

EVALUATION OF LAND AT RETREAT FARM QUARRY, GRIMLEY, WORCESTERSHIRE

Anna Deeks, Robin Jackson and Marc Steinmetzer

With contributions by Chris Cox and GSB Prospection

Illustrated by Steve Rigby

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© Archaeological Service, Worcestershire County Council

Archaeological Service,
Worcestershire County Council,
Woodbury Hall,
University College Worcester,
Henwick Grove,
Worcester WR2 6AJ



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Evaluation of land at Retreat Farm Quarry, Grimley, Worcestershire

Anna Deeks, Robin Jackson and Marc Steinmetzer

With contributions by Chris Cox and GSB Prospection

Part 1 Project summary

A staged programme of archaeological investigation was undertaken at Retreat Farm Quarry, Grimley, Worcestershire (centred on NGR SO 8320 5970). The work took place in response to an ongoing programme of mineral extraction by Tarmac Western Limited who have an outstanding, pre-PPG 16 planning permission for the extraction of sand and gravel at the site.

The project was commissioned by English Heritage through the Aggregates Levy Sustainability Fund (ALSF) and aimed to assess the impact of quarrying at Retreat Farm upon archaeological remains, and inform proposals for subsequent stages of mitigation for any surviving areas within this site.

A study area was defined centred on the permitted quarry and covered approximately 406 ha, encompassing four scheduled sites and the village of Grimley. The first stage of the project comprised collation and assessment of existing documentary and aerial photographic evidence in conjunction with a site visit and landscape appraisal. This indicated that the permitted area is located within an area of generally high archaeological potential, although previous investigations have been confined to the northern end of the study area. An extensive cropmark complex, which runs north-south across the study area, has been identified as a series of multi-period cut features, representing a diverse range of landscape use including occupation, cultivation and funerary activity.

The cropmark complex extended into the permitted area where sinuous and linear ditches, a large pit, a possible ring-ditch and numerous smaller pits were identified and assessed as being of high archaeological potential. Unfortunately by the time the first stage of the project had been completed, quarrying had removed all of these features except a limited area of cropmarks indicative of small pits. A second stage of fieldwork, comprising geophysical survey, appeared to confirm the presence of these features, leading to targeted evaluation trenching of this surviving fragment of the site. However, no deposits of potential significance were recorded, features mainly comprising amorphous hollows and irregular depressions consistent with tree root disturbance. These probably represent the remains of an orchard or hop yard first noted within mapped sources on the 1840 Grimley tithe map. The 'pit type anomalies', revealed by the geophysical survey and cropmarks, are thus concluded to relate to this landuse rather than prehistoric or Romano-British activity. No further works have therefore been recommended at the site.

Part 2 Assessment report

1 Background

1.1 Reasons for the project

A staged programme of archaeological investigation was undertaken at Retreat Farm Quarry, Grimley, Worcestershire (centred on NGR SO 8320 5970; Fig 1), in response to a planned programme of mineral extraction by Tarmac Western Limited who have an outstanding, pre-PPG 16 planning permission for the extraction of sand and gravel at the site.

The development is considered by the Worcestershire Archaeological Service to have the potential to affect an archaeological site (WSM 32263). This is an area of prime concern in terms of the remaining pre-PPG16 aggregate extraction permissions within Worcestershire since it lies within an area characterised by extensive crop marks and other evidence of former occupation. Over the past thirty years extensive gravel workings have resulted in the destruction of a large majority of this significant cropmark complex, mostly without any form of archaeological record. Consequently, only fragmentary islands survive either through protective scheduling (SAM H&W 209, SAM 243, SAM 213, SAM 27499) or as zones awaiting extraction, with little or limited archaeological provision.

Consequently, an initial project was designed for non-intrusive work comprising a desk-based assessment, aerial photographic and geophysical survey (AS 2003a). This was commissioned by English Heritage using the Aggregates Levy Sustainability Fund (ALSF). This identified an area of cropmarks with considerable archaeological potential within the permitted area, which totalled some 50ha. However, over half of this had already been quarried at the time of the original Project Design including much of the area of cropmarks and by the time of the undertaking of the geophysical survey only some 6.5ha remained for extraction in Spring 2004 (Fig 1). Within this area a number of 'pit type' anomalies had been identified through cropmark evidence and geophysical survey confirmed their presence. Consequently an Updated Project Design was submitted and approved by English Heritage for targeted trial trenching (AS 2003b) leading to the production of this evaluation report.

