HERITAGE NETWORK

IVEL SPRINGS
Baldock, Herts.

HN488

Archaeological Fieldwalking Report

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Archaeological Director: David Hillelson, BA MIFA

IVEL SPRINGS
Baldock, Herts.

HN488

Archaeological Fieldwalking Report

Prepared on behalf of North Hertfordshire District Council

by

Geoff Saunders, BA

Report No.272

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The cover illustration is taken from Dury and Andrews' Map of Hartford-shire*, 1766*

Acknowledgements

The fieldwork for this project was carried out by Alison Hudson, and Geoff Saunders. Illustrations were prepared by Geoff Saunders, and the report was edited by David Hillelson.

The Heritage Network would like to express its thanks to Dieter Iwan, Countryside Management Service; David Hughes, Agricultural Contractor; and Kate Batt, Historic Environment Advisor, Hertfordshire County Council, for their co-operation and assistance in the execution of this project.

Summary

Site name and address:	Ivel Springs, Baldock, Hertfordshire		
County:	Hertfordshire	**District:**	North Hertfordshire
Village/town:	Baldock	**Parish:**	Baldock
Planning reference:	N/a	**NGR:**	TL 2432 3424
Client name and address:	North Hertfordshire District Council c/o Countryside Management Service, The Old Dairy, Bedford Road, Ickleford, Hitchin, Hertfordshire, SG5 3RR		
Nature of work:	Tree Planting	**Present land use:**	Allotments/Scrubland
Size of affected area:	c.0.5ha	**Size of area investigated:**	c.0.5ha
Site Code:	HN488	**Other reference:**	n/a
Organisation:	Heritage Network	**Site Director:**	David Hillelson
Type of work:	Fieldwalking	**Archive location:**	NHDC Museums
Start of work	13th December 2004	**Finish of work**	13th December 2004
Related SMR Nos.:	N/a	**Periods represented:**	Roman, Medieval, Post-Medieval
Previous summaries/reports:	N/a		

Synopsis: In order to determine the archaeological risk posed by a proposal for a programme of tree planting on land at Ivel Springs, Baldock, the Heritage Network was commissioned by the Countryside Management Service acting on behalf of the North Hertfordshire District council to undertake a programme of archaeological fieldwalking.

The Essex fieldwalking methodology was followed, although due to the small size of the area a 10m rather than a 20m grid was established across the site. A total of 32 transects were walked in a NE to SW direction.

Statistical analysis of the artefactual data suggests that the tree planting scheme is unlikely to disturb archaeological remains of any significance.

1. Introduction

1.1 This report has been prepared at the request of the *Countryside Management Service* (CMS) of Hertfordshire County Council acting on behalf of the North Hertfordshire District Council, as part of a programme of fieldwalking over an area of proposed tree planting at Ivel Springs, Baldock, Herts. The archaeological fieldwork has been proposed by the County Archaeology Office (CAO) of Hertfordshire County Council, following consultation by the CMS in connection with an application for grant-aid for the project. The scope of the work has been defined in a *Brief for Archaeological Evaluation by Fieldwalking* prepared by the CAO (ref. KB 07/04). The specification for the work is contained in the Heritage Network's approved *Project Design* dated December 2004.

1.2 The site is located on land to the north of the town of Baldock. The area is bounded by the railway line to the south, a sewage pumping station to the west, North Road to the east and allotment gardens to the north, centred on NGR TL 2432 3424.

1.3 The site covers an area of c.0.5ha and lies in the valley of the river Ivel, at approximately 60mAOD. The ground rises to the east and the west. The majority of the site is occupied by scrub and grassland. An area of archaeological significance, AS93, as defined in the District Local Plan, lies to the north. This consists of a complex of enclosures and linear ditches, known from aerial photographs, and encompasses Scheduled Ancient Monument (SAM) 5, an area of cropmarks showing ditched enclosures and pits.

1.4 On the basis of the known archaeology in the vicinity, it was considered by the CAO that late pre-Roman Iron Age and Romano-British remains may be disturbed by the planting scheme. The aim of the fieldwalking programme has been to clarify this risk by mapping the presence of artefactual evidence in the ploughsoil.

1.5 The present report is intended to provide the CAO with sufficient data to allow it to consider the archaeological implications of the proposed tree planting, and thus to determine what further, if any, mitigation measures may be required to allow the scheme to proceed.

