



LINDSEY ARCHAEOLOGICAL SERVICES

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MILL DROVE, BOURNE.

AN ARCHAEOLOGICAL EVALUATION

An Iron Age/Romano-British Settlement at Mill Drove, Bourne.

J.B. Tipper

Introduction

In March 1994, an archaeological evaluation to the north of Mill Drove, on the north-eastern edge of Bourne, defined features indicative of occupation. This was carried out by Lindsey Archaeological Services under instruction from M. Parker and Sons Ltd. The purpose of the evaluation was to define the extent and type of site, the date of occupation, and its location in the landscape, using a combination of data from field walking, geophysical survey and limited excavation.

Location: Topography and Geology

The site, a four hectare rectangular field, north of and perpendicular to Mill Drove, is situated on rising ground above the Fen edge, TF 1030 2125, c.6-8 m above sea level (the site is crossed by the OD 7.5 m contour, defining the edge of the Fenland region), with land sloping gradually away to the south and east: the southern boundary is c.1.8 m below the level of the northern end (Fig. 1). The site is located on the very edge of the Lincolnshire Fens, under 1 km to the Fen edge in the Roman period, closer during the Iron Age.

Recent research has shown that the Fen edge was by no means static (Simmons 1980). Furthermore, there was no strict division between land and sea but rather a frequently changing zone of marshland during the Iron Age and Romano-British periods. The siting of the settlement on rising ground meant that at no point, during the period under discussion, was it enveloped by the sea.

The western boundary is marked by a recent housing development, formerly the line of the Great Northern Railway Bourne to Sleaford Branch. The land on the east falls away, beyond the field boundary, to the Roman Car Dyke, c.110 m due east (at a height of c.6.3 m OD). The field boundary takes its alignment from the Dyke, orientated N - S.

The local geology consists of sand and gravel fluvio-glacial drift deposits. Gravel extraction close to and in the assessment plot, during the last hundred years, is indicated by a small gravel pit in the SW corner, marked on the 1906 OS map. Evidence for this was uncovered by the excavations (Trench 12).

Fieldwork

Field walking was undertaken at the end of January 1994 across the assessment plot in order to identify the spread of activity. In order to define the extent and complexity of the site, a magnetometer survey was carried out over the whole plot by Geophysical Surveys of Bradford in January 1994 (Figs.2, 3). The results of the survey will be discussed in conjunction with this excavation report.

In March 1994, fourteen trenches were dug by machine, between 10 and 20 m in length x 1.5 m in width, uncovering features cut into the natural geology (Figs. 2 -5. Plates 1 - 14). These trenches were positioned with respect to the geophysical results, to establish the extent of archaeological features and to

produce dating evidence. Unfortunately, the water table, at c.0.7 m below topsoil surface, prevented complete excavation of features greater in depth.

Archaeological features were assigned numbers for recording purposes, which are referred to in the text and on the illustrations.

Date, Type and Spatial extent of Occupation

Geophysical survey and excavation have defined a large and complex arrangement of enclosure ditches, gullies, pits and post-holes dating to the Iron Age and Romano-British periods (Figs. 2, 3). Two distinct areas of ditched enclosures were located, at the north and south ends of the assessment plot, c.80 - 90 m apart. These may belong to the same settlement complex, possibly to different phases of occupation, but they could relate to different settlement complexes. Few relationships could be established between the larger ditches and therefore the chronology of occupation is in doubt.

The artefactual record does not facilitate a close dating of the settlement. The diagnostic material from the 1994 fieldwork is made up of a small collection of pottery, fragments of flue-tile and a brooch (of 2nd/3rd-century AD date but uncontexted). The pottery is most abundant for the Late Iron Age and Early Romano-British periods (1st-centuries BC/AD). A small quantity of animal bone indicates a domestic context of occupation.

Despite earlier prehistoric and later early medieval material recorded in the near vicinity (SMR Nos. 34114 & 34137), no evidence of occupation earlier than the Early Iron Age (5th-6th centuries BC) or later than the Romano-British periods (3rd-century AD) was forthcoming from the 1994 fieldwork. However, late medieval agriculture is evidenced by a probable furrow (Tr. 13), orientated E-W. Slight traces of ridge and furrow have been observed on the surface.

Southern Enclosure Complex

Enclosure 1

The geophysical survey clearly defined a single enclosure, Enclosure 1, at the southern end of the plot, with enclosure ditches delimiting an area of c.2000 m², orientated E-W, possibly associated with a trackway fronting its northern side (Figs. 2, 3). However, no evidence for the linear magnetic anomalies, running parallel c.10 m apart, was found during the excavations (Tr. 11), inexplicably given the clear geophysical definition.

Enclosure 1 is fronted on its north side by a large sub-linear ditch, curving gently ENE -W (Fig. 5. Plates 8, 9). Excavation proved that this intense positive magnetic anomaly represents an enclosure ditch with multiple recuts, extending to 6.6 m in width: five recuts were observed during excavation (Fig. 7). This feature represents a multi-phase delimitation of space on the same alignment. In particular, ditch F113 (profile not discerned) and recut F107, with a U-shaped profile, have widths of c. 2.8 m, indicating substantial features. Fill (115) of ditch F113 is a yellowish grey-brown loam, in contrast to the dark grey-brown loam, (108), of F107. No diagnostic material was recovered from these features.

On its south side, ditch F107 cuts a smaller V-shaped ditch, F94, c. 1.6 m wide (projected) x 0.5 m deep. The upper layer of F94, (122), contained Early - Late Iron Age pottery. The final phase of recutting of the ditch complex, F111, a

small V-shaped ditch 1.3 m wide x 0.45 m deep, was found to contain Early - Mid Iron Age pottery but this is almost certainly residual as a fragment of Roman stamped box flue-tile was recovered from the same fill (112). Ditch F111 cuts layer (110), which contained Late Iron Age pottery. It is probable that this ditch complex represents a period of intense activity during the Iron Age: ditches F113 and F107 are possibly of an earlier date. This was then recut during the Romano-British period, suggesting that the earlier ditch may have been visible and still in use.

Two post-holes, F100 and F102, along the northern edge of ditch F113, may represent evidence of a fence. If it can be tentatively assumed that their close association with the ditch represents contemporaneity, this can be interpreted as a ditched stockade, which may delimit an outer boundary associated with the northern complex. Furthermore, layer (114) may indicate the presence of a bank on the northern edge of F113: a greater quantity of silting on the northern side of the ditch may have been caused by the erosion of the bank.

It is suggested that the enclosure, identified through magnetometry, represents a separate phase of the southern ditch complex, possibly defined by ditch F111. Unfortunately due to the constraint of time, the excavations were unable to investigate the other sides of this enclosure. No internal features were identified by geophysical survey or excavation. Further excavation would be required to clarify the southern enclosure complex and to fully understand the multi-phase enclosure ditch. Field survey by the Fenland Project defined a small Late Bronze Age-Early Iron Age settlement c.0.5 km east of the assessment plot (SMR 34114), to which the southern enclosure complex may be related.

Northern Enclosure Complex

An extensive area of magnetic anomalies, indicative of substantial occupation, was located at the northern end of the site (Fig. 2). Ditch systems belonging to at least three enclosures on different alignments show as clear positive anomalies on the geophysical survey and were examined through excavation.

Enclosure 2

The earliest evidence of occupation at the northern end of the assessment plot appears to be a small enclosure, Enclosure 2, c.1900 m² in area and aligned N-S (Fig 3). The enclosure was defined on its eastern side by F72, and, probably, F66 on its western side, which is parallel to F72. F66 is a V-shaped ditch, 2 m wide x c.1 m deep (Tr. 3. Fig. 6b. Plate 10).

The eastern side of this sub-rectangular enclosure, formed by a shallow V-shaped ditch, F72 (1.35 m wide x 0.3 m deep), appears to be recut, by F70 (0.8 m wide x 0.3 m deep) (Tr. 5. Fig. 6c. Plate 11). Ditch F70 is later cut by a narrow slot, F68 (0.3 m wide x 0.2 m deep), parallel with and adjacent to the first recut. F70 contained pottery dating to the Late Iron Age/1st-century AD, including a body sherd of a butt beaker with cordoned and zoned decoration, and a fragment of kiln or other industrial brick.