1.2 Project parameters

The project conforms to the *Code of approved practice for the regulation of contractual arrangements in field archaeology* (IFA 1997), *Standard and guidance for archaeological desk-based assessment* (IFA 1999a), *Standard and guidance for archaeological field evaluations* (IFA 1999b), and *Guidelines for finds work* (IFA nd).

The project also conforms to a proposal prepared by the Service (AS 2003a), as well as the Updated project design (AS 2003b).

1.3 Aims

The overall aims of the desk-based assessment were to collate all existing information relating to the archaeological potential of the site and the wider study area. In addition a site visit/walkover was carried out in order to record the topography and ground conditions at the site as well as any previously unrecorded earthworks. A full analysis and interpretation of existing aerial photographs was also completed for the study area.

The results of this work informed a second stage of work aimed at further investigating the site through non-invasive prospection techniques (fieldwalking and geophysical survey). In the event, ground conditions were not suitable within the project programme period for fieldwalking, however, a geophysical survey was undertaken to provide further information on the archaeological potential of the surviving area.

The information was analysed to assess the potential character and significance of any archaeological remains surviving within the site, as well as to assess their potential level of preservation and the impact of the permitted development upon them. In turn this informed the production of an Updated Project Design for a stage of targeted trenching of an area of higher archaeological potential, which had been identified. This aimed to further test the archaeological potential of this area (AS 2003b).

The information collated and assessed during the course of this project has been presented in this report, which will inform future research and development control in this area. Information on the site will also be accessioned onto the County Sites and Monuments Record and a summary published in the Transactions of the Worcestershire Archaeological Society thus making the results publicly available.

2 Methods

2.1 Documentary search

Prior to fieldwork commencing a search was made of the Sites and Monuments Record (SMR) concentrated in a 7.5km² area centred on the proposed quarry area. Searches were also carried out at the Worcestershire County Records Office as well as the Gloucestershire Sites and Monuments Record. In addition the following sources were also consulted:

Cartographic sources

- Grimley tithe 1840 (19th century copy; WRO BA 1572 x760/291);
- Ordnance Survey. 1st Edition 1882 25" to the mile. Sheet number 47SE, 48SW, 54NE and 55NW;
- Soil survey of England and Wales (Beard *et al* 1986);
- Ordnance survey provisional edition 1:10,560 SO 86SW (1954);
- British Geological Survey, Solid and Drift sheet 182. 1:50,000 (1976).

Aerial photographs

- See Appendix 3: Aerial photographic assessment.

Documentary sources

- Place-names (Mawer and Stenton 1927);
- English Field Names (Field 1972);
- Victoria County Histories Worcestershire, Volumes 1 and III;
- History of Worcestershire (Nash 1795).

The following sources were also consulted but were not considered relevant to this project;

- Estate map 1862 (BA 5403/20);
- Map of the manor of Grimley 1746 (BA 5403/18);
- Plan of 1839 (BA 5589/89);
- 19th century plan of Sinton Court;
- Plan of Wichenford Manor. 1729 (BA 6134/44).

Written sources consulted during the course of the project are listed in Appendix 1 and Appendix 2, full references for which are provided in the report bibliography (Section 13).

2.2 Field walkover/landscape appraisal

Fieldwork was undertaken on 4th June 2003. The field walkover was carried out to appraise ground conditions and topography as well as checking for any previously unrecorded earthworks. All observed features were noted onto a base map (1987 1:10 000 Ordnance Survey map), and those of the greatest clarity were also recorded using a Global Positioning System.

2.3 Aerial photographic assessment

An aerial photographic assessment of the entire study area was carried out by Chris Cox of CGMS. The full report complete with references is provided in Appendix 3.

2.4 Fieldwalking

Current landuse as rough grazing meant that fieldwalking was not possible of this area within the programme period available for the project.

2.5 Geophysical survey

The entire remaining area within the quarry was scanned with a fluxgate gradiometer by GSB Prospection Limited. On the basis of the scan, two areas of higher potential totalling 1ha were selected for detailed survey. The full report complete with illustrations and references is provided in Appendix 4.

2.6 Evaluation trenching

Trenches were located in the south-west corner of the site with the aim of assessing a group of cut pit anomalies identified through the geophysical survey and cropmark assessment.

Fieldwork was undertaken between 1st and 5th December 2003, following a detailed specification prepared by the Service (AS 2003b).

A total of three trenches, amounting to just over 525m² in area, were excavated, representing a sample of 4.5% of the area of high potential indicated by the geophysical survey.