2. Fieldwork

TOPOGRAPHY AND GEOLOGY

2.1 The site lies in the valley of the river Ivel, at approximately 60mAOD on land which rises gently from south-west to north-east.

2.2 The solid geology of the area is chalk overlain by brown marly soil. The area had been chisel ploughed, rotivated, and allowed to weather prior to the start of the project.

METHODOLOGY

2.3 In advance of the fieldwork, the study area was cleared of undergrowth and brush, and then chisel ploughed and rotovated. The ground was allowed to weather for a period of four weeks before being walked.

2.4 The work followed the *Essex Fieldwalking Methodology* (Medleycott and Germany, 1994) although due to the small size and narrow nature of the survey area a 10m grid was used aligned with the plot boundaries.

2.5 The proposed tree planting scheme covers an area of approximately 0.5ha. A 10m grid was established across the site in line with southern site boundary. Transects were walked in a north-east to south-west direction. Only whole transects were walked in order to avoid skewing of the statistical base.

2.6 Finds were recovered from 1m either side of each 10m transect, giving a 20% sampling rate, and bagged by transect. A 'no discard' policy was operated in the field.

2.7 Post-fieldwork processing consisted of washing, identification and quantification of the finds, which were then subject to statistical analysis. The significance of the data was calculated per transect using the standard deviation equation set out in the Essex methodology:

$$\sigma = \sqrt{\frac{\sum x^2}{n} - \mu^2}$$

By this system, a rating of 1 is considered to be significant, being over 2 standard deviations from the mean value for the site as a whole (ie. there are more finds than expected in this transect). Conversely, a rating of 4 indicates that the finds in this transect are less than the mean value. The results per find type were plotted on the site plan using indicative symbols, as shown in the following table:

	Significance Rating	**Plotted Symbol**
<Mean (z)	4	Line
Mean to 1 Standard Deviation (r)	3	Cross
1-2 Standard Deviations (r)	2	Circle
2 Standard Deviations + (r)	1	Star

2.8 All work, other than the use of a 20m grid, was carried out in accordance with the detailed method statement contained in the Heritage Network's approved *Project Design*.

RESULTS

2.9 For the purpose of calculating the significance rating, the mean (z) and the standard deviation (r) have been rounded to the nearest whole number. The results have been listed by find type.

2.10 No Prehistoric pottery, Romano-British CBM, Saxon pottery, or Worked Flint was recovered during this project. All potential flints were either plough struck, or frost fractured natural pieces.

Roman Pottery

Occurrence:

Grid		Weight (g)	Significance
East	North		
A	30-40	10	1
A	110-120	5	1
A	120-130	5	1

Statistics: n = 32 transects
z = 1g
$\Sigma x = 20$
$\Sigma x^2 = 150$
r = 2g

Medieval Pottery

Occurrence:

Grid		Weight (g)	Significance
East	North		
A	80-90	55	1

Statistics: n = 32 transects
z = 2g
$\Sigma x = 55$
$\Sigma x^2 = 3025$
r = 10g

Post Medieval Pottery

Occurrence:

Grid		Weight (g)	Significance
East	North		
A	10-20	15	4
A	20-30	15	4
A	30-40	105	2
A	40-50	55	3
A	50-60	50	4
A	80-90	45	4
A	90-100	25	4
A	100-110	70	3
A	110-120	110	1
A	120-130	40	4
A	130-140	25	4
B	10-20	45	4
B	20-30	5	4
B	30-40	50	4
B	40-50	20	4
B	50-60	25	4
B	80-90	65	3
B	90-100	60	3
B	100-110	40	4
B	110-120	90	2
B	120-130	75	3
B	150-160	105	2
B	180-190	55	3
B	190-200	60	3
C	0-10	1	4
C	10-20	20	4
C	170-180	60	3
C	180-190	60	3
D	160-170	60	3
D	170-180	75	3
D	180-190	30	4
E	170-180	60	3

Statistics: n = 32 transects
z = 51g
$\Sigma x = 1616$
$\Sigma x^2 = 106576$
r = 29g

Post Medieval Tile

Occurrence:

Grid		Weight (g)	Significance
East	North		
A	10-20	205	2
A	20-30	130	3
A	30-40	105	3
A	40-50	225	1
A	50-60	20	4
A	80-90	15	4
A	90-100	220	2
A	100-110	210	2
A	110-120	120	3
A	120-130	160	3
A	130-140	170	2
B	10-20	80	4
B	20-30	25	4
B	30-40	80	4
B	40-50	10	4
B	50-60	20	4
B	80-90	60	4
B	90-100	80	4
B	100-110	140	3
B	110-120	130	3
B	120-130	170	2
B	150-160	140	3
B	180-190	65	4
B	190-200	95	4
C	0-10	35	4
C	10-20	110	3
C	170-180	75	4
C	180-190	55	4
D	160-170	45	4
D	170-180	60	4
D	180-190	105	3
E	170-180	70	4

Statistics: n = 32 transects
z = 101g
$\Sigma x = 32300$
$\Sigma x^2 = 448300$
r = 62g

Post Medieval Brick

Occurrence:

Grid		Weight (g)	Significance
East	North		
A	130-140	85	1

Statistics: n = 32 transects
z = 3g
$\Sigma x = 85$
$\Sigma x^2 = 7225$
r = 15g

Undated Slag

Occurrence:

Grid		Weight (g)	Significance
East	North		
A	100-110	40	1

Statistics: n = 32 transects
z = 1g
$\Sigma x = 40$
$\Sigma x^2 = 1600$
r = 7g

Post Medieval Glass

Occurrence:

Grid		Weight (g)	Significance
East	North		
A	10-20	20	3
A	20-30	15	3
A	30-40	15	3
A	40-50	2	4
A	50-60	10	4
A	80-90	10	4
A	90-100	15	3
A	100-110	10	4

Grid		Weight (g)	Significance
East	North		
A	110-120	2	4
A	120-130	50	1
A	130-140	5	4
B	10-20	10	4
B	20-30	15	3
B	30-40	25	3
B	40-50	2	4
B	80-90	15	3
B	100-110	25	3
B	110-120	2	4
B	120-130	40	1
B	150-160	10	4
B	180-190	30	2
B	190-200	30	2
C	0-10	10	4
C	10-20	5	4
C	170-180	2	4
C	180-190	20	3
D	160-170	5	4
D	170-180	2	4
D	180-190	5	4
E	170-180	25	3

Statistics: n = 32 transects
z = 13g
$\Sigma x = 418$
$\Sigma x^2 = 10424$
r = 13g

Clay Pipe

Occurrence:

Grid		Weight (g)	Significance
East	North		
A	100-110	2	3
B	40-50	2	3
B	50-60	3	2
B	90-100	5	1
B	100-110	2	3

Grid		Weight (g)	Significance
East	North		
B	110-120	2	3
B	120-130	2	3
B	150-160	3	2
B	180-190	2	3
C	0-10	2	3
C	10-20	10	1
C	170-180	5	1
D	170-180	2	3

Statistics: n = 32 transects
z = 1g
$\Sigma x = 42$
$\Sigma x^2 = 200$
r = 2g

Oyster Shell

Occurrence:

Grid		Weight (g)	Significance
East	North		
A	90-100	2	3
A	110-120	5	2
B	20-30	5	2
B	120-130	10	1
B	180-190	10	1
B	190-200	2	3
C	180-190	2	3

Statistics: n = 32 transects
z = 1g
$\Sigma x = 36$
$\Sigma x^2 = 262$
r = 3g

Animal bone

Occurrence:

Grid		Weight (g)	Significance
East	North		
B	10-20	40	1
B	30-40	2	4

Statistics: n = 32 transects
z = 1g
$\Sigma x = 42$
$\Sigma x^2 = 1604$
r = 7g

Undated Metal Objects

Occurrence:

Grid		Weight (g)	Significance
East	North		
B	10-20	20	1
B	180-190	5	2
C	170-180	2	3

Statistics: n = 32 transects
z = 1g
$\Sigma x = 27$
$\Sigma x^2 = 429$
r = 4g

3. Discussion

3.1 The present site lies within a well documented archaeological landscape with an area of archaeological significance identified from aerial photographs located to the north (AS93).

Prehistoric

3.2 There was no evidence for archaeological activity prior to the Romano-British period. A general lack of worked flints, burnt or otherwise, indicates that there is no definable prehistoric activity within the study area.

Roman

3.3 Romano-British pottery was collected in two areas, along the southern boundary close to the south-east corner of the site and close to the middle of the southern site boundary. The lack of significant Romano-British material is surprising due to the proximity of known Romano-British activity to the site. The small and heavily abraded nature of the material indicates that it may not originate from on the site, but it does however suggest activity of this period in the vicinity.

