SHERWOOD LODGE, BOLSOVER, ARCHAEOLOGICAL INVESTIGATIONS, 1992-3

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SUMMARY

Excavation recovered artefactual evidence of early prehistoric activity in the vicinity and defined a number of phases relating to part of a later Romano-British ditched enclosure, which contained industrial features, rubbish pits and post-holes. In the medieval period the area was ploughed, and part became incorporated into a ditched burgage plot. A formal garden was established here after the construction of Sherwood Lodge, around 1897.

INTRODUCTION

This report presents the results of archaeological investigations commissioned by Bolsover District Council, and undertaken in 1992-3 in advance of the construction of new offices in the grounds of Sherwood Lodge, Bolsover (Fig 1, centred on SK476706). Preliminary evaluation of the site, by geophysical survey and trial-trenching, conducted initially by Creswell Heritage Trust, identified part of a Romano-British settlement (Fig 1: Sumpter 1992; Wall 1992; Priest 1993). The threatened part of this settlement-focus (Fig 2) was excavated over a six week period in January and February 1993 by Trent and Peak Archaeological Trust. The brief (Walker 1992) was to recover dating evidence and a ground plan of the settlement, and to understand its function and economy.

The paper records have been copied onto microfilm by the National Archaeological Record of the Royal Commission on Ancient and Historical Monuments.

THE SITE

The investigations were located in the grounds of Sherwood Lodge (Fig 1), which occupies a plateau (at 170m AOD) to the north of the historic settlement core of Bolsover, bounded to the west by a steep scarp, leading towards the Hockley valley, and on the remaining sides by more gradual gradients. The town straddles a steep ridge, which defines the western boundary of a band of Permo-Triassic magnesian limestone, approximately 12km wide, which extends north to Doncaster and south to Mansfield. The eastern margin of this band of limestone is formed by well-bedded lower magnesian limestone, mixed with marl (Eden *et al.* 1957, fig. 27), but the upper magnesian limestone to the west, which is more granular and crystalline, supports a rich brown loam suitable for arable farming (Smith *et al.* 1967, 199).

THE EXCAVATIONS

Four distinct phases of activity were identified; these are presented in Table 1 and may be summarised as: Phase 1: prehistoric activity; Phase 2: Romano-British activity and enclosure (second-fourth century AD); Phase 3: medieval activity; Phase 4: late post-medieval activity

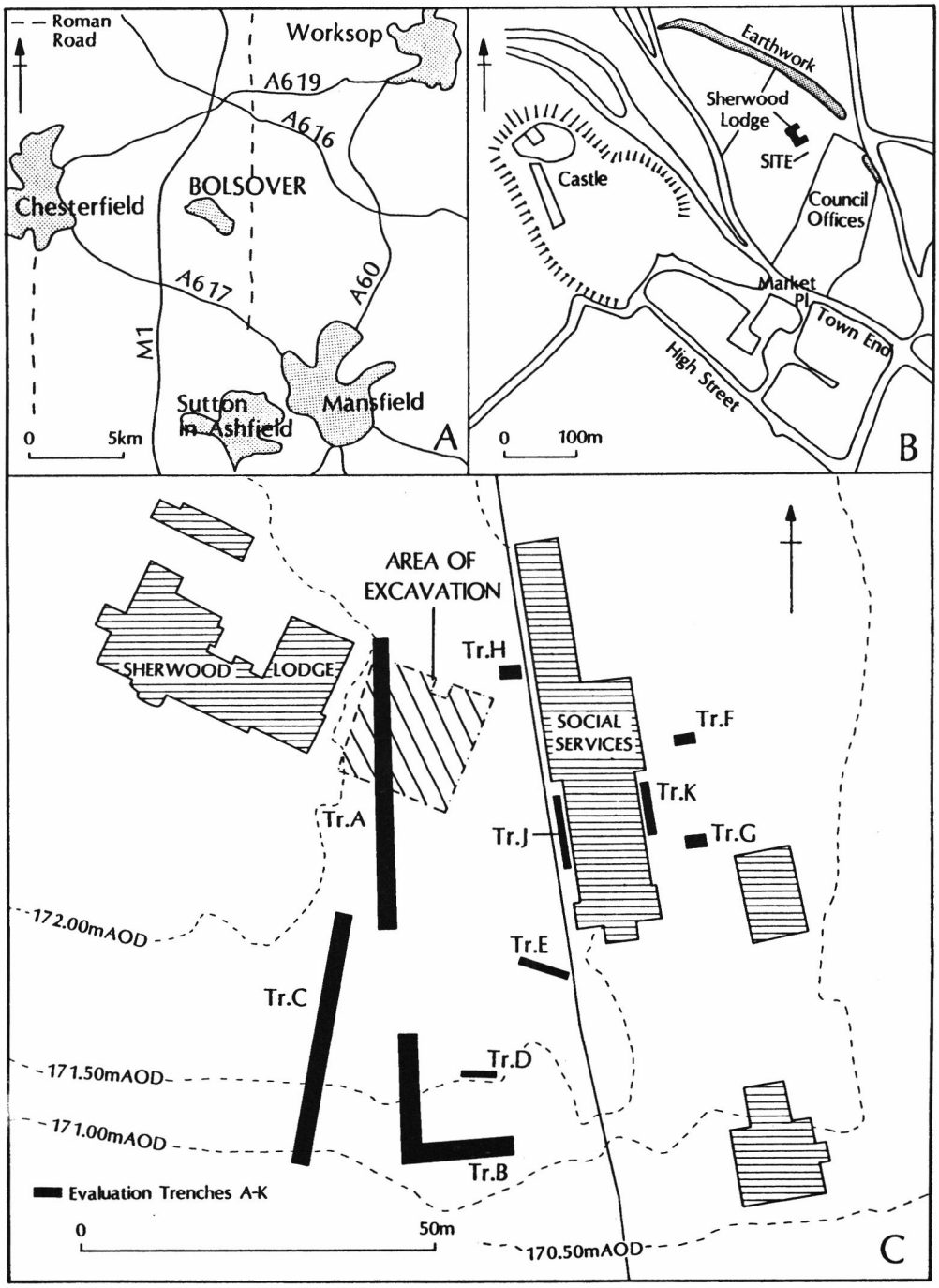

Fig 1 Sherwood Lodge, Bolsover. A: Bolsover area (1:20,000); B: Bolsover and the site (1:5000); C: areas of archaeological investigation (1:500).

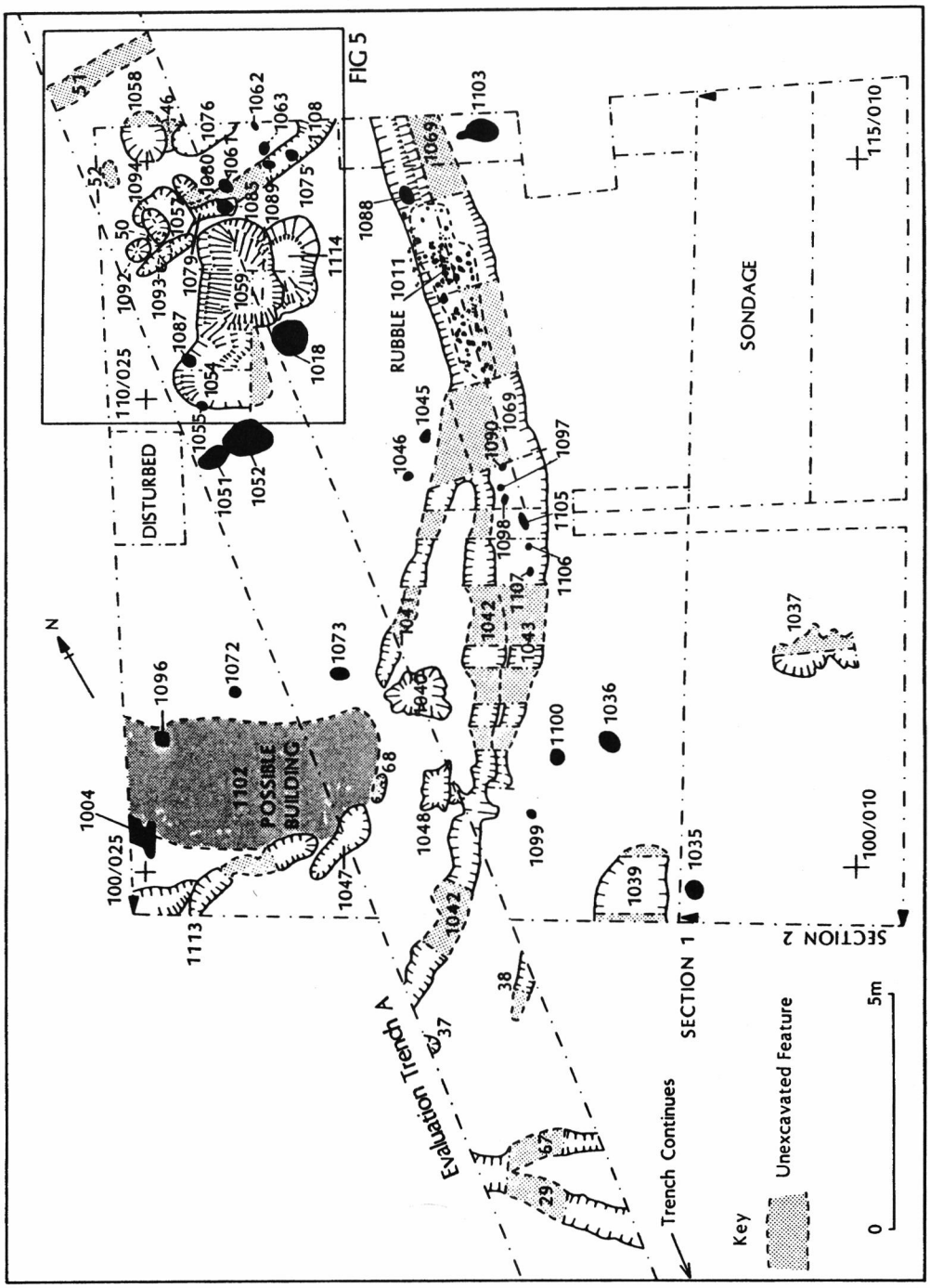

Fig 2 Sherwood Lodge, Bolsover. Simplified plan of Romano-British features (1:150).