The south limit of this enclosure, aligned NW-SE, was not excavated. The northern boundary lies outside the assessment plot. However, at its northern end ditch F72 turns through 105° to face eastwards for c.10 m before

terminating. This may continue eastwards, after a break of c.6 m, as F51: a 1st-century AD sherd and a fragment of loom weight were recovered from the gully (Tr. 1. Fig. 4). The pot-herd is part of a near-complete vessel recovered from F61, indicating that F51 continued SE, or was at least open at the same time. Intense magnetic anomalies, probably ditches, disappear to the north and out of the survey area.

The magnetometer survey suggests a possible entrance into this enclosure at its south-west corner, where a break of c.4 m in the linear anomaly is marked by an intense enhancement, suggestive of a ditch terminal (Fig. 2). Another entrance may occur on its eastern side, north of Tr. 5.

The enclosure may front a ditched track or driveway on its south side, c.14 m wide and orientated NW-SE, delimited on its southern side by a small V-shaped drainage gully, F36 (0.9 m wide x 0.6 m deep) (Tr. 6. Figs. 5, 6e). However, this relationship cannot be confirmed due to the lack of artefactual material. Furthermore, the gully is not clearly defined by the magnetometer survey: a linear feature (unexcavated) on the same orientation, c.6 m south of gully F36, clearly delimits the southern extent of the northern complex.

A shallow ditch, F26 (0.75 m wide x 0.3 m deep), aligned E-W with a recut on the same alignment, contained pottery dating to the mid-late 1st century AD and a fragment of loom weight (Tr. 4. Fig. 4). A sherd of butt beaker may suggest contemporaneity with Enclosure 2. However, given the inadequate amount of excavation, this interpretation may turn out to be incorrect. Interpretation of positive anomalies in the north-eastern corner of the plot is problematic as a result of the interference caused by a modern service trench running diagonally NE-SW across the field.

Enclosure 3

At some point, Enclosure 2 was enlarged by more than a third, into Enclosure 3, covering an area over 3000 m² to the edge of the plot (Fig. 3). Its northern side lies outside the assessment plot. Ditch F66, almost certainly recut, which might be indicated by layer (67), continued to delimit the western side of the enclosure (Fig. 6b). This may have occurred after the disuse of Enclosure 2, but without a break in activity given the continued use of F66. The southern boundary, F34, a U-shaped ditch c.2 m wide x 0.45 m deep (projected), shifted c.10 m to the south, but on the same orientation as the earlier enclosure ditch (Tr. 6. Figs. 4, 6d). A fragment of Roman comb-patterned box flue-tile was recovered from ditch F34.

No internal structures were defined by the geophysical survey, nor can any excavated features be positively identified as foundation trenches of structures. Nevertheless, the magnetometer survey indicates intense activity in the northern half of Enclosure 2/3, but this was not excavated and remains undated: it strongly suggests that the centre of activity lies beyond the northern boundary of the assessment plot (Fig. 2).

An internal subdivision of the later enclosure is indicated by a linear anomaly aligned NE-SW, less intense than the main boundaries, dividing the enclosure into two equal halves. These two small enclosures, c.1500 m², are similar in size to Enclosure 4 (see below), adjoining the eastern side of Enclosure 3, which would form a row of small enclosures aligned NE-SW.

Enclosure 4

The eastern boundary of Enclosure 3, defined by F20, defines the western side of a second and probably contemporary enclosure (Fig. 3). The southern boundary of Enclosure 4 (unexcavated) is almost certainly a continuation of the southern ditch of Enclosure 3, orientated on the same NW -SE alignment, but this has not been confirmed by excavation.

The most intense magnetic anomaly was produced by this sub- rectangular enclosure orientated NE - SW, c. 1500 m² in area. Excavation (Tr. 5) defined a small V-shaped ditch, F20 (1.2 m wide x c.0.4 m deep), containing a dark grey-brown loam with a high charcoal content, which delimits the western side of the enclosure (Fig. 5). The fill of ditch F20 contained pottery dating to the mid 3rd-century AD, including Nene Valley red and grey wares and a fragment of Nene Valley mortarium. Two fragments of Roman box flue-tile, one of which had combed patterning similar to the piece found in F34, is strong evidence to show that they were contemporary enclosures. Fragments of limestone rubble were also found in the ditch.

The northern boundary of this enclosure is unclear. Excavation defined an area of complex intercutting features (Tr. 1. Fig. 4). A ditch of multiple recuts aligned NE - SW, F55 (3.25 m wide x >0.3 m deep), which contains 1st/2nd century AD pottery, was shown to truncate an earlier ditch, F61, curving NW - SE, containing fragments of a 1st-century AD vessel (sherds of a complete rim) in its lower fill (Fig. 6a). A V-shaped gully, F51 (0.5 m wide x 0.3 m deep), aligned E - W, has been cut by ditch F55, and contains a fragment of the vessel from F61 (see above). F61, F51 and F55 represent temporally close phases but they are all earlier than the 3rd-century date of F20. However, it is possible that F55 was open when Enclosure 4 was constructed, given the evidence which suggests that F66 was reused to define Enclosure 3.

A break of c.3 m along ditch F20 is indicative of an opening. The magnetic enhancement is strongest at either side of the gap, an occurrence to be expected at ditch terminals where rubbish may have accumulated (Fig. 2). A smaller entrance may exist along the eastern ditch. These were not investigated by excavation due to the limitations of the evaluation.

This enclosure possibly has an internal subdivision aligned NW - SE. No internal structures could be identified in Enclosure 4. An intense positive anomaly on the magnetometry survey, c.6 m in width, north of, but adjacent to, the internal division, may indicate a large pit or craft/industrial debris (Fig. 2). This was not examined by excavation.

Both Enclosures 3 & 4 front a possible ditched track or driveway on their south sides, c.12 m wide and orientated NW -SE, delimited on its southern side by a sub-linear anomaly which was not investigated by excavation (Figs. 2, 3). The enclosures may relate to gully F36 (see above), c.5 m south of ditch F34. The magnetometer survey indicates that the trackway might turn northwards and continue along the western edge of Enclosure 2.

Although the western edge of the assessment plot has been much disturbed in more recent times (indicated by manhole covers), excavation defined a shallow ditch, F30 (1.5 m wide x 0.15 m deep), curving NE - SW (Tr. 2. Fig. 4).

A stake-hole cut into its base is suggestive of an enclosure fence. This extends what is known about the site from the geophysical survey. Unfortunately, no material was recovered from the excavated segment and the modern interference rendered the magnetometer ineffective. Only further excavation will locate this feature within the larger settlement complex.

Five of the fourteen trenches were located in areas without magnetic anomalies, in order to investigate the possibility that smaller and more ephemeral features, such as post-holes, would not be responsive to the geophysical survey (Figs. 2, 3). Trench 2 has been discussed above. Tr. 7 defined a sub-linear gully, aligned N-S, but Trenches 8, 10 and 14 failed to uncover archaeological features, substantiating the reliability of the magnetometer survey. Tr. 9 defined modern drainage pipes, eliminating a linear feature defined by magnetometry.

The trenches without archaeological features are important in showing that the gap of c. 80-90 m between the northern and southern complexes is real. Although plough damage was evidenced across the site, and has probably destroyed very shallow features and any occupation surfaces, the gap in the central zone of the assessment plot is unlikely to be a consequence of this, given the extensive survival of deposits on the rising ground: it represents a real break in activity. Field walking defined two concentrations of material in the northern and southern thirds of the assessment plot. This, combined with the different axes of the activity zones (the northern complex is orientated NW-SE while the southern enclosure is on a E-W axis), may indicate that they belong to different settlement complexes.

There was a sparsity of structural evidence from the assessment plot, consisting of a few pieces of roof tile, two fragments of flue-tile and a few lumps of limestone building rubble, compared with field walking immediately to the north of the site during the mid 1980's. The Fenland Project recovered tiles, hypocaust fragments and limestone rubble (SMR 34142): the pottery suggested occupation throughout the Roman period, particularly during the late 3rd - 4th centuries (SMR 34134), continuing into the Early Saxon period but shifting location to the north-west of the assessment plot (SMR 34137). This evidence is suggestive of an extensive Romano-British settlement with at least a moderate stone building, possibly indicative of a villa, centred immediately to the north of the assessment plot.