Medieval

3.4 Medieval pottery was collected in a single area, close to the middle of the southern site boundary. The lack of material recovered suggests that the study area was not used for settlement during the Medieval period.

Post-medieval

3.5 The post-medieval material was spread across the whole survey area, much of this material is likely to have entered the area during its use as allotments.

Undated material

3.6 The undated finds of animal bone, oyster shell, slag, and metal objects were only collected in small amounts and are insignificant in terms of defining areas of archaeological activity.

Conclusion

3.7 This fieldwalking survey has demonstrated little evidence for archaeological activity within the survey area. The Romano-British and Medieval material recovered is indicative of the proximity of the site to areas of known activity during these periods.

3.8 On this basis, the overall risk that the proposed planting will disturb significant archaeological remains should be considered to be Low.

CONFIDENCE RATING

3.9 During the course of the survey, the weather and ground conditions were generally acceptable for artefact recovery. However, the dark colour of the ploughsoil was close enough to some Romano-British pottery types to allow the possibility that some sherds of these types were not observed within the soil matrix.

3.10 Overall, these circumstances suggest a confidence rating for the work which is Moderate to High.

4. Bibliography

Ashworth, H. 2004. *Ivel Springs, Baldock, Herts. Project Design: Archaeological Evaluation by Fieldwalking.* Heritage Network, December 2004.

Batt, K. 2004. *Design Brief for Archaeological Evaluation by Fieldwalking, Ivel Springs, Baldock.* HCC.

Medleycott, M. and Germany, M. 1994. *Archaeological Fieldwalking in Essex, 1985-1993 : Interim results* in Essex Arch and Hist Vol.25.

5. Illustrations

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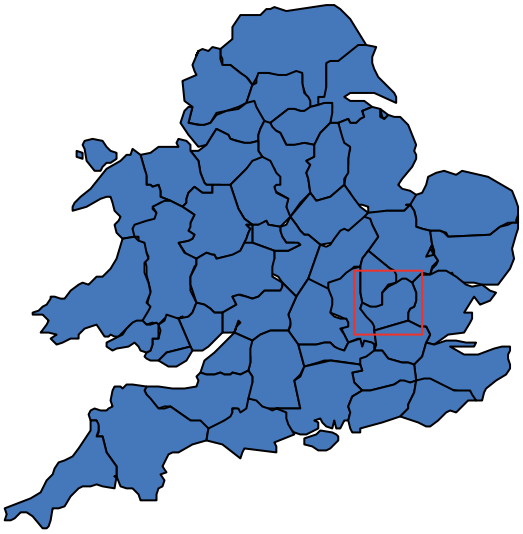

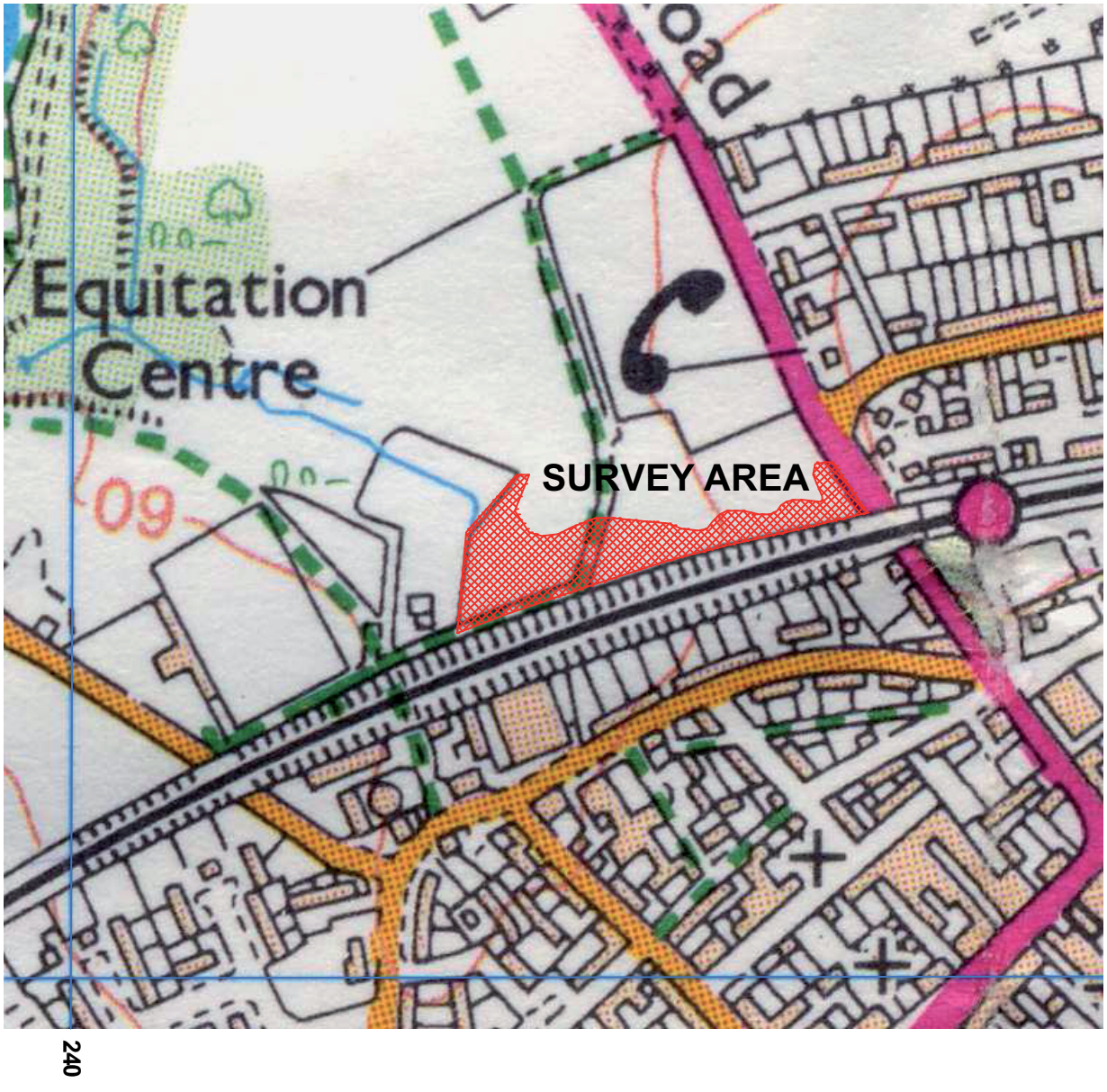

Site Location

Scale 1:4000

Figure 1

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Ivel Springs, Baldock

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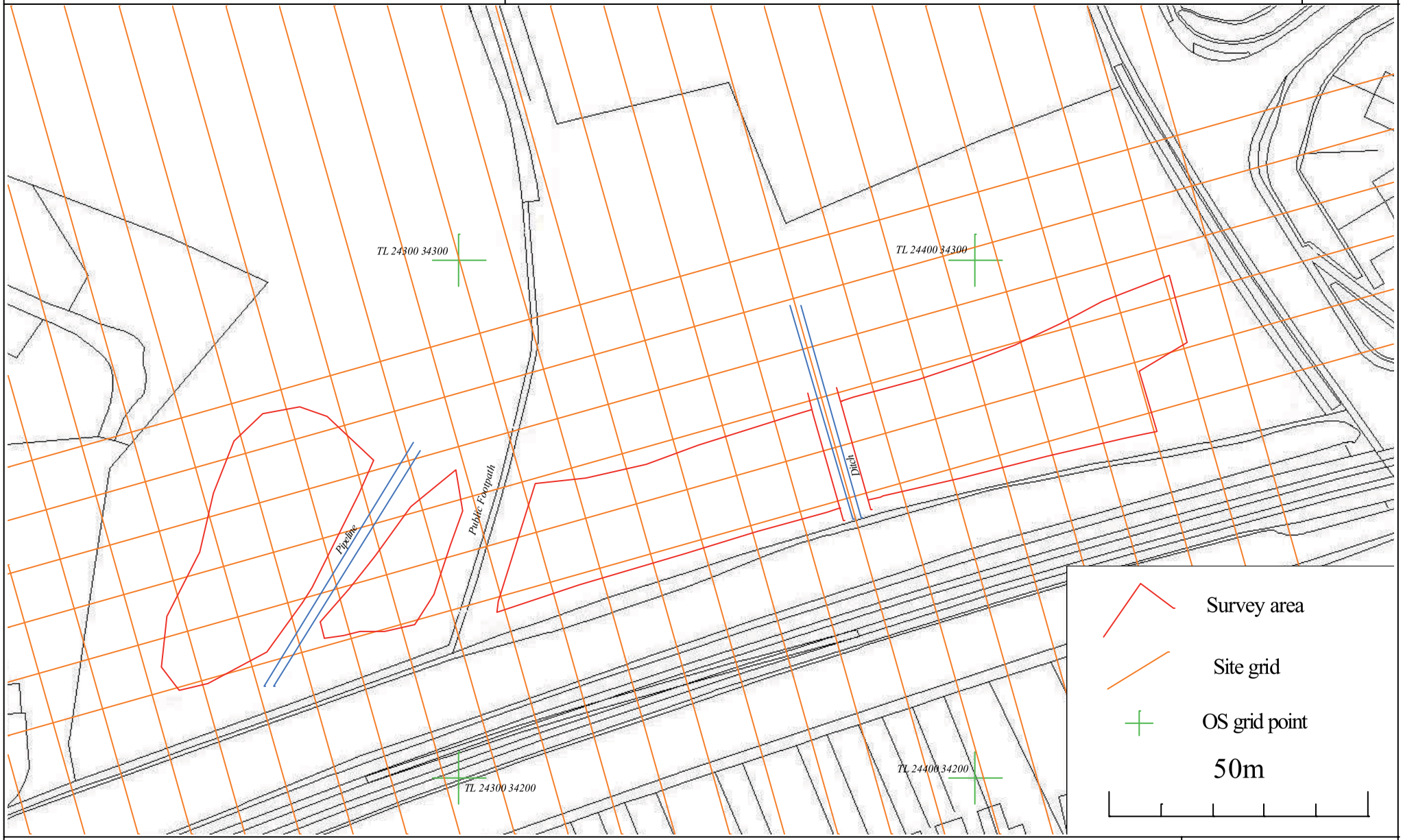

Site Layout

Scale 1:1000

Figure 2

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Ivel Springs, Baldock

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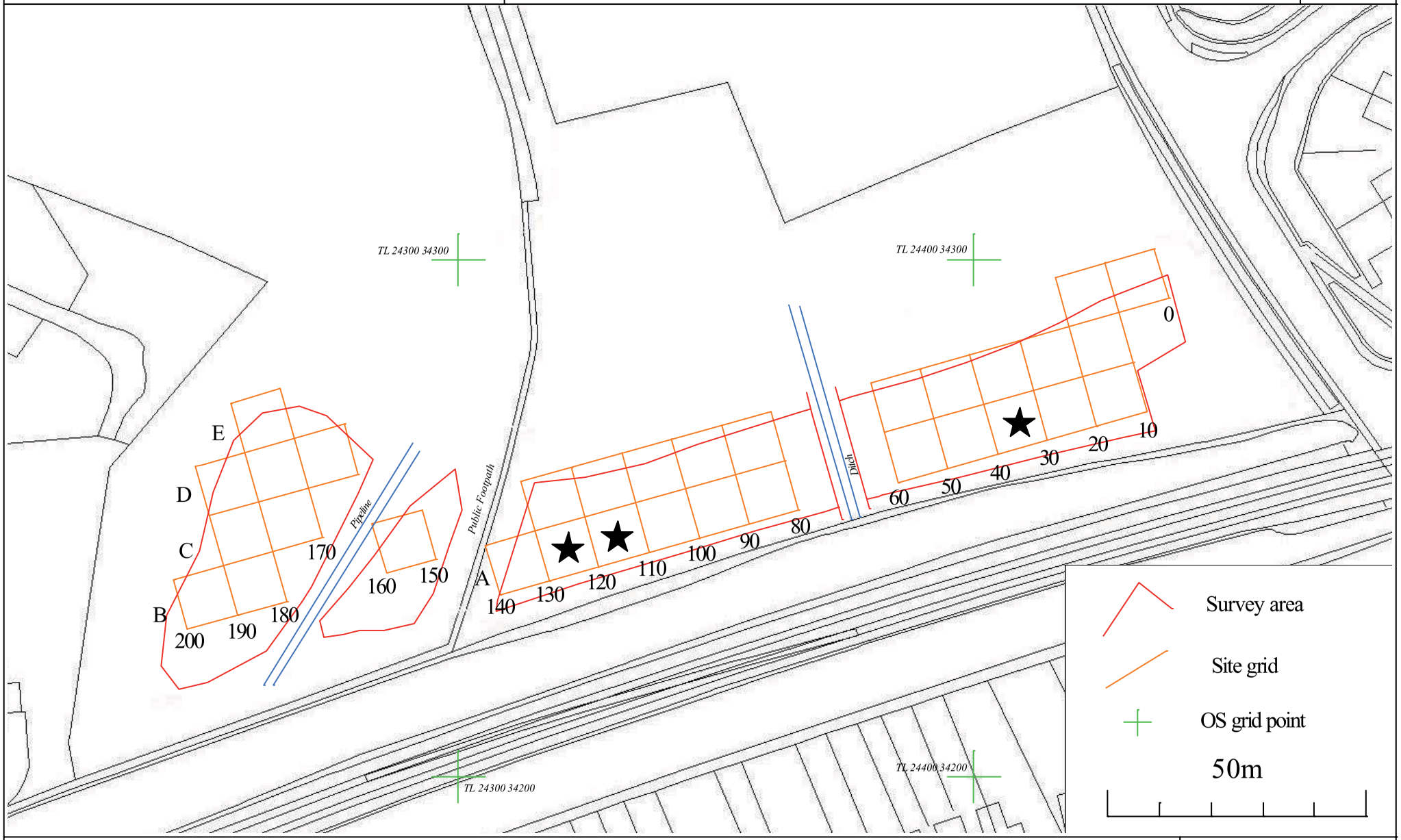

Fieldwalking finds : Roman pottery

Scale 1:1000

Figure 3

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Ivel Springs, Baldock

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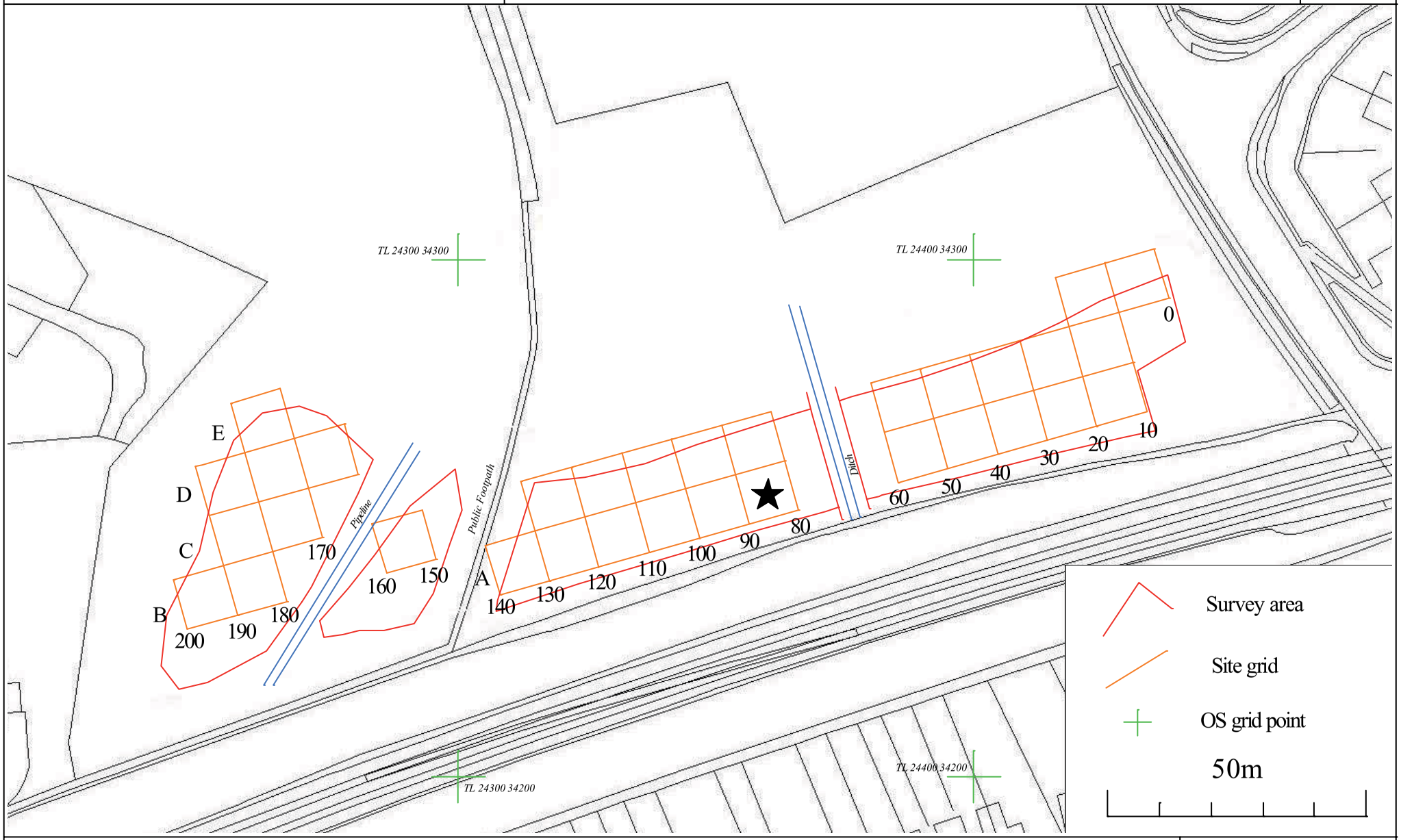

Fieldwalking finds : Medieval pottery

Scale 1:1000

Figure 4

Appendix 1

Fieldwalking Finds Record

		POTTERY: No. of Sherds and Weight in Grammes												Weight in Grammes only					FLINT: No. only			SHEET 1. OF 2
		Uncertain		Prehist.		Roman		Saxon		Medieval		Post-Med		RB Brick & Tile	Med/ P-M Tile	Med/ P-M Brick	Burnt Flint	Slag	Flakes	Cores	Tools	OTHER
	Grid	No.	Wt.	No.	Wt.	No.	Wt.	No.	Wt.	No.	Wt.	No.	Wt.									
A	10-20											6	15		205							Glass 20
A	20-30											4	15g		130							Glass 15
A	30-40					1	10					13	105		105							Glass 15
A	40-50											12	55		225							glass 2
A	50-60											13	50		20							Glass 10
A	80-90									3	55	13	45		15							Glass 10
A	90-100											7	25		220							Glass 15 oyster shell 2
A	100-110											6	70		210			40				Glass 10 clay pipe 2
A	110-120					2	5					11	110		120							Glass 2 oyster shell 5
A	120-130					4	5					8	40		160							Glass 50 charcoal 1
A	130-140											7	25		170	85						Glass 5
B	10-20											3	45		80							Glass 10 animal bone 40, metal 20
B	20-30											3	5		25							Glass 15 oyster shell 5
B	30-40											4	50		80							Glass 25 animal bone 2
B	40-50											5	20		10							Glass 2 claypipe 2
B	50-60											11	25		20							claypipe 3
B	80-90											11	65		60							glass 15
B	90-100											17	60		80							clay pipe 5
B	100-110											16	40		140							Glass 25 Clay pipe 2
B	110-120											19	90		130							Glass 2 clay pipe 2

		POTTERY: No. of Sherds and Weight in Grammes												Weight in Grammes only					FLINT: No. only			SHEET 2 OF 2
		Uncertain		Prehist.		Roman		Saxon		Medieval		Post-Med		RB Brick & Tile	Med/ P-M Tile	Med/ P-M Brick	Burnt Flint	Slag	Flakes	Cores	Tools	OTHER
	Grid	No.	Wt.	No.	Wt.	No.	Wt.	No.	Wt.	No.	Wt.	No.	Wt.									
B	120–130											21	75		170							Glass 40 clay pipe 2. oyster shell 10
B	150–160											18	105		140							Glass 10 clay pipe 3
B	180–190											20	55		65							Glass 30 metal 5 oyster shell 10 clay pipe 2
B	190–200											15	60		95							Glass 30 oyster shell 2
C	0–10											1	1		35							Glass 10 clay pipe 2
C	10–20											6	20		110							Glass 5 clay pipe 10
C	170–190											21	60		75							Glass 2 metal 2 clay pipe 5
C	180–190											10	60		55							Glass 20 oyster shell 2
D	160–170											9	60		45							Glass 5
D	170–180											11	75		60							Glass 2, clay pipe 2,
D	180–190											10	30		105							glass 5,
E	170–180											19	60		70							Glass 25,