Phase	Activity/ main features		Dating	Main feature/context nos.
1	*Prehistoric activity* Probably beyond site boundary Two sub-phases:	(1)	Meso-E. Neo	No identifiable features, only residual
		(2)	Later Neo	flint artefacts.
2A	*Early Romano-British activity*		2nd-3rd cent.	
	Gullies			1041, 1113, 1047
	Pit			1109
2B	*Romano-British enclosure*		third cent.	
	Ditches			1042, 1069
	Internal pits and post-holes			1040, 1114
	Possible building floor			1102 and post-holes
			1004,1072-3,1096	
	External features			1039, 1037, 29, 67, 38
2C	*Last occupation of enclosure*		3rd-4th cent.	Layer 32
3A	*Early medieval ploughsoil*		not dated	1024
3B	*Medieval ditched boundaries*		not dated	1070, 1084
4	*Late post-medieval* Ornamental garden		Late 19th cent.	Planting pits and gullies

Table 1: Sherwood Lodge, Bolsover. Simplified outline of site development

The magnesian limestone bedrock (Fig 3, Section 2:1020 [*NB* 4-figure numbers alone indicate layers or features; 4-figure numbers with a letter suffix indicate feature fills]) was exposed over the western half of the trench, at a depth of 0.5m below the modern ground surface (at 170m AOD). Fissures in its shattered and uneven upper surface were filled with light brown clay, its weathering product. The bedrock surface dipped slightly towards the east of the trench, where it was masked by a deposit of orange-brown clay-silt (1030). A machined sondage (Fig 3, Section 1), cut west-east, through this homogeneous deposit, provided a profile of this natural incline in the bedrock surface, and revealed layer 1030 to be natural in origin.

Phase 1: prehistoric activity

Prehistoric activity in the vicinity of the excavated trench is suggested by the recovery of 62 worked flint fragments, 58 derived from Romano-British and later contexts, the remainder from cleaning root disturbances within the natural clay-silt (1030). The flint dating suggests that two distinct episodes of activity could be represented here, the first belonging to the Mesolithic or early Neolithic, the second to the later Neolithic. No features of prehistoric date could be identified within the excavated area. This negative evidence is supported by analysis of the assemblage (pages 95-6 below), which suggests that the flint knapping foci may have been located beyond the area excavated.

Phase 2: Romano-British activity and enclosure (Figs 2-4)

Area excavation revealed that the focus of Romano-British activity located in evaluation Trench A (Wall 1992) was largely contained within a ditched enclosure. However, only a small part of its interior, located just inside the eastern ditched limit of the enclosure, was within the

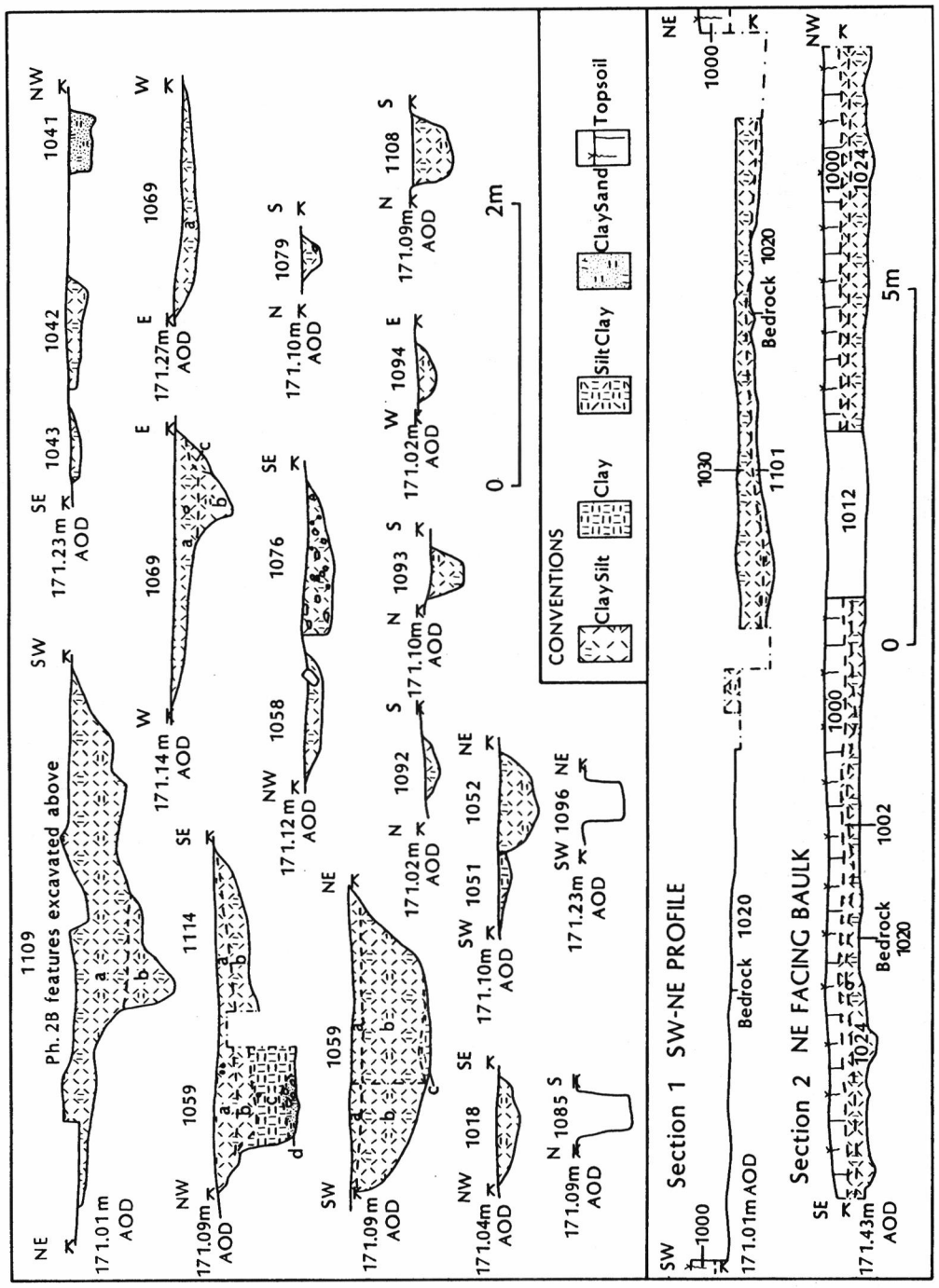

Fig 3 Sherwood Lodge, Bolsover. Sections (1:50 and 1:100).