Deposits considered not to be significant were removed using a wheeled excavator, employing a toothless bucket and under archaeological supervision. Subsequent excavation was undertaken by hand. Clean surfaces were inspected and selected deposits were excavated to retrieve artefactual material and environmental samples, as well as to determine their nature. Deposits were recorded according to standard Service practice (CAS 1995). On completion of excavation, trenches were re-instated by replacing the excavated material.

2.6.1 Structural analysis

All fieldwork records were checked and cross-referenced. Analysis was effected through a combination of structural and artefactual evidence, allied to the information derived from other sources.

2.6.2 Artefact recovery policy and analysis

The artefact recovery policy conformed to standard Service practice (CAS 1995; appendix 2). This in principal determines that all finds, of whatever date, must be collected. However, in this case only a sample of later material was collected from the spoil during machining. These comprised the majority of the finds recovered from the site. All artefacts were recovered from stratified deposits.

All hand retrieved finds 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 for the site. All information was recorded on *pro forma* sheets.

Pottery fabrics are referenced to the fabric reference series maintained by the Service (Hurst 1994).

2.6.3 Environmental recovery policy

No deposits were identified which warranted sampling for environmental remains (Elizabeth Pearson pers comm).

2.7 The methods in retrospect

Despite the unsuitable conditions for fieldwalking, the methods adopted allow a high degree of confidence that the aims of the project have been achieved.

The documentary and cartographic collation and analysis carried out using material from Worcestershire SMR and Worcestershire Records Office was a comprehensive appraisal of the available sources of both primary and secondary information.

The aerial photographic assessment also encompassed all existing aerial records for the study area. Neither element of the desk-based assessment was impeded by limited access to sources.

Good conditions for geophysical survey were present across the whole of the surviving extent of the permitted area, while the soils at the site are of a type that would be expected to provide a reasonable level of magnetic response.

Trenching was targeted to the geophysical and cropmark anomalies, which was not impeded by either the weather or the quality of machined surface finish.

3 Topography and current land use

The study area covers an area of just over 400 ha located to the west of the River Severn and encompassing the village of Grimley, Worcestershire. Within this area the permitted site, comprising approximately 20ha, is centred on NGR SO 87003700. This is located to the south-west of the village of Grimley, Worcestershire and bounded by Dark Lane to the north, Camp Lane to the east and field boundaries to the south and west (Fig 1). The land lies at approximately 20m AOD, sited on the western banks of the River Severn.

The soils of the western and central extents are a combination of typical brown earths of the Wick, Bishampton, Whimple and Salwick Series, all of which are subject to seasonal waterlogging. Gleyic brown alluvial deposits of the Trent and Teme series are confined to the east and south-east end of the permitted site (Beard *et al* 1986). The underlying solid geology consists of recent Pleistocene drift deposits of glacial origin comprising the first, second and third terrace sand and gravel of the River Severn, overlying Triassic Keuper Marl (British Geological Survey 1976 and 1990).

At the time of the initial field visit, landuse within the area remaining to be quarried was divided into two with the western side of the site under barley and the eastern side under pasture (Fig 2).

4 Results

4.1 Desk-based appraisal and aerial photographic assessment

The desk-based appraisal and aerial photographic assessment identified considerable evidence of known archaeological activity both on and around the permitted site, ranging from the Neolithic to the modern period. In conjunction with the results of a recent survey covering a study area to the north of the current one and partially overlapping with it (Edwards 1997), this provides an archaeological and historical context for the outstanding permitted area at Retreat Farm as well as information relating to already quarried areas.

A total of 77 sites are listed in the WSMR within the environs of the site (Fig 3). Those within the study area or pertinent to the overall cropmark complex are summarised below (Table 1) and subsequently discussed by period.

