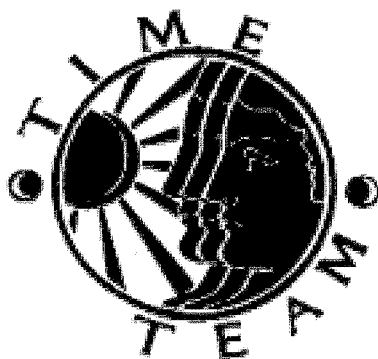




KEMERTON, WORCESTERSHIRE
Investigations by the Time Team, September/October 1998

Prepared on behalf of:



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Kemerton, Worcestershire
Archaeological Investigations by the Time Team,
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Kemerton, Worcestershire

Archaeological Investigations by the Time Team, September/October 1998

Summary

Investigations were carried out by Channel 4's Time Team into a series of cropmark sites to the south of the village of Kemerton, Worcestershire. The fieldwork comprised geophysical survey, excavation, and fieldwalking and was concentrated on three separate sites, WSM 27140, a possible Middle Iron Age enclosure, centred on SO 940368; WSM 27145, a Late Iron Age/Roman enclosed settlement, centred on SO 942367; and WSM 27144, a later prehistoric trackway and enclosure, and Anglo-Saxon settlement, centred on SO940360.

PART 1: INTRODUCTION

Project Background

Between 29th September and 2nd October 1998, survey and excavations were undertaken at Kemerton, Worcestershire, as part of the making of a *Time Team* television programme investigating a series of cropmark enclosures to the south of the village of Kemerton, Worcestershire.

The objective of the *Time Team* investigations was to examine a series of cropmark sites within the context of the making of a television programme. It was assumed that, given the proximity to the major Bronze Age site at Huntsmans Quarry (Figure 1), that much of the evidence would be of a similar date, therefore, the thrust of the programme was towards searching for this Bronze Age component.

The work carried out can be considered as a research evaluation, albeit one that had to be undertaken within the constraints of the making of a television programme. All the fieldwork was carried out within the three day time limit imposed by the *Time Team* structure, plus an additional day to complete the recording of the excavation trenches. The sites themselves were under no direct immediate threat other than from arable agricultural practices.

This *Time Team* investigation comprised a number of different elements: aerial photograph transcription and assessment; geophysical and geochemical survey, fieldwalking, and excavation. Background research was undertaken by the *Time Team* researchers and the aerial photographic transcriptions were done by Mike Glyde (*Worcestershire County Archaeological Service*) prior to the fieldwork. The rest of the fieldwork was carried out almost simultaneously during the three day period. The geophysical survey was carried out by *GSB Prospection* and the geochemical survey by *Terra Nova*. The excavations were carried out jointly by the *Worcestershire County Archaeological Service* and by *Time Team* archaeologists. The fieldwalking was undertaken with the aid of many local volunteers. This report was compiled by Rod Brook, Peter Bellamy (*Terrain Archaeology*) and Robin Jackson (*Worcestershire County Archaeological Service*) with specialist support from the staff of the *Worcestershire County Archaeological Service*.

This report attempts to bring together the data gathered from the excavation and survey and present the detailed results to form a record of the work done by *Time Team*. Of necessity, without further fieldwork,

analysis, and research, many of these results are of a preliminary nature. It is not intended to present a coherent synthesis of the settlement history of the region.

Location, geology and topography

Kemerton is a long narrow parish lying on the south side of Bredon Hill on the southern border of Worcestershire. The parish runs from the upper slopes of the hill to flat meadows lying along the north side of the Carrant Brook, a tributary of the River Avon (Figure 1).

The solid geology of the Carrant Valley consists of grey mudstones and clays of the Lower Lias (Whittaker 1972, 3-5). The drift geology is rather complex (Briggs *et al.* 1975), due to the interaction of glacial gravel terraces (which equate to the Avon 2nd Terrace) and Fan Gravels, the latter the product of solifluction and decalcification of the underlying limestone gravels on the lower slopes of Bredon Hill (Worssam 1982, 1,8).

The area which forms the focus of the investigations, lies on the gentle slopes of the southern limit of the fan gravels and to the south of the village of Kemerton. Almost all of the areas investigated were in arable with one field in pasture.

Historical and Archaeological Background

There has been a relatively high level of archaeological investigation in the area, which means that Kemerton parish has a very comprehensive sequence of evidence for human activity from the Palaeolithic onwards. The most extensive excavations have been undertaken in advance of quarrying at Aston Mill, on the southern edge of the parish (Dinn and Evans 1990) and at Huntsmans Quarry, immediately south of the study area. (Jackson and Napthan 1998) These have both produced widespread evidence of former occupation.

The earliest evidence of human activity from Kemerton is represented by the discovery of fifteen handaxes and other material redeposited in the gravels at Aston Mill Quarry. This material is not precisely dated but these gravels of the second Avon Terrace have been dated to c. 38,000 BP, providing a *terminus ante quem* for this material.

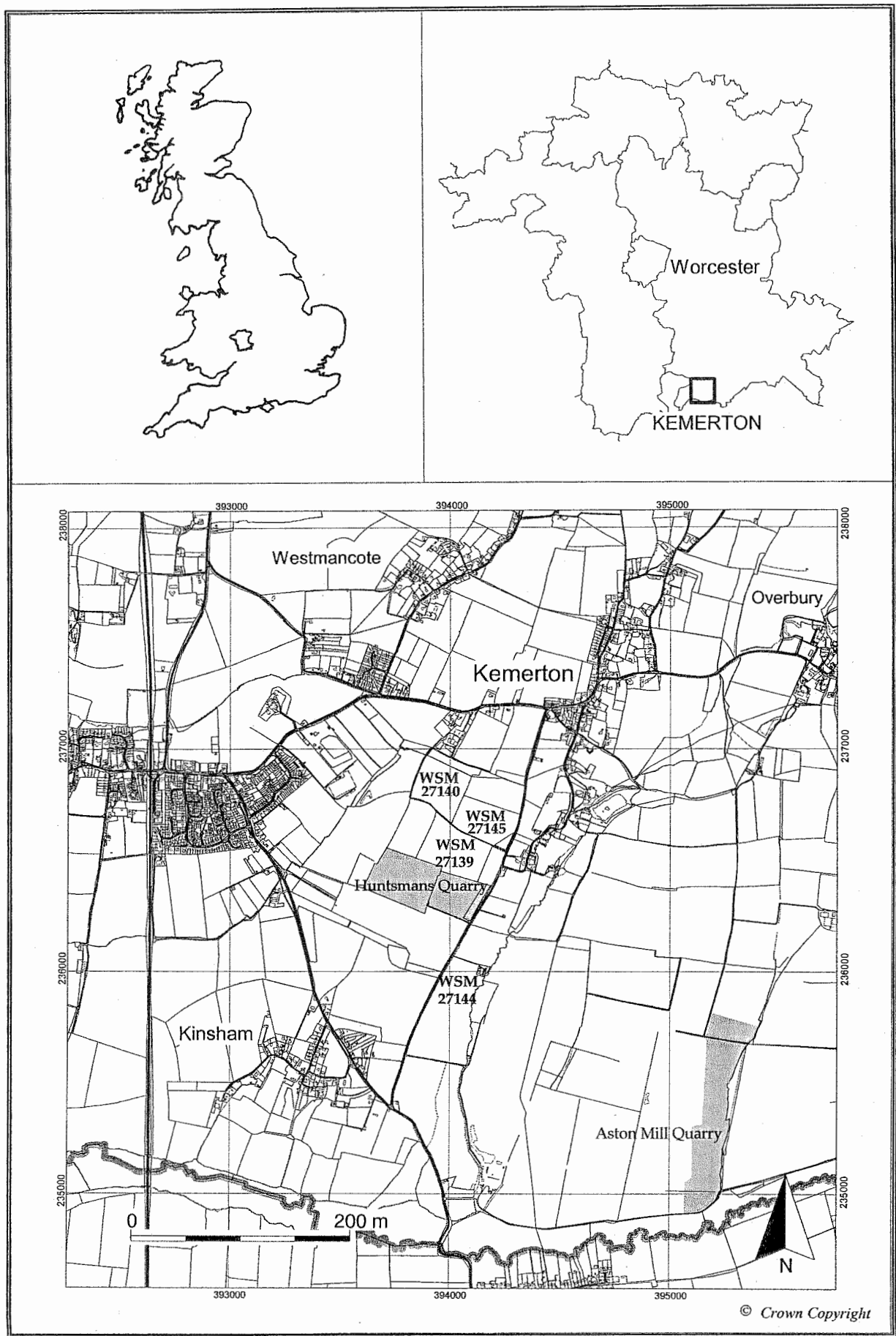


Figure 1: Location Map

Two potentially Upper Palaeolithic items from Huntsmans Quarry probably represent casual losses, but a small concentration of Mesolithic flint may represent a settlement site. Scatters of Mesolithic flint were also found at Aston Mill, mainly from features of probable natural origin.

The earliest archaeological features from Kemerton date to the period spanning the Late Neolithic and Early Bronze Age (3000/2900 BC to c. 1600 BC). At Huntsmans Quarry, a Late Neolithic pit, three Beaker period pits, a number of potentially contemporary structures, and a ring-ditch were recorded, while Late Neolithic occupation was also tentatively identified at Aston Mill along with an early Bronze Age ring-ditch. At the north end of the parish, on the slopes of Bredon Hill, a Beaker period barrow has been excavated (Thomas 1967). The nature of any occupation at this period is uncertain, however, it has been observed that the ring-ditches are focused along the boundary between the fan gravel and the gravel terrace (Dinn and Evans 1990). The pollen sequence from nearby Beckford indicates that the area had been largely deforested prior to c. 1800 BC and it was a largely open landscape with grassland and pasture predominating, but also some cereal cultivation (Greig and Colledge 1988). This clearance is earlier than elsewhere in the region, which may reflect the fertility of the Carrant Valley, attracting farming communities at an earlier date than the wetter Severn Valley to the west.

Middle Bronze Age activity (c. 1600-1200 BC) is restricted to a small number of finds. At both Aston Mill and Huntsmans Quarry, excavated ring-ditches have Middle Bronze Age secondary cremations.

The Late Bronze Age period (c. 1200-700 BC) has the first clear evidence of settlement in the area. At Huntsmans Quarry there was an extensive scatter of unenclosed Late Bronze Age roundhouses and other structures, field systems, trackways and waterholes, which contained significant quantities of well-preserved domestic debris (Jackson and Napthan 1998). This widespread unenclosed domestic settlement, was set within an associated landscape of contemporary and later trackways and field ditches. The evidence from this site suggests a predominantly pastoral economy, with some cereal cultivation. The trackways are likely to have been used for moving cattle or sheep, perhaps between summer grazing on meadows along the Carrant Brook and winter grazing on the slopes of Bredon Hill. This settlement appears to have been relatively short lived with no evidence for occupation continuing into the Iron Age, although alterations to the field pattern are believed to reflect later, possibly Late Iron Age or Roman activity.

Iron Age activity (700 BC - 1st century AD) is well represented in Kemerton and along the Carrant Valley. The area is dominated by the promontory fort on Bredon Hill, which dates from the Early Iron Age through to its desertion in the Late Iron Age (Cruso Hencken 1938). The valley below has extensive evidence for Middle Iron Age settlement (c. 300-100 BC), including the hillfort at Conderton (Thomas forthcoming) and the enclosed settlements at Beckford and Aston Mill Farm.

All of these Middle Iron Age settlements seem to have been abandoned at the onset of the Late Iron Age (c. 100

BC). A major shift in the settlement pattern is indicated and it has been suggested is a reflection of movement into larger villages or a shift away from the cropmark producing gravel terraces (Dinn and Evans 1990). Environmental evidence suggests a significant change in agricultural practice along the Carrant Valley in the Late Iron Age or Roman period (Greig and Colledge 1988). It seems that there may have been a major shift in the agricultural economy away from a pastorally dominated regime to an arable one. Evidence from alignments of boundary features at Huntsmans Quarry, and Kemerton as whole, suggest that by the Roman period, the Late Bronze Age land divisions, predominantly aligned on a north-east to south-west axis, had been reworked or abandoned in favour of a north-south alignment, similar to the field patterns known from the late Saxon and medieval period, which are in essence maintained up to the present day. Although the dating and impetus for these changes is not clearly established, a model can be suggested whereby the main period of change coincides with the settlement shift at the end of the Middle Iron Age and the onset of the Late Iron Age.

The Roman period is at present poorly understood at Kemerton and along the Carrant Valley as a whole. However, a pattern of enclosed farmsteads appears to be present along the valley floor and there are some indications from surface finds of wealthier settlements along the south-facing slopes of Bredon Hill.

Evidence for Early Anglo-Saxon activity (6th to 7th century AD) is relatively well represented in the Carrant Valley, compared to the rest of Worcestershire. Two Anglo-Saxon cemeteries were recorded at Beckford in the 1950s while in Kemerton, at Aston Mill, the grubenhause represented the first rural settlement site of this date to have been recognised in Worcestershire. Since that discovery, a further settlement has been recorded to the northwest of Aston Mill (Fagan *et al.* 1994). Although cereal remains have been recorded from the excavated deposits, it is unclear how intense cultivation was during this period. The Beckford pollen diagram has a discontinuous cereal pollen record for the post-Roman period and some reduction in cereal production may be represented or a shift away from areas close to the Brook.

For the later Saxon period and medieval period, evidence becomes increasingly abundant. Occupation appears to have been focussed around the two surviving settlements of Kinsham and Kemerton, the current locations of which have medieval origins. Documentary sources enable the reconstruction of late Saxon boundaries following the lines of the modern parish ones, while extensive remains of ridge and furrow systems reflect the medieval open field systems.

Although these later Saxon and medieval changes undoubtedly reflect a changing landscape, the pattern of Saxon estates, medieval parishes and open field boundaries can be suggested as one that may be based upon the broad pattern and alignments of Roman systems. Vestiges of the earlier prehistoric landscape may also survive in some boundaries and rights of way. However, it must be stressed that this is only a hypothetical model for the development and survival of earlier landscapes and as yet has not been demonstrated.

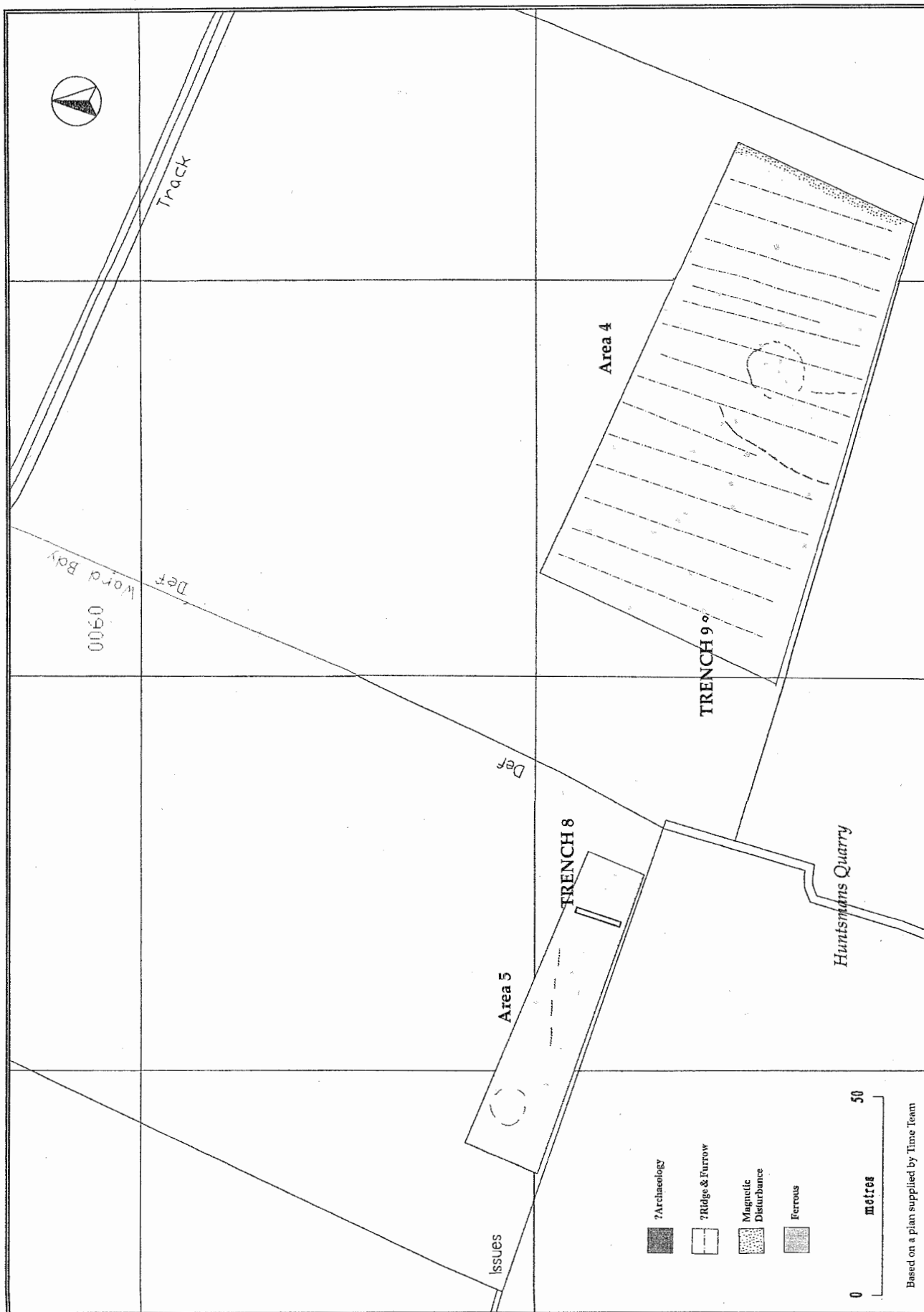


Figure 2: WSM 27139: Plan of geophysical survey areas 4 and 5 with excavation trenches 8 and 9

Methodology

The aerial photographic evidence had been rectified and plotted prior to the start of the fieldwork (Glyde n.d.) but, as a consequence of the three-day timetable, the geophysical survey and the excavations were carried out simultaneously. The aerial photographic data was used to determine the initial geophysical survey areas and also the location of trenches 1 and 2.

The location of all other excavation trenches was decided largely on the basis of the geophysical survey results. As the survey was being conducted at the same time as the excavation, the position of the trenches was determined using preliminary survey results produced during the course of the excavations. The geophysical

survey grids, the fieldwalking grids, and the excavation trenches were tied into the OS grid by RCHME (now English Heritage) using a total station.

The excavation trenches were stripped of their topsoil and subsoil by machine and then cleaned by hand and selected features were sample excavated. The archaeology was recorded using the Worcestershire County Archaeological Service's standard recording system (CAS 1995).

Fieldwalking was carried out within a 20 m grid tied into the Ordnance Survey grid by total station. Each grid square was given an alphanumerical tag and all classes of artefacts collected. Each grid square was also metal-detected.

PART 2: INVESTIGATIONS TO THE NORTH OF HUNTSMANS QUARRY

Introduction

The site excavated in Huntsmans Quarry (Jackson and Napthan 1998) appeared to continue northwards beyond the boundary of the quarry. As there are no clear cropmarks recognisable here, two small areas were subject to geophysical survey (Areas 4 and 5), in order to investigate how much further the archaeology extended. The results were not promising and the focus of the geophysical work shifted elsewhere. This field (WSM 27139, Figure 1) was under arable and consequently, it was gridded out and fieldwalked. Two small sondages (Trenches 8 and 9) were also excavated but the work was peripheral to the main areas of investigation further to the north.

Geophysical Survey (*GSB Prospection*)

Two areas (Areas 4 and 5) were surveyed by gradiometer along the southern edge of field WSM 27139 (Figure 2), in order to try to trace features extending northwards from Huntsmans Quarry.

The results from these areas are difficult to assess. While the remnants of ridge and furrow ploughing are clearly visible in the data, it is uncertain whether other anomalies are archaeological in origin. The responses are at the soil/instrument noise level, and as such the significance of any results is always uncertain. Mathematical processing of the data, in particular the different algorithms used, can result in spurious anomalies that in some instances can appear archaeological. For example, the 'circular' anomalies that have been highlighted, fall into this category though the linear responses appear more genuine.

Fieldwalking

A substantial part of the field was gridded out and fieldwalked. The finds have not been studied in detail but only subject to a rapid assessment. The finds represented a wide date range from prehistoric to modern. Worked flint was distributed across the site, but especially in the

centre and on the east side of the area that was walked. There was also a thin scatter of Roman pottery across the site, while, in contrast medieval pottery was quite rare. Post-medieval and modern finds were common, and included much burnt limestone resulting from agricultural activity. The fieldwalking results do not indicate any specific concentrations of activity.

Excavation

Two small sondages were excavated at the southern margin of the field, to assess whether there was any surviving archaeology in this area. Trench 8 was a 20 m long and 1.2 m wide machine trench, dug across the eastern end of geophysical survey area 5 (Figure 2). Trench 9 was a 1 m² hand-dug test pit at SO9401536457, at the western end of geophysical survey area 4. Neither trench revealed any archaeological features. Unfortunately neither trench was positioned to evaluate any of the geophysical anomalies. They were also too small to adequately evaluate the potential for surviving archaeology in this area.

Discussion

The archaeological results are difficult to assess because of the haphazard nature of the investigation of this area. The boundary ditches, which continued beyond the limits of Huntsmans Quarry, were not picked up by geophysical survey, though the nature of the survey results is unclear. Unfortunately the sondages were not positioned to investigate either the projected course of the Huntsmans Quarry ditches nor the geophysical survey anomalies, so they shed no new light on the potential survival of archaeological remains in this area. In general, the impression gained is of a low concentration of archaeological activity. However, caution should be exercised with this interpretation, since a similar range of evaluation techniques were used on the Huntsmans Quarry site, and these indicated only a low concentration of activity across areas subsequently demonstrated to be rich in Late Bronze Age remains.

PART 3: INVESTIGATION OF AN IRON AGE ENCLOSURE

Introduction

This section of the report summarises the work done in a roughly rectangular field (WSM 27140) centred on SO93953685 (Figure 1). An isolated penannular enclosure in the eastern half of this field is visible on the aerial photographs and this was the focus for the archaeological investigations in this area. Geophysical survey was undertaken on part of this field (Area 6), which was also fieldwalked. Two trenches (6 and 7) were excavated across the enclosure (Figure 3).

Aerial Photographic Evidence

An isolated penannular enclosure, measuring approximately 20 m by 16 m, with an entrance on the eastern side formed by apparently enlarged ditch terminals, was recognised from aerial photographs. No internal features could be recognised. In the land

immediately surrounding this enclosure were numerous, rather ill-defined marks, including possible penannular ditches, pits and linear features. Some of these marks may be geological in origin. The morphology of the enclosure is typical of Late Bronze Age/Early Iron Age enclosures.

Geophysical Survey (GSB Prospection)

An area (Area 6), 140 m long by a maximum of 60 m wide was surveyed by gradiometer in field WSM 27140 (Figure 3).

The penannular enclosure, with an entrance to the east, is clearly visible in the magnetic data. There are suggestions of internal pits, particularly in the western half. To the north is a small arc-shaped anomaly that also is of interest.

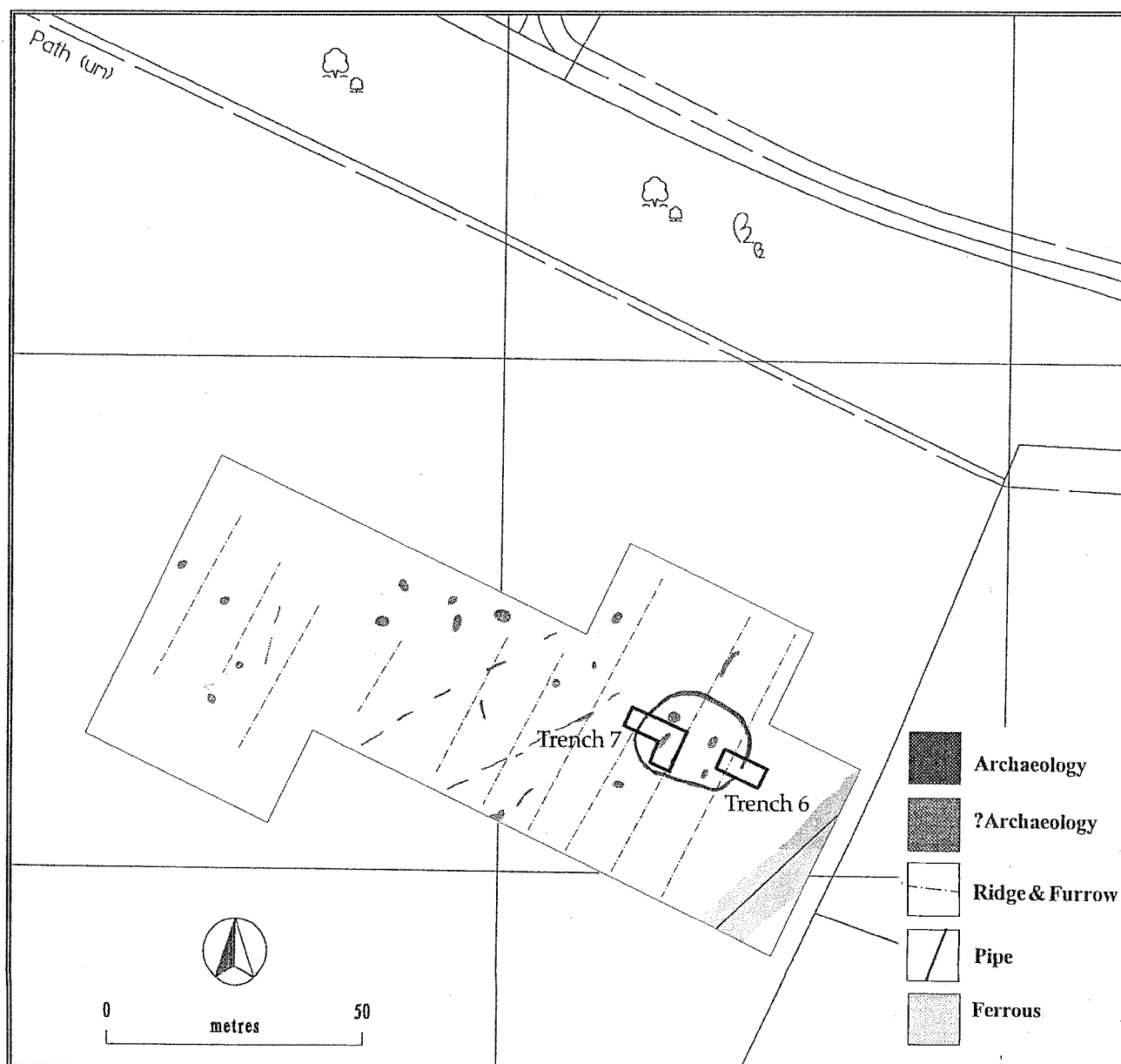


Figure 3: WSM 27140: Plan of geophysical survey area 6 and excavated areas

There is a linear trend in the data aligned approximately N-S and this coincides with the modern day ploughing. It is interesting to note that the strength of the linears is greater closer to the enclosure, presumably a reflection of the plough cutting into the magnetically enhanced archaeological deposits.

Elsewhere in the data are several ill-defined responses, possible pits and short lengths of ditch, whose interpretation remains uncertain as the responses are at the soil/instrument noise level, and, as such, the significance of any results is always uncertain.

A small water pipe that feeds a nearby animal drinking trough is the cause of the anomalies in the southeast corner of the survey area.

Fieldwalking

A substantial part of the field was gridded out and fieldwalked. The finds have not been studied in detail but only subject to a rapid assessment. The material collected represented a wide date range from prehistoric to modern. Worked flint was found across the whole site in a low density scatter and included cores, waste flakes and a small number of tools including a leaf arrowhead and an oblique arrowhead. Roman material was also generally found, with a slight bias towards the eastern side of the field. Potboilers and a small amount of burnt flint were also present.

Excavation

Enclosure Ditch

The enclosure ditch was investigated in two places: roughly midway along the western side (Trench 7) and the north terminal of the eastern entrance (Trench 6) (Figure 3). Trench 6 was roughly rectangular in shape, measuring 9 m by 4 m (Figure 5). Due to the constraints of time and resources, not all of the features were adequately investigated. Trench 7 was L-shaped, 11 m by 8 m across (Figure 6).

The size and shape of this ditch is most clearly seen in the section in Trench 7, where a roughly 0.75 m wide section was dug through it. Here the ditch was 2.8 m wide and 1.15 m deep, with an asymmetrical U-shaped profile with a deeper slot along the eastern side of the base (Figure 4). At the base of the ditch, the slot was filled with orange brown sand and fine gravel (711), 0.28 m thick. Above this was a series of layers of loamy sand (706) distinguished by the differing quantities of small to medium stone fragments within them. The shape of the ditch profile suggests that this ditch may have been recut or cleaned out, but no evidence for a recut could be seen in the fills. No dating evidence or any other finds recovered from this ditch section.

The aerial photographic and geophysical survey evidence suggested that the entrance to the enclosure was formed by a causeway bounded by rounded ditch terminals. The excavation evidence, however, showed that it was slightly more complex. A shallow flat-bottomed gully (608), about 1.25 m wide and 0.1 m deep crossed the trench on the same line as the enclosure ditch (Figure 5). Only a very small part of this feature was excavated and a full profile was not obtained. It was

traced in plan across the whole of the excavated area and it is assumed that it continued right across the enclosure entrance. This gully was cut into the natural and was filled with dark orange brown sandy loam (607) with occasional small stones. The gully was cut by the rounded terminal (604) of the enclosure ditch. Only a small part of the terminal was excavated and a full profile was not exposed, but it appeared to have a rounded end with a steep eastern side and end sloping at roughly 45° to a flat base. It was filled with mid brown sandy loam (603), which produced some animal bone and occasional Iron Age pottery sherds (Table 1). The ditch measured about 1.8 m wide and about 0.8 m deep.

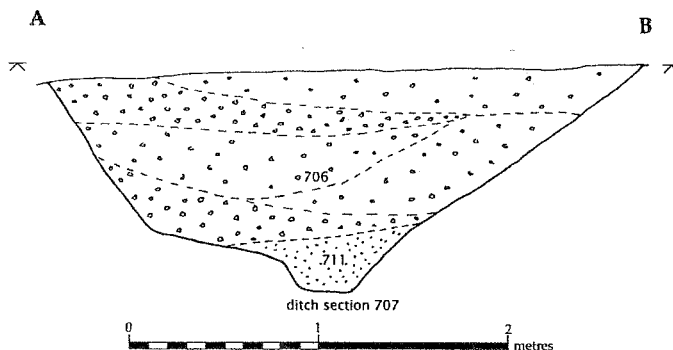


Figure 4: Penannular enclosure ditch section (Trench 7)

Features in enclosure entrance

A number of gullies and postholes were found in the enclosure entrance. Some of these may have been associated with entrance arrangements, but without more complete investigation of a larger area, this must remain very speculative. Immediately inside the entrance, about 1.75 m south of ditch terminal 604, was a circular posthole (610), which measured 0.40 m in diameter and 0.18 m deep. The mid brown sandy loam fill (609) contained frequent large burnt stone fragments. Another possible posthole, about 0.5 m in diameter, was observed in plan about two metres to the north but was not excavated (Figure 5).

Running along the inside of the enclosure, about 0.4 m from of the western edge of the ditch, was a curvilinear gully (613), which curved round and terminated adjacent to the unexcavated possible posthole (Figure 6). This gully was 0.55 m wide and 0.27 m deep with steeply sloping sides and rounded base. It was filled with a layer of mid brown sandy loam (612) containing abundant irregular stone, with a layer of mid brown sandy loam (611) above. The southern end of this gully was obscured by an irregular natural feature (614).

Immediately outside the entrance, was a curvilinear or angled gully (606), which appeared to join the enclosure ditch 604. It ran eastwards for about 2.5 m before turning sharply towards the south. This gully was only partially exposed and its relationship to the enclosure ditch was not investigated. It was 0.65 m wide with steep sides 0.18 m deep. The fill (605) was a mid brown sandy loam with occasional small to medium sized stone inclusions.

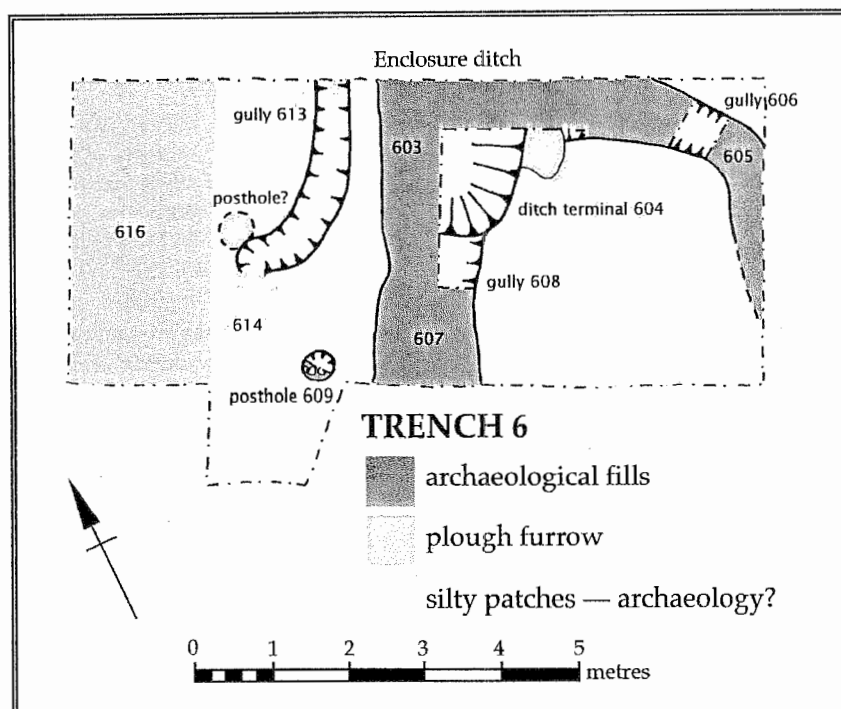


Figure 5: Plan of Trench 6

Interior of enclosure

Part of the interior was excavated in the eastern end of Trench 7 (Figure 6). A number of features were investigated, but numerous other patches of silt were also visible in this area, some of which may be archaeological features. None were excavated.

Two slightly curving gullies were found about 3.75 m inside the enclosure. Gully (708), on a slightly convergent course to the enclosure ditch, was 0.55m wide and 0.33m deep with rounded sides and base. It was filled with grey brown sandy silt (704) and was cut by another similar gully running parallel to the enclosure ditch. Two sections (710, 714) were excavated revealing steeply sloping sides 0.55m wide, and a flattish base 0.38 m deep. It was filled with grey brown sandy silt (709, 713).

Immediately east of gully 710/714, was a roughly circular scoop (703), 1.5 m in diameter, with a small lobate extension to the west. It had an irregularly rounded base 0.3 m deep and was filled with greyish brown sandy loam (702), which produced a sherd of Romano-British pottery (Table 1). The lobate extension coincided with a much softer patch of natural sand and is likely to be the result of erosion, rather than a deliberate part of the feature.

Without more extensive detailed investigation of the interior, it is unwise to offer any interpretation of these features. It is unclear whether they are contemporary with the enclosure or are the result of earlier or later activity on this site.

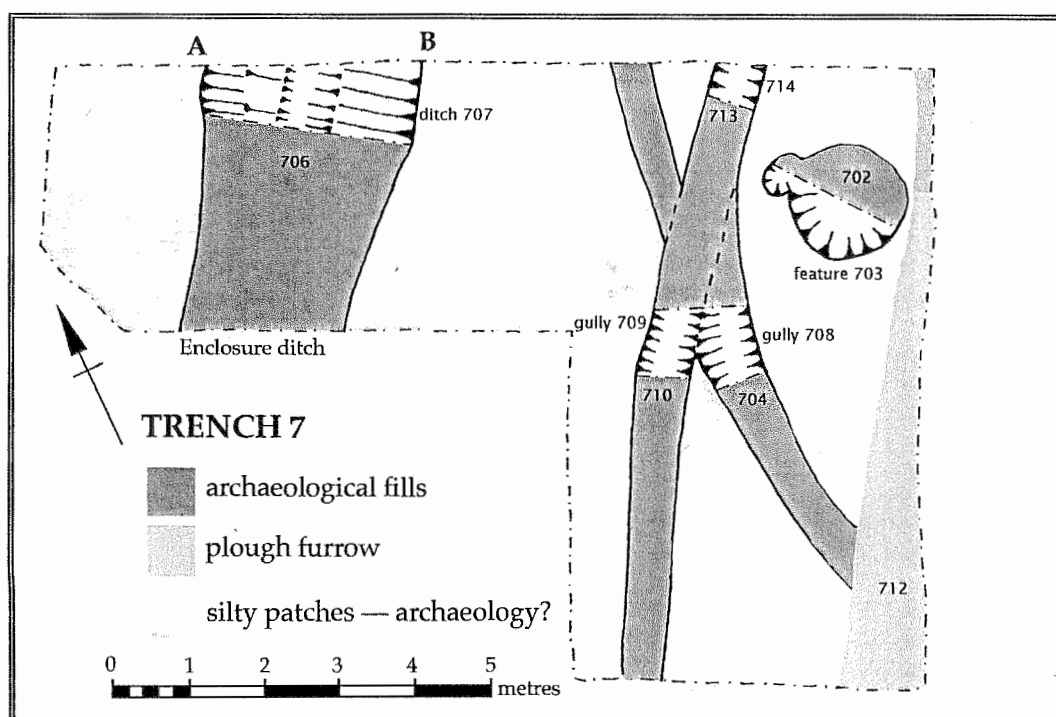


Figure 6: Plan of Trench 7

Later agricultural features

Two later furrows were found, one in Trench 6 and one in Trench 7. Both furrows were trending roughly north-south. In Trench 6, the furrow (617) ran across the western edge of the trench. It was 1.8m wide and 0.25m deep, and filled with brown sandy loam (616). In Trench 7, a band of brown sandy loam soil (712), over 1.1 m wide, was encountered along the eastern edge of the trench. It was not excavated.

The subsoil below the modern ploughsoil was an orange brown sandy loam (601, 701). The subsoil layer in Trench 6 contained a number of interesting, though unstratified, finds, including Middle Iron Age pottery, a fragment of Copper Alloy scabbard or shield binding, a saddle quern fragment and a large quantity of fired clay fragments (Table 1).

| | Context | Iron Age pottery | Romano-British pottery | Fired clay | Flint | Stone objects | Burnt stone | metal | Animal bone |
|--------------------------|---------|------------------|------------------------|------------|-------|---------------|-------------|-------|-------------|
| Trench 6 | | | | | | | | | |
| Unstratified | 600 | 17/133 | | | 1 | | 1 | Fe 1 | 3 |
| Subsoil | 601 | 24/164 | | 50/826 | | 1 | 7 | Cu 1 | 32 |
| Enclosure ditch terminal | 603 | 4/22 | | 3/4 | | | | | 14 |
| Gully 606 | 605 | 4/44 | | | | | | | |
| Trench 7 | | | | | | | | | |
| Subsoil | 701 | 1/4 | | | | | | | |
| Scoop 703 | 702 | | 1/28 | | 1 | | | | |
| Unstratified | 705 | | | 17/146 | 2 | | | | 2 |

Table 1: Finds assemblage from the Iron Age enclosure (no/wt (g))

Discussion

The enclosure appears to be an isolated feature in the landscape. There is a slight suggestion of a scatter of further features, perhaps pits and short lengths of ditch from the geophysical survey results. These anomalies are rather ill-defined and given that the natural has numerous irregular natural disturbances, it is perhaps unlikely that these represent archaeological features. The scatter of material across the surface of the field recovered by fieldwalking does not indicate any specific concentrations of activity in the area surrounding the enclosure.

The overall shape of the enclosure is clearly seen on both the aerial photographs and the geophysical survey

plots. Both sets of data are in broad agreement, though the enlarged ditch terminals at the entrance on the AP transcription are not visible in the geophysical data. No features were visible in the interior of the enclosure, though there were a number of geophysical anomalies, which may represent archaeological features.

The excavations have indicated the size and shape of the enclosure ditch. The northern ditch terminal was not enlarged but the existence of another gully here may have confused the cropmark interpretation. One interesting feature, not picked up on either the geophysics or the APs was a shallow gully running along the line of the enclosure ditch across the entrance. The relationship between the gully and the enclosure ditch was not clear but it is possible that the gully was a marking-out feature or possibly some sort of entrance feature. The interior of this enclosure is poorly

understood. A number of gullies and postholes were found but it is difficult to interpret them given the size of the area excavated.

Unfortunately most of the finds recovered were unstratified (Table 1), however, taken as a whole, they indicate the probable domestic and agricultural nature of the activities associated with this enclosure. A large number of fired clay fragments were recovered, including a number of pieces with curved surfaces, possibly the remnants of ovens or hearths. One fragment of saddle quern was also recovered as well as a number of fire-cracked pebbles, which may have been pot-boilers.

The pottery evidence dates the enclosure to the Iron Age, but more precise dating within the period is difficult. A single unstratified Middle Iron Age sherd from the subsoil 601 suggests that it is possibly Middle Iron Age in date. It does appear to be earlier than the adjacent Late Iron Age/Romano-British enclosure complex. The single Romano-British sherd from scoop 703 is probably either intrusive or represents an isolated later event.

PART 4: INVESTIGATION OF A LATE IRON AGE/ROMANO-BRITISH ENCLOSURE COMPLEX

Introduction

The cropmark evidence has revealed a complex of enclosures, pits, trackways, and other features about 150 m to the southeast of the penannular enclosure discussed above. This complex was spread across two fields but the investigations were concentrated in the arable field to the south (WSM 27145), where geophysical survey (Area 2), geochemical survey and excavation (Trenches 1, 2, 4 and 5) were undertaken. The northern field is under pasture and has a number of ornamental parkland trees surrounded by iron railings within it. Only geophysical survey (Area 3) was carried out in this field.

Aerial Photographic evidence

A complex of probable enclosure ditches has been identified centred on NGR SO942367. The northern part of this complex is obscured by deep soil and the adjacent pasture field, which is less susceptible to the recognition of cropmarks. The most prominent feature is a rectilinear enclosure, narrower at its eastern end and with rounded corners, which measures about 70 m by 40 m. There appears to be a smaller rectilinear enclosure, open to the north, within its eastern end. It is not clear whether these two are related.

To the north of the main enclosure is a series of three smaller curvilinear or subrectangular enclosures with broad ditches.

The eastern part of the complex comprises two parallel ditches oriented roughly east-west, which may represent a trackway, which appears to run to the southeast corner of the main enclosure. There is a return to the north at the west end of the double ditches, which may indicate a large rectangular enclosure. A number of other ditches cross this area and at least one ring ditch is visible.

West of the main enclosure is a line of four pits, the easternmost one is just inside the western edge of the enclosure.

The main enclosure is a form typical in the Late Iron Age. The features to the north may be related to this rectilinear enclosure. The possible trackway and enclosure to the east are clearly not contemporary with all the features to the north, but there is a suggestion that they relate to the main enclosure, so may be broadly later prehistoric in date also.

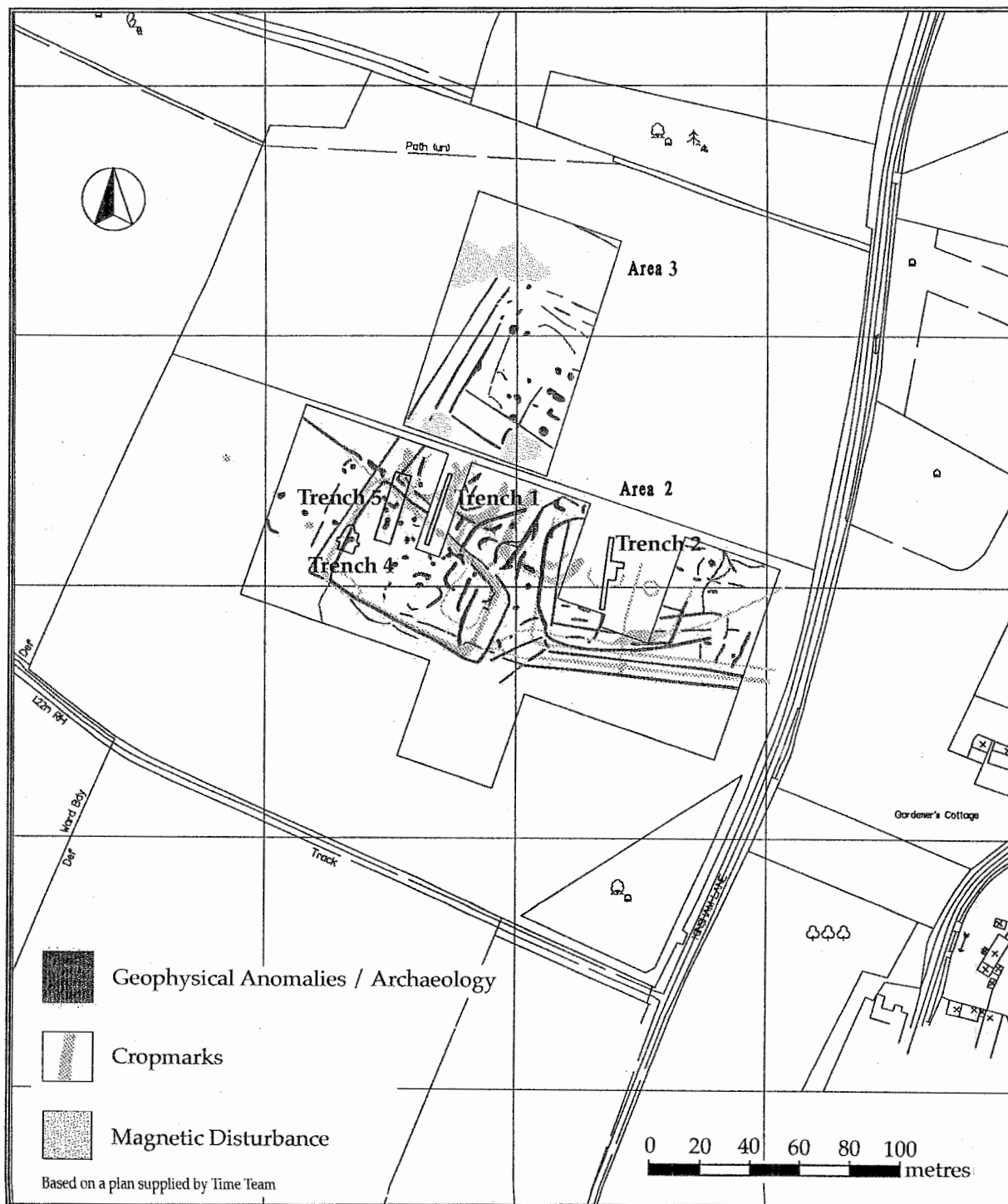


Figure 7: WSM 27145: Plan of cropmarks, geophysical survey areas 2 and 3 and excavated trenches

Geophysical Survey (GSB Prospection)

Geophysical survey was carried out in two areas: Area 2 in the arable field to the south and Area 3 in the pasture field to the north. Unfortunately, as a result of the overall project strategy, excavation trenches were begun prior to the geophysical survey work commencing, hence the large gaps in the survey plots in Area 2 (Figure 7).

Area 2

The results provide a very clear plan of the archaeological complex and while there is broad agreement with the aerial photographic transcriptions, there are distinct points of variance in the detail. The prominent subrectangular enclosure accords well with the gradiometer data as does an apparent trackway to the east. A pit alignment is also visible in both data sets. However, the series of conjoined, almost circular cropmarks is not visible in the geophysics results. The gradiometer results indicate a linear ditch to the west of the clearest enclosure, yet this is not marked on the aerial photo transcriptions and the internal detail also differs significantly. Similarly, geophysical results for the area outside the enclosure to the east and north display considerable differences. While it is expected that

variations will arise between AP transcriptions and geophysical results, it is perhaps surprising that in this instance several major elements appear to be at odds.

Area 3

Unfortunately, the results from the sample block in this field are distorted by strong anomalies associated with iron railings surrounding mature trees. In addition, a large metal feeding trough has resulted in an area of magnetic disturbance.

Despite the disturbed areas, the gradiometer survey has identified a complex of ditches, including a triple ditch alignment. These apparently 'turn through a right angle' though the complete picture is obscured by one of the trees referred to above and the magnetic anomalies are also far from clear in this part of the survey block. It would appear that there is some form of enclosure bounded by linears; other anomalies include pit-like features and other short ditch lengths within the ditched enclosure. Unfortunately, time did not permit a total survey of the pasture field as this may have helped resolve the interpretation. While some of the responses are associated with known archaeological features, it is possible that elements of a former formal garden are confusing the interpretation.

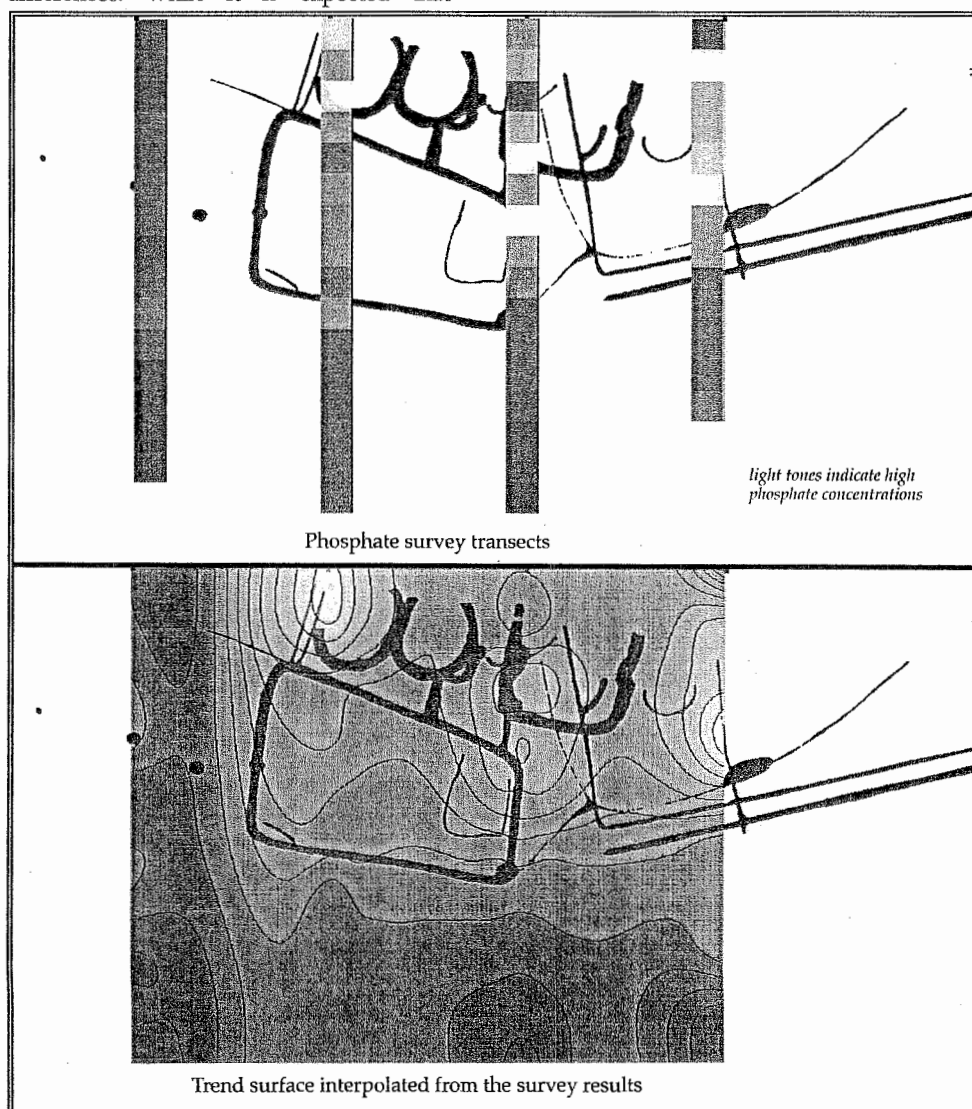


Figure 8: Phosphate survey results

Geochemical Survey (*David Jordan*)

Analytical method

Four survey transects, aligned with the site grid and spaced at 60 m intervals, were defined running approximately north-south from the northern to the southern field boundary, well beyond the area of cropmarks. Samples of about 250 g were taken from just below the plough horizon at 10 metre intervals along each traverse – 60 samples in all, of which 10 were replicated.

Each sample was mixed and an approximate 1 g of fine soil measured into a small test tube to which 1 ml of 1 normal hydrochloric acid was added. The samples were shaken and left for at least four hours and 0.5 ml of the acid solution was then pipetted into a second tube with 1 ml of ammonium molybdate solution (5 g ammonium molybdate in 130 ml 2M HCl). After approximately 30 seconds 0.5 ml of ascorbic acid solution (0.5 g ascorbic acid in 100 ml distilled water) was added and the resulting colour change measured after a further 30 seconds at 730 nm in a colorimeter. The results were not calibrated against samples of known phosphate content for lack of time and because of the difficulty of obtaining reference samples which would behave similarly to the soils sampled here. Thus the scale of phosphate concentrations is arbitrary, though expected to be linear – a colorimetric reading of 1.00 indicating twice the phosphate concentration of a reading of 0.5.

Results

The survey was carried out blind and the samples were not processed in the order of collection, specifically to avoid systematic bias in the results. The unexpected clarity of the pattern that emerged (Figure 8) was, therefore, all the more striking. It was shown that, despite considerable variability, there is a strong correlation between the area of higher phosphate concentrations and the area of known cropmarks. It is interesting, in particular, that the higher phosphate concentration does not extend much beyond the cropmarks – and the boundary of the site appears to have been defined quite independently by these two sets of observations. The variability within and between sample points was not sufficient to cast doubt on the general phosphate trend but it emphasised the difficulty which would face more detailed survey interpretation and the need for replication.

Conclusions

The soil phosphate concentrations indicate a zone of human activity in the north and east of the survey area. This confirms, independently, the cropmark evidence for archaeological remains but it also indicates that activity did not extend much beyond this surviving area of buried features since raised phosphate levels would be expected to show where activity had taken place, whether or not buried features survived.

Excavation

Three trenches (1, 4 and 5) were laid out to examine the prominent rectilinear enclosure visible in the cropmark and geophysical survey data. Trench 1 (29 m

by 1.5 m) was laid out to sample both the northern edge of the enclosure and the features to the north. Trench 5 (27.5 m by 7 m) was dug to investigate a larger sample within the northern part of the enclosure and Trench 4 (7.5 m by 6.5 m) was laid out to investigate the apparent intersection of the western side of the enclosure ditch with a large pit. Trench 2 was excavated to investigate the cropmark features to the east of the rectilinear enclosure. It measured 28 m long by 1.5 m wide with a middle section widened out to 8 m, in an exaggerated L.

Early Features

There is one feature exposed in Trench 1, which may pre-date the enclosure complex. A large steep-sided cut (116), about 7 m wide was partially revealed, just to the north of the rectilinear enclosure, roughly in the middle of the trench. The upper part of this feature was cut by later features and its plan shape is unclear. It was only partially excavated to a maximum depth of 0.55 m. Three fills were noted (Figure 12). The lowest layer (113) was a mid brown sandy silt, which was only partially excavated but was over 0.3 m thick. Overlying this was a 0.2 m thick layer of dark yellowish brown sandy loam and the uppermost fill was a 0.35 m thick layer of reddish brown sandy loam (121). These layers dipped in towards the centre of the feature. A single sherd of Beaker pottery was recovered from feature 116.

The size of this feature is reminiscent of a number of large features excavated at the Huntsmans Quarry site, which were interpreted as waterholes of Late Bronze Age date. These features contained significant quantities of residual Beaker material. It is possible that feature 116 is another example, but well outside the previously defined limits of the Late Bronze Age settlement.

A residual flint thumbnail scraper was recovered from ditch 108. This is likely to be contemporaneous with the Beaker pottery.

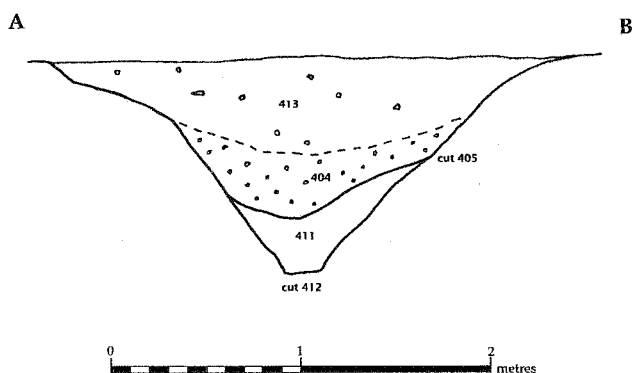
Rectilinear Enclosure

Enclosure ditch

Trenches 1, 4, and 5 all crossed the line of the prominent rectilinear enclosure ditch. The enclosure ditch was identified by its size, orientation and location and confirmed by plotting the features against the geophysical survey data (Figure 7). Sections were excavated across the ditch on the western side of the enclosure in Trench 4 and on the northern side of the enclosure in Trench 5. The ditch was not excavated in Trench 1.

The only complete profile across the enclosure ditch was excavated in Trench 4. Here, the ditch (412) was 2.7 m wide and 1.15 m deep with a steeply sloping V-profile (Figure 9). The bottom of the ditch was filled with a 0.28 m thick gravelly deposit (411). Above this, the original ditch was apparently destroyed by a recut (405), running along exactly the same line as the original ditch. This recut was filled with a 0.45 m thick layer of dark brown sandy loam (404) with a 0.52 m thick layer of brown sandy loam (413) above. Although recognised on site, the recorded evidence for this recut is not particularly convincing. The section seems to show a single ditch with three fills (Figure 9).

South-facing section through ditch 412



East-facing section through ditch 515

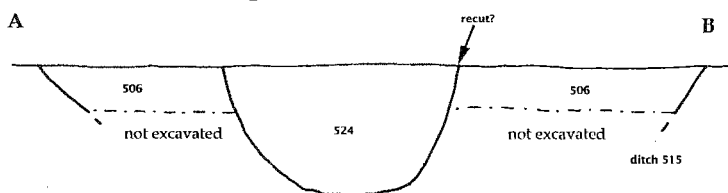


Figure 9: Rectilinear enclosure ditch sections

Evidence for the recutting of the enclosure ditch is slightly clearer in Trench 5, even though only a small part of this section was excavated. The ditch (515) was 3.5 m wide with steeply sloping sides, but was only excavated to a depth of 0.3 m. The upper fill was a grey brown sandy loam (506). In the central part of the ditch was a mid grey brown clay loam (524) layer which appeared to fill a U-shaped cut 1.25 m wide and 0.7 m deep. However, given the rapidity of the excavation and the small area investigated, any identification of a recut must remain tentative.

TRENCH 4

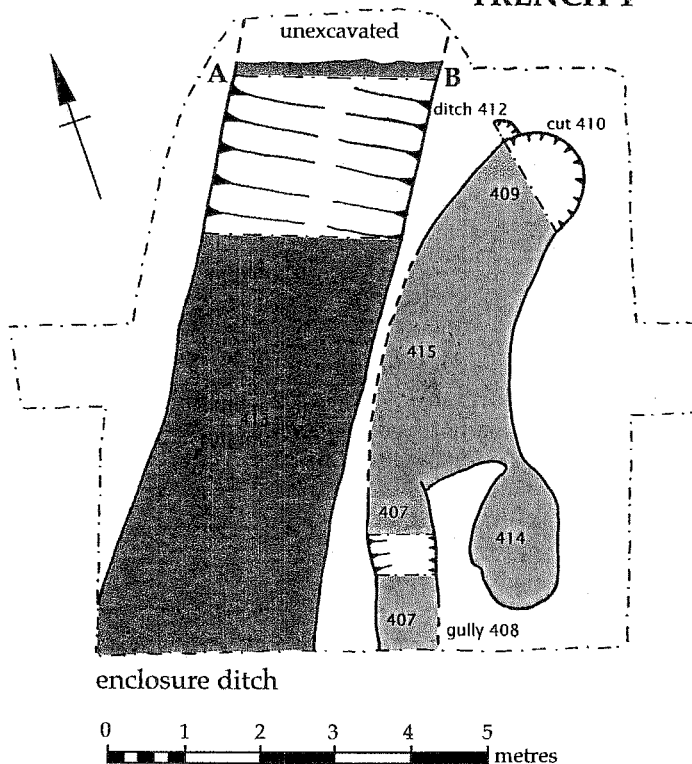


Figure 10: Plan of Trench 4

In Trench 1, the enclosure ditch was not positively identified. It is probably represented by a 3.5 m wide linear feature, aligned NW-SE, on roughly the right line for the enclosure ditch. It was not excavated. The upper part of the fill was a grey brown sandy loam (120), which contained fragments of burnt clay.

Internal Features

In Trenches 1, 4 and 5, a number of features within the enclosure were exposed. In Trench 5 some patterning of features could be tentatively identified and a similar pattern probably existed in Trench 1, though not enough of the interior of the enclosure was excavated in this trench to be certain of this.

In Trench 5, about two metres to the south of the enclosure ditch, was a complex of shallow intercutting circular and sub-circular pits occupying a band about four metres wide. To the south of the pits there were numerous postholes (Figure 11).

The pit complex comprised about six pits, of which three (520, 521, 523) were partially excavated. Pit 520 was oval in shape measuring 1.8 m by 1.5 m across, with steeply sloping sides and a flat base. It was only 0.20 m deep and was filled with grey brown sandy loam (514), which contained two large angular limestone slabs. Pit 521 was similar to 520. It measured 1.4 m by 1.0 m across and was only 0.1 m deep. It was filled with grey brown sandy loam (513). Both pits 520 and 521 were cut by pit 523. Pit 523 was circular, 1.6 m in diameter and 0.30 m deep. It has steeply sloping edges curving down into a flat base. The fill (522) was similar to those in pits 520 and 521. A small quantity of Iron Age pottery was recovered from these pits and one piece of iron slag from pit 520 (Table 2).

A further isolated pit (526) lay immediately to the south of the pit complex. This measured about 1.3 m in diameter and had steeply sloping sides about 0.15 m deep. It was filled with grey brown sandy loam (525).

In Trench 1, a similar pit (106) about 2.0 m in diameter, was found about two metres south of the enclosure ditch (Figure 12). It had vertical sides and a flat bottom 0.25 m deep. It was filled with grey brown sandy loam (105). No finds were recovered but some glume bases of emmer wheat were identified from a sample taken from the fill.

A line of three postholes was found just to the south of the pits. Two of these (510, 511) were half-sectioned. Both were oval in plan with steeply sloping sides and rounded bases about 0.1 m deep and filled with grey brown sandy loam (509, 511). The third, unexcavated, posthole was similar in size and had a similar fill. These three postholes form a straight line and it is possible that they are part of a single structure, perhaps a fence. However, the area of excavation was simply not large enough to determine this with certainty. Two other postholes were identified, one of which (528) was excavated. This was similar in size and fill to the other excavated postholes.

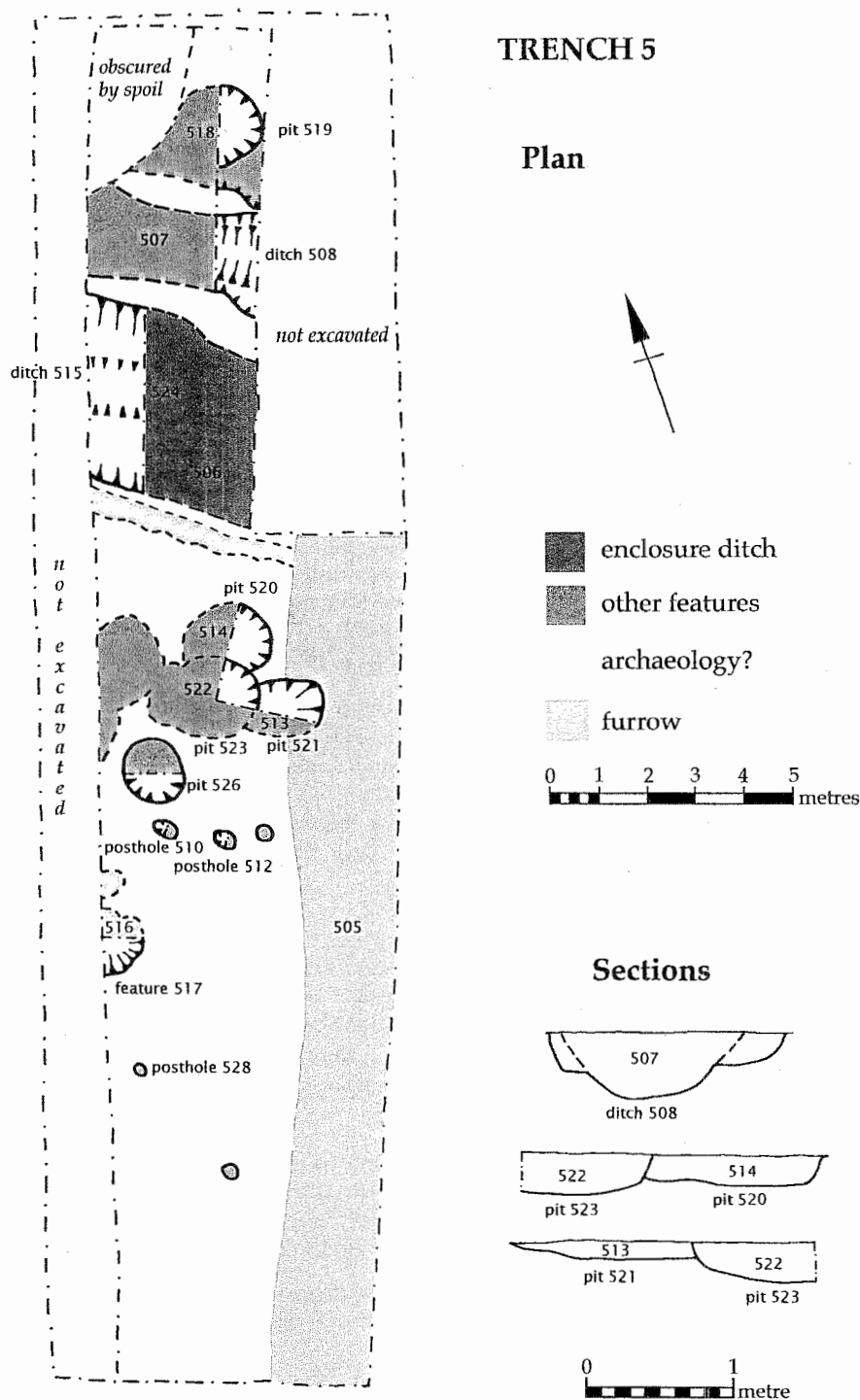


Figure 11: Plan and sections of Trench 5

At the western edge of Trench 5, two features were partially exposed, only one of which was excavated. Feature 517 was irregular in shape, made up of a series of rounded lobes, with steeply sloping sides. It measured 0.9 m across and 0.35 m deep. It was filled with a noticeably dark grey silty loam (516) with very few inclusions. It is unclear what this feature is — it may be the result of animal disturbance, rather than an anthropogenic feature. No finds were recovered from it. The other feature had a similar fill to 517.

In Trench 4, the area excavated was not large enough to be able to make any sense of the features exposed inside the enclosure. There was a single complex of features recorded (Figure 10), however, it is entirely possible, particularly given the lack of time available for

excavation, that further cleaning of this area may have resolved this complex into a series of discrete features. At the southern end was a shallow gully (408) running slightly convergent to the enclosure ditch 412 (Figure 10). It was about 0.9 m wide and 0.1 m deep, and was filled with brown sandy loam (407). The northern end of this linear feature ran into a curving patch of soil about 4.5 m long and 1.8 m wide. The northern end of this soil patch was excavated and a rounded cut (410) with steeply sloping sides and rounded base, measuring 1.30 m across and 0.45 m deep was identified. It was filled with mid brown sandy loam (409). It is possible that feature 410 is a discrete feature, perhaps a circular or oval pit, the southern part of which is obscured by the remains of the subsoil (406), which was not completely removed from this trench. Another oval pit filled with mid brown sandy loam (414) was found three metres to the south. This was not excavated.

Features to the north of the enclosure

A number of features were exposed to the north of the rectilinear enclosure ditch in Trenches 1 and 5, some of which could be related to geophysical anomalies. However, too little of this area was exposed to be able to determine the nature of the activity in this area.

About 0.9 m north of the enclosure ditch in Trench 1, a 2.8 m wide linear feature oriented roughly NW/SE, was observed in plan. Upon excavation, this proved to be three smaller intercutting ditches (117, 118, 119) filled with very similar grey brown sandy loam (109). The earlier ditches (117 and 119) had U-shaped profiles and measured about 0.8 m wide and about 0.4 m deep. The later ditch (118) was a 0.8 m wide V-shaped ditch 0.6 m deep. The fill of 118 was stonier than the fills of ditches 117 and 119 and included a possible burnt quern fragment. It is assumed that these three ditches are recuts of the same boundary and can be identified on the geophysical plot as a discontinuous ditch running parallel to the northern ditch of the enclosure, apparently forming a trackway along the western end of the northern side of the enclosure (Figure 7). There was a significant quantity of pottery, some animal bone, fire-cracked pebbles, and a number of fragments of fired clay, some possibly from ovens or hearths recovered from these ditch fills (Table 2). Some charred plant remains of emmer wheat, barley, and weed seeds were also recovered.

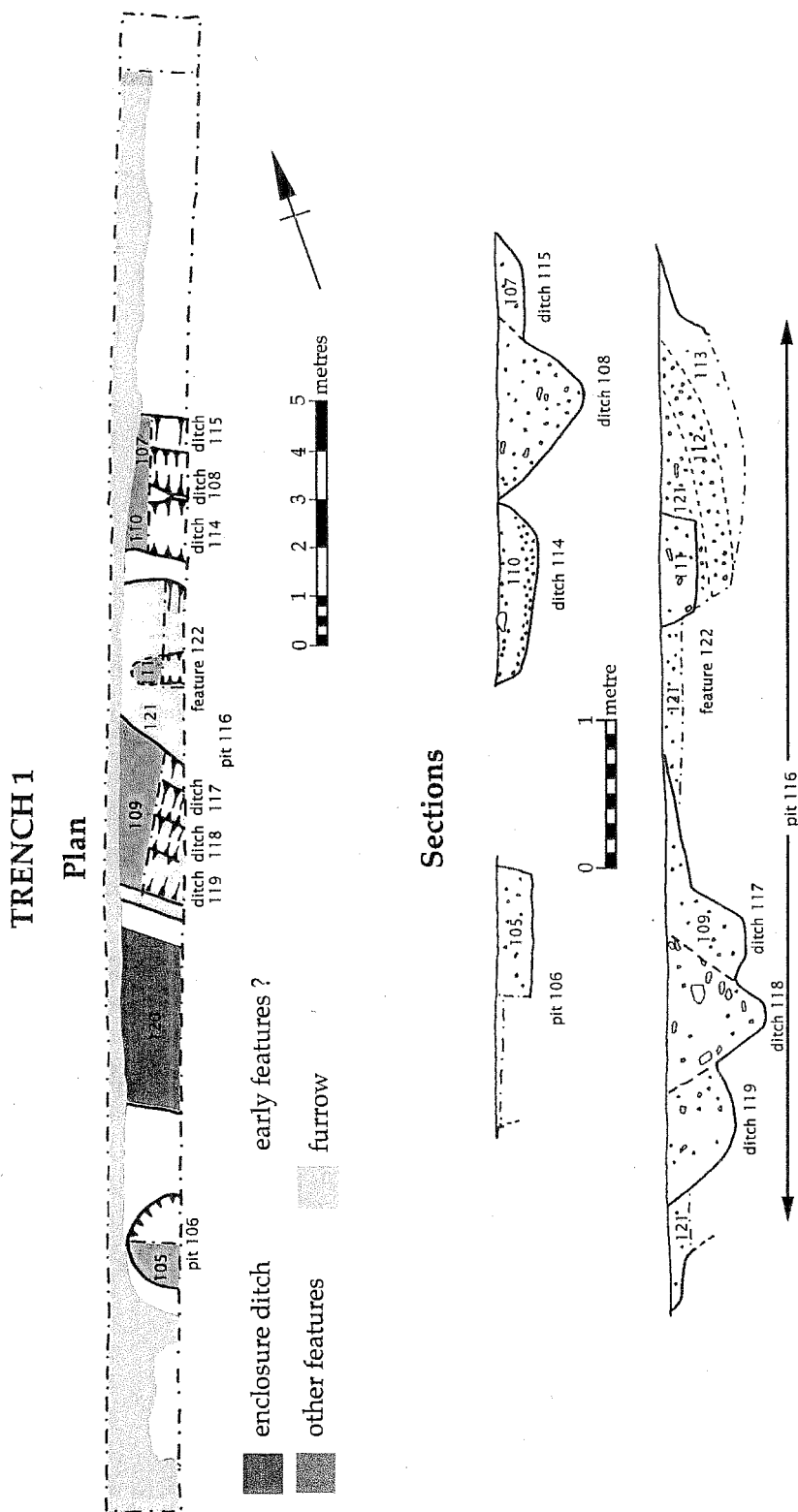


Figure 12: Plan and sections of Trench 1

This same feature was picked up in Trench 5, about 0.5 m north of the enclosure ditch. In this area the boundary was a U-profiled ditch (508), about 1.5 m wide, with steeply sloping sides and a slightly curved base, 0.48 m deep. It was filled with grey brown sandy loam (507). In plan this feature flared slightly to the east and in section ditch 508 was shown to cut through an earlier, wider shallower ditch, or possibly two earlier ditches (Figure 11). These earlier ditches were not described.

There were a number of features found to the north of this boundary. In Trench 5, an oval pit (519) roughly 1.7 m by 1.4 m across, with steeply sloping almost vertical sides was found about one metre to the north of the boundary ditch. This pit was not bottomed but only excavated to a depth of 0.4 m. It was filled with grey brown sandy loam (518). It appeared to be cut into an earlier feature, though the nature of this feature is unclear, as only a very small part was exposed and excavated. This pit contained a much larger quantity of finds compared to the pits within the rectilinear enclosure (Table 2), though any significance in this is unclear.

In Trench 1, there was another complex of three small ditches (108, 114, 115), oriented roughly WNW-ESE, about 4.5 m to the north of the boundary. This too comprised two shallow flat-bottomed or U-shaped ditches (115, 114), cut by a later V-shaped ditch (108) (Figure 12). Ditch 114 to the south was 1.0 m wide and 0.23 m deep. It was filled with grey brown sandy loam (110) with a lens of siltier soil. This ditch was not actually cut by ditch 108 in the excavated section. Ditch 115, to the north, was roughly 0.70 m wide and 0.15 m deep. The fill of this ditch was similar to that of ditch 108, only slightly less stony. The fills of both ditches were removed as one context, the differences only being recognised later in section. Ditch 108 was 1.0 m wide, and 0.60 m. It was filled with grey brown sandy loam (107). These ditches cannot be traced easily on the geophysical plot, mainly because Trench 1 lies outside of the area surveyed.

One other small flat-bottomed feature (122) was identified in Trench 1, just to the north of boundary ditches 117/118/119. In plan, this appeared to have a rounded terminal to the west. It was 0.75 m wide and 0.22 m deep and filled with grey brown sandy loam (111).

Features to the east of the enclosure

Trench 2 was excavated though the features to the east of the main enclosure (Figure 7). Unfortunately, because it was dug prior to the geophysical survey, it is unclear how the excavated features relate to the rest

of the complex and it is extremely difficult to understand the fragmentary remains exposed in such a small area. From the plan of the trench, it is clear that there are at least four stratigraphic phases of activity represented (Figure 13). The dating evidence, however, is not fine enough to be able to precisely date the features so it is not clear which features were contemporary.

Iron Age features

At the northern end of the trench, were two intercutting ditches oriented roughly WNW/ESE. The earlier ditch had a V-shaped profile and was about 0.8 m

| | Context | Beaker pottery | Iron Age pottery | Romano-British pottery | Saxon pottery | Medieval pottery | Post-medieval pottery | Fired clay | CBM | Flint | Burnt stone | metal | Animal bone |
|------------------------|---------|----------------|------------------|------------------------|---------------|------------------|-----------------------|------------|------|-------|-------------|-----------|-------------|
| Trench 1 | | | | | | | | | | | | | |
| Unstratified | 100 | | 1/14 | 20/136 | | 4/40 | 1/10 | | | | | | 6 |
| Ditch 108 | 107 | | | | | | | | | 1 | | | |
| Ditches 117, 118 & 119 | 109 | | 66/567 | 8/38 | | | | 27/750 | | | 9 | | 54 |
| Ditch 114 | 110 | | 3/14 | | | | | | | | | | |
| Feature 122 | 111 | | 3/9 | 1/4 | | | | | | | | Cu 1 | |
| Waterhole 116 | 113 | 1 | | | | | | 9/242 | | | | | 2 |
| Trench 4 | | | | | | | | | | | | | |
| Unstratified | 400 | | 4/22 | 1/6 | | | | | | 2 | | | 8 |
| Enclosure ditch | 404 | | | | | | | 1/6 | | | | | 1 |
| Gully 408 | 407 | | | | | | | | | | | | 1 |
| Enclosure ditch | 411 | | 2/10 | | | | | | | | | | |
| Enclosure ditch | 413 | | | | | | | | | | | | 2 |
| Trench 5 | | | | | | | | | | | | | |
| Unstratified | 500 | | 10/54 | 3/118 | | | | 3/20 | | | | | 10 |
| Plough furrow | 504 | | | 1/26 | | | | | 1/12 | | | Fe 1 | 1 |
| Enclosure ditch | 506 | | 32/142 | | | | | 6/22 | | | 4 | Fe 1 | 90 |
| Ditch 508 | 507 | | | 7/80 | | | | | | | | | 8 |
| Pit 521 | 513 | | 1/12 | | | | | | | | | | 23 |
| Pit 520 | 514 | | | | | | | 1/5 | | | | Fe slag 1 | 6 |
| Pit 519 | 518 | | 28/514 | 7/140 | | | | 2/44 | | | 1 | | 7 |
| Pit 523 | 522 | | 2/34 | | | | | | | | 2 | | 28 |
| Enclosure ditch | 524 | | 9/82 | | | | | | | | 2 | | 27 |
| Trench 2 | | | | | | | | | | | | | |
| Subsoil | 204 | | 8/29 | 4/22 | 72/9 | | | | | | | Fe 3 | |
| Pit 205 | 205 | | 4/20 | 9/814 | | | | 167/1782 | | | | Fe 5 | 6 |
| Gully 206 | 206 | | 4/29 | 2/30 | | | | | | | 1 | | 10 |
| Ditch 207 | 207 | | 15/71 | 1/5 | | | | 2/4 | | | | | 5 |
| Ditch 208 | 208 | | 10/112 | | | | | | | | | | 3 |
| Ditch 209 | 209 | | 6/76 | | | | | | | | | Fe 1 | 5 |
| Gully 210 | 210 | | 8/23 | | | | | 5/20 | | | | | 12 |
| Gully 212 | 212 | | 1/4 | | | | | | | | | | 2 |
| Ditch 213 | 213 | | | 1/6 | | | | | | | | | |
| Ditch 214 | 214 | | 17/108 | 9/160 | | | | 1/2 | | | | Fe 1 | 19 |

Table 2: Finds assemblage from the Late Iron Age/Romano-British enclosure complex (no/wt (g))

wide and 0.6 m deep. It was filled with grey brown sandy loam (208), containing very small quantities of burnt limestone, charcoal, bone and daub. Its southern side was cut by another similar V-shaped ditch, 1.0 m wide and 0.65 m deep, which probably represents a recut of the original ditch. This was filled with a similar grey brown sandy loam (209) containing sparse fragments of animal bone, pottery and a fragment of an iron blade. These ditches have been tentatively ascribed an Iron Age date on the basis of a small quantity of Iron Age pottery (Table 3). It is also notable that they are on a slightly different alignment to the other ditches exposed in this trench, which appear to be broadly Romano-British in date. The alignment is similar to that of the northern side of the rectilinear enclosure. These ditches cannot be traced on the geophysical survey plot.

Romano-British features

The following features all produced small quantities of mid 1st-4th century AD pottery. From the plan, there appear to be several stratigraphic phases present. Unfortunately, none of the relationships between features was investigated in order to confirm this. The earliest feature is perhaps gully 206, oriented roughly E-W, which crosses the southern part of the trench. It measured 0.7 m wide and 0.23 m deep and had concave sloping sides and a rounded base. It was filled with greyish brown sandy loam (206) with sparse charcoal flecks, moderate limestone and burnt limestone pieces,

occasional animal bone and pottery. The western end of gully appeared to run into or join curvilinear gully 212 but this relationship was not investigated. Gully 212 was curvilinear in plan with vertical sides and a flat base, measured 0.50 m wide and 0.08 m deep. The fill (212) appears to have been similar to gully 206. Both 206 and 212 appeared to join what appears to be another straight length of ditch, 1.1 m wide, oriented NE-SW. This 'ditch' (215) was not excavated nor described. In plan, it appears to have been cut by ditches 207 and 213 (Figure 13).

A ditch (207) crossed the trench in a roughly E-W direction, apparently cutting the northern end of ditch (215). It was 1.55 m wide and 0.50 m deep with a broad shallow slightly rounded V-profile. The fill was grey brown sand (207) containing small quantities of pottery and bone. Ditch 207 appears to have been cut in turn by another small ditch (213), oriented roughly N-S. This was a very shallow feature with steep sides and a flat bottom, measuring 1.0 m wide and only 0.06 m deep.

The stratigraphically latest feature in Trench 2 was a curvilinear gully 210, about 6.5 m long, 0.55 m wide and 0.13 m deep. In plan this appeared to cut gully 207 but like all the other features, the relationship was not investigated. It had rounded terminals at both ends with fairly steeply sloping sides and a flat base. It was thought during the excavation that the curvilinear gullies 210 and 212 might belong to the same circular structure (a round

house?), perhaps with posthole 211, which lay about 0.9 m south of 210, also being associated with it. Posthole 211 was about 0.5 m in diameter and 0.1 m deep. It is difficult to confirm or deny this possibility given the available evidence. It would appear from the plan that 210 and 212 were stratigraphically different. However, as none of the relationships between features was investigated, this cannot be argued with any convincing degree of certainty.

At the southern end of the trench was another ditch (214). This ditch was oriented roughly WNW-ESE and was 1.2 m wide and 0.35 m deep with sloping sides and a flat base. Its fill was not described but it did produce a number of sherds of Romano-British pottery.

Later Roman features

A sub-rectangular pit (205), 1.70 m long, 0.70 m wide and 0.40 m deep, with vertical sides and a flat base was exposed near the southern end of the trench (Figure 13). It was filled with grey brown sandy loam (205) containing moderate charcoal flecks. It produced a whole carinated beaker of mid 1st to 2nd century date (Figure 16) and some 3rd-4th century AD pottery, together with a number of iron fittings, baked clay with wattle impressions and lime-wash, and occasional fragments of animal bone.

Later Agricultural Activity

In Trenches 1 and 5 there were two features, which probably relate to the former ridge and furrow agriculture. Along the eastern side of Trench 5 there was a two metre wide shallow linear feature (505) filled with grey brown soil (504) that produced a small quantity of post-medieval pottery. This feature was probably a remnant post-medieval furrow. Similarly, in Trench 1, there was a furrow along the west side of the trench, filled with grey brown soil (102).

In Trench 4, there was a patch of compact black burnt soil (415) found immediately below the subsoil 406, sitting on top of the archaeological features. This soil was interpreted as a modern feature.

Discussion

The geophysical survey has both extended the plan of the cropmark complex into the pasture field to the north and clarified some of the individual elements of the site. Nevertheless, the plan is still incomplete and it is difficult to interpret many of the details. Excavation has provided some more detailed information, particularly about the rectilinear enclosure. However, the areas excavated were too small and not particularly well positioned to provide more than minimal information on how the different elements of the site relate to one another.

The geophysical survey plan suggests that there were several phases to the site, based on two main alignments. The rectilinear enclosure appears to have been a primary element, providing the axis for the layout of the western part of the site. The features to the east, though on a slightly different alignment, appear to have accreted to this enclosure and largely respect it.

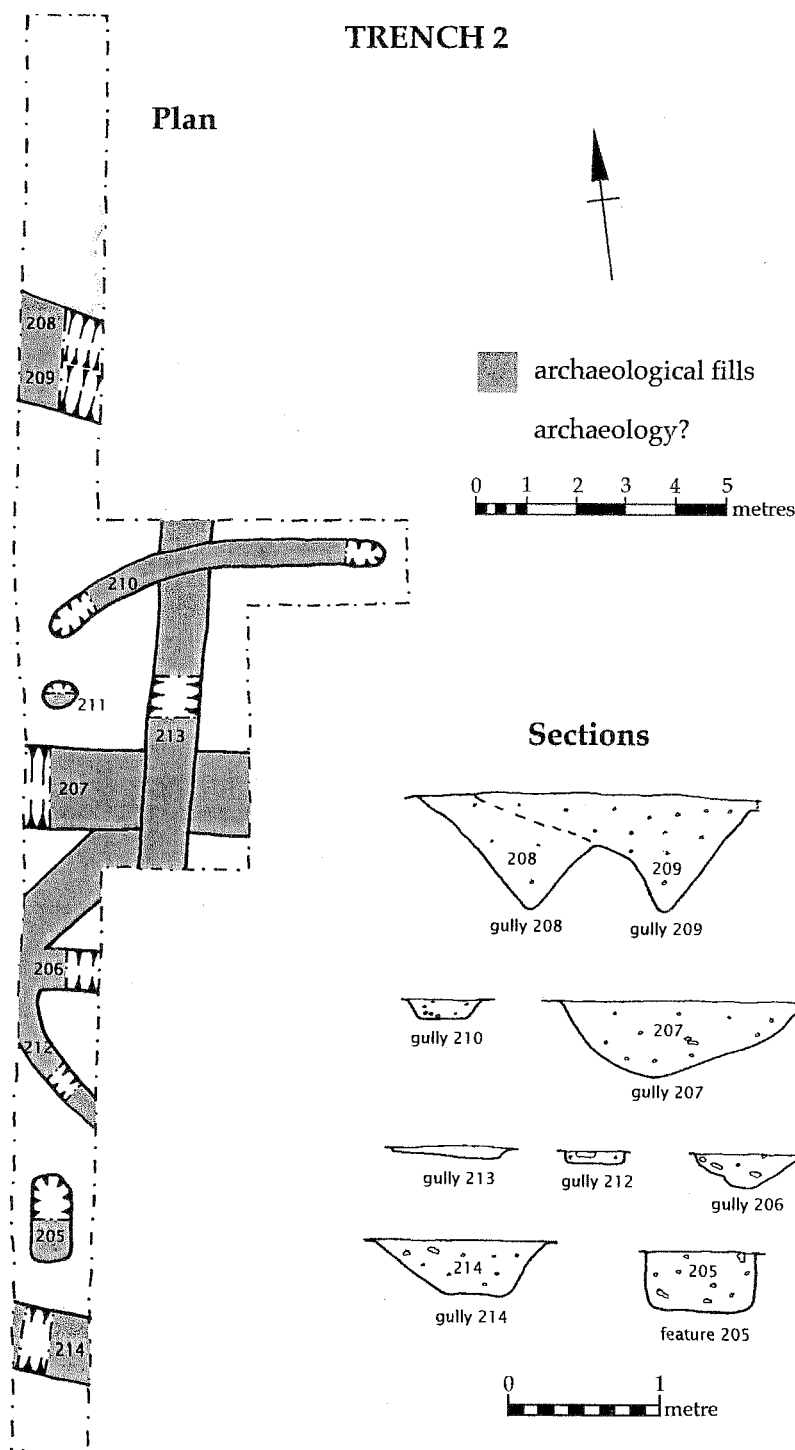


Figure 13: Plan and sections of Trench 2

The plan of the enclosure is clear, with a single perimeter ditch and an entrance in the northeast. There is no real evidence for an accompanying bank. This was likely to be small in scale, less than two metres wide, as both Trenches 1 and 5 revealed apparently contemporaneous pits within two metres of the enclosure ditch. In Trench 4, there were features immediately adjacent to the ditch, though it is less clear whether these were contemporary. It is interesting to note that the pits inside the northern part of the enclosure occupy a zone close to the perimeter, with postholes occurring further in, suggesting some zoning of activity.

To the north of the rectilinear enclosure was a series of rectangular enclosures and trackways. To the east, are

further enclosures and trackways but, unfortunately, the geophysical survey is incomplete in this area making description and interpretation difficult. The excavation of Trench 2 produced evidence for a series of small ditches and gullies, together with postholes and pits. The small areas excavated and the lack of a wider context in the form of a geophysical survey of the adjacent area makes any interpretation problematical. However, the finds from both this area and the rectilinear enclosure are similar and suggest a similar range of activities. The dating of both areas is broadly Late Iron Age/ Romano-British in date with some evidence from Trench 2 suggesting it continued into the 3rd/4th century AD.

PART 5: INVESTIGATION OF A LATER PREHISTORIC TRACKWAY AND SAXON GRUBENHAUS

Introduction

In addition to the work described above, in the area between Huntsmans Quarry and the village of Kemerton, investigations were also undertaken southeast of Huntsmans Quarry on the eastern side of Kinsham Lane, adjacent to the sewage plant (WSM27144) (Figure 1). The work in this area, centred on SO942359, was intended to investigate part of a trackway, visible as a cropmark and thought to be Late Bronze Age in origin. A small rectangular enclosure adjoins the western side of the trackway in this area (Figure 3).

Geophysical survey (Area 1) was undertaken across the trackway and sub-rectangular enclosure (Figure 14). A single trench (Trench 3) was excavated across the junction of the trackway and the northeastern corner of the enclosure.

Aerial photographic evidence

Immediately northeast of Kinsham (centred on SO941358), a broad curvilinear cropmark feature can be traced for a distance of about 250 m. It is oriented roughly northeast/southwest but turns to run in a north/south direction at its northern end. This feature is probably a hollow-way and it is defined by parallel ditches and/or pit alignments along its length. There are two complexes of cropmarks adjoining this trackway (Glyde n. d.).

The northern group of cropmarks (centred on SO942359) formed the focus of this part of the *Time Team* investigations. It comprises a rectilinear enclosure with a number of possible pits within, which abuts the western side of the trackway at the point where it changes direction. A number of *maculae*, (large irregular pit-like marks) can be seen to the south of the enclosure and a number of isolated large rectangular pit-like marks are visible to the east.

The trackway appears to be earlier than the enclosures and is most likely to be later prehistoric in date. The isolated rectangular pit-like anomalies have

been interpreted as possible Saxon *grubenhäuser* — an example has been excavated nearby (Fagan *et al.* 1994).

Geophysical Survey (GSB Prospection)

An L-shaped area (Area 1), 60 m by 60 m across, was surveyed by gradiometer in field WSM27144 (Figure 14).

The gradiometer successfully identified the major elements visible as cropmarks including the putative trackway. While some of the internal features apparently showing on the aerial photographs have not been detected, others, particularly in the northeast, have been defined. A clearer picture of the ditch arrangements and apparent entrances has also been provided by the geophysical work. However, all of the responses are quite weak, and in places only just above soil noise levels. Spot readings taken with a Bartington coil indicated that magnetic susceptibility sampling would not have detected any significant elevation in background levels, but the anomalies could have been detected by gradiometer scanning.

Excavation

Trackway

A broad linear band of soil was observed crossing the northern part of the trench in a roughly N-S direction. This was flanked by a smaller parallel ditch running along its eastern side (Figure 15). It is assumed, on the basis of its size and orientation, that this represents the trackway and flanking ditch visible on both the aerial photographic and geophysical data. Only a very small part of the western side of the putative trackway was excavated. However, this was enough to demonstrate that there was a substantial hollow with concave sides measuring about 5.3 m wide and about 0.6 m deep. At the base of this hollow, on the western edge, was a deeper slot about 0.3 m wide and at least 0.25 m deep, tentatively interpreted as a rut. This was filled with soft dark orange silty sand and the rest of the hollow was filled with compact orangey brown fine sandy loam (307).

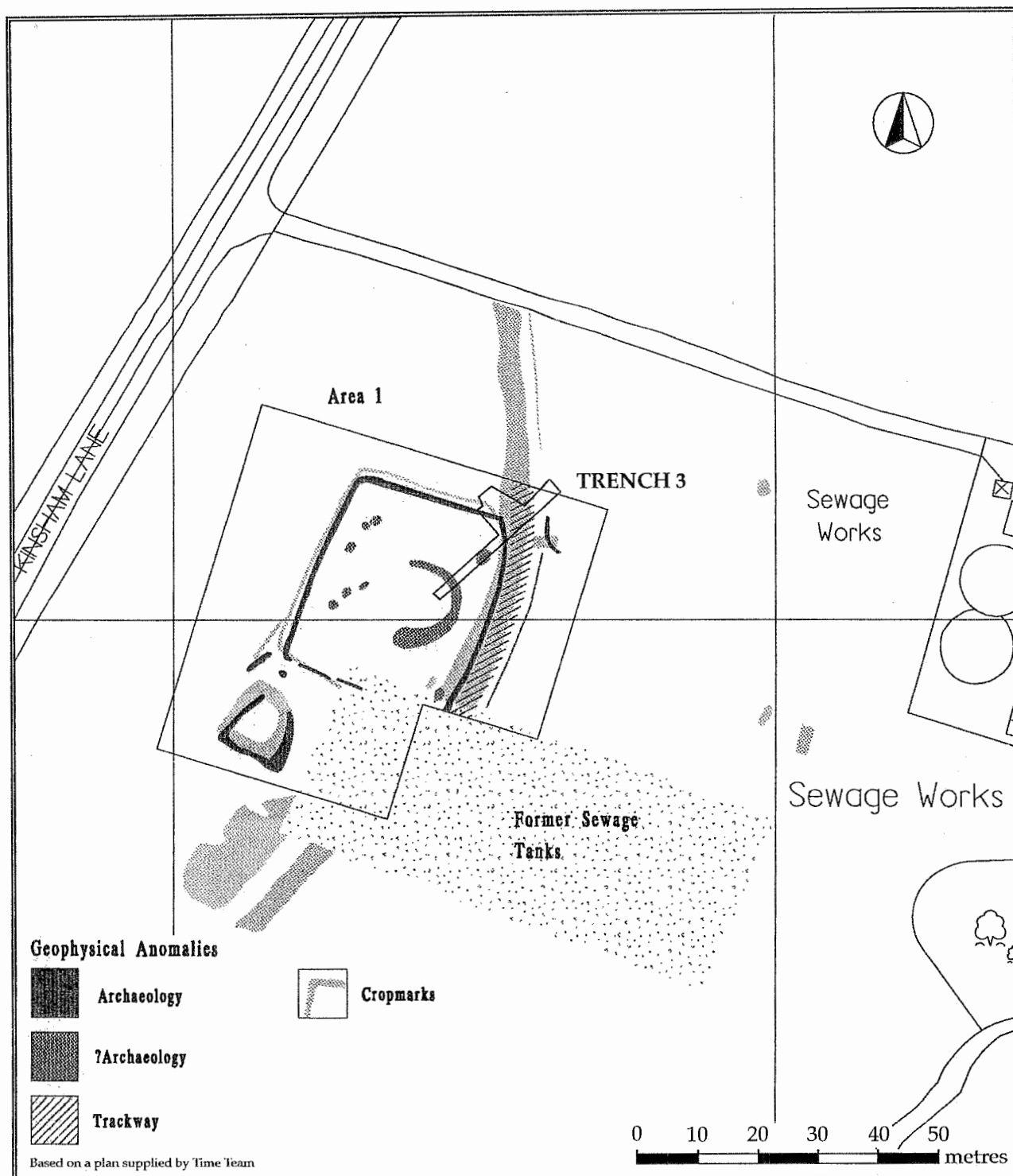


Figure 14: WSM 27144: Plan of cropmarks, geophysical survey area 1 and excavation trench

Ditch 314 was about 0.9 m wide and ran broadly parallel to hollow way 308, about 1.2 m east of it. Only a small part of the western side of this ditch was excavated, so a full profile was not obtained and the base of the ditch was not exposed. It had a steeply sloping western edge and was over 0.35 m deep. The fill was an orangey brown sandy loam (313).

Enclosure Ditch

The western edge of hollow way 308 appeared to be cut by a 0.75 m wide ditch, about 0.4 m deep (319), oriented roughly at right angles to it (Figure 15). Only a small part of the southern side of this ditch was excavated and a full profile was not obtained. It was filled with orangey brown silty sand (318), which

contained an abraded Iron Age potsherd and some animal bone. This was very similar to the fill of the hollow way, which made it extremely difficult to see the relationship between the two features. In plan, ditch 314 could be traced for a short distance across the hollow way (Figure 15).

On site, this ditch was interpreted as being part of the sub-rectangular enclosure visible on the aerial photographs. The width of the ditch is similar to that indicated by the geophysics results and it has a similar orientation, so this is plausible. The occurrence of Iron Age pottery in the fill would also lend credence to this interpretation. Unfortunately, because the location of this trench was not recorded during the excavations, the

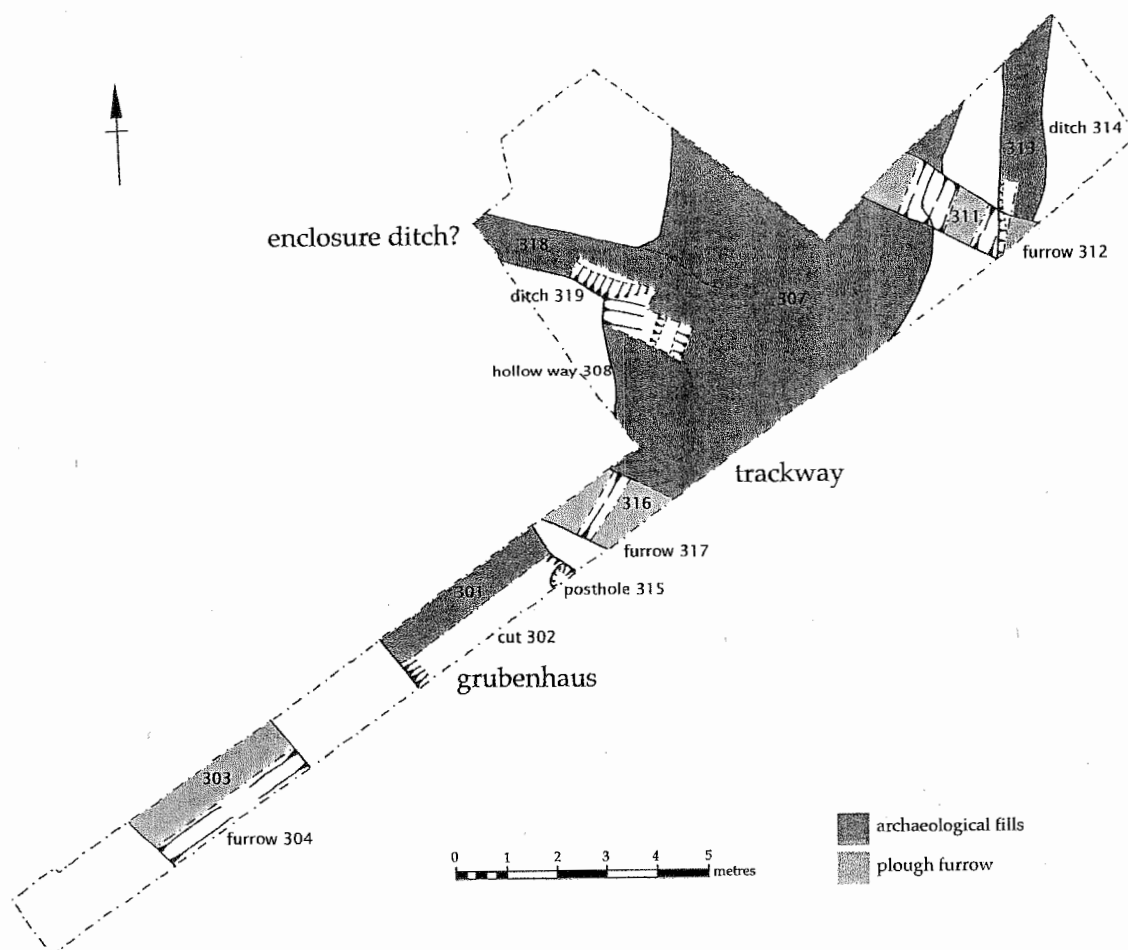


Figure 15: Plan of Trench 3

position of the ditch cannot be used to confirm whether it is the enclosure ditch or not. In fact, the position of the trench as shown on Figure 14 is based on the assumption that this interpretation is correct.

Grubenhaus

Immediately to the west of the trackway, within the northeastern corner of the sub-rectangular enclosure, was a cut feature (302), 3.8 m wide and 0.2 m deep. Only a small part was exposed, which showed that it had straight parallel sides and a flat base. The southern edge was sloping and the northern edge was almost vertical. A posthole (315), 0.45 m across and 0.15 m deep, was found cut into the base of 302 against its northern edge (Figure 15). A layer of compact orangey brown sandy loam (309) lay on the base of the feature. The main fill above, was a dark greyish brown sandy loam (301) with frequent charcoal flecks, pottery and animal bone. Posthole 315 was filled with similar material (310).

| | Context | Iron Age pottery | Saxon Pottery | Medieval pottery | Fired clay | CBM | Flint | Copper Alloy | Animal bone |
|---------------------|---------|------------------|---------------|------------------|------------|------|-------|--------------|-------------|
| unstratified | 300 | | 1/44 | 4/34 | | | 1 | 2 | |
| Grubenhaus 302 | 301 | | 61/76 7 | | 7/50 | | | | 93 |
| Feature 304 | 303 | | | | | 1/30 | | | |
| subsoil | 305 | 3/8 | | | | | | | |
| unstratified | 306 | | 5/64 | | | | | | 18 |
| Posthole 315 | 310 | | | | | | | | 7 |
| Enclosure ditch 319 | 318 | 1/16 | | | | | | | 2 |

Table 3: Finds assemblage from Trench 3 (no/wt (g))

The pottery recovered from feature 302 (Figure 17,1-5) clearly dates it to the Saxon period and the large size of some of the sherds indicates that they are primary in the fill of this feature. Charred plant remains recovered from context 301 included barley, some bread wheat and other grains (see Pearson below). The pottery appears to be from cooking vessels and most showed some traces of use. This, together with the relatively large assemblage of animal bone, suggests habitation debris. This occupation evidence, the pottery dating, and the form of this feature have lead to it being interpreted as a *grubenhaus*. It is similar to other *grubenhäuser* excavated elsewhere (Dinn and Evans 1990; Rahtz 1981). No other contemporary features were recognised on site.

Later Agricultural features

There were two linear features (312, 317), crossing the trench in a WNW-ESE direction., which are thought to be the result of medieval and post-medieval ridge and furrow agriculture. These cut across the fill of the trackway and 312 cut across flanking ditch 314 as well. Both of these features were about 1.2 m wide and 0.1 m deep, with shallow concave sides and base. They were filled with brown sandy loam (311, 316).

A third possible post-medieval feature (304) was at the southern end of the trench. It was on a NW-SE alignment and was 3.2 m wide and 0.3 m deep with shallow concave sides and base. It was filled with pale brown sandy silt (303), which contained one fragment of post-medieval tile. This feature appears to be part of a large semicircular geophysical anomaly within the

sub-rectangular enclosure (Figure 14).

Discussion

The geophysical survey results have clarified and added to the existing cropmark evidence. The features visible within the enclosure are different in the two sets of data but are in broad agreement. It is interesting to note that the grubenhaus 302 was not visible on the APs and was only identified as an uncertain archaeological feature in the geophysical plot. Conversely, one of the possible grubenhäuser identified from the cropmarks (Glyde n.d.) appears to be a short length of ditch on the geophysical survey (Figure 14). The other cropmarks were outside the survey area.

The excavation was not extensive enough to provide many details of the archaeological sequence. The

excavated slot on the western side of the postulated trackway, indicates that it is probably a hollow way but too little of its profile was exposed to confirm its form and no evidence for its chronology was obtained. The relationship between the trackway and the enclosure is not clear from the excavated stratigraphy and the dating of the enclosure rests on one abraded Iron Age sherd. Thus, the excavated evidence does not contradict the existing hypothesis based on the morphology of the cropmarks. The one significant find was the evidence for Saxon settlement. Unfortunately this was only dealt with very cursorily in the fieldwork and little else can be said about its nature. It is not known whether the grubenhaus was an isolated structure or was part of a larger settlement.

PART 6: FINDS AND ENVIRONMENTAL EVIDENCE

Assessment of the artefactual evidence (J. Derek Hurst)

Aims

The aims of the finds assessment were: i) to identify, sort, spot date, and quantify all artefactual material; ii) to describe the range of artefacts present; iii) to assess the significance of the artefacts; and iv) to make recommendations about the future analysis, reporting, and other appropriate requirements of artefacts.

Methods

Excavation: artefactual recovery policy

All artefacts from the excavated area were retained in accordance with the Service manual (CAS 1995 as amended). Palaeoenvironmental samples were taken, and artefacts from these were retained for study.

Fieldwalking: recovery policy

All artefacts were recovered and an abbreviated record was produced.

Artefactual analysis

All hand-retrieved artefacts were examined. They were identified, quantified, and dated to period. A *terminus post quem* date was produced for each stratified context. The date was used for determining the broad date of phases defined in the site stratigraphic sequence. All this information was recorded on *pro forma* sheets.

The metalwork was assessed without radiography, and, therefore, the results are provisional. Artefacts from samples were examined, but they were not quantified and none were included below as they provided no additional information.

The pottery from the excavation was identified to broad fabric type rather than just to period, as no further analysis of the assemblage was planned subsequent to the assessment. Individual fabrics, in particular for the limestone tempered wares, were not identified. Where specific pottery fabrics were identified, they are

referenced to a fabric reference series maintained by the County Archaeological Service (Hurst and Rees 1992, 200-9).

Results of analysis

The artefacts from the excavations are quantified in Table 4

| Material | Count | Weight (g) |
|--------------------|-------|------------|
| Pottery | | |
| Beaker | 1 | ? |
| Iron Age | 292 | 2355 |
| Roman | 74 | 1625 |
| Anglo-Saxon | 64 | 810 |
| Medieval | 10 | 98 |
| Post-medieval | 1 | 10 |
| Building materials | | |
| Tile | 2 | |
| Fired clay | 291 | |
| Burnt stone | 17 | |
| Metal work | | |
| Iron | 17 | |
| Copper Alloy | 2 | |
| Slag | 1 | |
| Fuel Ash slag | 17 | |
| Glass | 1 | |
| Bone | 453 | |
| Flint | 7 | |
| Worked stone | 1 | |

Table 4. Quantification of the artefacts (hand retrieved material only) from trenching

Fieldwalking

Fieldwalking was conducted in parts of two fields (WSM 27139 and 27140). The finds were not quantified, and the following comments on this assemblage are based on only scanning the assemblage rather than any detailed study. In general, the pottery sherds of Roman and medieval date were all severely abraded, as was the iron slag in some cases.

WSM27139

The finds represented a wide date range from prehistoric to modern. Worked flint was distributed across the site, but especially in the centre and on the

east side of the area that was walked. The flint included diagnostic artefacts from the Early Neolithic (leaf arrowhead), late Neolithic (oblique transverse arrowhead) and post-medieval (gunflint) periods. There was also a thin scatter of Roman pottery across the site, while, in contrast medieval pottery was quite rare. Post-medieval and modern finds were common, and included much burnt limestone resulting from agricultural activity.

WSM 27140

The finds represented a wide date range from prehistoric to modern. Worked flint was found across the whole site in a low density scatter and included material of Late Neolithic/Early Bronze Age character. Roman material was also generally found, with a slight bias towards the eastern side of the field. Potboilers and a small amount of burnt flint were also present.

Excavation

Vertical stratigraphy was not well developed, as usual for a rural site. Finds were retrieved from unstratified and stratified deposits. Condition of the pottery was generally very good, and though the modern soil pH was not measured the underlying geology would suggest that alkaline conditions would normally prevail here. The artefacts are discussed below in a chronological sequence combining together the results of the fieldwork.

| | WSM 27140 | | WSM 27144 | | WSM 27145 | |
|---------------|-----------|------------|-----------|------------|-----------|------------|
| Pottery | Count | Weight (g) | Count | Weight (g) | Count | Weight (g) |
| Beaker | | | | | 1 | ? |
| Iron Age | 50 | 367 | 7 | 38 | 235 | 1950 |
| Roman | 1 | 28 | 1 | 16 | 72 | 1581 |
| Anglo-Saxon | 0 | 0 | 62 | 796 | 72 | 714 |
| Medieval | 0 | 0 | 4 | 34 | 6 | 64 |
| Post-medieval | 0 | 0 | 0 | 0 | 0 | 0 |

Table 5: Quantification of pottery from excavations

Earlier prehistoric

There were seven worked flints found, five from unstratified contexts and the rest were residual. A flint handaxe was found on the field surface adjacent to Trench 3. Unfortunately, this was lost before it could be studied in detail. The rest of the assemblage came from WSM 27140 and 27145 and comprised two multidirectional flake cores (both unstratified), one blade-like flake, one chip, and a thumbnail scraper. The scraper is likely to be Late Neolithic/Early Bronze Age in date and scrapers of this type are often found in association with Beaker pottery (Edmonds 1995).

A single sherd of Beaker pottery was recovered from context 113. Unfortunately this was lost during the filming process and was not available for analysis.

Iron Age

The majority of the pottery was of Iron Age date, and this was mainly from WSM 27140 and 27145. There was a range of different fabrics: Malvernian, limestone tempered, and sandy wares. Droitwich salt containers (briquetage) were also well represented. This suggested a variety of trade and exchange contacts over a wide region, such as has been found elsewhere in the region (e.g. Evesham (Edwards and Hurst 2000, 101-2; Beckford (D. Ford pers comm)). At least some of the

Iron Age pottery was of middle Iron Age date, as a stamp decorated rim was present (601).

Some of the pottery showed clear signs of its use for cooking. Though the sample was relatively small, it was noted that only the Malvernian wares (fabric 3) exhibited lime scaling on the inside, and so it may be that certain types of pottery had specific culinary uses. Pot-boilers in the form of fire cracked pebbles were also present, but were not systematically recorded in any detail. These are likely to have been used, in combination with the ceramic vessels, for the heating of water. There were also irregularly shaped pieces of limestone which were burnt, but it was unclear precisely how these had been used, though they might have been parts (i.e. floors) of oven structures for the baking of food. There were many fragments of fired clay from Iron Age contexts, as typical on sites of this period in the region (e.g. at Beckford, Hurst 1984). These were potentially the fired parts of ovens and hearths used generally for domestic and, more rarely, for industrial purposes.

A large part of a saddle quern was found in Trench 6 (WSM 27140, 601), and a fragment of copper alloy scabbard or shield binding (601). A fragment of a large iron blade (209) was also associated with an Iron Age date.

Roman

Most of the pottery of this period was from WSM 27145. This was nearly all Severn Valley ware (fabric 12), a local type that typically predominates in collections of Roman pottery in the area (Timby 1990, 243). It was dated to the mid 1st to 4th century AD, and included a whole carinated beaker of mid 1st to 2nd century date (205; Fig 16). Other fabric types present were grey ware (fabric 14) and Oxfordshire ware (fabric 29).

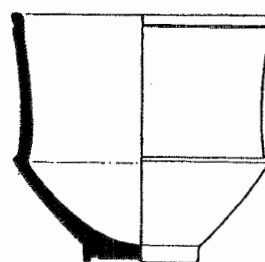


Figure 16: Roman Severn valley tankard (scale 1:4)

The ceramic assemblage also included some Roman roof tile (504), and one context (205), associated with a late Roman pottery date, produced a substantial amount of fired clay, some of which exhibited an unusual white coating on its surviving surface. Similar material was also found in association with post-Roman deposits (i.e. 301), and in this case the white deposit was c. 2 mm thick. The coating resembled a lime-wash, and a test for the presence of calcium was affirmative (S. Southwick pers. comm.). It was, therefore, concluded that the white coating was a thick lime-wash. During laboratory testing no shrinkage of the fired clay occurred at a temperature of c. 750°C, suggesting that it had been fired in antiquity to at least this temperature. Unfortunately it remained unclear what type of structure this coating had been applied to, but its thickness suggested that it represented

an attempt to weatherproof the outer part of a building incorporating daub. It is presumed here that it has survived due to having been accidentally fired.

The only non-ceramic find of note was a simple iron fibula (214), which was probably of Iron Age date, and residual in this period.

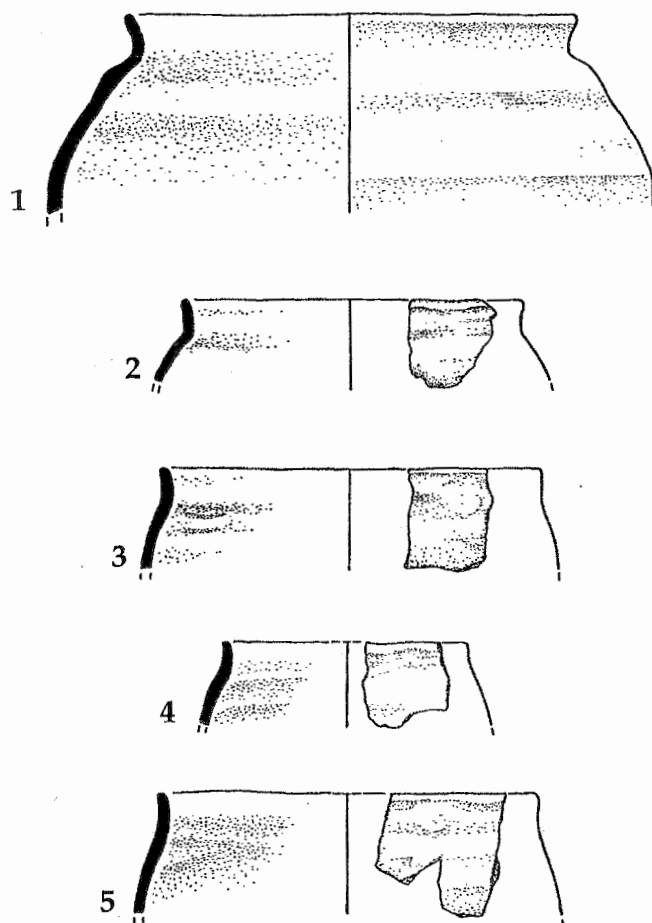


Figure 17: Early to middle Saxon pottery (scale 1:4)

Sub-Roman to Anglo-Saxon

All the pottery of this period was from WSM 27144, except, possibly, for a small amount from WSM 27145 (205). The post-Roman pottery was all primarily sandy in character, though larger vessels showed some evidence of organic tempering as well. The sandy ware resembled fabrics from Droitwich (Lentowicz 1997, 75), and, more locally to Kemerton, at Aston Mill (Evans 1990), though the Kemerton examples also contained a very small amount of limestone, which indicated that these sandy wares were likely to be of fairly local origin. Sherd size was notably large for the pottery of this period, which tends to be generally poorly fired, and therefore, friable. Except for one larger vessel all the rims were from small bag-shaped vessels (Figure 17, nos 1-5), which were typically used for cooking, and most of these vessels showed obvious traces of such a use. Pottery of this period is relatively rare in the region, and this assemblage represented a valuable addition.

Medieval

There was very little medieval pottery and it was mainly of later medieval date. The only piece of iron working slag was from this period (514).

Post-medieval

There was a very small amount of pottery, tile, and glass, which was retrieved during site clearance. Most material of this period will have been in the ploughsoil from which there was no systematic recovery of finds during machining.

Discussion

The Time Team fieldwork at Kemerton revealed sites of several different periods, where the range of finds was generally fairly typical for the region. Iron Age remains were most in evidence, and the majority of the associated artefacts represented trade and/or exchange over long distances (e.g. the salt containers from Droitwich). Artefactually the site strongly echoes the substantial Iron Age settlement at Beckford (unpublished), which was located close by, and where there were large quantities of pottery and other finds.

The most significant period represented was of Anglo-Saxon date, and some particularly large sherds, probably signifying primary deposits, were recovered. Unfortunately the priorities of the Time Team programmers were such that these deposits were not seen as worthy of much attention, and Trench 3 was closed early in the fieldwork.

Environmental remains

(Elizabeth Pearson)

Methods

Fieldwork and sampling policy

The environmental sampling policy was as defined in the County Archaeological Service Recording System (1995 as amended). Large animal bone was hand-collected during excavation and samples of 10 to 40 litres taken from 16 contexts of Iron Age to Saxon date. Two samples from an Iron Age ditch (109) and a pit beneath a Saxon Grubenhaus (301) were selected for analysis.

Processing and analysis

The samples were processed by flotation followed by wet-sieving using a Siraf tank. The flots were collected on a 300 µm sieve and the residues retained on a 1 mm mesh. This allows for the recovery of items such as small animal bones, molluscs and seeds.

The residues were fully sorted by eye and the abundance of each category of environmental remains estimated. The flots were scanned using a low power EMT stereo light microscope and remains identified using modern reference collections housed at the County Archaeological Service.

Results

Hand-collected animal bone

A total of 6.1 kg (505 fragments) of animal bone was hand-collected during excavation. However, due to

| Botanical name | Family | Common name | Habitat | Context 109 | Context 301 |
|--|-----------------|----------------------------|---------|-------------|-------------|
| Charred plant remains | | | | | |
| <i>Triticum dicoccum</i> grain | Gramineae | emmer wheat | F | 2 | |
| <i>Triticum dicoccum</i> glume base | Gramineae | emmer wheat | F | 14 | |
| <i>Triticum dicoccum/spelta</i> grain | Gramineae | emmer/spelt wheat | F | 1 | |
| <i>Triticum</i> sp (free-threshing) grain | Gramineae | free threshing bread wheat | F | | 3 |
| <i>Triticum</i> sp grain | Gramineae | wheat | F | 2 | |
| <i>Hordeum vulgare</i> grain | Gramineae | barley | F | | 36 |
| <i>Hordeum vulgare</i> rachis frag | Gramineae | barley | F | 1 | |
| Cereal sp indet grain | Gramineae | cereal | F | 7 | 14 |
| Cereal sp indet grain (frags) | Gramineae | cereal | F | | + |
| Cereal sp indet embryo shoot | Gramineae | cereal | F | 1 | |
| <i>Bromus</i> sp | Gramineae | brome grass | AF | 1 | |
| Gramineae spp indet grain | Gramineae | grasses | AF | 6 | 6 |
| cf <i>Brassica</i> sp | Cruciferae | cabbage/turnip/cole | AF | 1 | |
| <i>Vicia</i> sp | Leguminosae | vetch | A | 1 | |
| <i>Rumex acetosella</i> sgg | Polygonaceae | sheep's sorrel | A | 1 | |
| twig fragment | | | | | 1 |
| Waterlogged plant remains | | | | | |
| <i>Stellaria media</i> | Caryophyllaceae | chickweed | AB | + | |
| <i>Chenopodium album</i> | Chenopodiaceae | fat hen | AB | + | |
| <i>Urtica urens</i> | Urticaceae | small nettle | AB | | + |
| Key A= cultivated ground B = disturbed ground C = woodlands, hedgerows, scrub etc D = grasslands, meadows, and heathland E = Aquatic/wet habitats F = cultivar | | | | | |
| | | | | + | = 1-10 |
| | | | | ++ | = 11-50 |
| | | | | +++ | = 51-100 |
| | | | | ++++ | = 100+ |

Table 6: Plant remains

limited budget and time resources this material was not analysed. However, gravel terrace sites such as this have rarely produced substantial or well-preserved assemblages of animal bone in the county, and given the small quantities for each period represented, analysis is unlikely to produce significant results.

Wet-sieved samples

Environmental remains were generally poorly preserved in most samples. Only small quantities of charred cereal crop remains survived in association with mollusc remains. Occasional uncharred seeds may have survived under anaerobic conditions in well-sealed deposits, but are more likely to be modern contaminants.

Context 109: Iron Age ditch

Charred cereal remains consisted of a small number of grains, mostly poorly preserved and unidentifiable, with the exception of emmer wheat (*Triticum dicoccum*). Chaff remains (glume bases) from this crop, a barley (*Hordeum vulgare*) rachis fragment and occasional weed seeds such as brome grass (*Bromus* sp), vetch (*Vicia* sp) and sheep's sorrel (*Rumex acetosella* agg) were also recovered.

These remains may have been accidentally charred when parched during crop processing or burnt as a result of crop waste being used as fuel for fires. The small quantity of debris is more likely to result from small-scale

domestic processing, rather than crop processing on a large scale.

Context 301: Saxon Grubenhaus

Charred remains were relatively more abundant in this deposit, consisting of mostly barley grains (*Hordeum vulgare*), some of which had sprouted, and a small number of wheat grains likely to be a free-threshing species such as bread wheat (*Triticum aestivum*). Unidentifiable cereal and grass grains were also noted.

Other remains

Molluscs were abundant in both 109 and 301, but were not analysed. Flots from the remaining samples were briefly scanned, but contained mainly poorly preserved cereal grains. However, in pit (105) dated to the Romano-British period, glume bases of emmer wheat were identified.

Discussion

Environmental remains relating to debris from human activity on the site consisted mostly of charred cereal crop remains and animal bone. There was evidence for only a low level of waste scattered across the site from the Iron Age to Saxon periods. Where crop waste is concerned, this suggests only small scale arable processing or production.

Emmer wheat has been identified in the Iron Age ditch (109) and a pit (105) of Romano-British date. This was a principal wheat in cultivation during the Iron Age and Roman periods locally, although elsewhere, spelt wheat has been identified in quantity, for example at Deansway, Worcester (Moffett forthcoming), Norton and Lenchwick (Jackson *et al.* 1996a) and Strensham (Jackson *et al.* 1996b), Worcestershire. The type of wheat crop identified on an Iron Age site is of interest, since it is during this period that there was a transition in importance of emmer and spelt wheat crops (spelt wheat gradually becoming the main wheat crop in use). The retention of emmer wheat as the main wheat crop endured for longer in south-west England and Scotland (Jones 1996).

In the Saxon grubenhaus (301), a free-threshing type of wheat grain was tentatively identified (probably bread wheat), suggesting that a subsequent transition from the use of glume wheats such as emmer and spelt wheat may have occurred on this site by the Saxon period. Generally in southern Britain between the late Roman and Saxon period there appears to have been a shift in emphasis to the cultivation of bread wheat on a larger scale (Moffett 1987). Although bread wheat was in cultivation before the Saxon period, this change should be viewed as a shift in emphasis, rather than an introduction of a new crop. Few sites of this date have been excavated locally, and little information exists on the cereal crops in cultivation at the time. For this reason, these remains provide rare data on this aspect of the economy.

CONCLUSIONS

The *Time Team* fieldwork at Kemerton has produced data from a wide chronological span. The results are summarised by period below.

Early Prehistoric

The earliest evidence of human occupation revealed was the flint handaxe from the surface of field WSM 27144. This may be of a similar date to the handaxes found in Aston Mill Quarry, just to the southeast, redeposited in gravels of the second Avon Terrace, which have been dated to c. 38,000 BP. This is another addition to the significant assemblage of handaxes from this part of the Carrant Valley.

No Mesolithic artefacts or features were identified during the *Time Team* investigations, though scatters of Mesolithic flints have been found at both Aston Mill and Huntsmans Quarry. Neolithic evidence is restricted to a sparse scatter of flint recovered by fieldwalking in the field immediately north of Huntsmans Quarry (WSM 27139).

There is extensive evidence for Late Neolithic/ Early Bronze Age activity at Huntsmans Quarry but the present fieldwork suggests that this did not continue into the area to the north, except perhaps for isolated features. A single sherd of Beaker pottery was recovered from a large feature (116) in Trench 1, together with a thumbnail scraper of a similar date. This feature was not fully investigated and its form is unclear. The Beaker sherd might suggest a Late Neolithic/Early Bronze Age date, however, the scale of this feature is reminiscent of the Late Bronze Age waterholes found at Huntsmans Quarry, which also contained significant quantities of residual Beaker artefacts. At present there is simply not enough information to determine either the form or date of this feature.

Late Bronze Age/Early Iron Age

The majority of the evidence for Late Bronze Age activity is negative evidence. No artefacts of certain Late Bronze Age or Early Iron Age date were recovered. The very limited investigation of the area immediately to the north of Huntsmans Quarry suggested the extensive Late Bronze Age activity found in the quarry did not continue

into the area immediately to the north. However, caution must be exercised over this interpretation, as examination of the main site shows that there were areas where there were few archaeological features and, in general, this site was not very conducive to showing under limited evaluation conditions. The reality is that the *Time Team* investigations were not of a sufficient scale to confirm the existence, or otherwise, of the site to the north of the previously excavated area.

The WSM 27144 excavations across the trackway were too limited in scale to provide any information to confirm or deny the postulated Late Bronze Age date for this trackway.

The *Time Team* fieldwork appears to confirm a pattern previously noted (Dinn and Evans 1990) of an absence of lowland settlement evidence in the Carrant Valley firmly dated to the Early Iron Age.

Middle Iron Age

The isolated penannular enclosure (WSM 27140) is of Iron Age date and probably belongs to the Middle Iron Age period. It adds to the already extensive evidence of lowland enclosed settlement of the Middle Iron Age in the Carrant Valley with excavated examples at Aston Mill Farm and Beckford. The lack of secure dating evidence and an absence of palaeoenvironmental data means that it is difficult to assess the place of this enclosure within the larger pattern of Middle Iron Age settlement and land division of this area.

Late Iron Age/Roman

In common with other Middle Iron Age settlements in the area, the penannular enclosure was probably abandoned in the Late Iron Age, probably with a shift to the cropmark complex (WSM 27145) to the east, which seems to date to the Late Iron Age/ Roman period. The dating of this complex is quite significant because it contradicts the hypothesis that the major change in the settlement pattern was a reflection of movement away from the cropmark producing gravel terraces (Dinn and Evans 1990). It is perhaps more likely that a major social and economic change led to the abandonment of the

Middle Iron Age settlements in favour of new larger enclosed settlements, also sited on the gravel terraces.

The excavations indicated that several of the ditches within the complex had been recut suggesting a long period of occupation and the phosphate survey suggests that the habitation was focused within the enclosures and there was no unenclosed settlement outside. The range of artefacts is typical for sites of this date in this area and suggests a mixed farming economy set within a network of trade and/or exchange over long distances. The lack of resources has meant that the environmental samples have not been fully studied and, therefore, little can be contributed to the debate about the shift from a pastoral to an arable-based economy.

Anglo-Saxon

The discovery of the grubenhaus is a significant addition to our knowledge of Anglo-Saxon settlement in the area. It is of interest to note that it is the third site to be discovered in the immediate surrounding area of Aston Mill Farm. Unfortunately our knowledge of rural Anglo-Saxon settlement in the region is still far too limited to be able to fully assess the nature of the settlement of this area during this period. The environmental information obtained from the grubenhaus is a significant addition to the rare data on Anglo-Saxon cereal cultivation in this region.

PROJECT ARCHIVE

The project archive will be deposited in the Worcestershire County Museum, Hartlebury Castle, Hartlebury, nr Kidderminster, Worcestershire, DY11 7X2..

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