The fieldwork at Mill Drove, Bourne, has defined enclosures, probably for livestock, associated with an Iron Age farmstead. During the Romano-British period, probably in the 2nd-century AD, this was Romanised, and possibly transformed into a small villa complex, located immediately to the north of the assessment plot. This change did not result in a major realignment of, or alterations to, the enclosure complex, suggesting that there was no major change in the site's economic base.

The Communications Network

The Fenland Project has shown that the Fen margins were densely inhabited during the Iron Age and Roman periods, containing numerous irregular

nucleated enclosures (Hayes and Lane 1992). However, few excavations of these recently identified sites have taken place. Therefore, the threatened destruction of the Mill Drove site is particularly important as it enables the investigation of a Fen edge site showing evidence for both Roman and pre-Roman occupation.

The settlement complex is sandwiched on the Fen edge (close to both the Iron Age and Roman coastlines) between the Car Dyke c.110 m to its east and the junction between King Street, heading north to Lincoln and south to Great Casterton, and a branch to the north-west, connecting Bourne with the Ermine Street to the south of Ancaster, just over 0.5 km to its west (Fig. 1). The site lies c.1 km from the modern centre of Bourne.

The Mill Drove site is one of a number of Iron Age sites on the Fen edge between South Kyme and Bourne, which appear to reflect the later course of the Roman Car Dyke (Simmons 1980). This relationship is primarily topographical, occurring along the rising ground above the Fen edge.

The Iron Age site was situated on stable land, suited for stock rearing, and close to the Fen edge for exploiting its resources. Although salterns have been identified for both periods in the immediate vicinity (Lane 1988), no evidence has been discovered for salt production at the site, during either the Iron Age or Romano-British periods. A villa owner may well have had associations with the salt industry, being ideally positioned for the local market centre, probably at Bourne, although this remains to be substantiated by research, and for transportation to markets further afield.

The Car Dyke, probably of late 1st/early 2nd-century AD date, follows the OD 7.5 m contour, which straddles the site, along the eastern edge of the limestone escarpment, and along the Fen edge. Once thought to have been an artificial canal and major waterway for shipping grain to the military north from an Imperial estate encompassing the Fen region, it is now generally accepted that the Car Dyke was part of an elaborate drainage system (Simmons 1979). This does not lessen the importance of the investigation of sites situated adjacent to it.

The drainage system centred on the Car Dyke, combined with a receding coastline during the Roman period, would have produced well drained fertile land for intensive farming, for exploitation from sites in the near vicinity. Furthermore, the Dyke would have acted as a means for transporting produce, on a small scale, to local markets.

Summary

The evidence which has been discussed suggests that an Iron Age/Early Romano-British farmstead was Romanised and possibly transformed into a small villa, probably during the 2nd-century AD. At least four enclosures are known. The focus of occupation debris, and the possible villa structure, lies to the north: no evidence of structures was found in the assessment plot. Occupation continued from the Early Iron Age, and possibly earlier, into the 3rd-century AD without any apparent significant break in activity. An informative site plan has been produced but dating and phasing remains

uncertain without further excavation of both the northern and southern areas of activity.

Acknowledgements

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9 May 1994

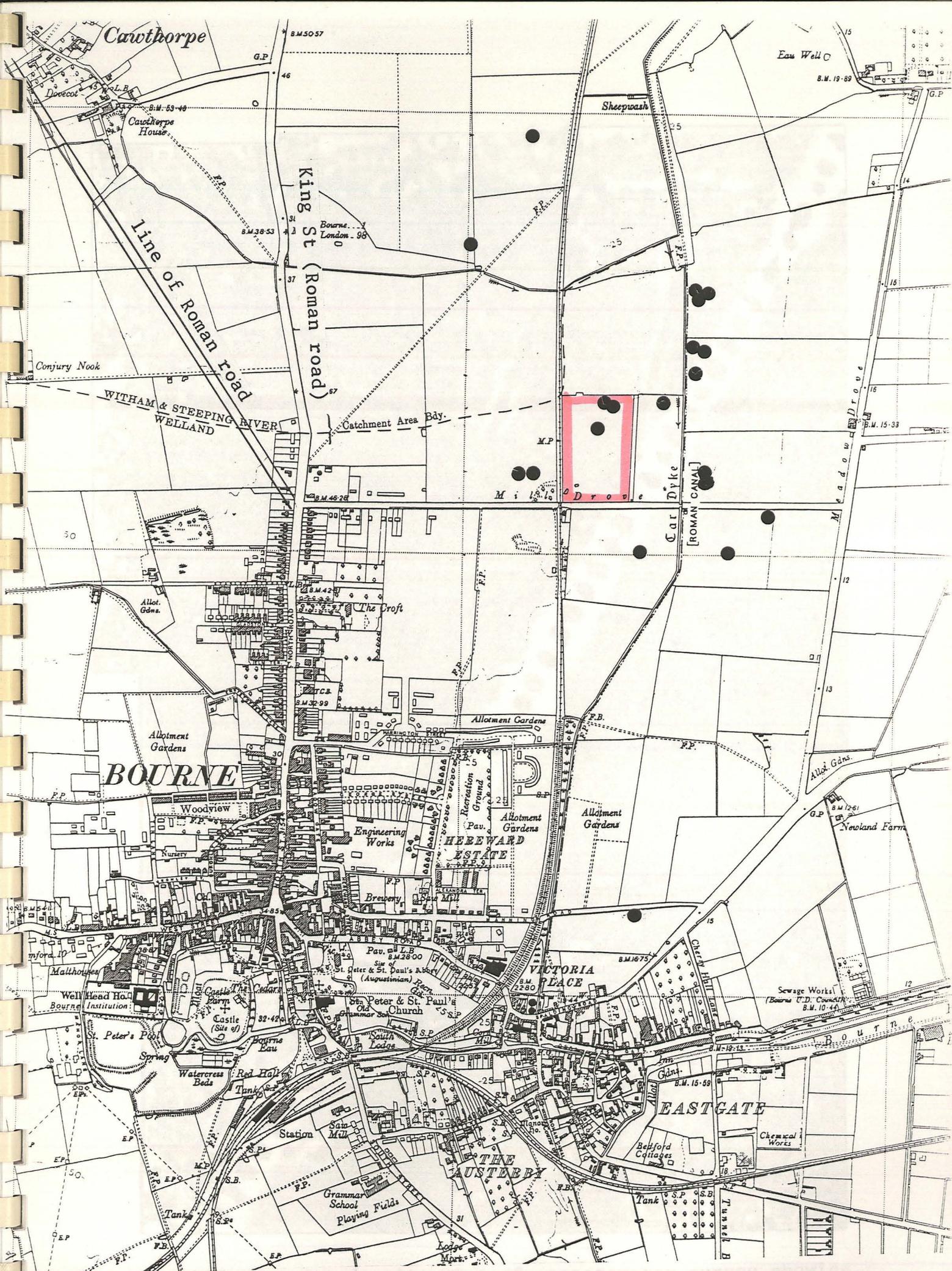


Fig. 1 Bourne, Mill Drove. Site location. Known archaeological remains also marked. Reproduced from the 1951 OS 1:10560 scale map with permission of the Controller of HMSO, Crown copyright. Licence no. AL50424A.

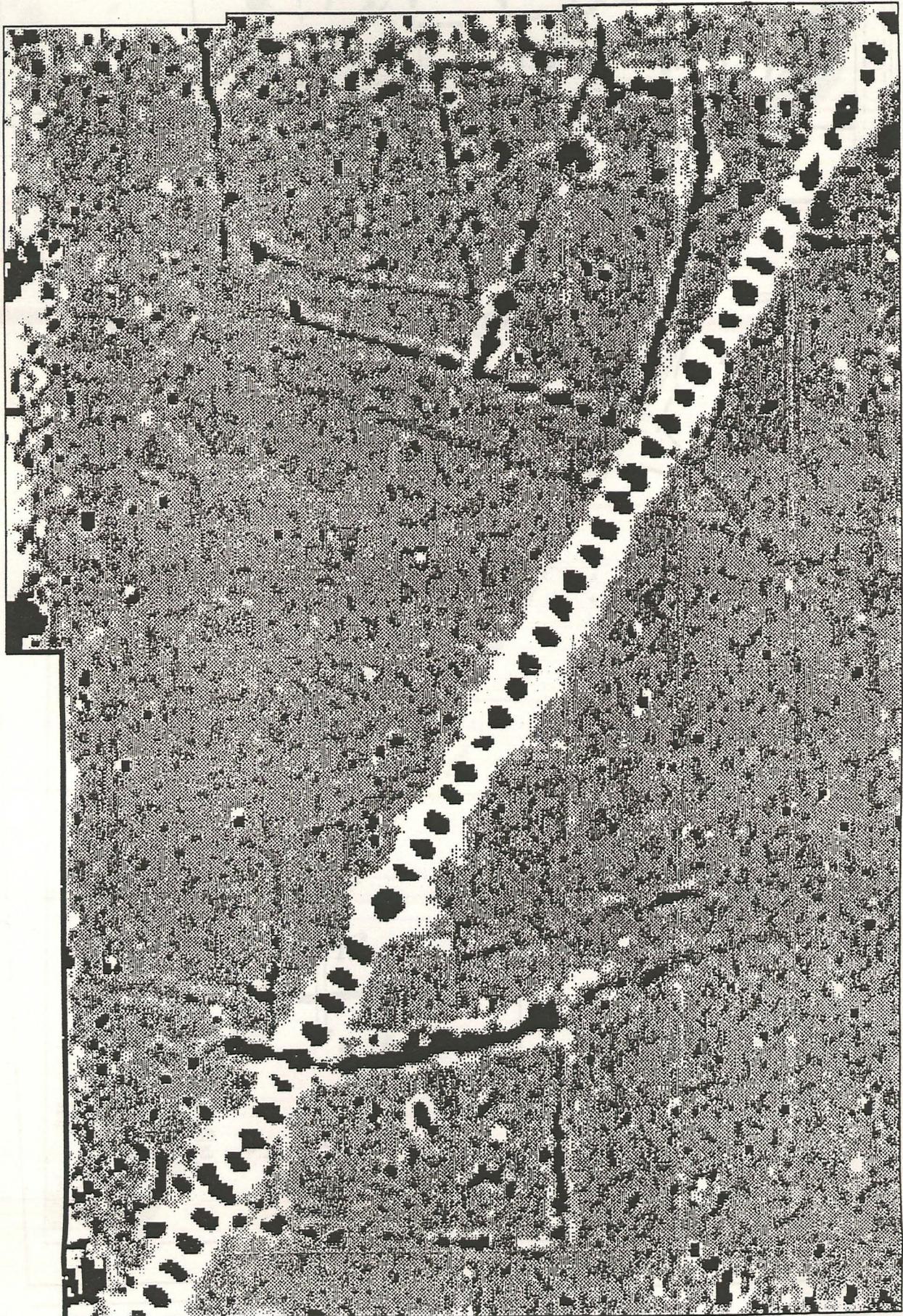


Fig. 2 Random dot density plot of magnetometer survey showing major enclosure ditches on site. Scale 1 :1250. (Geophysical Surveys of Bradford)

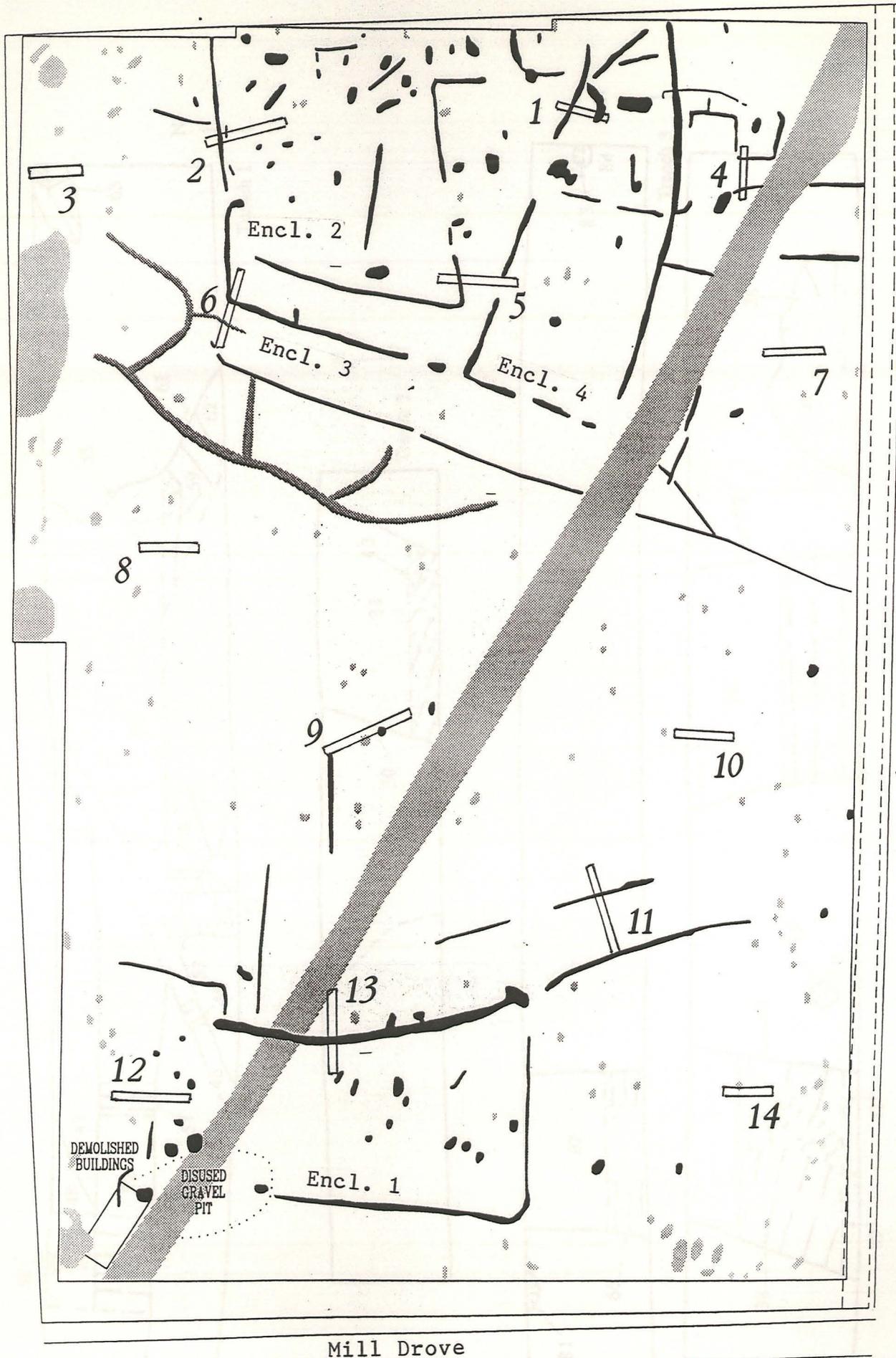


Fig. 3 Trench locations in relation to the geophysical survey
Scale 1:1250

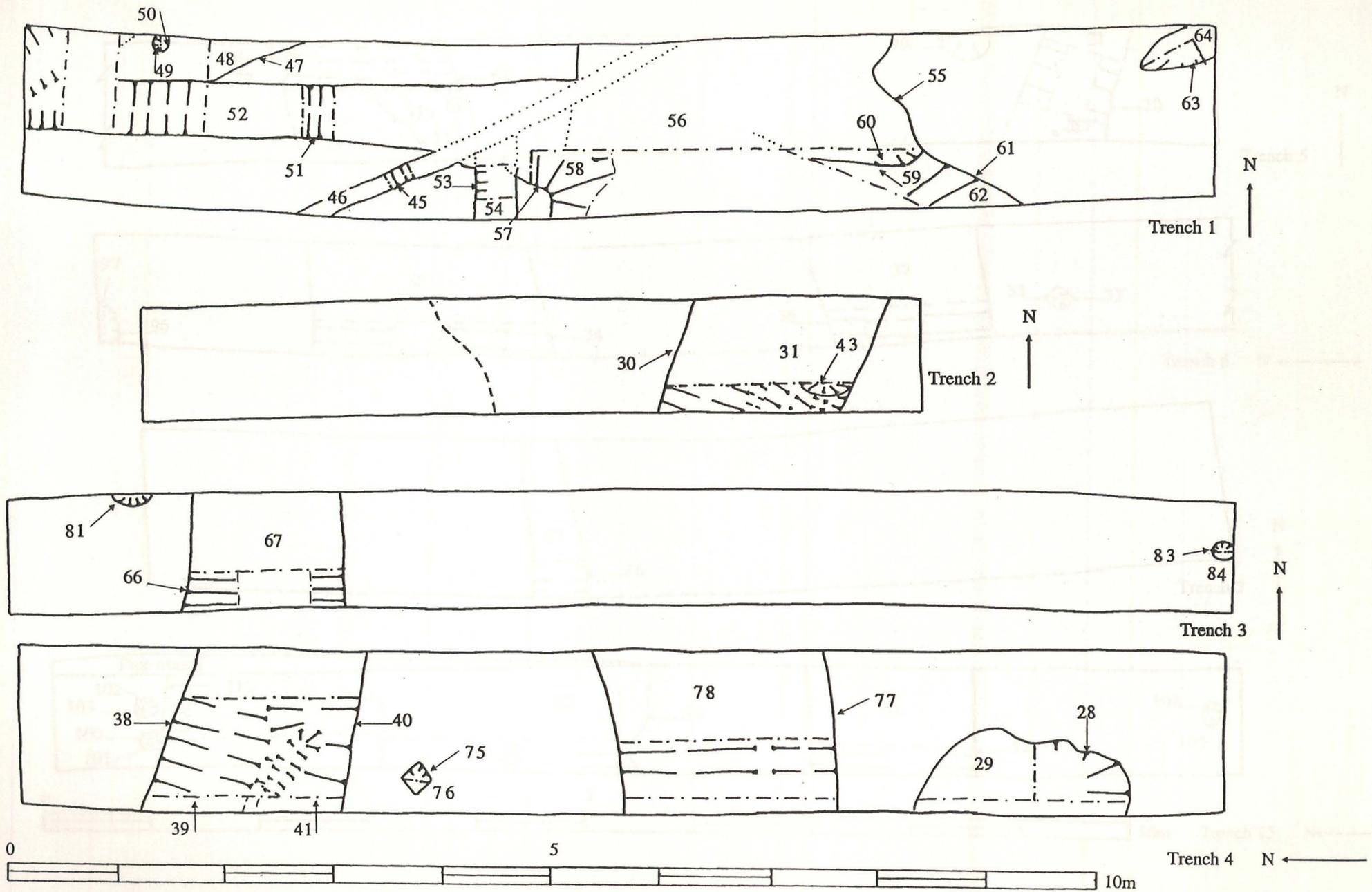


Fig 4: Mill Drove Bourne, trench plans

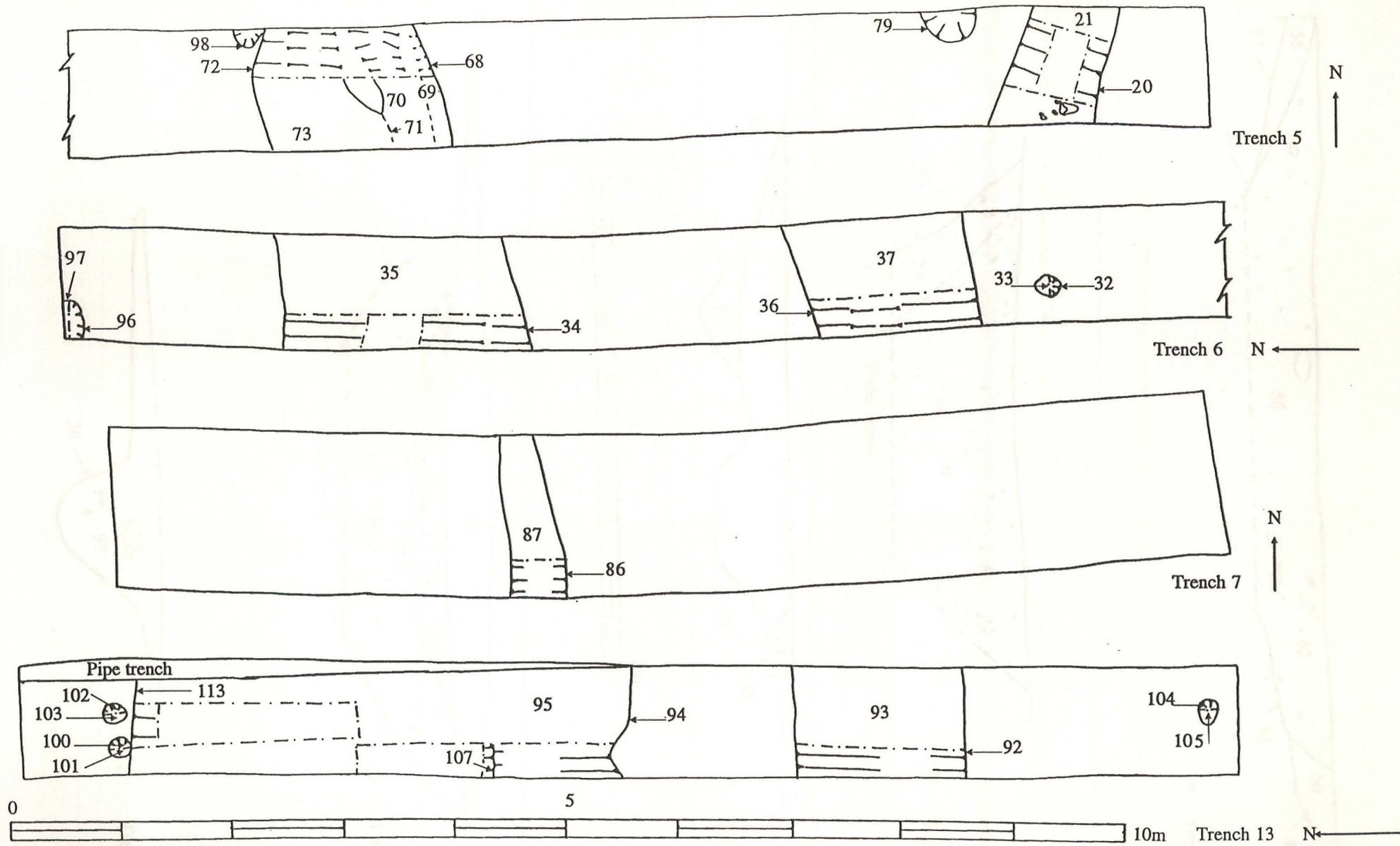
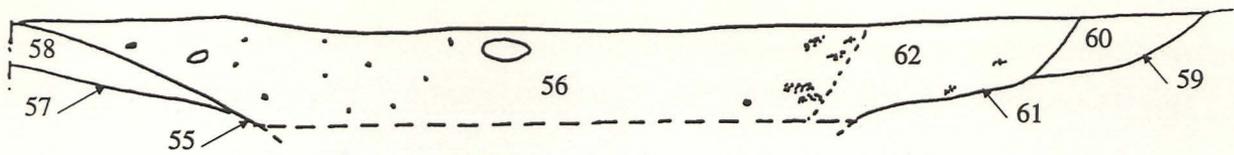
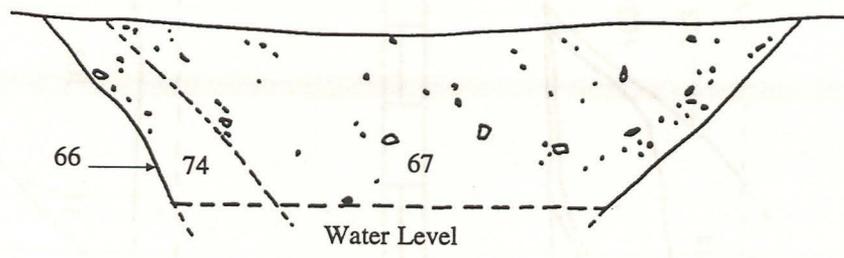