Table 1 Sites registered with the SMR within the defined study area

| SMR ref/status | OS grid ref | Site name/description | Date |
|-----------------------|--------------|--|--|
| WSM 01172 | SO 8250 6000 | Fishponds, N of Hallow Heath, E of Sinton, Grimley | Medieval |
| WSM 01182 | SO 8340 6050 | Cropmarks, W of Church Farm, Grimley | Unassigned |
| WSM 01191 | SO 83205980 | Cropmarks, ring ditches etc, E of Tinkers Coppice, Grimley | Unassigned |
| WSM 02233 | SO 8350 5930 | Fields, N of Camp Inn, Grimley | Unassigned |
| WSM 02286 | SO 8370 5950 | Occupation, Bevere Island, River Severn | Early medieval/Dark Age Post medieval |
| WSM 02583 | SO 8274 6078 | Stone axe hammer, Ball Mill gravel pit, Holt | Bronze Age |
| WSM 02584/ SAM 243 | SO 8354 6077 | Enclosure, 100m N of St Bartholomews Church, Grimley | Roman |
| WSM 02597 | SO 8390 6170 | Stone axe hammer, Grimley Ham, west bank of River Severn | Bronze Age |
| WSM 02598 | SO 8291 6065 | Ball Mill, NW of Grimley | Medieval- Post-medieval |
| WSM 04055 | SO 8285 6060 | Statue, nr Ball Mill, Grimley | Early Iron Age to Roman |
| WSM 04501 | SO 8330 6064 | Cropmarks, W of Grimley | Unassigned |
| WSM 04503 | SO 8325 6029 | Cropmarks, Grimley. Field system and pit | Bronze Age and Roman |
| WSM 04505 | SO 8355 6097 | Cropmarks, N of the church, Grimley | Unassigned |
| WSM 04507 | SO 8301 6117 | Cropmarks, Holt. Occupation site | Iron Age and Roman |
| WSM 04510 | SO 8350 6115 | Enclosure, N of Grimley Church | Unassigned |
| WSM 04512 | SO 8344 6166 | Enclosure, Holt. Findspot | Bronze Age and Roman |
| WSM 04516 | SO 8334 6068 | Ring ditch, W of church, Grimley | Bronze Age |
| WSM 04517 | SO 8359 6110 | Double ring ditch, N of Grimley village | Unassigned |

Table 1 Sites registered with the SMR within the defined study area (continued)

| SMR ref/status | OS grid ref | Site name/description | Date |
|----------------|--------------|------------------------------|-------|
| WSM 04534 | SO 8363 6078 | Romano-British Fort, Grimley | Roman |

| | | | |
|------------------------|--------------|---|-------------------------|
| WSM 04535 | SO 8364 6121 | Parallel Linear Cropmarks, N of Grimley | Roman |
| WSM 04535 | SO 8364 6121 | Ridge and Furrow | Medieval |
| WSM 04538 | SO 8339 6053 | Cropmarks, Church Farm, Grimley | Unassigned |
| WSM 05562 SAM 27527 | SO 8360 5940 | Churchyard cross, Grimley | Medieval |
| WSM 06068 | SO 8290 5940 | Enclosures, S of Tinkers Coppice, Hallow | Unassigned |
| WSM 06730 | SO 8376 6058 | Medieval fishponds, Grimley | Medieval |
| WSM 07891 | SO 8370 5950 | RB Coins, Bevere Island, Claines | Roman |
| WSM 07892 | SO 8400 5920 | Enclosure and findspot, S of Bevere Manor | Findspot Roman |
| WSM 07895 | SO 8370 5960 | Bronze flat axe and stone axe hammer, Bevere Island, Claines | Bronze Age |
| WSM 07899 | SO 8340 5890 | Enclosures, S of Camp House, Hallow | Unassigned |
| WSM 08021 | SO 8363 6068 | St Bartholomew's Church, Grimley | Medieval |
| WSM 08022 | SO 8360 6060 | Possible Roman road, Grimley | Roman |
| WSM 12978 | SO 8350 6070 | Settlement shrinkage, shrunken village, Manor House, Chapel | Medieval |
| WSM 15157 | SO 8360 6010 | Enclosures, S of Ivy House, Grimley | Iron Age |
| WSM 15158 | SO 8390 6000 | Ridge and Furrow, SE of village, Grimley | Medieval |
| WSM 15204 | SO 8361 6062 | Cottage, S of Church, Grimley | Post-Medieval |
| WSM 15207 | SO 8390 5922 | Building, SW of Bevere Manor, N Claines | Post-medieval |
| WSM 15255 | SO 8400 6100 | Enclosure, NE of village, Grimley | Unassigned |
| WSM 15256 | SO 8400 6110 | Cropmarks, NE of village, Grimley | Unassigned |
| WSM 15623 | SO 8365 6080 | Mapping of Grassmarks at Grimley, identified fort | Roman |
| WSM 17146 | SO 8280 6000 | Military camp and firing range, Grimley | Post-medieval to Modern |
| WSM 21277 | SO 8248 5995 | Park and garden building | Post-medieval |
| WSM 21278 | SO 8275 5977 | Park Lodge, Thorngrove, Grimley | