposed for development is in agricultural use, which comprises a network of fields, some of which are defined by hedgerows. The site lies on the edge of the valley of the River Ivel, which flows c.2km to the west. It is on a low ridge running north-south between the Ivel and one of its tributaries. It is at a height of c.35m AOD and is generally fairly level with a slight fall in height from west to east.
- 1.2.3 The northern half of the development site lies on an area of second terrace gravels whilst the southern half lies on glacial gravels. The dividing line between these two bands of gravel runs approximately along the east-west road to West Sunderland Farm. A band of alluvium is present associated with the stream bounding the development area on the east. To the south of this the glacial gravels join the boulder clay which stretches over the eastern part of the parish from this point. However only a narrow strip of this clay exists within the development site itself.

1.3 Archaeological and historical background

- 1.3.1 As part of the Environmental Statement regarding the proposed development, OA has produced a section on Cultural Heritage and Archaeology (OA 2003a) which assesses the archaeological potential of the site based on known archaeology in the area. The Gazetteer of Cultural Heritage Features within the development area is reproduced in Appendix 2. This relates to figure 5; Cultural heritage features mapping. For a full understanding of the archaeological potential of the site, the relevant section of the Environmental Statement should be consulted.
- 1.3.2 The site lies in an area of known archaeological potential. Evidence for archaeological activity dating to the later prehistoric and Roman periods, and possibly the medieval period, has been recorded from within the site itself. This evidence comprises cropmarks (identified from aerial photographs), which are distributed across much of the site (HER 3544, 15328 and 16160). They include a ring ditch, enclosures and linear features and form part of a wider complex of cropmarks to the

north east and east of Biggleswade (e.g. HER 509, 3543, 3548, 13957 and 15080). The most significant evidence being what appears to be a Neolithic cursus, which lies 500m to the north west of the development area.

- 1.3.3 The site of a 19th century brickworks lies within the site, on its eastern edge. The brickworks is shown on the 1881 25" map and labelled as 'brick field'. It had three large buildings and two subsidiary ones, one of which is labelled on the map as the kiln. There are also two buildings slightly to the north-east of the brickworks, in the triangular field and one to the north-west in the same field as the brickworks, which may also have been associated with the brickworks. A large pit is labelled as the Clay Pits, from which the raw material would have been extracted and a pump is marked as being present over a filled-in pit.
- 1.3.4 The brickworks had become disused by the time the 2nd edition map was produced in 1902 and few of the buildings associated with the brickworks remained.
- 1.3.5 Beyond the site itself a number of archaeological investigations have revealed archaeological activity. Extensive archaeological investigation of the deserted medieval settlement of Stratton (HER 518), to the south of the proposed development area, revealed activity dating to the Saxon and medieval periods as well as evidence of Bronze Age and Iron Age occupation (HER 17733). At Broom Quarry, 3km to the east, extensive archaeological investigations in advance of quarrying in a similar location (a low gravel and clay ridge astride a small tributary of the Ivel) has produced evidence of activity from the Neolithic to Saxon periods including settlements, funerary and ritual monuments and field systems (CAU 1997 and 1999).

1.4 Evaluation aims

1.4.1 The aims of the evaluation were to determine the location, extent, date, character, and state of preservation of any archaeological remains surviving within the proposal area and in addition to make available the results of the investigation in order to inform the extent and nature of a Stage 3 (trial trench) evaluation.

2 EVALUATION METHODOLOGY

2.1 Field-walking

- 2.1.1 Field-walking was undertaken on fields under cultivation within the proposal area at the time of survey. This totalled 48 ha (see fig.2).
- 2.1.2 The survey was undertaken using a 20m grid, which was tied into the national grid. Transects of 20m length were walked in 20m stints and staff collected artefacts from a 1m wide strip either side of the transect. Transects and stints were labelled Alphanumerically with A-Z identifiers (excluding O) at 100m intervals prefixing numerical identifiers (0-4) at 20 m intervals.
- 2.1.3 Artefacts of all types and periods were collected from the ground surface, retained and removed for processing and analysis.

2.1.4 The finds were scanned. Modern material was tabulated and discarded. Brief comments are included for modern CBM and pottery. Artefacts of archaeological significance have been washed, marked, recorded and analysed by relevant specialists (according to the Bedfordshire County Artefact Type Series, where relevant). The results of the fieldwalking has been presented as density distributions across the area for each (archaeologically significant) artefact class present.

2.2 Geophysical survey methodology

- 2.2.1 See Appendices 3 and 4 for geophysical survey methodologies and reports.
- 2.2.2 Due to crop growth the magnetic susceptibility (scan) survey of the proposal site was restricted to c 67ha.
- 2.2.3 Recommended areas for detailed gradiometer survey based on the results of the scan survey totalled 5.4ha. Due to crop growth only 0.96 ha was available for survey.

3 RESULTS: FIELDWALKING

3.1 Presentation of results

- 3.1.1 Finds from the fieldwalking have been analysed to an appropriate level in accordance with their potential to address the evaluation aims. All finds are tabulated in Appendix 1.
- 3.1.2 Pottery has been tabulated, dated and the distribution of possibly significant sherds (non post medieval) has been illustrated in relation to the geophysical survey and cultural heritage features mapping.
- 3.1.3 All lithics have been recorded, tabulated and are illustrated as find spots in relation to the geophysical survey and cultural heritage features mapping.
- 3.1.4 CBM has been recorded, tabulated and brief comments are included. All the diagnostic CBM is modern. The distribution of CBM has not been illustrated.
- 3.1.5 Glass; Only modern glass was collected during the field walking. No further work was carried out with this material.
- 3.1.6 Stone; One artefact of note (an either a very large spindle whorl, or a small flywheel or drill weight) was collected. This has been described and its collection point shown in illustration.
- 3.1.7 Metal objects; All metal objects retrieved were scanned and were modern. No further work was carried out.
- 3.1.8 Animal Bone; The bone assemblage was scanned. All material collected could be interpreted as modern domestic material. No further work was carried out.
- 3.1.9 Clay pipe; The location of clay pipe stems has been tabulated.

3.2 Finds

Pottery

- 3.2.1 Some 530 sherds of pottery were recovered from the site. These were generally small and abraded, consistent with a disturbed ploughsoil assemblage. All but a few pieces were post-medieval in date. The pottery, collected from all fields, largely comprised earthenwares and glazed whiteware. Earthenwares consisted of both glazed and unglazed fabrics. The former, and commoner of the two, generally spans the 17th to 19th centuries, while the latter tends to be confined to the 17th-18th century (Baker and Hassall 1979, 220). Glazed whiteware was the most prolific type to be recovered; most of which is likely to fall within a 19th/early 20th century date range. Despite the predominance of whiteware, a varied assemblage of other types was collected. These included porcelain (probably entirely English, as opposed to Chinese) and so-called 'Blue and white' pottery or blue-transfer printed wares. The latter mainly spans the 17th to 19th century, although the tradition continued to some extent into the early 20th century (Copeland 2000). Slipware, dating to the mid 17th to early 19th century and probably from Staffordshire, was also recovered. Stoneware bottle fragments were found, which, like the whiteware, mainly date to the 19th/early 20th century (Baker and Hassall 1979, 222). Flowerpot sherds of 19th and 20th century date were also recovered.
- 3.2.2 A very small assemblage of sherds, potentially of medieval date, are present from fields 1, 6 and 11 (see Fig.2 for fieldwalking, field number allocations). The most clear-cut sherds comprise one handmade, hard oxidised shelly ware from Field 6 probably dating to the later 12-13th century and one wheelmade sandy ware from field 11. Two sandy wares from field 1 are also likely to be of medieval currency (late 12-14th century) whilst four further degraded hard gritty sandy wares from the same field could date to the later medieval-early post-medieval period.

Ceramic building material

3.2.3 A total of 23,722g of ceramic building material was recovered during fieldwalking. The assemblage comprises 1,492 small abraded fragments with no distinguishable features except the occasional curved fragment possible from ridge tiles. The material is Post Medieval in date.

Glass

3.2.4 All glass fragments are likely to date to the 19th and early 20th century. Most derive from bottles. Two complete bottle-stoppers were found.

Worked Flint

3.2.5 An assemblage of 13 struck flints and three pieces (94 g) of burnt unworked flint was recovered from the fieldwalking (Table 1). The flintwork is generally in a poor condition, with heavy modern damage and rolling evident on most pieces. With two exceptions from collection units F1 A3 and F1 B3 (field 1), the flints are uncorticated.

Field:				1	1				3	3	4	9	1	0	11	Total:
Category:	F0		F1		F2	F3	F4	Н3	D2	E4	G4	D2	Н0	H4	J0	
	C4	A3	В1	В3	В4	В3	B0	C4	E3	D2	E3	13	K4	K0	L3	
Flake	1	1		1	1		1			1	1		1	1		9
Irregular waste			1									1				2
End and side scraper						1										1
Hammerstone															1	1
Burnt unworked flint								1	1	1						3
Total:	1	1	1	1	1	1	1	1	1	2	1	1	1	1	1	16

Table 1: Flint by type from fieldwalking.

3.2.6 The assemblage is composed mainly of unretouched flakes, the majority of which are undiagnostic. An end and side scraper of possible Neolithic or (? earlier) Bronze Age date was recovered from square F3 B3 (field 1). This piece exhibits neat, abrupt retouch to the distal end and both lateral margins. Square J0 L3 (field 11) produced a flint hammerstone (358 g), consisting of an almost spherical flint cobble with heavy battering to both ends.

Field:	X:	Y:	Category:	No.	Burnt	Broken:	Weigh	Description:
1	F0	C4	Flake	1		1		Preparatory flake, probably hard-hammer struck. Broken longitudinally.
1	F1	A3	Flake	1	1	1		Heavily calcined tertiary flake fragment.
1	F1	B1	Irregular waste	1				Rolled and glossed.
1	F1	В3	Flake	1		1		Rolled flake.
1	F2	B4	Flake	1		1		Side-trimming flake with distal break. Gravel flint. Neolithic / Bronze Age.
1	F3	В3	End and side scraper	1				In rolled and glossed condition. Neatly made on tertiary flake, with abrupt retouch to both lateral margins and distal end. Slightly 'nosed' form. Neolithic - (earlier?) Bronze Age?
1	F4	В0	Flake	1		1		Tertiary flake in good condition with exception of modern damage to left-hand side. Slight platform
1	H3	C4	Burnt unworked	1	1		62	Heavily calcined.
3	D2	E3	Burnt unworked	1	1		15	Heavily calcined.

Field:	X:	Y:	Category:	No.	Burnt	Broken:	Weigh	Description:
3	E4	D2	Flake	1				Rolled and glossed secondary flake with heavy plough-damage.
3	E4	D2	Burnt unworked	1	1		17	Heavily calcined.
4	G4	E3	Flake	1		1		Secondary flake in very poor condition - rolled, with extensive modern damage. Probably chalk flint with a very thick cortex
9	D2	I3	Irregular waste	1				Possible core fragment? Lightly rolled condition. Gravel flint.
10	Н0	K4	Flake	1		1		Thin secondary flake.
10	H4	K0	Flake	1		1		
11	Ј0	L3	Hammerstone	1			358	Spherical cobble of good quality flint with heavy battering to both ends.

Worked stone

- 3.2.7 All the stone was examined with the aid of a x10 magnification hand lens.
- 3.2.8 Five items of stone were recovered during fieldwalking. These include a chunk of unworked sandstone and three fragments of shale, all dried and retaining no evidence that they were worked. Although the main known exploited sources of shale are in Dorset, shale may have been available in the Kimmeridge Clay that outcrops in a narrow band to the north and west of Biggleswade.
- 3.2.9 Half a pierced roundel with an oblong cross section was also recovered. This is either a very large spindle whorl, (diameter 94 mm) or a small flywheel or drill weight; it has been suggested that anything greater than 100 mm in diameter is too large to be a spindle whorl (Brown 1984, 422). There is nothing distinctive about the object which could be used to attribute it to a particular phase and, although less common than their ceramic counterparts, stone spindle whorls/discs are found on sites of all periods.

3.3 Summary fieldwalking results

3.3.1 Mapping of the archaeologically significant artefacts retrieved during the fieldwalking programme shows a low density of material across the surveyed areas. Two areas are highlighted as having potentially notable artefact assemblages. To the south west of the site several worked and burnt flints as well as medieval pottery was retrieved. To the centre of the proposal area three worked flints were retrieved in close vicinity to possibly prehistoric crop marks.

4 RESULTS: GEOPHYSICAL SURVEY

4.1.1 The magnetic susceptibility scan highlighted seven areas incorporating anomalies that may represent archaeological activity (see Appendix 3). Due to crop growth only one of these areas was available for detailed gradiometer survey.

4.1.2 Detailed gradiometer survey was carried out on the one 0.96ha zone available (to the centre of the proposal area). The area, which had exhibited low magnetic susceptibility and also contained crop marks, detected a number of very weak magnetic anomalies describing three possible circular features and a number of ditches including a possible sub-rectangular enclosure. The magnetic survey also indicated a putative area of archaeological activity.

5 DISCUSSION AND INTERPRETATION

5.1 Reliability of field investigation

- 5.1.1 The nature of non-intrusive evaluation is such that only presence rather than absence of archaeological remains can be confidently determined. Archaeological features may be in-filled with material similar to the surrounding geology and therefore remain obscure to geophysical survey. If archaeological features are deeply buried or do not contain at least moderately abundant artefacts, plough action and soil erosion/movement will not bring sufficient finds to the surface to imply a focus of archaeological activity rather than a 'background noise' scatter to be collected during field walking. Finds rich periods (e.g late prehistoric, Roman and medieval) are thus more visible than finds poor periods (e.g early prehistoric and Saxon).
- 5.1.2 The field walking was carried out in good weather conditions and although crops had just started to come through visibility was good.
- 5.1.3 The presence of defined anomalies within the area of detailed gradiometer survey suggests that the interpreted results of the magnetic susceptibility survey are a good indication of areas with potential for archaeological remains.

5.2 Overall interpretation

- 5.2.1 The combined results of the field walking and geophysical survey (carried out todate) have been viewed in relation to mapping of the cultural heritage features. The results given here are only those where the Desk Based Assessment has been enhanced by this survey rather than a full reiteration of the archaeological potential.
- 5.2.2 The evaluation results show an indication of probable prehistoric activity to the centre of the site. This comprises 3 worked flints retrieved from the fieldwalking survey and possible ditches recorded in the gradiometer survey in addition to the several cropmark areas (**OA** 65 palaeochannels (?) 14 linear features and 34 possible ring ditch) detailed in the Desk Based Assessment.
- 5.2.3 Eight worked flints were retrieved from the south west of the site during field walking. These do not appear to relate to significant signal variations recorded during the magnetic susceptibility survey. However these finds are in reasonably close

proximity to excavations on the Bronze -Age/Iron Age ring ditch and pit excavations carried out to the south west (**OA 87** and **88**) and may indicate either the extension of prehistoric activity/occupation in to this part of the proposal area or a separate focus of activity.

5.2.4 No positive results can be confidently inferred from the presence of 12th-14th century medieval pottery retrieved during the field walking. Given the medieval origins of Biggleswade and the vicinity of Stratton DMV to the south (OA 45,39, 76, 85, 86, 87, 88 and 89) it is to be expected that at least some pottery dating to this period would be retrieved - possibly representing manuring.

5.3 Further Work

- 5.3.1 Presently six of the areas that were recommended for detailed gradiometer survey (see Appendix 3) have not been carried out due to crop growth.
- 5.3.2 It is suggested that the Stage 3 trial trench evaluation is carried out in the areas that are available at present (this is approximately the same area as the fieldwalking survey) and the results of all investigations are then reviewed to formulate a strategy for the areas presently under crop. Trenches should be targeted on features identified from geophysical and heritage features mapping.

APPENDIX 1 FINDS INVENTORY

Transect	Pot	CBM	Glass	Slate	Other	Comments
FIELD 9						
C1/J1	2	1				Earthenware; Glazed white ware
C1/J2		1			3	Shiny black material - ?shale
C2/I3		1				
C2/I4	1	1				Earthenware
C2/J0		1				
C2/J2	2					?Flowerpot
C3/I2	1	1				Clay pipe
C3/J1		1				
C3/J3		1				
C4/I1				1		
C4/I2		1	1			
C4/I3	1	1	2	1		Glazed white ware
C4/J0		2				
C4/J1	1	2	1	1		Blue-transfer; modern glass
C4/J2			1			, , , , , , , , , , , , , , , , , , , ,
C4/J3	2	1				
D0/I0		2				
D0/I1	2					Earthenware
D0/I2		1				
D0/J0		1				
D0/J2	1	1				Earthenware
D0/J3	1	1				
D0/J4		1				
D0/K0	1					
D1/J2		1				
D1/J3		1				
D1/J4	1					Earthenware/flowerpot
D2/H0	2					Earthenware; clay pipe
D2/H2	1					7 7 1
D2/I2		1				
D2/I3					1	Flint irregular waste
D3/G4		4				
D3/H0		3	1			
D3/H1			1			
D3/H2		3				
D3/H3		1				
D3/H4	1	1				Earthenware
D3/I0	1	1				Earthenware
D3/I1	1	1				Glazed earthenware
D3/I3		1				
D3/I4		3				
D3/J0		1				
D3/J1		1				
D4/G4	1	1				Glazed Glazed white ware
D4/H1	1					Earthenware
D4/H2	1					Earthenware
D4/H3	2					Glazed Glazed white ware; red
						earthenware
D4/I1	3					Earthenware

Transect	Pot	CBM	Glass	Slate	Other	Comments
D4/I3		1				
D4/J1	1	1	1			Earthenware
E0/G4	1		1			Eurnenware
E0/H0	5		4	3		Blue-transfer
E0/H1	5	1	2	3		Blue-transfer
E0/H2	2	1	2	1		Porcelain
E0/H4	1			1		1 Oreciam
E0/I0	1		1			
E0/I0			1	1		
E0/12 E0/I3	1	2		2	1	Iron nail
E0/13 E0/I4	1	3	2	1	1	Glazed white ware
		2		1		
E0/J0	2	2	1			Flowerpot; Glazed white ware
E0/J1			1	1		D 1:
E1/H0	2		1	1		Porcelain
E1/H1	1	2	1	1		
E1/H2	1		1			Glazed white ware
E1/H4	1	1	-			
E1/I0	1	1				Porcelain
E1/I1	1					
E1/I3	3					Porcelain; clay pipe
E1/I4	1	1	2			Porcelain
E2/H2		1				
E2/H3	1	1				Earthenware
E2/H4		2				
E2/I0		1				
E2/I2	1	1				Earthenware
E3/H2		2				
E3/H3		1				
E3/H4		1				
E3/I0		2				
E4/H1	2					Glazed earthenware; Blue-transfer
E4/H2	1	1				Glazed Glazed white ware
E4/H3	1	1				Blue-transfer
E4/H4		2				
E4/I0		1				
F0/H3		1				
F0/H4		1				
J1/E1		1				
FIELD 4						
D4/H0	2	2				Earthenware; clay pipe
D4/H2		1				/ / / /
D4/J0	2					Glazed white ware
D4/J2	1			1		Flowerpot
G4/F1		3				F
H2/E0		2				
H2/E2		_			1	
H2/E3	2			1	1	Earthenware
H2/F1	1		1	+		Earthenware
H2/G0	2			1		Clay pipe
I0/D3	-	2		+		City pipe
I0/D3		2		+		
I0/D4 I0/E0		2		1		
I0/E0 I0/E1		1		1		
I0/E1 I0/E2	2	1	1	+		Earthenware
		2	1			Latifichiwate
I0/E3	1	2				

Transect	Pot	CBM	Glass	Slate	Other	Comments
I0/E4		4				
I0/F0		2				
I0/F2		1				
I0/F3		1				
I0/G0			1			
I2/D3			2			
I2/D4			1	1		
12/E0	3		3	1		Glazed white ware
I2/E2	1		3			Porcelain Porcelain
12/E3	-		1			1 orderam
I2/E4	1	3	1	1		Blue-transfer
12/F0	1	1		1		Dide transfer
12/F1		2				
12/F3	1	2				Glazed white ware
12/G2	1					Glazed white ware
I3/D4	1	1				Glazed white ware
I3/E0		1	3			
I3/E4	1		3			Earthonyara
13/E4 13/F0	1	1				Earthenware
	1	1				Domosloin
I3/F1	1	2				Porcelain
I3/F2	1	2				D1-:
I3/F3	1					Porcelain
I3/G0	1	1				Porcelain
I3/G1		1			1	C1 11
I3/G2					1	Shell
I4/D4		2				
I4/E0		3				- 1
I4/E1	1	1				Earthenware
I4/E3		1				
I4/E4		2				
I4/F1		1				
I4/F2		2				
I4/F4		1				
I4/G0		3				
I4/G1		2				
I4/G2		1				
I4/G3		3				
J0/D4	1		1			
J0/E0	2		1			Glazed white ware
J0/E1	2		1			Glazed white ware
J0/E2				1		
J0/E3	1	1		1		Glazed white ware
J0/E4			1			
J0/F2			2			
J0/F3				1		
J0/F4		1				
J0/G0		1		1		
J0/G1		1				
J0/G3		2				
J0/GZ		1				
J1/E3		1				
J1/F0		1				
J1/F4	1					Clay pipe
J1/G0		1				
J2/G2			1	2		
		÷	•			

Transect	Pot	CBM	Glass	Slate	Other	Comments
J2/G3	1					Porcelain
FIELD 1						
E1/C1					1	Whetstone
E1/C3		1				
E2/B4		1				
E2/C0	1					?late Medieval-early post-
22,00						medieval
E2/C1		1				medie var
E2/C3	1	1			1	Flowerpot; iron nail
E2/C4	1	3			1	Trowerpot, non nan
E3/B4		4				
E3/C3	1	1			1	Blue-transfer; iron fragment
E3/C4	1	1		1	1	Glazed white ware
E3/C4	1	1	1	1		Glazed white ware
E4/B2	2	1	1			Red earthenware lid rim
E4/B2					1	Iron nail
E4/B4		1			1	Iron fitting
E4/C0		3			1	Holl litting
E4/C0 E4/C2		5				
E4/C2 E4/C3	2	3				Earthenware
		1	1			Earthenware
E4/C4		1	1			
F0/A3	2					P. d
F0/A4	2	1				Earthenware
F0/B0		2				
F0/B1		1	1			
F0/B2	1	1				Ceramic door knob
F0/B3		1	1			
F0/C0	4	4				Earthenware; ?late medieval
						sandy ware x1
F0/C1	1	4	1			Stoneware
F0/C2		1				
F0/C3	1					Glazed white ware
F0/C4	2		2		3	Glazed white ware - ?modern;
						metal ring and nail; broken flint
						flake
F1/A3		5	1			Burnt flint flake
F1/B0	1	1			1	Glazed white ware; iron nail
F1/B1					2	Iron nail (?PM); flint irregular
						waste
F1/B2		3				
F1/B3	7	4			3	Earthenwares/flowerpot; flint
						flake (1); slag (1); iron piece (1)
F1/B4		12		1		
F1/C0	3					
F1/C1		3			1	Copper button
F1/C2	1	4				Medieval sandy ware (late 12-
						14 th)
F1/C3	4	1	1			Medieval sandy ware (x1); late
						Med/early post-med (x1);
						porcelain; clay pipe
F1/C4	2	1	1	1		Blue-transfer
F2/A3		2				
F2/A4	1	2				Late Medieval/ early post-
						medieval sandy ware
F2/B0		1				
F2/B1		4				

Transect	Pot	CBM	Glass	Slate	Other	Comments
F2/B2		5				
F2/B3		-	6			
F2/B4	1	5			1	Broken flint flake
F2/C0	1	2				Brondin many many
F2/C1	2	5				Glazed white ware
F2/C2	1	1			3	Earthenware; 19th/20th century
12/02	1	1				buttons
F2/C3		4			1	Bone
F2/C4		3			1	Copper alloy button
F3/A4		6			1	Copper unoy outton
F3/B0	1	4	1		+	Late Medieval-post-medieval
13/80	1	-	1			sandy ware
F3/B2		4				Surray ware
F3/B3		5	1		1	flint scraper
F3/B4		1	1		1	mint scraper
F3/C1		5				
F3/C1		2				
F3/C2		1				
F3/C3 F3/C4		2				
F4/A2	1	<u> </u>	2			Porcelain
F4/A3	1	2	<u> </u>			1 orceram
F4/A3		2				
F4/A4 F4/B0		4	1	1	1	Broken flint flake
F4/B0 F4/B1	1	3	1	1	1	
F4/B1	1	1	1			Flowerpot
F4/B2 F4/B3	1	1		1		Earthenware
F4/B3 F4/B4	1	2	1	1	1	Earthenware Earthenware
F4/B4 F4/C0	1	_	1		1	Earmenware
F4/C0 F4/C1		2				
	3	1				Demonstration and an arrange
F4/C2	1	1	1			Porcelain; earthenware Porcelain
F4/C3	1	1	1	1		Porceiain
F4/C4	1	3 2		1	1	C11-1:41-1
G0/A3	1				1	Glazed white ware; bone
G0/A4		2			1	I. C.
G0/B0	1				1	Iron fragment
G0/B2	1	1				Clay pipe
G0/B3	1	1				Glazed white ware
G0/B4		1				_
G0/C0	1	1				_
G0/C1	1	1				Clavenina
G0/C4	1	4				Clay pipe
G1/A3		1				_
G1/A4		2	1			
G1/B2		2	1			
G1/B3		1	1	1	1	
G1/B4	1	1	1	1	1	Charcoal
G1/C0	1	3			1	Clay pipe; shell
G1/C1		2				
G1/C4		3				
G1/D0	1	4	1			
G2/B1	1	2	1			Earthenware
G2/B2		5				
G2/B3		1				
G2/B4		1			1	Piece of lead
G2/C1		1				

Transect	Pot	CBM	Glass	Slate	Other	Comments
G2/C2		2	1			
G2/C3		3	1			
G2/C3	2			+		Earthenware/flowerpot
G2/C4	+-	5				Bartion ware, no welpet
G2/D0	1	2				Earthenware
G3/B3	2	1	1			Glazed white ware
G3/C0	2	1	1			Glazed white ware
G3/C0	1	2	+	1		Clay pipe
G3/C1	1	1	+	1	1	Burnt animal bone
G3/C2 G3/C3	2	1		+	1	Red earthenware; iron nail
G3/C3 G3/C4	1	3	1	1	1	Stoneware
	1	1	1	1		Stolleware
G3/D0		1	1		1	C
G4/B3	1				1	Copper alloy button
G4/B4	1		1			Clay pipe
G4/D0		2	1			
H0/B1		2	1			
H0/B2	1	1	1			
H0/B3		3			1	Iron nail
H0/B4			2			
H0/C0		1	3	3		
H0/C1	3		2			Porcelain; earthenware
H0/C3			1			
H0/C4		1	2			
H0/D0	1	5	1			Earthenware/flowerpot
H0/D1					1	Plastic
H1/B4		1				
H1/C1		1				
H1/C2		2				
H1/C4		2				
H1/D0		2	1			
H1/D1		2				
H1/D1		2				
H2/C0	1	1				Glazed white ware
H2/C1	1	2				Clay pipe
H2/C2	-	1				
H2/C4		2	1	+		
H2/D1		1	1	+		
H3/C2	1	1	1			Glazed white ware
H3/C4	1	1	1		2	Charcoal x 1; burnt unworked
113/04		1	1			flint (61 g) x 1
H3/D0	†	2			1	Slag
H3/D1	+	1			1	Animal bone
H3/D1 H3/D2	1	1			1	/ Ammar bone
H4/C2	+	1	1			
H4/C2 H4/C3	1	1	1			Glazed white ware
	1			1		Giazeu winte wate
I0/C2	1			1		
I0/C3	1	1	12	1		
I0/C4	1	1	2			Claud white we 1 1
I0/D0	1	1	1			Glazed white ware - looks
IO/D1	1	12	12			modern
I0/D1	1	2	2			
I0/D2	1		1			Clay pipe
I1/D1	1	1	1			
FIELD 11						
I2/M1		1				

Transect	Pot	CBM	Glass	Slate	Other	Comments
I2/M3		1				
13/L2		1				
13/L3			1			
I3/L9		1				
13/M0	2	1	1			Glazed white ware
13/M4	1	1	1	1		Glazed white ware
13/N0	1	4		1		Glazed white ware
I4/L0		2				
I4/L1	1	1	+			Glazed white ware
I4/L2	1	1				Glazed white ware
I4/L4		1				
I4/M3		1				
I4/M4		1				
J0/L3		1			1	Flint hammerstone (361 g)
J0/L3		1			1	Finit nammerstone (301 g)
		2	+			
J0/M3 J1/K1		4	1			
		1		1		
J1/L3		1	1	1		
J1/M0		1	1			
J1/M1	1	1	1			Clay pina
J1/M3	1		1			Clay pipe
J2/J4		1				
J2/K0		1	1			D1
J2/K2	2	1				Blue-transfer
J2/K2		1	-			
J2/K3		1	-			
J2/K4		1				
J2/K4		_				
J2/L0		1				
J3/K3		1				
L4/M2		2				
FIELD 6						
F4/G2	5	1	3			Blue-transfer; stoneware
F4/G3	1		1			
F4/G4			1			
G0/G1	1	2				Clay pipe
G0/G2	3	1				Glazed white ware; earthenware
G0/G3		2				
G0/G4	2	1				Clay pipe
G1/G0		2	1			
G1/G1		4				
G1/G2		4				
G1/G3		2				
G1/G4		1				
G2/G1	3	5				White ware door knob; yellow-glaze earthenware; brown-glazed
G2 / 2 2						earthenware
G2/G2		6	1			
G2/G3		3	1			
G2/G4		1			1	Charcoal
G2/H0	1	<u> </u>	1			Red earthenware
G3/G1		5				
G3/G2		8				
G3/G3		4				
G3/G4		5				

Transect	Pot	CBM	Glass	Slate	Other	Comments
G4/G1		1				
G4/G2		3	1			
G4/G3		2	-			
G4/G4	1	2				Yellow glazed earthenware
G4/H0	1	1		1		Tono W Brazon Gardion Ware
H0/G2	1	2		1		
H0/G3	1	3				Stoneware
H0/G4	2	3				Stoneware; earthenware
H0/H0		5				Stoneware, carthenware
H1/G2		1				
H1/G3		1				
H1/G4		3				
H1/H0		2				
H2/G4		1				
H2/H0		2				
	1	1				Familyanasa
H3/G3	1	1		+		Earthenware Shall tampared: madiaval
H3/H0	1			+		Shell-tempered: medieval
FIELD 10			1	1		
F0/I1	1	1	1 1	1		Fouth environs
F0/I2	1	1		1		Earthenware
F0/I2			1			
F0/I3		3	2			D1
F0/I4	2	1				Blue-transfer; earthenware
F0/J0				2		
F1/I0	<u> </u>	2				1- 1
F1/I1	2					Earthenware
F1/I2		1				
F1/I3		1				
F1/I4		1				
F1/J1		1				
F2/I0		1				
F2/I1		2				
F2/I3		1				
F2/I4		1				
F2/J2		1				
F3/H4		1				
F3/I0		1				
F3/I1	1	4	1			Clay pipe
F3/I2		3				
F3/I3		1				
F3/I4		2				
F3/J0		2		1		
F3/J3	3	1	1	6		
F4/I0	1	1				Stoneware
F4/I2	2	1				Earthenware
F4/I3		2				
F4/I4		1				
F4/J1	4					Earthenware
G0/I0	1					Earthenware
G0/I3		1				
G0/J3	1					Flowerpot
G0/J4	1					Earthenware
G1/I2		2				
G1/I3	3	_				Glazed earthenware; stoneware
G1/I4	3		2			Glazed earthenware; Blue-transfer
J 1/1 1		1	-			Grazioa caranon ware, Diae transfer

Transect	Pot	CBM	Glass	Slate	Other	Comments
G1/J0	2					Glazed earthenware
G1/J1	1	2	1			Stoneware
G1/J2	1	1				Stoneware
G1/J3	1					Blue-transfer
G1/L0		3	1			
G1/L1	3	1	1			Clay pipe; glazed white ware
G1/L2		4				eing pipe, ginzen winte water
G1/L3	1	1				Glazed white ware
G1/L4	2					Earthenware; clay pipe
G2/I1		1				Eurmenware, etaly pipe
G2/I2		2				
G2/I2 G2/I3		1				
G2/I4		4				
G2/J0		1				
G2/J2		4				
G2/J2 G2/J3	1	6				Earthenware
G2/J3 G2/J4	1	2				Latinghware
G2/J4 G2/K0	1	1				
		3				
G2/K2		2				
G2/K3	1	2				F - 11 - 11 - 11 - 11 - 11 - 11 - 11 -
G2/K4	1	2				Earthenware
G2/L0		3				D. d.
G2/L1	1					Earthenware
G2/L3		3				
G2/L4		1				
G2/M0	1	2				Earthenware/flowerpot
G3/I3	1					Earthenware
G3/J0		2				
G3/J1		1				
G3/J4		1				
G3/K0		1				
G3/K3	1	1				Flowerpot
G3/K4		1				
G3/L2		2				
G3/M0		1				
G4/I3	1	2				Glazed white ware
G4/I4	2	3	1			Glazed white ware
G4/J0				1		
G4/J1		1	1	2		
G4/J2			1	1		
G4/J3	1	1	1			Glazed white ware
G4/J4		1				
G4/K1	1	1				Blue-transfer
G4/K4		1		2		
G4/L0	1		1			Glazed white ware
G4/L1	3	1		1		Glazed white ware
G4/L2	2	1	1	1		Glazed white ware
G4/L3	1	2				Blue-transfer
G4/M0	3			2		?Slipware; stoneware; clay pipe
H0/I4		4	1			7
H0/J0	1	3				Earthenware
H0/J1	-	4				
H0/J2		4				
H0/J3	1	2				Earthenware
H0/J4	1	1	1			2
110/37	1	1	1		ĺ]

Transect	Pot	CBM	Glass	Slate	Other	Comments
H0/K0		1				
H0/K1		5				
H0/K2		4				
H0/K3	1	1				Earthenware
H0/K4	1	3			1	Broken flint flake
H0/L0		1			1	Broken milit make
H0/L1	2	1				Earthenware/flowerpot
H0/L2		3				Eurinem ware, no werpot
H0/L3		3	1			
H0/L4		2	1			
H0/M0	3	2				Glazed earthenware
H0/M1	1	1				Flowerpot
H0/M1	1	3				Nowerpot
H1/J0		2				
H1/J1		1				
H1/J2	1	2				Earthenware
H1/J2 H1/J4	1	4				Earmenware
	-					
H1/K0 H1/K2	-	1				
		3				
H1/L0	1	3				
H1/L1	1	1				
H1/L2		1				
H1/M0		1				
H2/J0	1	1		1		Clay pipe
H2/J1		2				
H2/J2		4	1			
H2/J3		2	1	_		
H2/J4			1	1		
H2/K1	1	2				
H2/K2		3		1		
H2/K3		1				
H2/K4	1	1				Porcelain
H2/L0	1	1				Glazed white ware
H2/L1	2	1				Earthenware; flowerpot
H2/L2		1	1			
H2/L4		1				
H2/M1		1				
H3/.M3	2	1				Earthenware
H3/J1	5					Earthenware
H3/J2	1	1				Earthenware
H3/J3	3					Glazed earthenware
H3/J4		1				
H3/K0		4				
H3/K3						Glazed earthenware
H3/K4		5				
H3/L0		3				
H3/L1	1	2				Yellow glazed earthenware
H3/L2		2				
H3/L4		2				
H3/M1	3					Earthenware/flowerpot
H3K2		2				
H4/J1		2				
H4/J3	1					Earthenware
H4/K0		1			1	Broken flint flake
H4/K1		1				
		1			1	1

Transect	Pot	CBM	Glass	Slate	Other	Comments
H4/L0		1				
H4/L1		1				
H4/L3	1	1		+	+	Flowerpot
H4/L4	1	1				Tiowelpot
H4/M2		1				
H4/M3	2	1				Medieval sandy ware (late 12-
114/1013	2					14 th); clay pipe
H4/M4		1				14), ciay pipe
I0/J3	3	2				Porcelain
I0/J4	1	1				Clay pipe
I0/J4	3	1				Blue-transfer;
10/10	3	1				earthenware/flowerpot
I0/K1			2			carthenware/nowerpot
10/K1 10/K2	1	1				Glazed white ware: ?porcelain
10/K2 10/K4	1	1				Glazed white ware
10/K4 10/L0	1	1		+	+	
I0/L0 I0/L1	1	1				Clay pipe Porcelain
10/L1 10/L2	1	1	2			
10/L2 10/L4	1					Clay pipe
		2	1			
I0/M0		1				
I0/M1	1	1				C1 1 1:
I0/M3	1			_	_	Glazed white ware
I0/M4				_	_	Glazed white ware
I1/J2	1	2				Flowerpot
I1/K0		3				
I1/K2		2				
I1/K4		1	1			
I1/L0	1					Glazed earthenware
I1/L1		1				
I1/L4		2				
I1/M1		1				
I2/L2		2				
I3/J2	1		1			Porcelain
I3/J3	1	1	2			Blue-transfer
I3/J4				1		
I3/K1	1			1		
13/K2		1				
13/K3	1	1	1			Blue-transfer
I4/J3		1	1			
I4/J4		2				
I4/K0	1	2	1			Flowerpot
I4/K1		1				
I4/K2		1				
I4/K3		3				
J0/J3		1				
J0/K0		1				
J1/K0		2		1		
K4/K0		1				
FIELD 5						
D3/G3		1				
D4/G0		1	1			
D4/G1			3			
D4/G2	3	1	2			Glazed earthenware; porcelain
D4/G3	2	1	3			Porcelain
E0/F2		1				
	•	•				•

Transect	Pot	CBM	Glass	Slate	Other	Comments
E0/F3		1	1			
E0/F4		1	1			
E0/G0		5				
E0/G1		1				
E0/G2		2				
E0/G3		2				
E0/G4		1				
E1/F2	1	1				Earthenware
E1/F3	4					Slipware; stoneware; glazed
E1/13	-					earthenware
E1/F4		4				
E1/G0		3	1			
E1/G1	1	4	1			Porcelain
E1/G2	1	1				Porcelain
E1/G3	1	2				Clay pipe
E1/G4	1	3				Blue-transfer
E2/F2	1	3				Earthenware
E2/F2 E2/F3	1		+		1	Slag
E2/F3	2	1	+		1	Clay pipe; earthenware
E2/F4 E2/G0	1	1	1			Earthenware
E2/G0 E2/G1	1	2	1			Latticityate
E2/G1 E2/G2	1	2	+			Clay pipe
E2/G2 E2/G3	2	1	+			Clay pipe; earthenware
E2/G3 E2/G4		5				Ciay pipe, earmenware
E2/G4 E2/H0		2				
E2/H0 E3/F3						
		1			1	Inon from our out
E3/F4 E3/G0	1	3			1	Iron fragment
	1					Earthenware
E3/G1	2	4				Davis ains
E3/G2	3	2				Drain pipe
E3/G3	1	2	1			E d
É3/G4	1	4				Earthenware
E3/H0		2				
E4/F4		3		_		
E4/G2		2		_		
E4/G3		1				
E4/G4		2		_		GI :
F0/F4	1	2	1	1		Clay pipe
F0/G0	2	12	2	1		Glazed white ware; Blue-transfer
F0/G1	2	2	+			Glazed earthenware; porcelain
F0/G2	5		+			Porcelain; stoneware; earthenware
F0/G3	2	1	+			Glazed white ware
F0/G4	1	1		1		
F0/H0	1	2	12	1		Glazed white ware
F0/H1	1	1	3	1		Clay pipe
F1/F3	1	1	1			Glazed white ware
F1/G0	1	1	1			
F1/G1	1	1	1			DI (
F1/G4	1	3	1			Blue-transfer
F1/H0	1	3				
F1/H1	1	1	1			Earthenware
F1/H2	2		1			Glazed white ware; earthenware
F2/F4	1	3				
F2/G1	1	1				
F2/G2		4				

Transect	Pot	CBM	Glass	Slate	Other	Comments
F2/G3		5				
F2/H2		4				
F3/F4	1	<u> </u>				Leaf-decorated black
13/1						Wedgewood Basalt ware
F3/G0	1		2	1		Glazed white ware
F3/G1	1					
F3/G2	1		1			Clay pipe
F3/G4	4		2			Porcelain; Blue-transfer; clay pipe
F4/G0		4				, , , , , , , , , , , , , , , , , , , ,
F4/G1		1				
K2/G4		3				
FIELD 3						
D1/H0	2					Glazed white ware
D1/H1	1	2				Clay pipe
D2/E3		2			1	Burnt unworked flint (15 g)
D2/E4		3				
D2/F0		1				
D2/F1		6				
D4/D2	3	3	3			Earthenware
D4/D3		1	1			
D4/D4		3				
D4/E0	1	6	1			Glazed white ware
D4/E1		4				
D4/E2		3	1			
D4/E3		4				
D4/E4	1	4		1		Glazed white ware
D4/F0		1				
D4/F1	1	1				Stoneware
D4/F2	1	4				Glazed white ware
E0/D0		2				
E0/D1	6					Earthenware
E0/D2		7				
E0/D3	1	6				
E0/D4		4				
E0/E0		5				
E0/E1		2				
E0/E2		7				
E0/E4	1	1				Flowerpot
E0/E4		4				
E0/F0	-	3				
E0/F1		2			1	
E1/D1		5				
E1/D1	2	5			1	Stangwara
E1/D2	2					Stoneware
E1/D4		3 2				
E1/D4 E1/E0		3				
E1/E0 E1/E1	1	1				
E1/E1 E1/E2		4			-	
E1/E2 E1/E3	1	2				
E1/E3 E1/E4		2			-	
E1/E4 E1/F0	1	3				Stoneware
E1/F0 E1/F1	1	1			-	Stoneware
E1/F1 E2/D0		1				
	1	6		1		Glogad white were
E2/D1	1	0		1	1	Glazed white ware

Transect	Pot	CBM	Glass	Slate	Other	Comments
E2/D2		7				
E2/D3		3				
E2/D3	1	4				Glazed white ware
E2/E0	3	4				Glazed write ware; glazed white
E2/E0		-				ware; clay pipe
E2/E0		2				ware, etay pipe
E2/E0		2				
E2/E1		2				
E2/E4	3	2				Porcelain
E2/F0	3	2				1 orcciam
E2/F1	1	1				Porcelain
E3/D0	1	3				1 Orectain
E3/D0		4				
E3/D1 E3/D2		3				
E3/D2		3				
E3/D3		3				
E3/E1		4				
E3/E1 E3/E2		2				
E3/E2 E3/E3		3				
E3/E3 E3/E4		3				
E3/E4 E3/F0		1				
E3/F0 E4/D0		1				
E4/D0		4				
E4/D1 E4/D2	1	4			1	Clazad aarthanyyara: flint flaka:
E4/D2	1	4			1	Glazed earthenware; flint flake; burnt unworked flint(17 g)
E4/D4		5				built unworked limt(17 g)
E4/E1		2				
E4/E2	1	1	1			Glazed white ware
F0/E1	1	1	1			Glazea White Ware
F0/E2		3	1			
F0/E3		2				
F0/E4		1				
F0/F0		2				
F0/F1		1				
F1/D2		1				
F1/D3						
F1/D4		2				
F1/E0	1	_				Earthenware
F1/E2	-	1				
F1/E3		2				
F1/E4		1				
F1/F0		2				
F1/F1		1				
F1/F2	1	<u> </u>				Glazed white ware
F2/D0	1	3				
F2/D1		3				
F2/D2		2				
F2/D3		1				
F2/D4		1				
F2/E0		1				
F2/E1		1	1			
F2/E3		1	1			
F2/E4		1				
F2/E4 F2/F0		4				
F2/F1		4				
14/11		1 7	1			

Transect	Pot	CBM	Glass	Slate	Other	Comments
F2/F3		1				
F3/D1		1				
F3/D2		2				
F3/D3		1				
F3/D4		1				
F3/E3		2				
F3/E4		2				
F3E1	1	1 -	+			Clay pipe
F4/D0	1	2	+			City pipe
F4/D1		3				
F4/D3		2				
F4/D3		3				
F4/E0	1	1				Blue-transfer
F4/E0	1	2				Blue-transier
F4/E1		3				
G0/D1		1				
G0/D1		2				
G0/D1 G0/D2	+	1				
		1				
G0/D2 G0/D3	1	2				
		5				
G0/D3			1			
G0/D4		1	1			
G0/D4		3				
G0/E0		2	1			
G0/E0		5				
G0/E1		1				
G0/E1		2				
G1/D2		6				
FIELD 2						
D3/E1	3	3	3			Glazed white ware
D3/E3	1			1		Clay pipe
D3/F0	13		5			Glazed white ware/porcelain
D3/F0	1	4		1		Glazed white ware
D3/F1	1	4			1	Glazed white ware; oyster shell
D3/F2	1	2		1		Glazed white ware
D3/F2		4	1	1		
D3/F4	2	2	1	2		Glazed white ware
F0/C4	2		1			Porcelain
F0/D0	2	3	1			Porcelain
F0/D1	1					Earthenware
F0/D2	6	2	1	1		Earthenware; stoneware;
						porcelain
F0/D3	1		3			Glazed white ware
F0/D4	3	3	4			Porcelain
FIELD 4						
F1/F4	1	4				Glazed white ware
F3/F2	1					Stoneware
F3/F3		4				
F4/F0		2				
F4/F1		2				
F4/F2		1				
F4/F3		3				
F4/F4		2				
G0/E2		2	1			
G0/E2	1					Porcelain
u		4				•

Transect	Pot	CBM	Glass	Slate	Other	Comments
G0/E3	100	1	Class	51400	3 (1141	
G0/E3		1	2	1		
G0/E4			1	1		
G0/E4 G0/F0		1	1			
G0/F0	1	1				Stoneware
G0/F0	1	4				Stolleware
G0/F1		2	1	+		
G0/F1 G0/F2	2	4	1	+		Glazed white ware; flowerpot
G0/F2 G0/F2		2	1	+		Giazed willte ware, flowerpot
		3	1			
G0/F3			2	1		
G0/F3	1	2	2	1		Cl. 1 12
G0/F4	1	1		1		Glazed white ware
G0/F4		2	3	1		TI.
G0/G0	1		1			Flowerpot
G1/D4		3				
G1/E0		1				
G1/E1		6				
G1/E2		4				
G1/E3		4				
G1/F0		4				
G1/F2	1	3				Glazed earthenware
G1/F3		1				
G1/F4		2				
G2/D1		4				
G2/D2		5				
G2/D3		2				
G2/D4		8				
G2/E0		11				
G2/E1		3				
G2/E2		1				
G2/E3		4				
G2/E4		1				
G2/F0		2				
G2/F1		2				
G2/F2		2	1		1	Animal bone
G2/F3		2				
G2/F4		3				
G3/D1		-	1			
G3/D2	2		_		1	Clay pipe; perforated stone disc (?whetstone)
C2/D2	1	2	1	1		Glazed earthenware
G3/D3	1	3	1	1		
G3/D4	1		2			Glazed white ware
G3/E0	2	3	2			Glazed white ware
G3/E1		1	1			
G3/E3		2	1			
G3/E4	1	3	1		1	Demodeline of H
G3/F0	1		1		1	Porcelain; shell
G3/F1	1		2			Earthenware
G3/F2	3	3				Glazed white ware; earthenware
G3/F3	2	1		1		Porcelain
G3/F4	2		1	1		Porcelain
G3/G0	2	1				Glazed white ware
G4/D2		1				
G4/D4		1				
G4/E2		1				

Transect	Pot	CBM	Glass	Slate	Other	Comments
G4/E3					1	Flint flake
G4/F2	1	1				Stoneware
G4/G0	1					Earthenware
H0/D2		4				
H0/D3	3	5				Porcelain; clay pipe
H0/D4	1	3				Porcelain
H0/E0	1	2				Glazed white ware
H0/E1		1	1			
H0/E2	1	1				Porcelain
H0/E3	3	1				Clay pipe; glazed white ware; earthenware
H0/E4	1	2				Buff earthenware - ?Staffs-type
H0/F0		1				
H0/F1	1					
H0/F2		4				
H0/F3		1				
H0/F3	1				1	Clay pipe; shell
H0/F4		2				
H0/F4	1	3				Glazed white ware
H0/G0		1				
H0/G0		4				
H1/D2		3				
H1/D3		1				
H1/D4	1	3				Glazed white ware
H1/E0		3				
H1/E1	1					Earthenware
H1/E2		1				
H1/E3		1	1			
H1/E4		4				
H1/F0		2				
H1/F1	2					Flowerpot
H1/F2		4				
H1/F3		3				
H1/F4		2				
H1/G0		2	1			
H3/D3	5	2	1			Porcelain
H3/D4	5		1			Glazed white ware
H3/E0		2		1		
H3/E1	3	1	1			Blue-transfer; clay pipe
H3/E2	4	1				Porcelain; stoneware
H3/E3	1	1	1			Glazed white ware
H3/E4	2					Earthenware; glazed white ware
H3/F0	1	-				Blue-transfer
H3/F1	1	1				Glazed white ware
H3/F3	1	1				Porcelain
H3/F4	2	1				Glazed white ware
H3/G0		1	1	1		
H3/G2	5	1	1	1		Clored conthermone and their
H4/D3	3	2	1			Glazed earthenware; porcelain
H4/D4		3	1			Glass bottle stopper
H4/E0 H4/E1		2				
H4/E1 H4/E2		2				
H4/E2 H4/E3	1	1				Slipware
H4/E3 H4/E4	1	2				Shpware
Π4/ E4		4	1			

Transect	Pot	CBM	Glass	Slate	Other	Comments
H4/F0	1					Porcelain
H4/F1	1					Earthenware
I1/E1		1				
I1/E3	1	1				Stoneware
I1/F0		1				

APPENDIX 2 GAZETTEER OF CULTURAL HERITAGE FEATURES

Abbreviations:

OA = Oxford Archaeology

NMR = National Monuments Record

SAM = Scheduled Ancient Monument

OA No.	NMR/SMR No.	DESCRIPTION
1	5443	Turnpike Farmhouse – Grade II listed Building – 17 th century timber framed
		building (Sutton 5/70)
2	505 (NMR 462)	Line of Roman Road 22 from Baldock to Godmanchester
3	509 (NMR TL14NE 27	Complex area of crop marks, possibly associated with Kinwick DMV. NMR puts
	& TL24NW 1)	possible location within square 19 47
4	520	Moat associated with several phases of earthwork features including ridge and
	SAM 11541 (NMR	furrow and platforms to the south of Stratton DMV (RCHME field report 1993).
	TL24 SW3 & 21)	Probably medieval manor house and associated features
5	644 (NMRTL 14NE	Crop marks – group of 4/5 ring ditches, indicating possible Bronze Age barrows
	29&40)	and linear feature thought to be a possible Neolithic cursus
6	916 (NMR TL14SE 9)	Probable position of find spot of a Roman bronze Patera, possibly associated with
		burial, NMR places find spot c.500m to the south.
7	1615	Complex area of earthworks and crop marks, including enclosures, linears and
		ring ditches. Ring ditches may be WWII searchlight batteries identified as OA
		41.
8	2500	Old clay pits seen on OS 25" 1st edition map of 1881
9	2501	Probable gravel pit situated in gravel pit close.
10	2502	Gravel pit seen on OS 25" 1st edition map, 1881
11	3107	Brick field and kilns with clay pits to east seen on OS 25" 1st edition map, 1881
12	3543	Crop marks – area of linear features
13	3544a	Crop marks - Linear feature – also seen extending to south-west in addition
		to that seen on SMR on AP (TL 2045/2/446)
14	3544b	Crop marks - Two linears at right angles
15	3544c (NMR	Crop marks – Number of enclosures, possibly representing a settlement of
	TL24NW12)	prehistoric or Roman date
16	3548 (NMR TL24NW	Crop marks - indicating prehistoric or Roman settlement – comprising
	28)	rectangular and curvilinear enclosures, pits and linear features (some overlaying
		each other suggesting different occupation phases), and probably extends further
1.7	5112	than is visible, into less responsive soils.
17	5113	Possible area of watermill
18	7003 (NMR TL24SW	Area of Stratton Park as shown on the 1838 Tithe Map. NMR suggests the house
	2)	and Park was built in 1597 – demolished in 1960 and the area of the house is now a garden.
10	7127	<u> </u>
19 20	7127 7128	Brick Clamps' field name on 1838 Tithe map.
20	/128	Brickworks shown on 1881-2 map – shows extent of clay pits, buildings and kiln, maybe associated with buildings at OA 51 and 50.
21	9099	Crop marks – linear and ring ditch
22	13915	'Burnt Ground' field name on 1838 Tithe map
23	13923	'Sand Pit Field' field name on 1838 Tithe map
	13924	'Brick Hill Field' fieldname on 1838 Tithe Map
24 25	13924	'Burnt Ground' fieldname on 1838 Tithe Map
26	13930	'Gallows Ditch' fieldname on 1730 estate map
27	13939	'Dovehouse Close' fieldname on 1777 estate map
28	13959	Crop marks – series of enclosures Crop mark – linear feature
29 30	15010	
30	15079 (NMR TL14NE	Crop marks – D-shaped enclosure and two smaller rectangular enclosures – the
21	43) 15080	enclosures are probably prehistoric or Roman in date.
31		Crop marks – linear features
	15101	Crop marks – linear features Crop marks – double rectilinear enclosure
33	15327	Crop marks – dodole rectimear enclosure

34	15328 (NMR TL 24NW 26)	Crop marks – Part of ring ditch of barrow – NMR areas this feature or refers to a second ring ditch c. 7.5m to the south-east, both locations plotted
35	15328	Crop marks – Small rectangular ditch
36	15374	Crop marks – no further details
37	16159	Crop mark – ring ditch
38	16160	Crop marks – irregular crop marks
39	518 (NMR TL24SW 9)	Area of Stratton DMV – archaeologically investigated – see above – houses, boundary plots and roads discovered. 10 th to 14 th century in date. Also Saxon settlement discovered
40	NMR TL24NW20	Crop mark – trackway. OA inspection of APs revealed this is probably a fault line of the lens.
41	NMR TL24NW 21	Crop mark – Possible WWII searchlight battery, visible as earthworks. Appears to be in the same position as the possible ring ditches identified within the area of crop marks OA 7.
42	NMR TL24 NW 22 & 23	Crop mark – curvilinear enclosure, possibly of prehistoric/Roman in date (maybe two such features in this area)
43	NMR TL24 NW 24	Crop marks – Possible pit cluster – possibly of prehistoric/Roman in date
44	NMR TL24 NW 25	Crop marks – Possible round barrow area, of prehistoric or Roman date, visible as ring ditch.
45	NMR TL24SW 9	1990, 1991-2 excavations and watching brief at Stratton DMV & 1994-6 evaluation and excavations at Stratton DMV to the north of the above
46	Listed building map	Sunderland Hall - listed Grade II - dating to the 17 th century (Biggleswade 3/3)
50	1881 map	Buildings associated with Brickworks shown on 1881-2 map, also a well seen on the 1902 OS 2 nd edition maps
51	1881 map	Single building seen on 1881 1st edition 25" OS map – possible barn
52	1881 map	Gravel pit marked on the 1881 1st edition 25" OS map
53	1882 map	Gravel pit marked on the 25" 1 st edition 1882 OS map
54	1838 map	Area of Spread Eagle Farm seen and named on the tithe map 1838
55	1777 map	Area of Road Farm, marked on the 1777 estate map and named on the 1838 Tithe
56	•	map
57	1902 map	Area of building seen on 2 nd edition 6" OS map, 1902 – probable barn Area of footbridge seen on 1 st edition 6" OS map – 1881
58	1881 map Obs.	Bank and path seen on ground with wooded bank on western side, up to
		1.00m high – path to Common
59	Obs.	Area of demolished brick built barn, not seen on maps up to and including the 1927 3 rd edition 6". Demolished between 1999 and 2003 but footings still <i>in-situ</i> .
60	1931 map	Collective number for areas of probable barns & ponds seen on 3 rd edition 6 "-1931
61	1777 map	Roadway marked on 1777 map as 'Common Balk' – raised route from Biggleswade to Common
62	1777 map	Area of Coldharbour Farm marked on 1777 estate map and 1804 map
63	1804 map	T.G. Sutton Gate marked on 1804 map, probably marking entrance to Common
64	RCHME APs	Field of possible ring ditches seen on Aps
65	RCHME APs	Possible palaeochannels seen on APs (TL2045/2/446 & OS/69/59) & TL 2145/17 & 16
66	RCHME APs	Possible linear features seen on Aps
67	RCHME APs	Probable Romano-British field boundaries seen on Aps
68	1804 map	Area of Pest House seen on 1804 map
69	1804 map	Area of barn marked on 1804 map
70	1838 map	Building seen on 1838 Tithe Map
71	1838 map	Building seen on 1838 Tithe Map
72	1838 map	Building seen on 1838 Tithe Map
73	16818	Crop marks - possible east end of large rectangular enclosure
74	16822	Crop marks - possible three sides of a sub-rectangular enclosure
75	17786	Earthworks - South end of field shows ridge and furrow running east-west, north end shows possible settlement features.
76	17738 (NMR 1370260)	Archaeological evaluation of medieval settlement features including post-holes, pits and ditches indicating house-plots at eastern end of the Stratton DMV. Also possible findspot of Roman pottery.
77	13918 (1777 map)	'Burnt Ground' field-name on 1777 estate map.
78	13929 (1777 map)	'Park Field' field-name on 1777 estate map.

79	13919 (1777 map)	'Barn Field' field-name on 1838 Tithe map.
80	13925 (1777 map)	'Barn Field' field-name on 1838 Tithe map
81	15082 (NMR 974468)	Crop marks - sub-rectangular enclosure with possible linear features running to north and south.
82	5095	Bridleway first shown on Jefferys map of 1765 as a track.
83	NMR 544894	Post-medieval house at Furzenhall Farm.
84	NMR 1050705	Former Biggleswade Isolation Hospital, built in 1875, with further buildings added in 1905.
85	NMR 1326089	Assessment and evaluation in 1995/1998 - Low intensity of prehistoric flint, medieval and post-medieval pottery recovered during fieldwalking in 1995. Trial trenching in 1998 discovered one Iron Age feature.
86	NMR 1326158	Watching-brief in 1997 - recorded early medieval, medieval and post-medieval features consistent with adjacent areas.
87	NMR 1370257	Excavation in 2001 - features uncovered included late Bronze Age or early Iron Age pits, a scatter of Roman pottery, early medieval enclosures, later medieval or early post-medieval water-pits with flooded deposits, and demolition debris from the emparkment of the settlement in the 17th century.
88	17733	Excavation in 1999 -uncovered a probable Bronze Age ring-ditch, an iron Age pit, a dispersed early medieval settlement including pits and post-holes, and further evidence of the later medieval settlement consisting of ditched enclosures, pit clusters, water-pits, and pottery dated to the 12th to 14th century.
89	NMR 1326082	Evaluation in 1998 - early medieval settlement including wells, pits, a sunken- featured building and a post-built structure, with a considerable quantity of pottery recovered. Later medieval features included a farmstead area comprising ditched enclosures, trackways and a post-built dwelling succeeded by a later beamslot structure.
90	1777 map/Obs.	Historical Hedgerow defined under the 1997 Regulations criteria as 'Important' (5a: pre-enclosure field system).
91	1777 map/Obs.	Historical Hedgerow meeting the 1997 Regulations criteria as 'Important' (5a: pre-Inclosure field system).

APPENDIX 3 MAGNETIC SUSCEPTIBILITY SURVEY PRELIMINARY REPORT

APPENDIX 5 BIBLIOGRAPHY AND REFERENCES

Baker, E and Hassall, J, 1979	The pottery, in Excavations in Bedford 1967-1977 (D Baker, E Baker, J Hassall and A Simico), <i>Bedfordshire Archaeological Journal</i> 13 , 147-240
Brown, L. 1984	In B. Cunliffe. Danebury an Iron Age Hillfort in Hampshire, Volume 2. The Excavations 1969-78: the finds, 407-426
CAU 1997	Investigation of the Archaeological Landscape at Broom Bedfordshire: The Plant Site and Phases 1 and 2 (CAU Report 202).
CAU 1999	Investigation of the Archaeological Landscape at Broom, Bedfordshire: Phases 3 (CAU Report 294).
CAU 1999	Investigation of the Archaeological Landscape at Broom, Bedfordshire: Phase 4 (CAU Report 320).
Copeland, R 2000	Blue and white: transfer-printed pottery, Shire, Princes Risborough
OA 2003a	Cultural Heritage and Archaeology in Land East of Biggleswade, Bedfordshire: Environmental Statement
OA 2003b	Written Scheme of Investigation for an Archaeological Evaluation at Land tot the East of Biggleswade

APPENDIX 6 SUMMARY OF SITE DETAILS Site name: Land to the East of Biggleswade

Site code: BIGG03

Grid reference:NGR: TL 2057 4516 (centered)

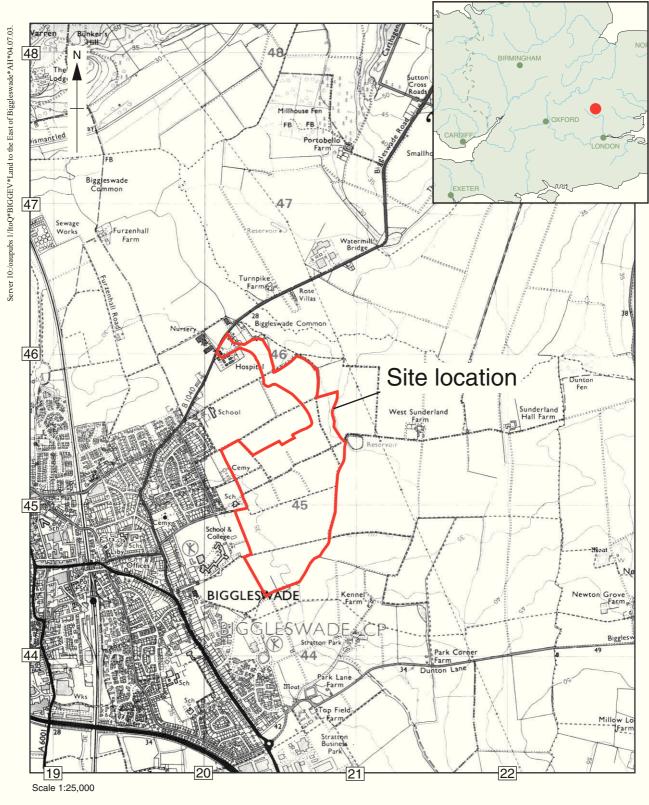
Type of evaluation: Fieldwalking and Geophysical Survey Summary

Date and duration of project: April-June 2003

Area of site: c75 Ha Summary of results:

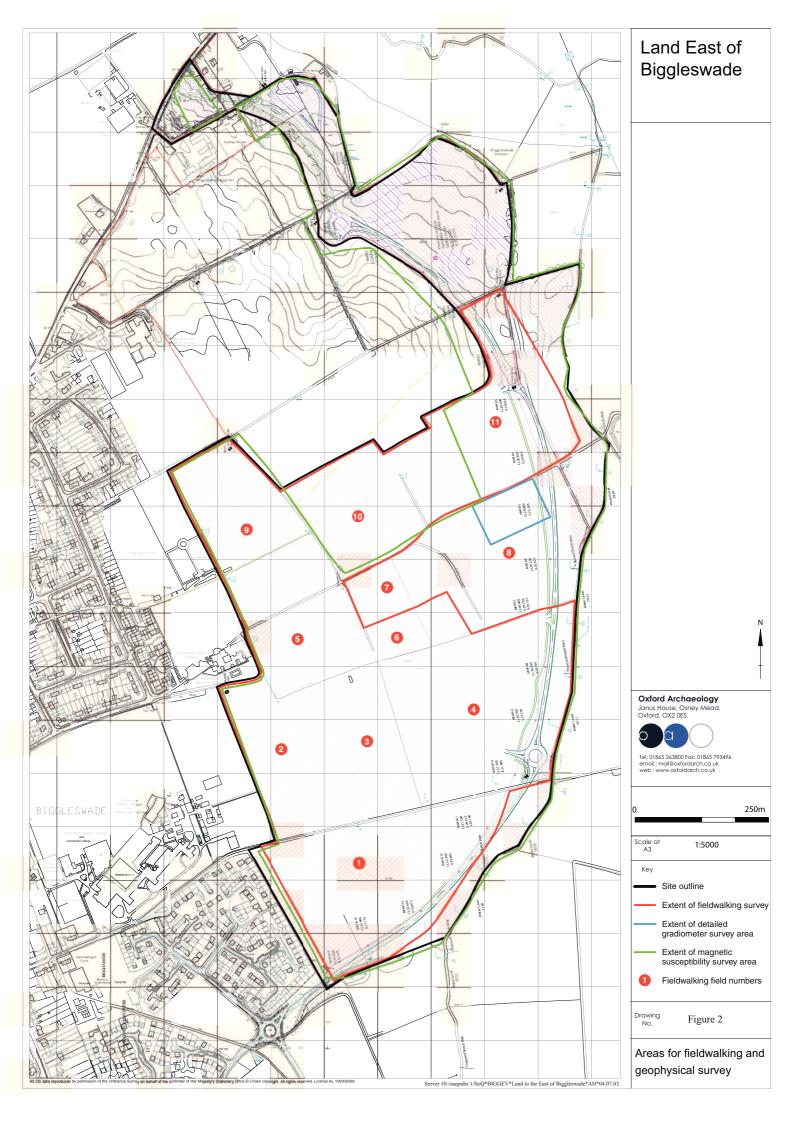
Oxford Archaeology carried out a field evaluation at Land to the East of Biggleswade on behalf of Martin Grant Homes Ltd and Taylor Woodrow Developments Ltd. The evaluation comprised field walking (Stage 1) as well as scan and detailed geophysical survey (Stage 2). This document details the results of the field walking, summarises the overall evaluation and includes the scan and detailed geophysical survey reports as appendices. The evaluation has highlighted the probable presence of prehistoric activity to the centre of the site.

Location of archive: The archive is currently held at OA, Janus House, Osney Mead, Oxford, OX2 0ES, and will be deposited with Luton Museum in due course.



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Figure 1: Site location



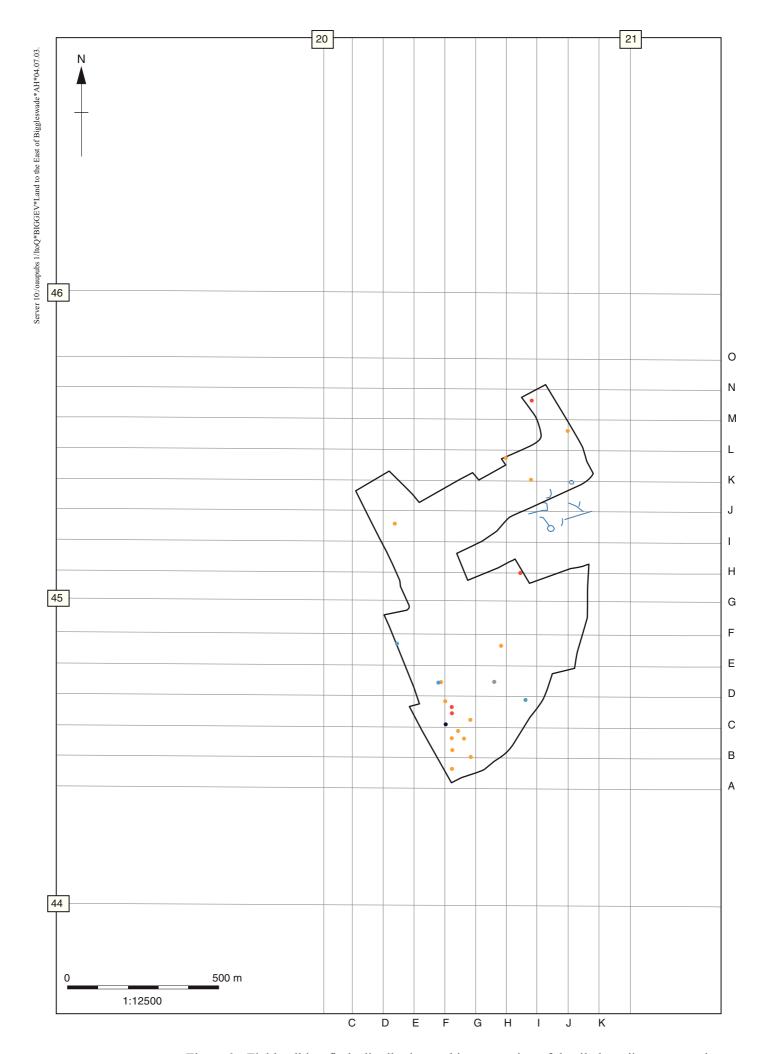


Figure 3: Fieldwalking finds distribution and interpretation of detailed gradiometer results

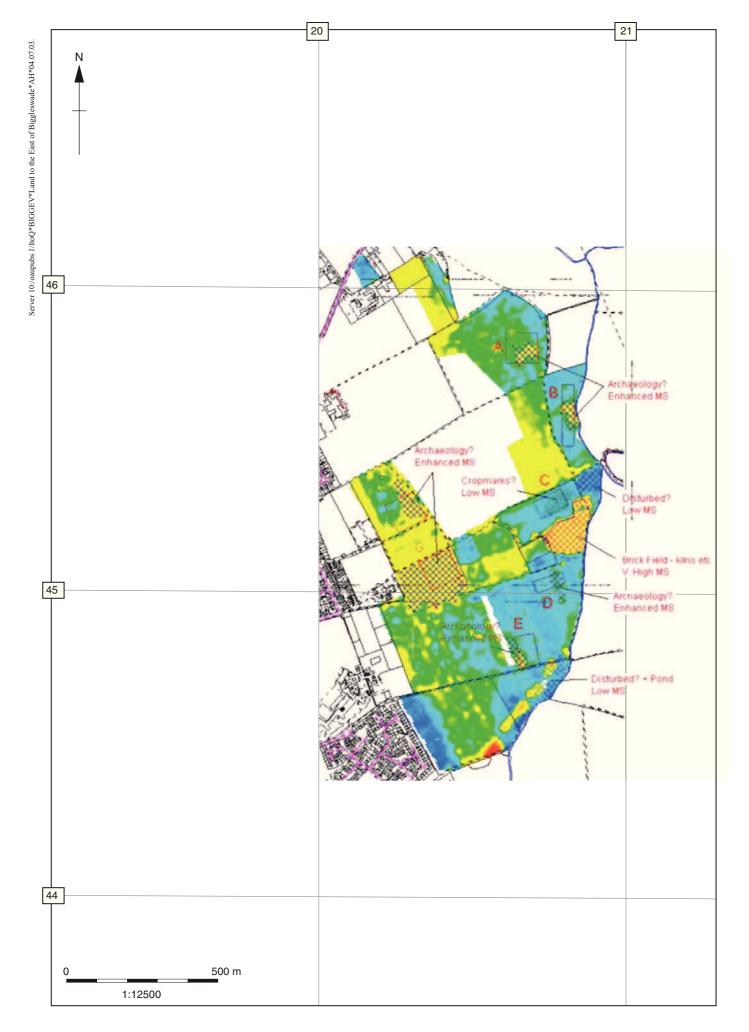
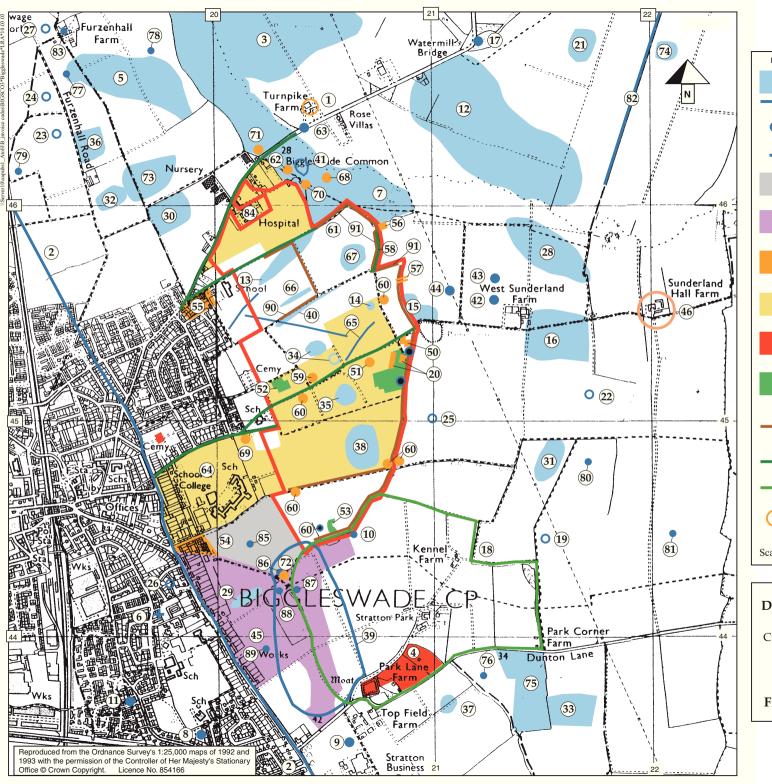
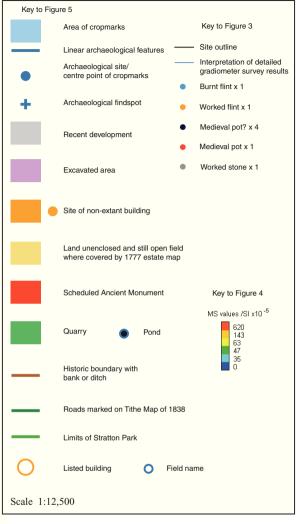


Figure 4: Magnetic susceptibility results





Drawing Title:

Cultural heritage features mapping

Figure No. Figure 5



NORTHAMPTONSHIRE ARCHAEOLOGY NORTHAMPTONSHIRE COUNTY COUNCIL JUNE 2003

A GEOPHYSICAL SURVEY AT

LAND TO THE EAST OF

BIGGLESWADE, BEDFORDSHIRE

JUNE 2003

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A GEOPHYSICAL SURVEY AT LAND TO THE

EAST OF BIGGLESWADE, BEDFORDSHIRE, JUNE 2003

ABSTRACT

Magnetic Susceptibility survey was undertaken on agricultural land with a combined area of approximately 67 hectares, east of Biggleswade, Bedfordshire. The survey detected a pattern of variations within topsoil magnetic susceptibility, some of which were thought likely to reflect archaeological activity areas. Sample 0.96 hectare gradiometer survey was carried out over one area of anomalously low susceptibility and known crop marks. The detailed survey revealed several possible archaeological features including circular gullies and other ditches.

1 INTRODUCTION

Northamptonshire Archaeology conducted geophysical surveys on land with a combined area of approximately 67.08 hectares east of Biggleswade, Bedfordshire. (NGR TL 2057 4516, Fig 1). Richard Brown of Oxford Archaeology (OA) commissioned the work, on behalf of Martin Grant Homes Ltd and Taylor Woodrow Developments Ltd, as part of planning application in advance of a major development outside Biggleswade. The geophysical survey met the requirements of the Written Scheme of Investigation issued by OA (2003). The purpose of the work was to identify the extent and nature of any buried archaeological remains. Survey took place between the months of April and June 2003.

2 TOPOGRAPHY AND GEOLOGY

The site covers an area of approximately 74.24 hectares. It is bounded to the north by agricultural land and the B1040, Potton/Biggleswade Road, and to the west by existing school grounds and residential development presently being constructed along with existing housing areas. Agricultural land lies immediately to the east and south of the development site.

At the time of the survey all of the areas (Figure 1) were used for agricultural purposes, other than five fields under rough pasture or overgrown. Due to the length of time that the survey took, the crop grew to a considerable height. Nineteen fields were surveyed and these are numbered 1-19 for reference (Figure 1).

The northern half of the development site lies on an area of second terrace gravels whilst the southern half lies on glacial gravels. The dividing line between these two bands of gravel runs approximately along the east-west road to West Sunderland Farm. A band of alluvium is present

associated with the stream bounding the development area on the east. To the south of this the glacial gravels join the boulder clay which stretches over the eastern part of the parish from this point. However only a narrow strip of this clay exists within the development site itself (OA 2003).

3 ARCHAEOLOGICAL BACKGROUND

The site lies in an area of known archaeological potential. Evidence for archaeological activity dating to the later prehistoric and Roman periods, and possibly the medieval period, has been recorded from within the site itself. This evidence comprises crop marks (identified from aerial photographs), which are distributed across much of the site. They include a ring ditch, enclosures and linear features and form part of a wider complex of crop marks to the north east and east of Biggleswade. The most significant evidence being what appears to be a Neolithic cursus, which lies 500m to the north west of the development area (OA 2003a & b).

The site of a 19th century brickworks lies within the site, on the eastern edge. The brickworks is shown on the 1881 25" map and labelled as 'brick field'. It had three large buildings and two subsidiary ones, one of which is labelled on the map as the kiln. There are also two buildings slightly to the north-east of the brickworks, in the triangular field and one to the north-west in the same field as the brickworks, which may also have been associated with the brickworks. A large pit is labelled as the Clay Pits, from which the raw material would have been extracted and a pump is marked as being present over a filled-in pit. The brickworks had become disused by the time the 2nd edition map was produced in 1902 and few of the buildings associated with the brickworks remained (OA 2003a & b).

Beyond the site itself an number of archaeological investigations have revealed archaeological activity. Extensive archaeological investigation of the deserted medieval settlement of Stratton (HER 518), to the south of the proposed development area, revealed activity dating to the Saxon and medieval periods as well as evidence of Bronze Age and Iron Age occupation. At Broom Quarry, 3km to the east, extensive archaeological investigations in advance of quarrying in a similar location (a low gravel and clay ridge astride a small tributary of the Ivel) has produced evidence of activity from the Neolithic to Saxon periods including settlements, funerary and ritual monuments and field systems (OA 2003a).

4 METHODOLOGY

Research has shown that fired, or cut and backfilled archaeological features such as kilns and hearths, ditches and pits often have an anomalously higher *magnetic susceptibility* (MS) than the surrounding subsoil due to burning and biological processes converting iron ore *haematite* into the more magnetic compound *magnetite*. Feature fills have a tendency to become mixed with the top

layers of soil through ploughing and natural soil processes, distributing the high MS magnetite in a 'halo' around the features. Extensive topsoil magnetic susceptibility survey aims to detect these areas of enhanced, or depleted, MS over a landscape in order that more intensive survey may be targeted.

The magnetic susceptibility survey was carried out using a Bartington Magnetic Susceptibility Meter. The readings were logged in SI (x10⁻⁵, although this will be omitted here on) units at 10m intervals along transects spaced 10m apart using the MS2D Field Coil. Reduced reading levels are often encountered when surveying pasture fields as the vegetation forms an insulating layer between the detector coil and the bare soil. Where this occurs is noted in the report and taken into account. The data was captured in the field using a Leica Global Positioning System and PenMap. Differences in magnetic susceptibility within the subsoil and archaeological features can be detected as changing magnetic flux by an instrument such as a fluxgate gradiometer. Data from this may be mapped at closely spaced regular intervals, to produce an image which may be interpreted to locate buried archaeological features (Clarke 1990).

Detailed gradiometer survey was carried out utilising a Geoscan Research FM36 fluxgate gradiometer with ST1 sample trigger. Prospection was carried out in grids of 20m x 20m along parallel traverses spaced at 1m intervals, recording data points spaced at 0.25m (a total of 1600 points in each grid) to a maximum instrument sensitivity of 0.1nT in accordance with English Heritage Guidelines (EH 1995). The grids were surveyed in the 'zig-zag' style (traverses walked alternately north-south/south-north). At regular intervals, the data was downloaded to a notebook computer for storage and assessment.

DATA PROCESSING AND PRESENTATION

The GPS/Penmap logged MS data were subsequently imported into MapInfo V6.0 for analysis and plotting. No significant processing took place, other than the removal of individual outlying values. The magnetic susceptibility results are shown as colour scale plot (Figure 2).

Following the completion of the gradiometer survey, processing and analysis took place using Geoplot v.3.00 software (Geoscan Research 1999). The most typical method of visualising the data is as a greyscale image. In a greyscale, each data point is represented by a shade of grey, from black to white at either extreme of the data range. A number of standard operations were carried out to process the data. The gradiometer data was mathematically adjusted to account for instrument drift over time. The mean level of each traverse of data was reduced to zero and all grids matched so that there are no differences between background levels. The data was interpolated and subject to a 'low pass' data smoothing algorithm in order to enhance the weaker

anomalies. The data was analysed 'on-screen' using a variety of viewing parameters and styles and the most useful of these saved as a *.BMP image and manipulated using Corel Draw software. A digital map of the survey area was constructed in MapInfo using Ordnance Survey Landline data. The greyscale image of the survey results were then overlaid onto the digital map (Figure 4) and an interpretation diagram generalised from the results (Figure 5).

5 MS SURVEY RESULTS

The results of the MS survey are shown as a colour graduated plot in Figure 2 and anomalies interpreted on Figure 3. The plot has a non linear scale running from 0SI - purple through blue, green and yellow to approximately 620SI – red. The most significant range in this survey appears to lie between zero (purple) and 150 SI (orange).

- 5.1 FIELD 1 MS levels in this field were all low (0-30SI), partially due to the effect of pasture insulation (see above, 4).
- 5.2 FIELD 2 Despite grass cover, the levels in Field 2 were found to increase from approximately 60SI in the west to 120 in the north-east.
- 5.3 FIELD 3 Also a pasture field, readings in 3 were constant in the mid 60SI units, reducing to low 50SI units in an area crossing the eastern boundary.
- 5.4 FIELD 4 The 50SI area detected in Field 3 was found to continue into the west of this scrub field, the remainder of which was in the late 30SI range.
- 5.5 FIELD 5 The western corner of Field 5 was found to have a susceptibility of approximately 66SI, decreasing to around 46SI for most of the interior of the field. The northern, eastern and southern boundaries were low, in the 30's SI. In the south-eastern sector of Field 5, a bi-nodal anomalous area (approx. 0.2ha) was found to have a susceptibility ranging between 66SI and 79SI. A sparse scatter of Romano-British pottery was observed on the ground in this area, a region suspected to contain Romano-British field boundaries (OA 2003, OA67).
- 5.6 FIELD 6 The survey of Field 6 was not completed due to high crop following a change to the dimension of the total survey area during the course of the project (R Brown Pers Comm). Survey of the northern half of this field detected an average MS of approximately 46SI whilst the southern half ranged between 65SI and 100SI. Such variation may represent variation in former agricultural regimes, unsurprising in a field of such size (approx. 16ha).
- 5.7 FIELD 7 The overall level of susceptibility in Field 7 centred on 30SI. A number of former barns are known from the centre of the field (OA 2003, OA60) and a walkover survey of the site by OA noted a particularly boggy area on the central-east side, adjacent to the stream, possibly representing an area of flooding. These factors may explain the high MS readings noted in this position, as a flooding area possibly filled with magnetic brick rubble to harden the ground.

- 5.8 FIELD 8 This area was scrub land showing signs of disturbance, and likely to have contained buildings related to quarrying and brick production on site. The topsoil MS values were extremely low, possibly due to the insulation effect (see above, 4).
- 5.9 FIELD 9 Inspection of the ground in the field revealed a number of putative crop marks. These formed several circles and lineations, possibly ring gullies and ditches. The MS level was surprisingly low, around 20SI, in this fairly discrete area. But, as Field 9 was pasture, perhaps the lack of ploughing and the grass insulation effect had reduced any apparent enhancement from possible archaeology.
- 5.10 FIELD 10 This field was known in the past as Brick Field due to its use as a Brickworks (kilns, pits etc OA 2003, OA20). Not surprisingly this rough pasture field has produced some of the highest readings of the survey, 100SI to 240SI, surely a product of the extreme heating carried out on the site.
- 5.11 FIELD 11 MS was found to average approximately 45SI in this field.
- 5.12 FIELD 12 Magnetic susceptibility was found to average approximately 23SI in this field.
- 5.13 FIELD 13 An area of enhanced topsoil MS (69+SI) was detected in the south-east corner of Field 13, coincident with a crop mark of a small rectangular ditch (OA 2003, OA30). Variation in the low levels of MS east and west in the remainder of the field seems to reflect modern agricultural practice where half the field has been planted and the other left fallow.
- 5.14 FIELD 14 Survey in Field 14 demonstrated almost uniform MS levels, around 90SI. A barn or pond may have previously existed in this field (OA 2003, OA60), but it is thought unlikely to have raised the susceptibility of the entire field and so may be an archaeological or agricultural effect.
- 5.15 FIELD 15 Containing a former quarry (OA 2003, OA52), the variation between a high background MS and two linear and a discrete low MS anomalies in Field 15 are thought to reflect relatively modern factors.
- 5.16 FIELD 16 This field, adjacent to the east of the cemetery resolved a lower MS area centrally, flanked east and west by higher MS lineations. The western anomaly follows the field boundary and probably reflects soil build-up against it, however the eastern linear at 90-170SI may be of more archaeological significance.
- 5.17 FIELD 17 This 17.8ha field shows considerable variation from west (MS in 40-50SI range) to east (MS in 20-30SI range). This can be explained geologically as the change from second terrace to glacial gravels north to south over the site, and the possible alluviation nearer to the stream on the eastern boundary. A enhanced MS area was detected centrally along the southern boundary, coincident with irregular crop marks (OA2003, OA38), suggesting archaeology at this point. An enhanced lineation of similar magnitude was located in the north-east corner, perhaps also representing an area of archaeology.
- 5.18 FIELD 18 A wide band of very low susceptibility mirrors the western boundary of Field 18.

 This matches possible landscaping noted in the walkover survey. Mid range susceptibilities

throughout the centre of the field match those of the west of Field 17. Very high MS readings in the eastern corner of the site were a response to a modern track way. An extremely high MS anomaly on the southern boundary could be a combination of both the track and a filled-in gravel pit.

5.19 FIELD 19 The high MS track way identified in Field 18 continued north-east through the generally low susceptibilities of Field 19. A pond was situated in the eastern half of the field and it is likely that a combination of scrubland insulation and alluviation is the cause of the poor MS response.

6 DETAILED SURVEY RESULTS

An area of 0.96ha was subject to detailed gradiometer survey in Field 9. The results of this are presented as a greyscale image in Figure 4 with an interpretative plot in Figure 5. The detailed survey area was located to assess the possible archaeological crop marks and discrete low MS anomaly in Field 9 (see above, 5.9). The position of this survey had been agreed with OA following the Preliminary Report on the MS survey (Butler 2003) and the area formerly known as Area C. Other areas suggested for detailed investigation were deemed unsurveyable until after harvest of crops.

The dynamic range of magnetic anomalies detected was found to be very low, with 66% of the data within 2.6nT of zero. This is not surprising, given the very low susceptibilities encountered in the MS survey (<20SI) – apparently not entirely due to vegetation insulation effects. However some anomalies of possible archaeological origin have been found in the data. Three curving, near circular, positive magnetic anomalies were identified – two on the northern edge of the survey, one on the southern. These anomalies may represent buried circular gullies. Sinuous positive anomalies, possibly buried ditches, were also detected along the east-west axis of the survey area. Most westerly amongst these include two slightly higher anomalies within a group that may reflect part of a sub-rectangular ditched enclosure. A marked increase in the background 'texture' of the survey was noted in the entire western half of survey area. Such texturing has been known on other sites to indicate a general area of 'archaeological activity', such as features too small to be easily detected by the sampling regime, or waste debris in the soil.

7 CONCLUSION

A extensive topsoil magnetic susceptibility survey was carried out on approximately 67.08 hectares of agricultural land east of Biggleswade, Bedfordshire. A number of areas of enhanced and depleted susceptibility were located, a number of which coincided with known areas of archaeological interest or recent activity.

Based upon the success of the MS technique in highlighting those areas, it has been possible to

BIGGLESWADE, BEDFORDSHIRE

suggest several regions of archaeological activity. Detailed gradiometer survey of one 0.96ha zone of low MS that also contained crop marks detected a number of very weak magnetic anomalies describing three possible circular features and a number of ditches including a possible sub-rectangular enclosure. The magnetic survey also indicated a putative area of archaeological activity.

It is recommended that sampling of MS anomalies by detailed survey is continued over the remainder of the site as previously suggested in Butler 2003.

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Northamptonshire Archaeology
A service of Northamptonshire County Council