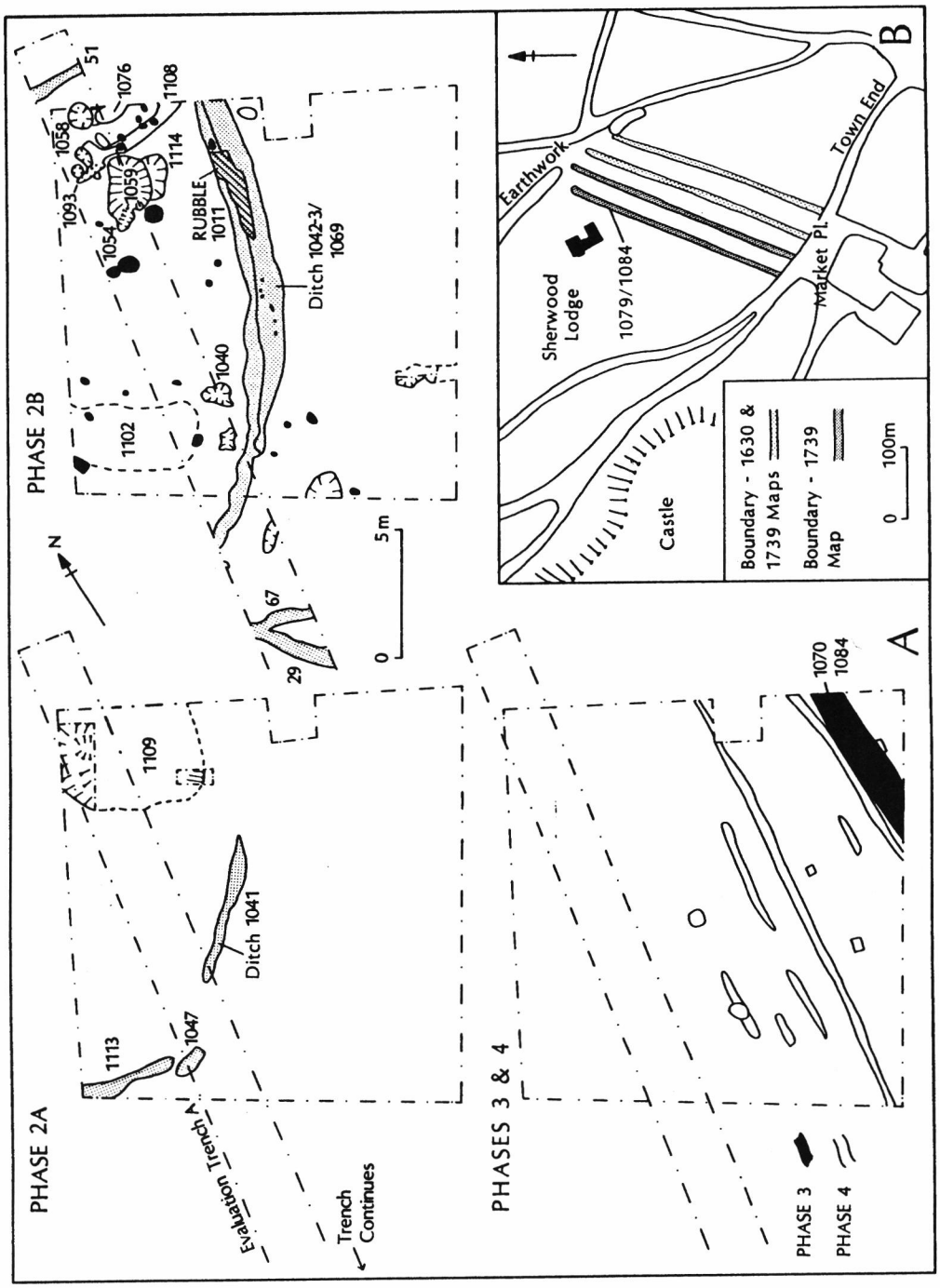

Fig 4 Sherwood Lodge, Bolsover. A: simplified phase plans (1:250); B: the site in relation to boundaries shown on maps of 1630 and 1739. (*NB only the main Phase 2 features are labelled.*)

development zone and available for excavation. Three sub-phases of Romano-British activity are identifiable.

Phase 2A: early activity

The earliest Romano-British activity is represented by shallow interrupted gullies and a broad pit, all dug into the bedrock. A slightly curviform gully (1041), cut into bedrock, was recorded for a length of 6m. Other shallow, interrupted gullies (1047, 1113), infilled with similar material, could have been contemporary.

An irregularly-shaped shallow pit (1109: Figs 3, 4), measuring a maximum of 5m in diameter, was cut through the natural clay-silt (1030), and into the bedrock below. The pit was infilled with a mid-brown clay-silt (1109 a, b, c — *not illustrated*). The infills of the pit and gullies suggest gradual silting-up after disuse.

The pit contained Derbyshire Ware with a *terminus post quem* in the early-mid second century. Ditch 1113 contained sherds of Derbyshire and Dales Ware with a *terminus post quem* in the third century. Both the pit 1109 and the gully 1041 were cut by Phase 2B features, but may not have been contemporary with each other, a hypothesis supported by the pottery dating evidence.

Phase 2B: the enclosure (Plate 1)

The enclosure ditches

The eastern limit of the Romano-British enclosure was defined by a shallow, irregularly-sided ditch or palisade trench (1042-3/1069), dug approximately north-south, cutting the Phase 2A gully (1041). This feature appears to have been cut in three sections, with slight changes of angle. The ditch was cut more deeply on the inside, to form an irregular profile. A stakehole group

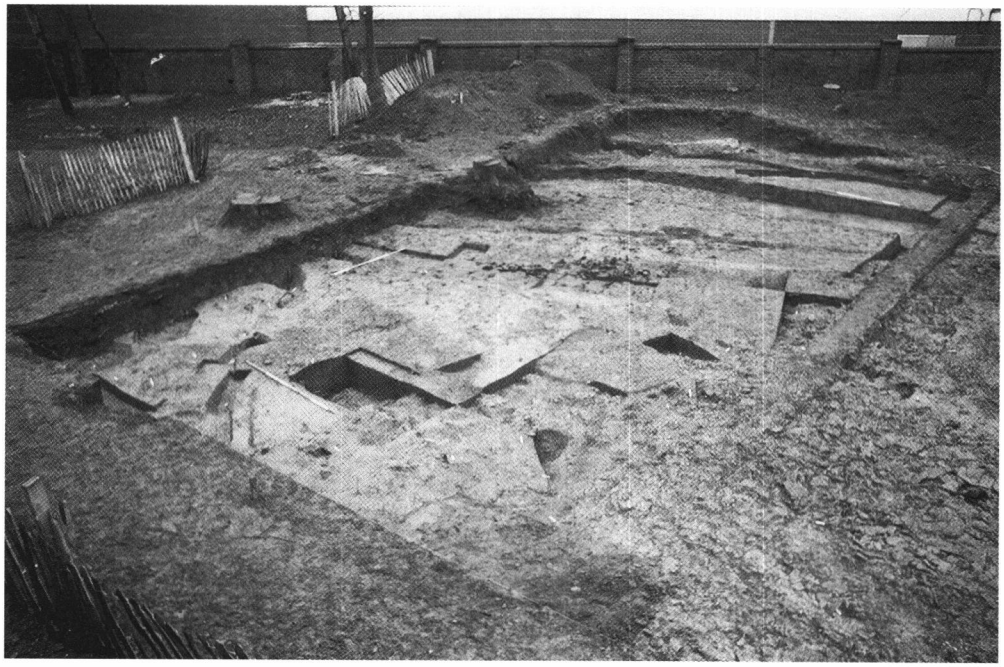

Plate 1 Sherwood Lodge, Bolsover. View of the enclosure, looking south-east *(photo. A. E. Jones).*

(1088, 1090, 1097-8, 1105-7) was dug into the base of the ditch, possibly to retain timber uprights supporting a palisade positioned towards the outside of the cut, although these stakeholes could not be recognised over the entire excavated length of the palisade trench.

The ditch was gradually infilled with a mid-brown clay-silt (1042a/1043a/1069a), which contained a single fragment of a Nene Valley mortarium. A quantity of sandstone rubble (1011) was dumped into the remaining hollow of the ditch, possibly during industrial activities, in the area immediately adjacent.

The industrial features (Fig 5, Plates 2, 3)

A zone of industrial activity, containing hearth-pits, gullies and a large unidentified cut, was defined just inside the eastern enclosure boundary. These features were cut into the infilled Phase 2A pit (1109), and into the natural clay-silt (1030). Details of these industrial features are presented in Table 2. The slag and other metallic residues recovered are reported on below (pages 99-100).

The bases of two heavily truncated hearth-pits (1057, 1058) were identified in this industrial zone. Feature 1057 was joined to the east by a long gully (1108), that turned slightly to the northwest, just inside the east baulk. This gully was re-cut along part of its length by a slightly curvilinear gully (1079), perhaps dug during the continued use of feature 1057. Feature 1058, located to the north of hearth-pit 1057 may have been contemporary with the latter. A shallow oval cut (1076), dug to the east of feature 1058, and filled with crushed limestone fragments, is paralleled by an example of similar form and fill, located in a leadworking area at Carsington

No.	Identification	L x W (m)	Depth (m)
Unidentified			
1059	Boat-shaped cut with flat-base	2.25 x 1.5	0.5
Hearth-pits			
1057	Square in plan with flat-base	1.0 x 1.2	0.2
1058	Sub-oval in plan with flat base	1.1 x 0.8	0.15
Gullies			
51	Gully, aligned west-east	2.4 x 0.5	—
1079	Gully to east of 1057	1.0 x 0.5	0.15
1093	Gully to south of 1057	1.6 x 0.3	0.25
1108	Gully aligned west-east	3.5 x 0.5	0.3
Small scoops			
46	Roughly oval	0.5 x 0.5	—
50	Shallow oval cut	0.8 x 0.25	—
52	Sub-circular cut	0.6 x 0.3	—
1080	Shallow oval pit	0.7 x 0.45	0.1
1092	Small circular pit	0.5 x 0.45	0.1
1094	Small oval pit	0.8 x 0.4	0.15
Stone-filled cut			
1076	Flat-based cut, through clay-silt (1030) to bedrock (1020)	0.3 x 0.7	0.1

Table 2: Sherwood Lodge, Bolsover. Details of Phase 2B industrial features

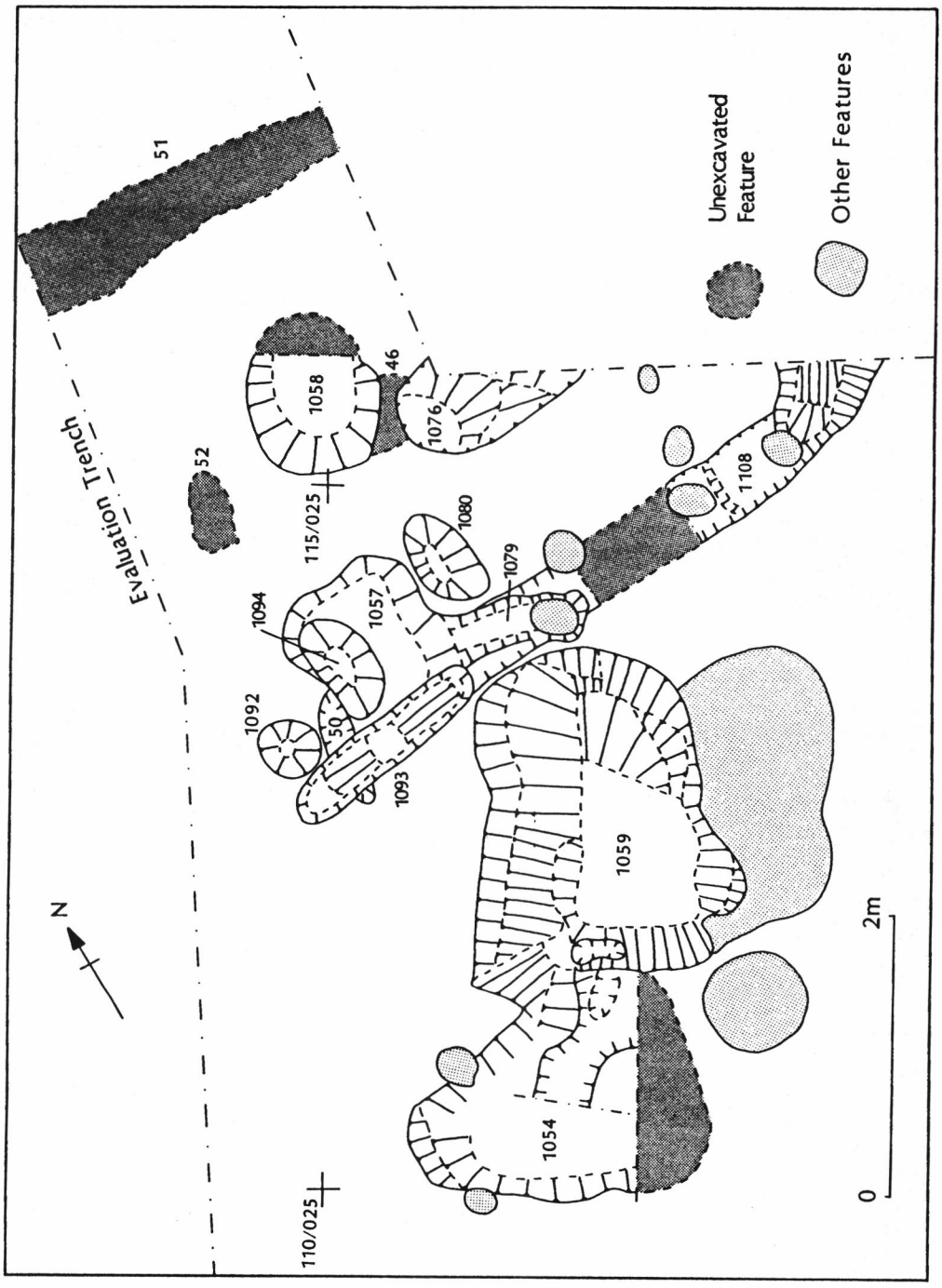

Fig 5 Sherwood Lodge, Bolsover. Detail of Phase 2B industrial features (1:50).

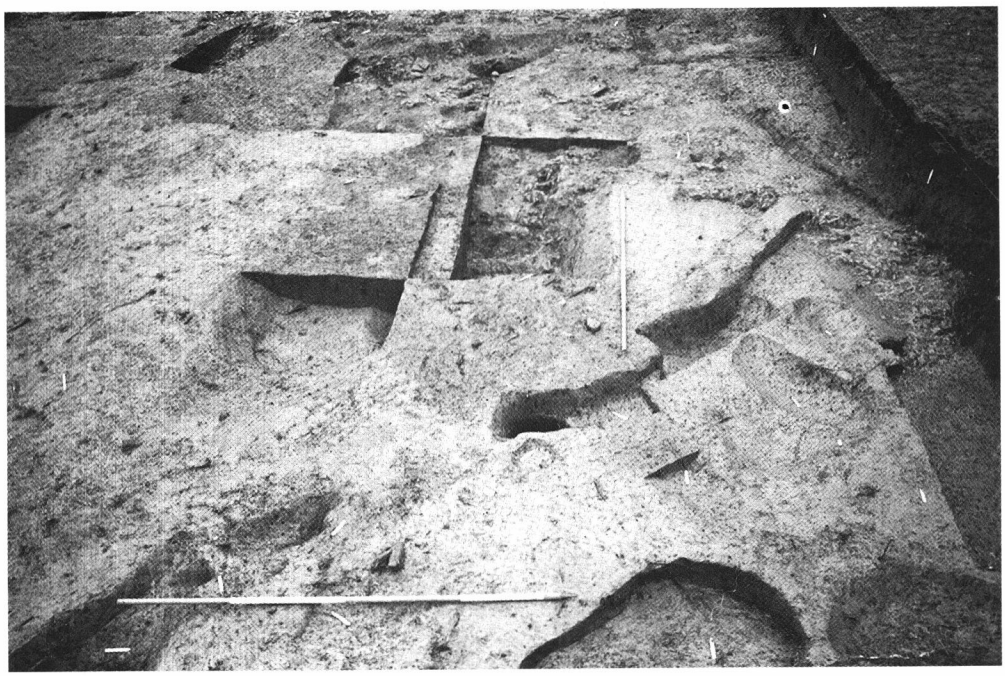

Plate 2 Sherwood Lodge, Bolsover. Detail of industrial features, looking west *(photo. A. E. Jones).*

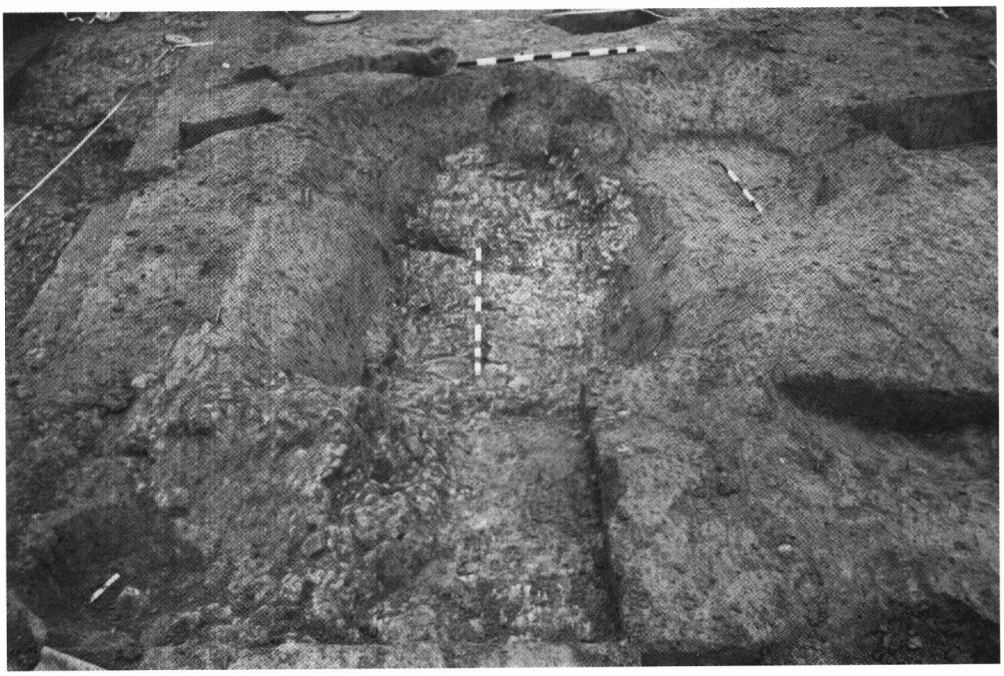

Plate 3 Sherwood Lodge, Bolsover. Detail of feature 1059 fully excavated, looking east *(photo. D. Threader).*

(Dearne *et al.* this volume). A further gully (51: not excavated), dug parallel with gully 1108, was probably joined to a further hearth-pit, located beyond the area investigated.

Features 1093 and 1094 were cut into the infilled hearth 1057, after its abandonment. The base of elongated cut 1093 was lined with limestone slabs. Cut 1094 was approximately similar in form and dimensions to features 1080 and 1092, located respectively to the east and west of pit 1057. Hammerscale was recovered from features 1058, 1079 and 1093, and fragments of hearth-bottom were found in features 46 and 1080. Sherds of mortarium found in fills 1057a and 52a have a *terminus post quem* in the range 230-300 AD. Ditch 51 contained a fragment of Parisian Ware beaker with a *terminus post quem* in the late second to early third century. The pottery dating does not allow this group of features to be subdivided, nor is it possible from the sparse pottery dating evidence to distinguish chronologically between the industrial and non-industrial features located in the enclosure interior. The infilled industrial features were cut by post-holes 1061, 1075, 1085 and 1089, and sealed by Phase 3C layer 32 (not illustrated).

A flat-based cut (1059), located to the south of the industrial area was notably unusual in form. It was round-ended to the north and flat-ended to the south where it joined a shallow gully dug within a roughly bowl-shaped depression (1054). The base of the former appeared to be lined with worn rectangular red sandstone cobbles, measuring approximately 0.05m across (similar to the material tipped into the upper hollow of feature 1069). The proximity of feature 1059 to the industrial area, its lining, and unusual form may suggest that it served an industrial function, although no metalworking residues were recovered from its fills. Cut 1059 was dug into the Phase 2A pit (1109) and a shallow rubbish pit (1114), and was sealed by layer 32.

Feature 1059 contained grey ware, Dales and Derbyshire Wares and a sherd of Mancetter-Hartshill mortarium, giving a *terminus post quem* in the third century, and a sherd of hammerhead mortarium with a *terminus post quem* in the late second-early third century.

Other internal features (Fig 4)

A number of post-holes and rubbish-pits was identified within the enclosure interior. A group of post-holes in the southwest corner of the excavated area (1004, 1096, 1072-3) may define a timber-framed building, perhaps also delimited by an area of tabular bedrock (1102), possibly cleared to form a floor. Post-holes 1096 and 1072-3 were vertically-sided, packed with stone, and cut to a depth of 0.2m.

A second concentration of post-holes and a rubbish-pit were found in the zone immediately surrounding the ironworking area. The pit (1114) was roughly circular in plan, and was backfilled with mid-brown clay-silt. It was cut by feature 1059. This latter group of post-holes (1018, 1051-2, 1062-3), cut into natural clay-silt (1030), may have defined parts of wooden structures associated with metalworking, while other post-holes (1075, 1089, 1085), dug into disused hearth-pits and gullies, may represent parts of later timber buildings.

External features

A few, mostly ill-defined, features were located outside the enclosure, but feature definition in this area was generally poor, due to extensive tree-root disturbance of the bedrock surface. These external features comprised two joining ditches (29, 67), shallow ?pits (1037, 1039), and possible post-holes (1035-6, 1099-1100), cut into the bedrock. In contrast, only one feature, a single possible post-hole (1103), was located away from the bedrock area.

These features may have been contemporary with the Romano-British enclosure, although the only dateable pottery came from ditch 29, which contained sherds of Derbyshire and Dales Wares with a *terminus post quem* in the third century. These external features were sealed by the Phase 3 ploughsoil.

Phase 2C: last occupation of enclosure

Within the enclosure interior a layer of red-brown silt-clay (32), containing flecks of charcoal and limestone fragments, was recorded, sealing the infilled industrial features. This homogeneous layer contained a large quantity of artefacts, including pottery, animal bone, and iron nails of a type not generally used for structural purposes (I. Ferris *pers. comm.*). Ironworking residues, including smithing slag, tap slag and cinder were also recovered from this deposit.

The pottery assemblage from this layer amounted to approximately one third of the total quantity of Romano-British pottery recovered from the site, and includes Samian, Dales and Derbyshire Wares with a *terminus post quem* in the second-fourth centuries. The recovery of fourth century pottery from this layer may suggest that this area was used for rubbish disposal during continued occupation of other areas within the enclosure.

Layer 32 was cut by a group of undated small, shallow, sub-rectangular features (14, 41, 80: not illustrated), which contained ironworking residues, but no dateable artefacts.

Phase 3: medieval activity (Fig 4A, B)

The infilled Phase 2 features and layer 32 were overlain by an overall layer of ploughsoil (1024), measuring up to 0.2m in depth. This homogeneous layer may have formed during the first, post-Romano-British, cultivation of the area, and contained Romano-British pottery and two sherds of medieval green-glazed ware.

Later, a single boundary ditch (1070), of V-shaped profile, was cut north-south, through the medieval ploughsoil (1024), and into the natural silt-clay (1030) below. This ditch continued both to the north and south of the trench. After this ditch went out of use, it was re-cut (1084) along part of its length, following approximately the same alignment. The ditch re-cut continued to the south of the trench. The fills of both boundary ditches suggest gradual infilling after abandonment.

Phase 4: late post-medieval activity (Fig 4)

The infilled medieval boundary ditches and the medieval ploughsoil (1024) above, were sealed by an overall layer of dark brown clay-silt (1017, 1019), measuring up to 0.2m in depth, partially removed by mechanical excavator. This lower garden soil was cut by square shrub-planting pits and by stone-lined soakaways, components of the formal garden laid out after the completion of Sherwood Lodge (1897). The pottery finds from these features included wares with a *terminus post quem* in the nineteenth century.

Other trenches and test-pits

No features of medieval or earlier date could be located in other trial-trenches or test-pits, which are detailed in the evaluation reports (Priest 1993; Wall 1992).

THE FINDS

Flint (DG)

Of the 62 pieces recovered, 58 were derived from Phase 2—4 deposits, hence this collection will be considered as a single group rather than by context. The remaining four flints were recovered from cleaning disturbances within the natural silt-clay (1030) overlying the limestone bedrock.

There are no retouched tools within this collection; their lack might suggest that knapping was one of the activities undertaken. Chunks (9) from knapping frost-fractured raw materials, a core, core rejuvenation flakes (3) and some small debitage (6) are present, but in such small numbers as to suggest that the major knapping foci were outside the excavated area.

There were no artefacts diagnostic of date, but the forms of the pieces indicate at least two periods of flintwork deposition. The blades with small butts (4), and the crested core rejuvena-

tion flakes (2) are both common from the blade technologies of Mesolithic or Earlier Neolithic contexts. A flake fragment with a trimmed butt could have been the preparation for butt removal, a feature most common in Mesolithic contexts. On the other hand, two of the larger flakes have faceted platforms and might belong to a Later Neolithic context. The pieces are variably corticated, but there is no obvious link with date.

The flint is generally small with rolled cortex; it is presumed to come from redeposited sources. The three pieces of Wolds type flint (from the Lincolnshire/Yorkshire Cretaceous chalk) could be from a similar redeposited source. The nearest possible flint-bearing deposits mapped by the Geological Survey are glacial sands and gravels some 10km to the south-east, with the gravels of the Trent some 35km to the east (1:63,360 map sheets 100, 112, 113). There are also four pieces of pale grey chert ultimately from the Carboniferous Limestone of Derbyshire. A small proportion of similar cherts were located by fieldwalking at Elmton (4km to the north-east of Bolsover: Knight *et al.* in preparation), and is present in the collections from Mother Grundy's Parlour, Creswell Crags (R. Jacobi *pers. comm.*). It is not known whether these cherts are present within the local river gravels and fills, or whether this material has been carried from the west.

Romano-British pottery (RL)

275 sherds of Romano-British pottery were recovered from the site from at least 16 vessels.

Fabrics

The fabric of the pottery was first examined by eye and sorted into groups on the basis of colour, hardness, feel, fracture, inclusions and manufacturing technique. A sample of the sherds was further examined under a x30 binocular microscope to verify these classifications. The size of the sample was as large as was felt necessary to identify and confirm each fabric group, and varied from group to group.

Fabric descriptions

BB1: Black Burnished Ware category 1: Williams 1977.

CTA1: Compared fairly well with calcite-gritted ware found in the Derby Little Chester kilns dated to the late first to early second century. Orange-buff, occasionally brown. Soft, rough with laminar fracture. Moderate, fairly well-sorted, medium-sized shell, occasionally coarse; sparse, well-sorted, medium-sized, rounded quartz. It was extremely difficult to distinguish CTA1 scraps from CTA2 scraps.

CTA2: Dales Ware or South Midlands shelly ware. Brown. Soft with rough feel. Rare, well-sorted, fine, rounded, brown inclusions; abundant, ill-sorted, coarse to medium sized shell. Some bodysherds were hard to distinguish from CTA1 but CTA1 tended to have more and finer shell inclusions.

DBY: Derbyshire Ware: Kay 1962.

FLA1: Yellow. Soft, smooth with smooth fracture. Sparse, ill-sorted, coarse to fine, subangular quartz; rare, ill-sorted, medium-sized, subangular, brown or black inclusions.

GRA1: Comparable to fine grey ware from Derby Little Chester kilns. Grey with darker grey core. Hard, smooth with smooth fracture. Rare, very fine quartz; rare, fine, rounded, brown inclusions.

GRA3: Parisian Ware. Grey with brown sandwich core. Soft, smooth with laminar fracture. Rare, well-sorted, fine, subangular quartz; rare, fine, rounded, brown inclusions.

GRB1: General code for medium sandy grey wares.

GT: Possibly late first century grog-tempered sherd or prehistoric. Dark brown. Hard, rough with irregular fracture. Sparse, well-sorted, medium-sized, subangular quartz; moderate, ill-sorted, coarse to medium-sized, angular, buff or grey grog.

MMH1: Mancetter-Hartshill mortarium. Cream. Soft, slightly sandy with finely irregular fracture. Rare well-sorted, fine, rounded, quartz; rare, ill-sorted, coarse to fine, red-brown inclusions, iron oxides. Red trituration grits.

MMH2: As MMH1 but with the addition of black trituration grits which are not grog.

MNV: Probably Nene Valley mortarium. Cream. Hard, smooth with conchoidal fracture. Rare, well-sorted, fine, rounded, quartz; rare, ill-sorted, medium to coarse, angular, black or brown inclusions. Black slag trituration grits.

OAB1: Orange. Soft, sandy with irregular fracture. Rare, well-sorted, medium-sized, subangular quartz; moderate, ill-sorted, medium-sized, rounded brown-orange inclusions.

OBB1: Buff. Soft, sandy with irregular fracture. Moderate, well-sorted, subangular, medium-sized, quartz; sparse, well-sorted, medium-sized, rounded, brown inclusions.

PRE: Prehistoric scored ware sherd. Black, soft, rough with irregular fracture. Sparse, medium-sized, subangular quartz. Hard to see inclusions.

Description

The sherds came principally from Phase 2B industrial features and from the Phase 2C layer of clay silt (32) overlying some of these features. No pottery was found in the Phase 2A ditch (1041) but the truncated ditch 1113, thought to be contemporary, contained rim sherds of Derbyshire and Dales Ware giving a probable *terminus post quem* in the third century. Ditch 29 contained similar wares. Enclosure ditch 1042/1043/1069 yielded one useful sherd, a bodysherd from a Nene Valley mortarium. The date at which the Nene Valley industry began to make mortarium is not established yet but an Antonine start is likely (Howe *et al.* 1981, 10). Feature 51, contained a late second to third century Parisian Ware beaker (Fig 8: Elsdon 1982, type 3). Feature 49 contained a sherd of BB1 ware, while pit 1109 yielded some Derbyshire Ware, giving dates in the early and mid-second century respectively at the earliest. Features 49, 51 and 52 were

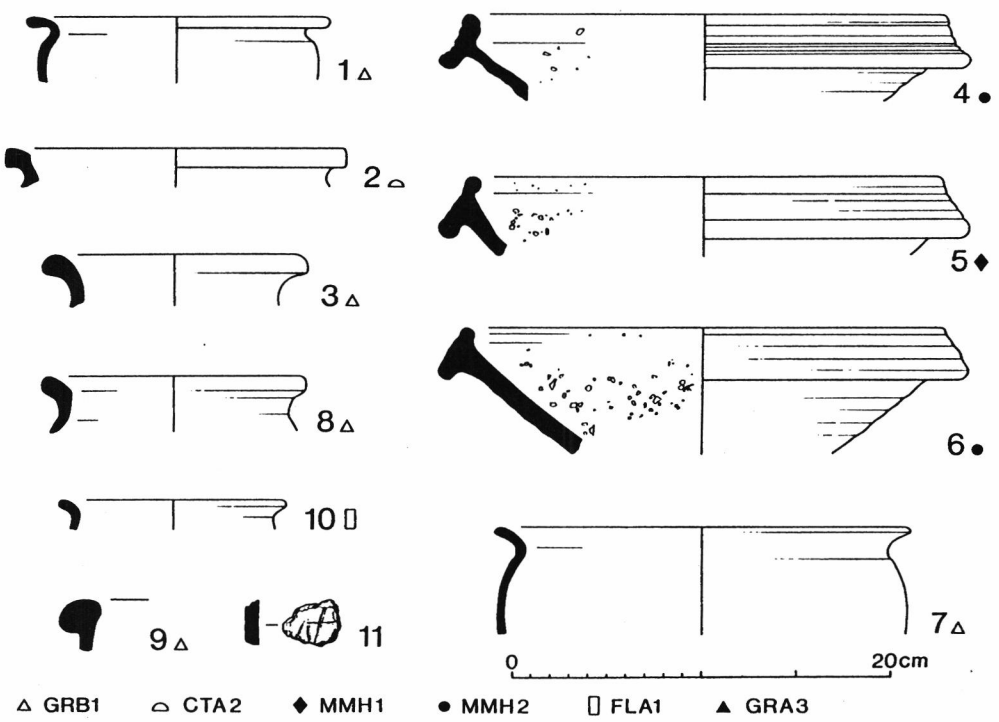

Fig 6 Sherwood Lodge, Bolsover. The pottery.

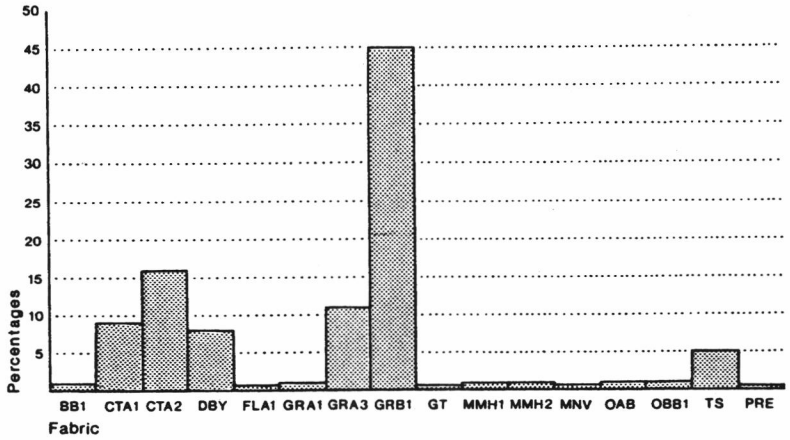

Fig 7 Sherwood Lodge, Bolsover. The pottery: relative percentages of Romano-British pottery and artefacts quantified using sherd count values.

overlaid by a layer of clay silt (32) which contained much pottery dating from the early second century to the third to fourth century (everted rim jar, small beaker and ovoid jar of Little Chester type [Fig 6:1, 3, 10], Samian forms Dr. 18/31 and 31, and one double lid-seated jar of late fourth century type [no. 2, cf. Darling 1977, 30-1]).

Within the enclosure, gullies 1093 and 1108 contained scraps of calcite gritted ware, some certainly CTA1 (see page 94), others of uncertain attribution along with one sherd of grey ware from 1093. These can give no more than a Romano-British date. Rather more material came from feature 1059, comprising bodysherds of grey, Dales and Derbyshire Ware and a Mancetter-Hartshill mortarium sherd dating from the third century. A more precise date range is provided by the hammerhead mortarium rim from layer 1059b (Fig 6:4) which can be dated to AD 230-300. A second hammerhead mortarium of similar date (Fig 6:5) was found in hearth pit 1057 along with some Derbyshire Ware, and a third mortarium (Fig 6:6) , again of similar date, was found on the surface of unexcavated cut 52, in association with metalworking debris.

The evidence points to a date in the mid to late third century for most of the activity on the site. Grey ware contributed nearly half of the assemblage and most of the forms (Fig 6:1, 3, 4, 8, 10) can be paralleled with the Derby Little Chester (no. 1 of Brassington 1971, nos. 155-70) and Derbyshire kilns (Brassington and Webster 1988, nos. 15-7, 40). Two forms, an everted rim jar and a deep, bead rim bowl (Fig 6:7, 9) are better paralleled in the South Yorkshire or Trentside kilns of Torksey, Knaith, Lea and Newton-on-Trent, where they are dated to the late second to third, and second to fourth century respectively. Likewise the Parisian Ware (Fig 8) is unlike the fine grey ware made at Derby and this type is not known from the kilns. The stamps cannot be matched with any known stamps nor does the fabric match any specific kiln, so the source for this fine vessel remains uncertain. Derbyshire Ware accounts for a further 8%, making the Derbyshire industries the principal supplier of pottery. The two calcite gritted wares, CTA1 and CTA2, accounted for 9% and 16% respectively. CTA2 (Fig 7) is certainly a Dales ware fabric but no forms were recovered in CTA1 and its origin is uncertain. The fabric and colour best matched a first to early second century fabric known at Derby Little Chester (see above) but this identification is by no means certain and another possibility is that it is a prehistoric ware contemporary with the scored ware sherd (Fig 6:11). The handful of oxidised sherds (Fig 6:10;

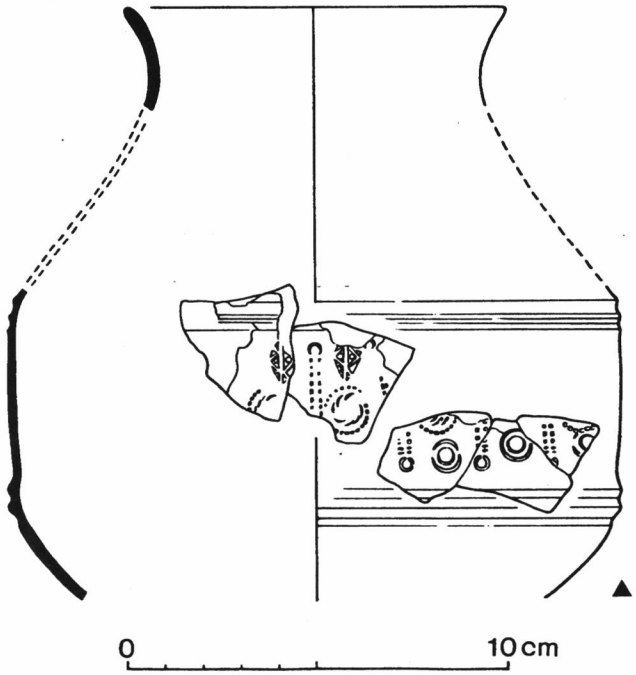

Fig 8 Sherwood Lodge, Bolsover. Parisian ware.

Fig 7) can readily be compared with material from the Derby Kilns(cf. Brassington 1971, nos. 183-4, 178). Thus around 60% of the assemblage came from the Derby potteries with a further 16% from the Dales Ware kilns. A mere 6% was imported from outside the locality, to judge from the small numbers of Mancetter-Hartshill, Nene Valley, samian and BB1 sherds (Fig 7). The absence of colour-coated wares and scarcity of dishes may be due to the industrial function of the site. The presence of four mortaria (Fig 6:4-6) in such a small assembage is, on the other hand, notable and they may have been used in the industrial process (cf. a stone mortar set in clay in an industrial area at Derby: Dool *et al.* 1985, 54).

Other Finds

None of the other finds, mainly heavily corroded iron nails from Phase 2 contexts, and nineteenth century pottery from Phase 4 features, is deemed significant for publication.

THE IRONWORKING RESIDUES (JM and PM) (Table 3)

The identification of an ironworking area, i.e. a place where ironworking has been carried out, relies on the identification of the residues: first the occurrence of significant quantities of smithing debris; secondly the presence of micro-residues, in particular hammerscale; thirdly the distribution of the residues. A major difficulty of interpreting ironworking residues is the redeposition of slags in antiquity away from the working area, in particular the use of slags for hardcore and levelling. Therefore large deposits of slags may be recovered some distance from the area of working, which may contain very few slags. However, this is usually balanced by the occurrence of hammerscale, which is distributed around the area of working and not prone to redeposition, except during the clearing out of a smithy or its hearth.

Fill	Identification	Quantity (gm)	Residue
PHASE 2A			
1109	Pit	—	—
PHASE 2B			
46	Small circular cut	470.00	Hearth bottom
49	Small circular cut	230.00	Ferruginous earth with degraded fired clay charcoal
1058	Hearth-pit	3.89*	Hammerscale
1059c	Unidentified feature	—	—
1059d	Unidentified features	—	—
1079	Vertically-sided cut	0.55*	Hammerscale
1080	Small circular cut	—	—
1093	Elongated gully, lined with stone	0.11*	Hammerscale
PHASE 2C			
32	Layer	130.00	Smithing slag
		7.00	Tap slag
		7.00	Cinder
14	Small cut	3.00	Smithing slag
44	Small cut	9.00	Smithing slag
80	Small cut	2110.00	Hearth bottom

*Hammerscale quantified from 37ml (30mg dry soil) sub-sample

Table 3: Sherwood Lodge, Bolsover. The ironworking residues

The interpretation of the evidence from the Sherwood Lodge enclosure is difficult, due to the quantity, types and distribution of the slags recovered, and the distribution of the hammerscale.

The total quantity of smithing slags (hearth bottom and smithing slag) recovered from the site was only 2.7kg and was scattered in six different contexts. This would normally be considered a 'background' level of ironworking debris, i.e. the random occurrence of slag pieces incorporated into cut fills. The large weight of hearth-bottoms relative to smithing slag is often indicative of redistributed material, as is the occurrence of the hearth bottoms in isolation from smithing slag, which suggests they were separated in antiquity. There is also an absence of hearth lining, except for one probable piece which is heavily slagged. The degraded material in feature 49, may have derived from poorly-fired lining material, but the absence of pieces of well vitrified hearth lining and any tuyere mouths suggests that the slags have been redeposited. On other sites hearth lining is usually found in dumps of smithy material. Further, the occurrence of two possible pieces of tap slag would support the argument that the slag is redeposited. Therefore the criterion of a significant quantity of smithing debris is not satisfied.

The recovery of hammerscale from three features (1058, 1079 and 1093) is significant, and is clear evidence for smithing. The majority was flake hammerscale, derived from scale being discarded as the metal was being worked; the remainder was spheroidal in shape, derived from slag or metal oxides that are expelled from between pieces of iron during welding. However, hammerscale was not detected in other contemporary adjacent features (1080, 1108 and 1059). This indicates either that they were not open at the time of the smithing activity or that the material recovered from 1058, 1079 and 1093 is the result of dumping of hearth material. Neither of these interpretations is particularly satisfactory. If feature 1059 had been used as a quenching

tank then scale should have been present. However, there are very few confirmed occurrences of 'quenching tanks' in the archaeological record. The second criterion of the presence of micro-slags is satisfied. However, the third criteria, that of slag and hammerscale distribution, is not satisfied. The slags are widely scattered and the scale is in discrete deposits.

There is insufficient evidence to conclude that the area around contexts 1059 and 1058 was an ironworking zone. There is evidence for smithing having been carried out, but it was either on a very small scale, i.e. a single episode, or larger scale smithing was being carried out in the vicinity and the excavation recovered peripheral evidence for this activity.

DISCUSSION

Prehistoric

All flint artefacts collected were residual material, dating the earliest nearby activity to the Mesolithic/Early Neolithic, and later prehistoric activity to the Later Neolithic, but no features of possible prehistoric date could be identified. Similar artefact scatters, recorded within the band of magnesian limestone, are concentrated in well-drained locations, such as Sherwood Lodge, and in caves (Hart 1981, 26, 37). Of particular interest is the finding of flint from the Lincolnshire/Yorkshire cretaceous chalk, which could suggest trading links with that area.

Romano-British

Early activity and the enclosure

The earliest Romano-British activity is difficult to interpret, given the severity of plough truncation and the small number of Phase 2A features represented. The lack of dating evidence also makes the chronological separation of the two Romano-British sub-phases difficult. Thus it may be argued that the Phase 2A group of features could include an early enclosure boundary (1041, 1113), while the dearth of finds may argue that any contemporary settlement was located at some distance, or was comparatively shortlived.

In contrast, despite extreme plough truncation the later Romano-British activity (Phase 2B) is better-defined, the settlement remains being largely confined within the bounds of a palisaded enclosure. However, the limited area of the enclosure interior available for excavation necessarily restricts our ability to understand the overall plan and economy of this settlement, and even to understand its overall context.

The eastern limit of the Phase 2B enclosure was marked by a curvilinear rock-cut ditch or palisade trench (1042/1069), which measured 0.2-0.1m in depth. The overall form or size of the excavated enclosure cannot be determined, although it may be presumed to have included an area now part of the Sherwood Lodge office complex (Fig 1). Reference to more completely excavated examples located on magnesian limestone may provide an indication of the form of the Sherwood Lodge example, although wide variations in form and size are recorded. Excavated examples include oval and circular enclosures (at Scratta Wood and Scarcliffe Park, east of Bolsover); sub-circular or polygonal sites (at Edlington Wood, south of Doncaster: Whitwell 1982, 116-118), and rectilinear forms recorded by aerial photography (at Barlborough: information from Derbyshire C.C. SMR No. 1120; and at Stubbin Wood: Kay 1956, 9). However, contemporary, and apparently unenclosed, settlement nuclei are also recorded at Edlington Wood and Scarcliffe Park (Lane 1981, 3-25). If the Sherwood Lodge enclosure was circular or oval in plan, as is suggested by the short excavated length of the perimeter ditch, this may be an attempt to follow the natural contours of the site, although elsewhere this form of enclosure has been interpreted as following an Iron Age tradition. However, there is no evidence for an Iron Age precursor of the Sherwood Lodge enclosure, except perhaps for a single sherd

of residual undated prehistoric pottery, and the association of the form of an enclosure with an Iron Age origin remains largely untested.

The degree of plough truncation (1024) encountered at Sherwood Lodge suggests that an internal bank, if originally constructed, could have been levelled by ploughing. The ditch at Edlington Wood was accompanied by an inner bank, while at Scratta Wood and Scarcliffe Park a drystone wall and bank formed the only definition of the enclosure circuit (Whitwell 1982, 118).

The proximity of the group of industrial features (Fig 5), some associated with ironworking, to the line of the palisade trench could indicate encroachment into the area of the presumed internal bank. The recovery of a quantity of red sandstone blocks, possibly lining material discarded from feature 1059, dumped into the partially infilled palisade trench, may indicate that the industrial features were in use after the trench ceased to be kept clean.

Although McDonnell and Maclean (pages 99-101) emphasise the need for caution in the interpretation of the group of features called here 'industrial', some conclusions can be drawn concerning both the evidence for industrial activity in Phase 2B, and the residual material recovered from Phase 2C contexts. The morphology of the Phase 2B features suggests that their function was not structural, and the form of feature 1059 is particularly notable as being without a clear parallel. The evidence for *in situ* iron smithing is the most compelling. The hammerscale recovered from features 1058, 1079 and 1093 suggests that these were employed in connection with smithing, although the pattern of deposition has been interpreted by McDonnell and Maclean to suggest that such activity was small-scale or episodic, and could have taken the form of the occasional repair of agricultural or domestic implements. The ironworking residues recovered from Phase 2C contexts, in contrast, are residual, and do not contain the hammerscale found in Phase 2B features. It may be that layer 32 was a levelling-up deposit, or even a yard surface. The ironworking residues recovered from this layer include smithing slag and hearth-bottom, which may indicate smithing activity elsewhere within the enclosure during its later period of use.

The location of these industrial features along the presumed eastern edge of the enclosure may reflect the need to distance this activity from any internal settlement focus, to minimise the risk of fire and limit the nuisance of noise and smoke. Alternatively, the proximity of this internal feature group to the edge of the enclosure, along with the continuation in the use of the enclosure, after the apparent disuse of the palisade, may suggest pressure for space within the interior, and provide a context for the features recorded outside the eastern limit of the enclosure. These latter features included pits and post-holes which may represent a spread of undefined structures beyond the enclosure, although the only dating evidence recovered from these features is from a ditch (29), which may be a component of a field system, and appears to be roughly contemporary with the time-span suggested for occupation of the enclosure.

The post-holes recorded in the enclosure interior may have defined timber structures, or internal divisions within the enclosure. The ground plan of part of one rectangular building was defined along both its long sides by post-holes which appeared to be cut around the outside of an area of levelled bedrock (1102), forming possibly a floor surface. Rectangular post-hole buildings have been excavated at Stubbins Wood, Shirebrook (Kay 1951, 80); structures of similar form have been inferred from rectangular platforms formed of dressed limestone at Scarcliffe Park (Lane 1981, 3), where circular stone-footings were interpreted by the excavator as bases for wattle and daub structures. Other circular stone-footed buildings have been identified at the Whitwell Wood enclosure, near Bolsover. It is also possible that some of the

timber structures found at Sherwood Lodge were associated with the group of industrial features.

The pottery assemblage suggests that the early Romano-British activity on site (Phase 2A) may be dateable to the second to the third century, with the most intensive activity (Phase 2B) attributable to the later third century. Some, perhaps limited, activity continued elsewhere within the enclosure and is suggested by the recovery of pottery with a *terminus post quem* in the fourth century from layer 32 (Phase 2C), during which the site underwent a change in industrial use. This change is represented by the occurrence of hammerscale in Phase 2B features, and the predominance of hearth-bottom fragments and smithing slags in Phase 2C deposits.

Analysis of the pattern and form of rural Romano-British settlement in the zone of magnesian limestone is important to contextualise the findings from the Sherwood Lodge enclosure.

The Romano-British setting

The Iron Age landscape will have been dominated by the hillfort at Markland Grips, which may have controlled the possible prehistoric trackway known as the 'Limestone Way' (Fullelove and Hornshaw 1976), but few other rural Iron Age sites are known outside the Trent and neighbouring river valleys (Challis and Harding 1975, 189). The course of this trackway, traced using historical research (Penny 1966, 85), may also be identified by the increased distribution of chance finds and settlements along its route, dating from the Neolithic into the Roman period. It runs approximately north-south, between Templeborough fort to the north and Broxtowe fort 5km northwest of Nottingham, following the long axis of the band of magnesian limestone, and passing just 1km to the east of the Sherwood Lodge enclosure (Fig 1A).

Continued use of the 'Limestone Way' into the Romano-British period is suggested by occupation at Markland Grips hillfort, the establishment of major settlements alongside its route at Scarcliffe Park (Lane 1981), at Whaley, Shirebrook and Roseland, and by scattered Romano-British artefacts found alongside its route. Recent fieldwork (J. Walker, *pers. comm.*) suggests that the 'Limestone Way' could have been linked to Ryknild Street at Clowne, north of Bolsover. Ryknild Street linked the Neronian fort at Strutts Park Derby (Brassington 1981, 91; Margary 1973, 412) with the fort at Chesterfield (Ellis 1990, 125).

The fort at Chesterfield appears to gave been abandoned around AD 120 which may have led to the establishment of a civilian administrative post controlling the Ryknild Way (Ellis 1990, 126), abandoned by the later second century AD. In contrast there is little evidence for any established Roman military presence in the magnesian limestone area, during the first century AD or later. The dominant form of Romano-British settlement in this area appears to have been the rural enclosure. The pattern of these does not, as yet, suggest a general continuity in occupation from the Iron Age, although some Romano-British activity is recorded at the Iron Age hillfort at Markland Grips, and the area around the Romano-British enclosure at Whitwell has yielded evidence of Iron Age settlement (Challis and Harding 1975, 53). Earlier prehistoric sites, long abandoned, such as Mother Grundy's Parlour and Whaley Rock Shelter (Radley 1967, 1) may also have been re-occupied in this period.

No clear picture emerges of the chronological development of these rural enclosures, although, as may be expected, first century material is absent (except at Scarcliffe Park), and the main *floruit* of rural sites is in the second to third century, as at the Sherwood Lodge enclosure. Although an Iron Age context for the Scarcliffe Park enclosures has been suggested (Todd 1991, 109), the main phases of activity here are dated from AD 120, continuing until the third century (Lane 1981, 9), and a similar date range is suggested for the enclosure at Edlington Wood, near Doncaster (Todd 1991, 109) and the putative enclosure at Ault Hucknall (Hart 1981, 95-6). A more restricted settlement period is suggested for the enclosures at Whaley (Kay 1939, 85-6) and

Stubbins Wood enclosure (Kay 1956, 9), dated to the second and third centuries respectively. Perhaps Sherwood Lodge may be added to the list of settlements occupied into the fourth century, which include Whaley rock shelter (third to fourth century: Radley 1967, 11), Whitwell, near Bolsover (first to fourth century), and Scratta Wood (Lane 1981, 19). At the latter site the fourth century material has been interpreted intriguingly as the result of a re-occupation by squatters.

Our understanding of the economy of these rural sites is hampered by the limited number of such sites investigated, the small size of the excavated samples and the fact that many were dug earlier in the century using techniques which were limited to the recovery of structural and dating evidence. However, despite sampling, no pollen or charred seeds could be recovered from the Sherwood Lodge enclosure. The evidence from Scarcliffe Park suggests arable and pastoral farming were supplemented by lead smelting (Lane 1981, 21) possibly utilising a local source of lead ore, although whether the scale of this activity indicates domestic production, or the preparation of items for sale is not clear. The identification of a roasting hearth and a shaft furnace at the Whitwell enclosure (Frere 1977, 392) could indicate secondary employment in ironworking here. Similarly, at the Sherwood Lodge enclosure iron smithing was probably carried out for domestic purposes.

Extensive field systems recorded from the air indicate that large tracts of land on the magnesian limestone south of Doncaster were farmed (Whitwell 1982, 113). Roman rural settlement nuclei on the magnesian limestone comprised either native enclosures (or groups of enclosures as at Scarcliffe Park), and villas. It has been suggested (Dolby in Whitwell 1982, 117), that the native, mainly upland, settlements were based on a pastoral economy, in contrast to the villas located on lowlands that were based on an arable economy, although further work would be required to test this model. Evidence of a stock enclosure added during later occupation is forthcoming from the Edlington Wood enclosure. However, a close physical nexus between enclosures and field systems is also recorded (Whitwell 1982, 117), as at the Sherwood Lodge enclosure where a field boundary (29) was identified near the enclosure circuit.

One villa was located at Mansfield Woodhouse in the south of the magnesian limestone belt, and another is postulated by Morris (1979, 153-4) at Stubbins Wood, Shirebrook where an aisled timber-framed building was identified. Whitwell (1982, 119), suggests that this area may have been on the western margin of the Corieltauvian *civitas*, which also marked the divide from the uplands to the west where villas are not presently recorded.

Evidence of reasonably extensive trading links is provided by the pottery assemblage from the Sherwood Lodge enclosure; Derbyshire and Dales ware were traded from a more local source, while more distant trade is indicated by mortaria sherds from Mancetter, and forms from South Yorkshire and Humberside (pages 98-99), samian and Parisian ware.

Medieval and post-medieval

The infilled Phase 2 features were sealed by an undated cultivation horizon (1024) which was in turn cut by successively re-defined ditches (1070, 1084), also undated, and cut on a north-south alignment.

Although the evidence for the undated Phase 3 activity is slight, use of cartographic sources may provide a wider context. The ditched boundaries may be represented on maps of the town, dated 1630 (W. Senior) and 1729 (J. Colbeck), which depict parallel burgage plot boundaries running to the east of the excavated feature, which remain identifiable to the present, with open fields to the west. An earth bank and ditch (Fig 1), to the north of Sherwood Lodge remains visible today, and is also represented on these plans. They have been variously interpreted as

defining the extent of the medieval urban area, and as a seventeenth century earthwork; however trenching failed to recover any dateable artefacts (Lane 1960).

Conclusion

Although only a limited area within the Romano-British enclosure was investigated, this excavation has provided an insight into the form and date of this rural settlement, which may have been extensively disturbed during the construction of Sherwood Lodge, and its recent extension (Fig 1). Of particular interest was the evidence for industrial activity, although the excavated evidence also adds to our understanding of the patterning of rural settlement in the magnesian limestone area, and provides data for inter-site comparison.

Further work is required to refine our understanding of the settlement pattern within the magnesian limestone area, and to relate this distribution to the Romano-British landscape in adjoining areas, such as the Peak District and the Trent Valley, which have perhaps been more extensively researched by archaeologists. Further work in the magnesian limestone area should ideally emphasise the importance of achieving an understanding of site economy, including peripheral activities, such as the 'industrial' activity recorded at Sherwood Lodge.

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