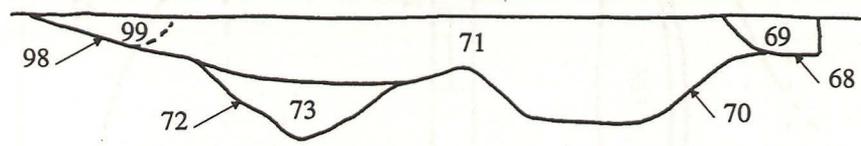
Fig 5: Mill Drove Bourne, trench plans



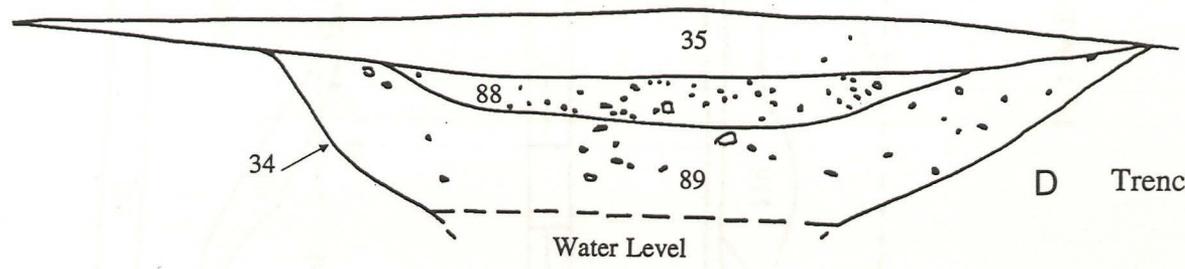
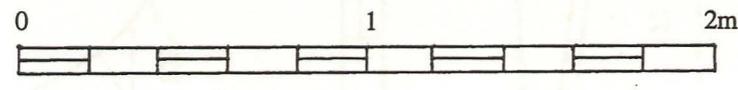
A Trench 1



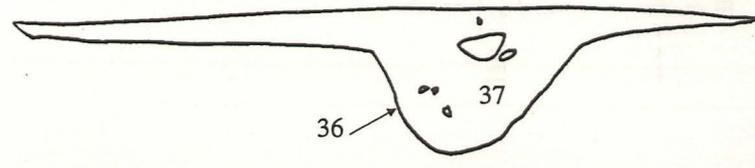
B Trench 3



C Trench 5



D Trench 6



E Trench 6

Fig 6: Mill Drove Bourne. Selected ditch sections

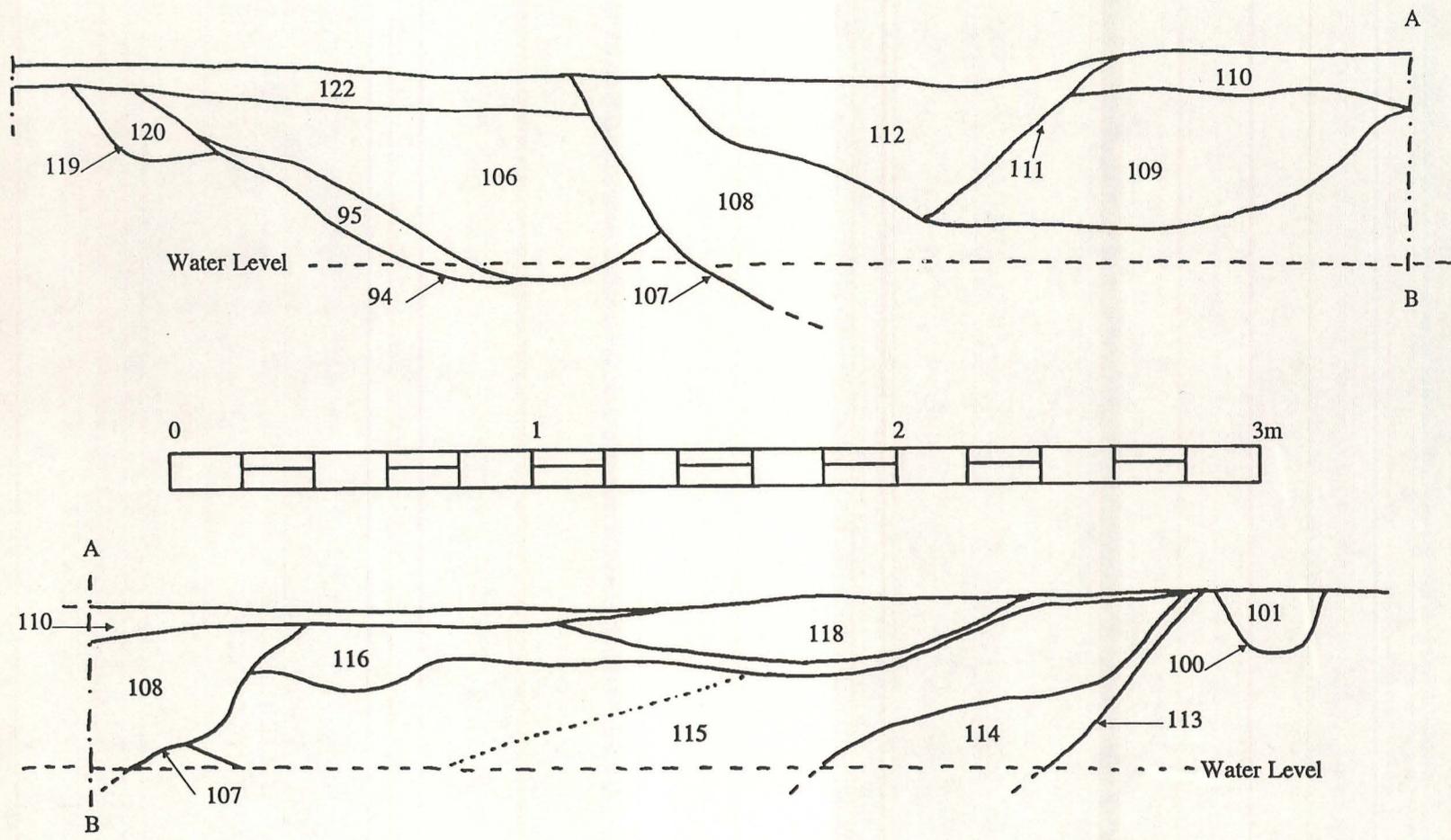


Fig 7: Mill Drove Bourne. Section through ditches in Trench 13



Pl. 1 Trench 1, view east

Pl. 2 Trench 2, view west



Pl. 3 Trench 3, view east

Pl. 4 Trench 4, view south



Pl. 5 Trench 5, view west

Pl. 6 Trench 6, view north



Pl. 7 Trench 13, view south



Pl. 8 Trench 13, enclosure ditch south half

Pl. 9 Trench 13, enclosure ditch north half





Pl. 10 Trench 3, ditch cut 66

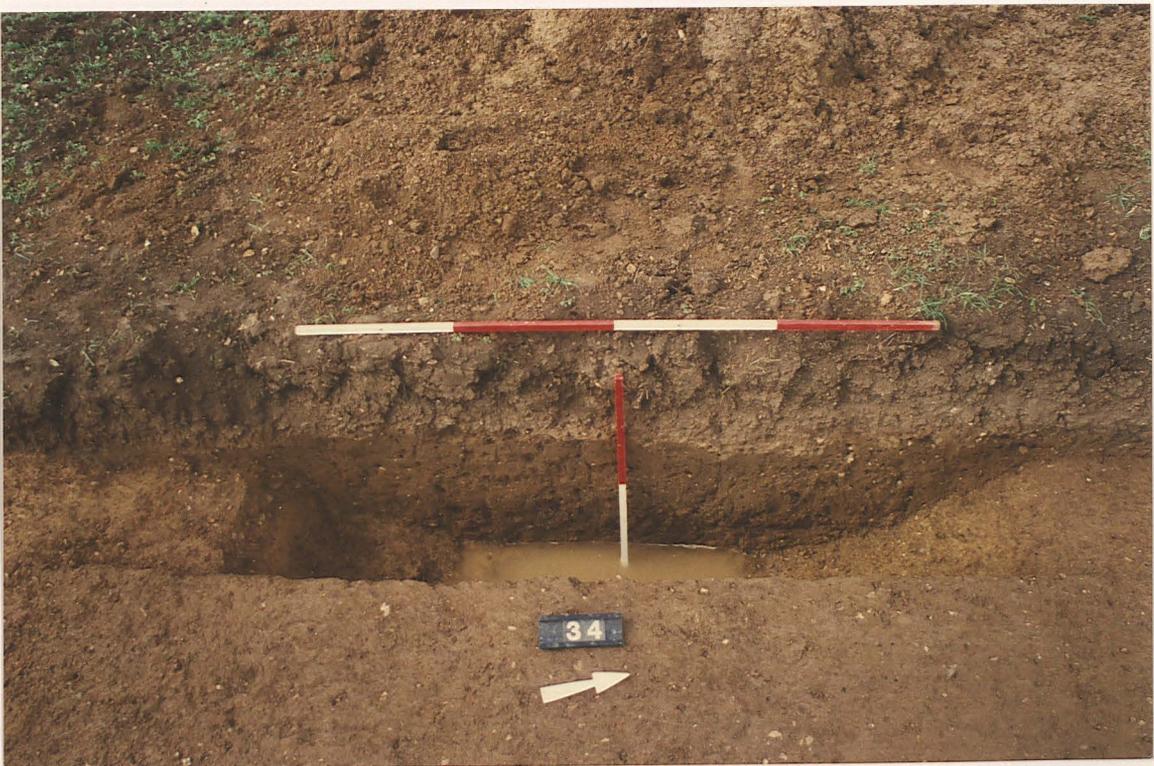
Pl. 11 Trench 11, ditch cuts 72 (l) and 70 (r)





Pl. 12 Trench 6, drainage gully cut 36

Pl. 13 Trench 6, ditch cut 34





Pl. 14 Trench 1, ditch cuts 55 (l) and 61 (r)

MILL DROVE BOURNE

POTTERY IDENTIFICATION by M. Darling

I.A. = Iron Age (mid) R-B = Romano-British

Notes

Native Iron Age and foreign Roman potting traditions co-existed during the conquest period in the mid 1st century AD

Some pottery cannot be closely dated either because the surviving sherd is too small or because the form and/ or fabric was current over a long period of time.

Context Description

- [21] Nene Valley ware grey rim sherd (R-B)
Nene Valley ware red rim sherd (R-B)
shelly rim sherd from a jar
Nene Valley mortarium sherd 3rd century AD
neck sherd with rilled decoration
General date for this group 3rd century AD
- [27] fine greyware base sherd (R-B)
- [29] group of grey and shelly ware body sherds mid-1st century AD (R-B)
- [39] flat rim sherd, grey ware butt beaker (R-B mid-1st century AD)
base sherd, shelly fabric, possible platter.
- [52] large sherd shelly fabric (probably late I.A.)
- [56] 6 sherds shelly fabric. Late I.A./early conquest (1st century AD)
mortarium rim, from Verulamium, early 2nd century AD
butt beaker sherd 1-2nd century AD
- [62] Group of pottery, representing 4 different vessels, all with shelly fabrics
1. near-complete cooking pot. Conquest period
2. base sherd
3. rim and body sherd
4. body sherd
- [67] 2 joining body sherds, red fabric (undatable)
- [71] Butt beaker with cordoned and zoned decoration (mid-late 1st century AD)
trimmed base sherd with rilled decoration (late I.A./mid 1st century AD)
rim sherd, shelly fabric (undatable)

Context	Description
[87]	rim sherd small greyware bowl (R-B) rim sherd greyware jar (R-B)
[110]	rim sherd (mid I.A.) body sherd (later I.A.)
[112]	rim and base sherds, shelly fabric (early-mid I.A.) body sherd decorated with incised lines (I.A.)
[122]	vertical rim sherd, from a large vessel (early-mid I.A.) rim sherd from a curving bowl (early(?) I.A.)
[35]	medieval handle

(archive report in preparation)

ROMAN TILE
identified by R. Kemp

All items described below are fragments of complete tiles

<u>Context</u>	<u>Description</u>
[21]	1 combed box flue tile 1 plain box flue tile
[48]	2 plain pieces
[67]	1 plain piece
[89]	1 very sandy combed box flue tile
[112]	1 stamped box flue tile. Only 3 known examples from the whole of the excavated collection from the city of Lincoln

FIRED CLAY
identified by J. Cowgill

All pieces have been wedged (i.e. prepared) which suggests that they are unlikely to have been daub

<u>Context</u>	<u>Description</u>
[27]	fragment
[39]	part of a triangular loomweight
[41]	fragment, with fine organic tempering (hay?)
[52]	loomweight fragment
[71]	kiln furniture or other industrial 'brick', some organic tempering
[112]	object of unknown function, shell tempering. Complete

ENVIRONMENTAL ARCHAEOLOGY CONSULTANCY

Key to codes used in the cataloguing of animal bones

SPECIES	BONE	SIDE	FUSION
BOS cattle	SKL skull	L - left side	P - proximal; D - distal; E - acetabulum;
CSZ cattle size	TEMP temporal	R - right side	N - unfused; F - fused;
SUS pig	FRNT frontal		
OVCA sheep or goat	PET petrous	TOOTH WEAR - Codes are those used in Grant, A. 1982 <i>The use of tooth wear as a guide to the age of domestic animals</i> , in B.Wilson, C.Grigson and S.Payne (eds) <i>Ageing and sexing animal bones from Archaeological sites</i> , 91-108.	
OVI sheep	PAR parietal	Teeth are labelled as follows in the tooth wear column:	
SSZ sheep size	OCIP occipital		h ldpm4/dupm4
EQU horse	ZYG zygomatic		H lpm4/upm4
CER red deer	MAND mandible		I lm1/um1
CAN dog	MAX maxilla		J lm2/um2
MAN human	ATL atlas		K lm3/um3
UKN unknown	AXI axis		
	CEV cervical vertebra		
	TRV thoracic vertebra		
	LMV lumbar vertebra		
	SAC sacrum		
	CDV caudal vertebra		
	SCP scapula		
	HUM humerus		
	RAD radius		
	MTC metacarpus		
	MC1-4 metacarpus 1-4		
	INN innominate		
	ILM ilium		
	PUB pubis		
	ISH ischium		
	FEM femur		
	TIB tibia		
	AST astragalus		
	CAL calcaneum		
	MTT metatarsus		
	MT1-4 metatarsus 1-4		
	PH1 1st phalanx		
	PH2 2nd phalanx		
	PH3 3rd phalanx		
	LM1-LM3 Lower molar 1 - molar 3		
	UM1-UM3 upper molar 1 - molar 3		
	LPM1-LPM4 lower premolar 1-4		
	UPM1-UPM4 upper premolar 1-4		
	DLPM1-4 deciduous lower premolar 1-4		
	DUPM1-4 deciduous upper premolar 1-4		
	LBON long bone		
	UNI unidentified		

ARCHIVE CATALOGUE OF ANIMAL BONES FOR BOURNE, MILL DROVE

SITE	CONTEXT	SPECIES	BONE NO	SIDE	FUSION	TOOTH WEAR	COMMENTS
BMD94	21	BOS	TEMP	R			FRAGMENT WITH JAW ARTIC AND PETROUS
BMD94	21	EQU	RIB		PF		PROX FRAG
BMD94	21	OVCA	CAL	L	PF		WHOLE
BMD94	21	CSZ	RIB	3			SHAFT FRAGS (X6)
BMD94	21	BOS	ILM	L			FRAG SHAFT & ACETABULUM
BMD94	21	BOS	ILM	R			ACETABULAR FRAG
BMD94	21	BOS	PUB	R			ACETABULAR FRAG
BMD94	21	BOS	PUB	R			ANTERIOR FRAG+ACET
BMD94	21	CSZ	TRV				BASE OF SPINE
BMD94	21	EQU	INC				INCISOR - WELL WORN
BMD94	21	CSZ	LBON				SHAFT FRAG
BMD94	21	SSZ	LBON				SHAFT FRAG
BMD94	21	SUS	MAND				DIST POST-KNIFE CUTS ALONG EDGE
BMD94	21	CSZ	SCP				BLADE FRAGMENT
BMD94	21	CSZ	RIB				SHAFT FRAG
BMD94	21	CSZ	LBON				SHAFT FRAGMENT
BMD94	21	CSZ	UNI				FRAG, POSS JAW
BMD94	21	BOS	INN	R	EF		ILM,PUB,ISH-ACET FUS-DOG GNAWED
BMD94	21	CSZ	RIB				MOST OF SHAFT (X2)
BMD94	21	EQU	MTT	L	DF		COMPLETE -280MM LONG
BMD94	29	CSZ	RIB				SHAFT (X3)
BMD94	29	CSZ	RIB				FRAG
BMD94	29	OVI	MTT	R			SHAFT ONLY-DIST CHEWED
BMD94	39	BOS	ZYG	L			ANT ZYGOMATIC
BMD94	39	SSZ	LBON				SHAFT FRAG
BMD94	39	OVCA	UM3	L		K12	
BMD94	39	OVCA	HUM	L	DF		DISTAL ARTICULATION
BMD94	48	BOS	MAND	L		J16K15	MIDDLE PORTION (X7) FRAGS
BMD94	48	SSZ	LBON				SHAFT FRAG
BMD94	52	BOS	PH1	R	PF		CUT MARK ON PROX END
BMD94	52	OVCA	RAD	R			SHAFT ONLY -ENDS CHEWED

SITE	CONTEXT	SPECIES	BONE	NO	SIDE	FUSION	TOOTH WEAR	COMMENTS
BMD94	52	OVCA	TIB		L			SHAFT ONLY ENDS LOST
BMD94	52	BOS	RAD		R			LATERAL SHAFT-PROX END CHEWED (X3)
BMD94	52	BOS	ISH		L			SHAFT-ACET & SHAFT CHEWED-POSS CHOPPED
BMD94	56	CSZ	RIB	5				SHAFT FRAGS
BMD94	56	SSZ	RIB	4				SHAFT FRAGS
BMD94	56	SSZ	RIB					SHAFT FRAG-CHOPPED
BMD94	56	SSZ	LBON	2				SHAFT FRAGS
BMD94	56	OVCA	MAND					FRAGMENT OF CORONOID
BMD94	56	OVCA	MAND		L		h12I7 J2	FRAG WITH DEC PM2,3 & 4
BMD94	56	OVI	ATL					WHOLE
BMD94	56	OVCA	ILM		L	EN		ANTERIOR HALF
BMD94	56	BOS	MTT		R	DN		DISTAL HALF SHAFT (X2)
BMD94	56	BOS	HUM		L			DISTAL SHAFT-DISTAL CHEWED
BMD94	56	BOS	MAND		L		J11K5	POSTERIOR HALF
BMD94	62	BOS	MAND		L			ANTERIOR FRAG WITH PM2 & 3
BMD94	62	OVCA	SKL		L			FRAGS PAR, TEMP, FRNT, OCIP
BMD94	62	OVCA	SKL					FRAGMENT OF BASIOCCIPTAL
BMD94	62	OVCA	FRNT					FRAGMENT CRANIUM
BMD94	67	BOS	MAND		R		h15I11J7	ANTERIOR HALF (X6) WITH DP3
BMD94	67	BOS	SCP		R			DISTAL HALF BLADE (X4)
BMD94	67	BOS	SCP		L			SHAFT FRAG
BMD94	67	BOS	MAND		L			ANTERIOR FRAG-SYMPHYSIS
BMD94	67	CSZ	LBON					SHAFT FRAG
BMD94	67	UKN	UNI	2				FRAGS
BMD94	67	BOS	LPM3					WELL WORN
BMD94	67	OVCA	LM2		R		J11	
BMD94	67	OVCA	DPM4		L		h12	
BMD94	71	CSZ	LBON					SHAFT FRAGMENT
BMD94	85	BOS	TRV			PFDF		CENTRUM AND BASAL HALF SPINE
BMD94	85	BOS	ULN		R			ARTIC AND SHAFT
BMD94	85	CSZ	RIB					SHAFT FRAG
BMD94	85	SSZ	TRV					SPINE ONLY
BMD94	85	OVCA	HUM		R	DF		DISTAL END

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SITE	CONTEXT	SPECIES	BONE	NO	SIDE	FUSION	TOOTH WEAR	COMMENTS
BMD94	85	SSZ	LBON	2				SHAFT FRAGS
BMD94	85	OVCA	MAND		R		h12I7J2	WITH DPM2 &3-SMALL JUV
BMD94	85	SUS	MAX		R			FRAG WITH CANINE ROOT, MALE
BMD94	89	EQU	SCP		R	DF		DISTAL END (X2)
BMD94	89	OVCA	PH1		L	PF		COMPLETE
BMD94	110	OVCA	MTT					SHAFT FRAG-BOTH ENDS CHEWED
BMD94	110	BOS	HUM					DISTAL SHAFT FRAG
BMD94	110	CSZ	LBON					SHAFT FRAG
BMD94	112	BOS	TEMP		L			JAW ARTICULATION
BMD94	112	BOS	AST		R			COMPLETE
BMD94	112	BOS	TRV			PNDN		CENTRUM AND NEURAL ARCH
BMD94	112	BOS	PET					SKULL FRAG
BMD94	112	CSZ	RIB	2				SHAFT FRAG
BMD94	112	BOS	UM2		R		J8	
BMD94	112	EQU	MTT					PROX AND SHAFT FRAG
BMD94	112	OVCA	TIB		R			SHAFT ONLY-DIST CHEWED
BMD94	112	BOS	ZYG					FRAG
BMD94	112	OVI	MTT		R			PROX HALF
BMD94	112	SSZ	RIB	2				FRAGS
BMD94	112	CSZ	LBON	3				SHAFT FRAG
BMD94	112	SSZ	UNI	2				FRAG
BMD94	112	CSZ	UNI					FRAG
BMD94	112	SSZ	LBON	2				PROX END FRAG
BMD94	112	BOS	MAND		R			ANTERIOR FRAG
BMD94	112	BOS	MAND		R			ARTICULATION
BMD94	112	BOS	MAND		L			FRAG BENEATH TOOTH ROW (X2)
BMD94	112	BOS	MAND					FRAG BENEATH TOOTH ROW
BMD94	112	BOS	MAND					LATERAL FRAGMENT
BMD94	112	BOS	LM3		L		K16	ROOTS WITH HEAVY GROWTH
BMD94	112	SUS	MT3		L			PROX HALF
BMD94	112	OVCA	MAND		R		J11K6	MIDDLE PORTION FRAGMENTED (X6)
BMD94	112	OVCA	MAND		L			ANTERIOR MEDIAL FRAG
BMD94	112	OVCA	LM2		L		J10	

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SITE	CONTEXT	SPECIES	BONE	NO	SIDE	FUSION	TOOTH WEAR	COMMENTS
BMD94	112	OVCA	LPM3					COMPLETE
BMD94	112	CER	HUM		L			DISTAL SHAFT-END CHEWED
BMD94	115	BOS	RAD		L	PF		PROX HALF (X2)
BMD94	115	BOS	RAD		L	DN		DIST SHAFT-POSS SAME BONE AS ABOVE (X2)
BMD94	115	CSZ	LBON					SHAFT FRAG
BMD94	115	BOS	MAND		L			ANTERIOR FRAG
BMD94	115	CSZ	MAND					LATERAL FRAG
BMD94	117	CSZ	RIB					SHAFT FRAGMENT
BMD94	117	SSZ	TIB					SHAFT FRAG

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