June 2003

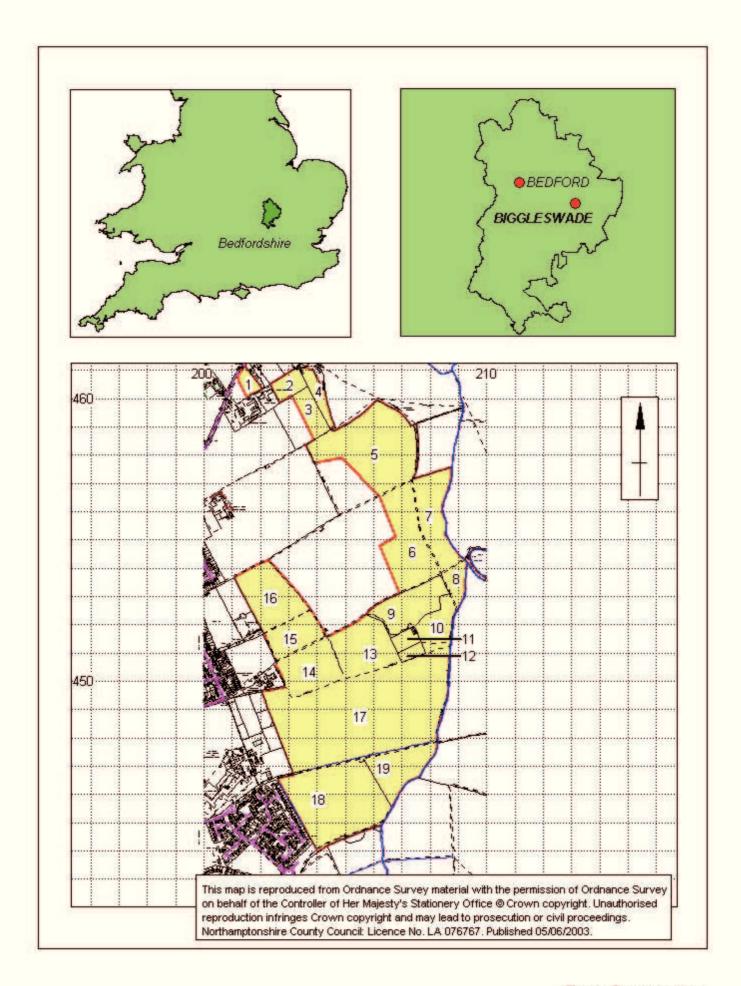


Fig 1: Site Location

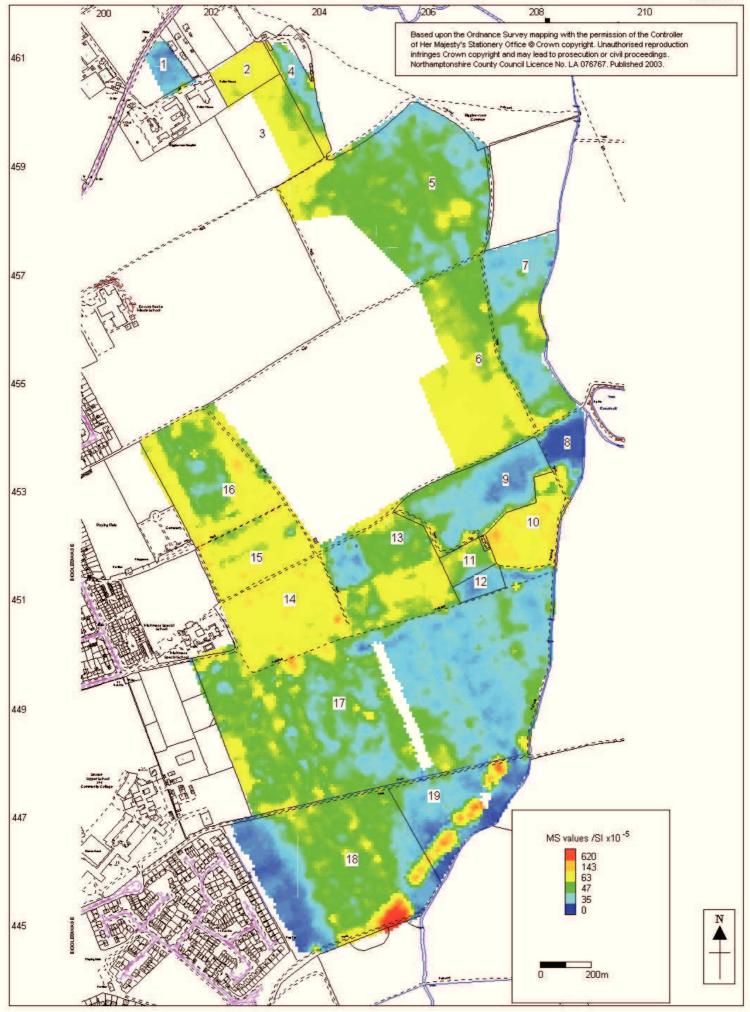


Figure 2: Magnetic Susceptibility Results

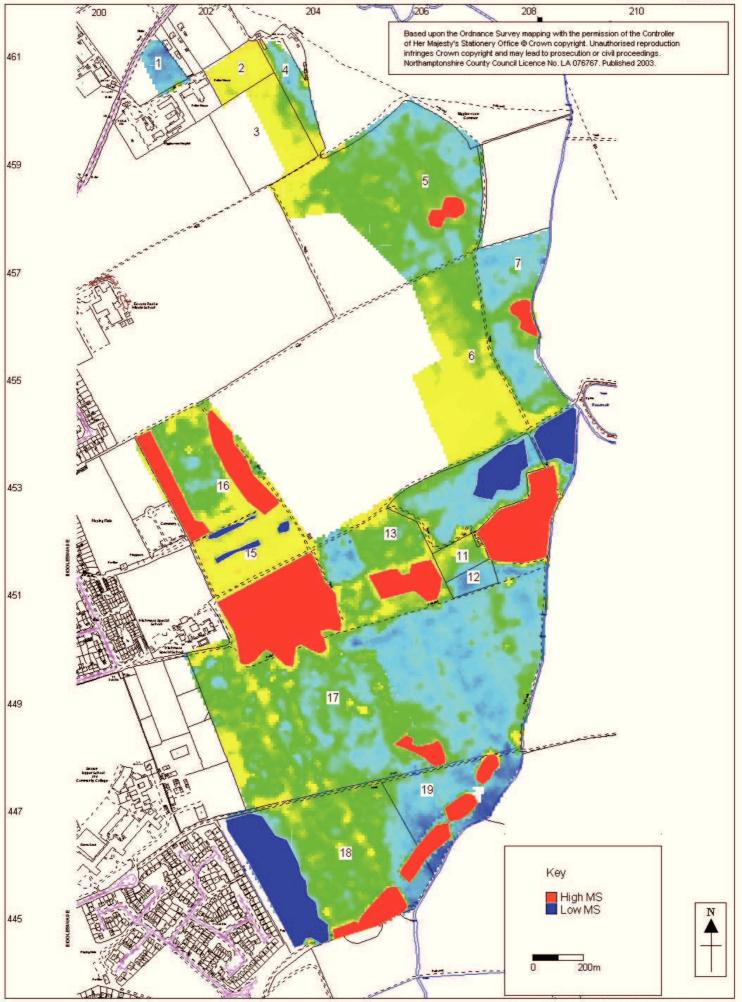


Figure 3: Magnetic Susceptibility Interpretation

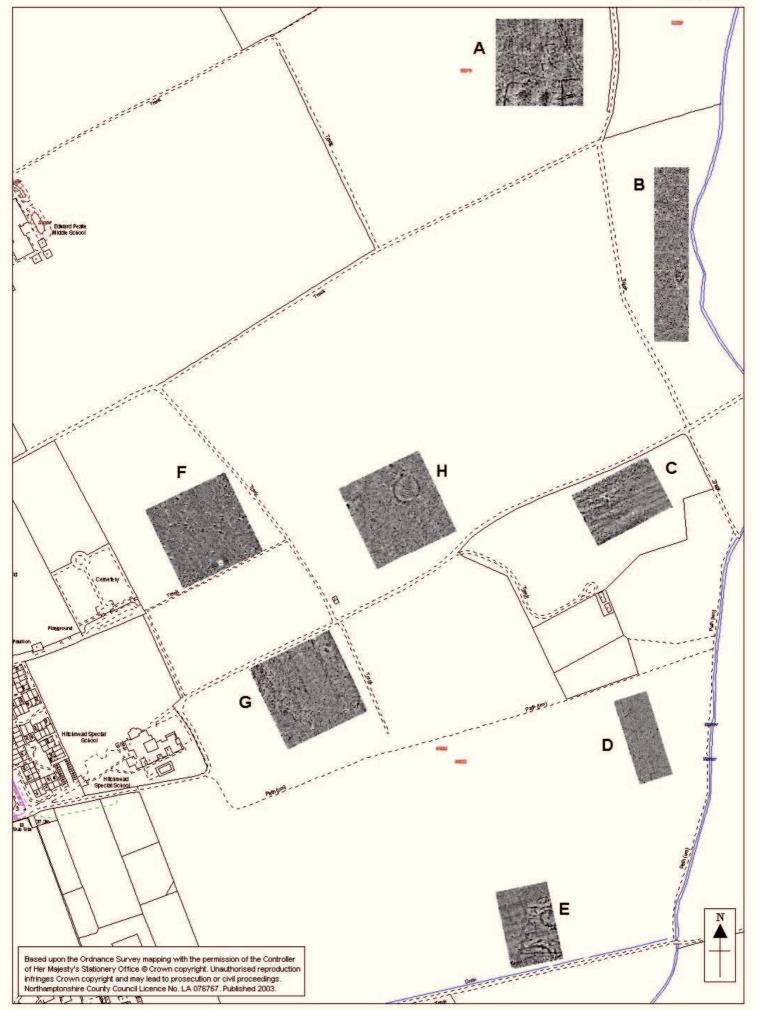


Figure 4: Gradiometer Results -3nT (white) / +3nT (black)

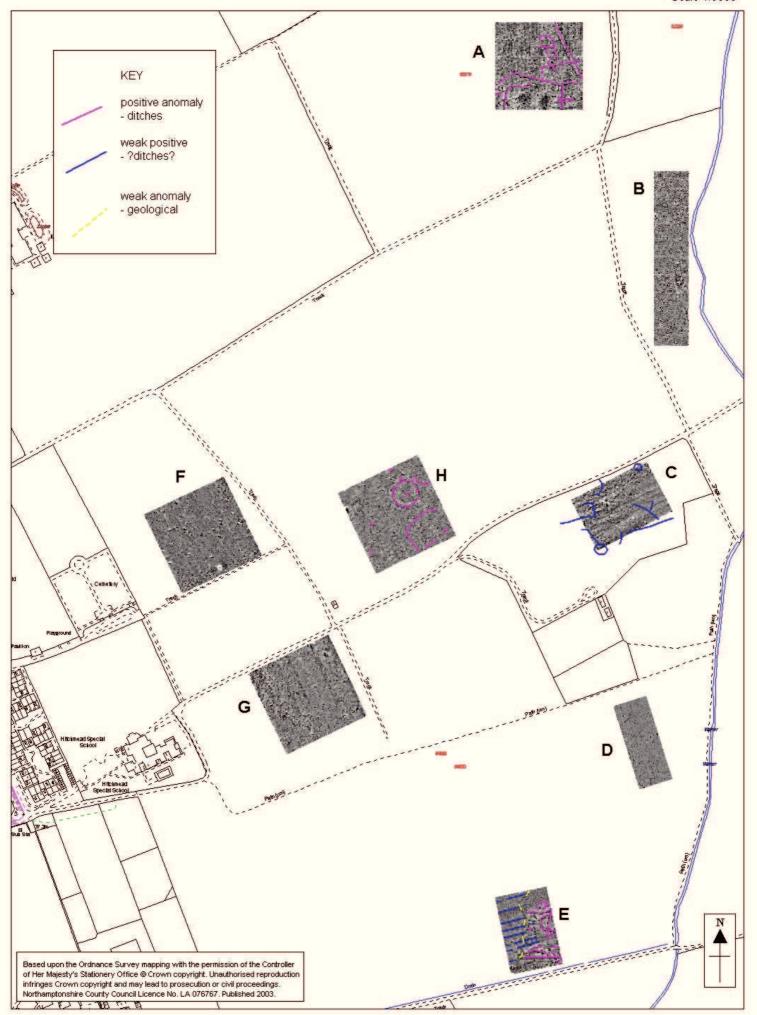
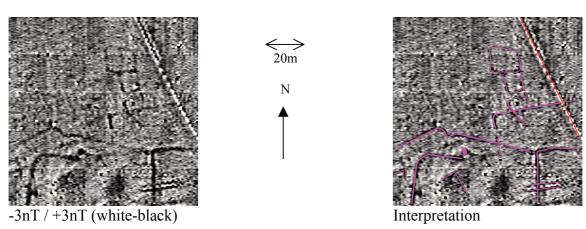


Figure 5: Gradiometer Results with Interpretation

LAND EAST OF BIGGLESWADE DETAILED GRADIOMETER SURVEY INTERIM RESULTS

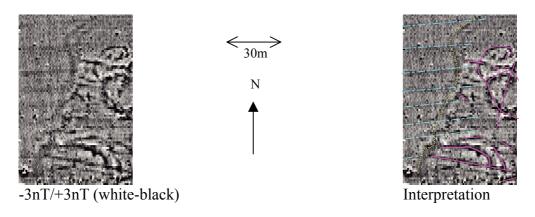
In the following document, the results for each area considered to be significant have been displayed as an image, image with interpretation and descriptive text. Detailed Areas A & H were located in the positions shown in the proposal plan, Area E is referenced to the southern side of the proposal.

Area A



A number of linear and sub-rectangular positive anomalies (purple, above) were detected in Area A. These are likely to reflect a series of buried ditches and ditched enclosures. A north-west orientated linear anomaly in the eastern half of the survey was probably a response to a modern cultivation change.

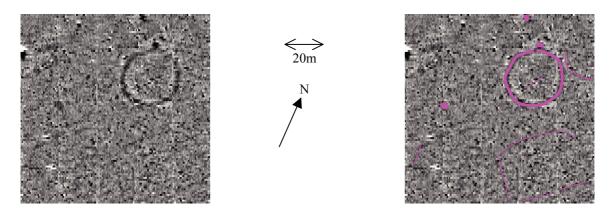
Area E



The area was divided into two distinct zones, on the east a group of curving and linear positive anomalies (purple) probably reflecting ditched features; and to the west of a curvilinear weak positive (yellow dashed) which possibly reflects a geological change into an area of relatively

suppressed readings, such as caused by alluviated land. Weakly positive linear bands aligned east-west probably indicate ridge and furrow ploughing.

Area H



A circular positive anomaly with an internal linear was detected in the north of Area H, probably a response to the ring ditch expected from cropmark evidence in this area. A discrete positive on the outside of the circle is likely to reflect a buried pit. A curving positive anomaly adjacent to the north-east of the ring ditch may represent a putative second similar feature. In the south-east of the area, weak positive anomalies appear to form a sub-rectangular ditched enclosure. Two further possible pits and a linear ditch were located in Area H (purple on the interpretation).

Conclusion

Of the eight detailed areas surveyed, only A E and H appeared to contain any substantial archaeological remains. The anomalies detected in Area C, reported upon earlier, were considerably weaker than those in the more recent surveys, and must now be considered with more caution than previously stated.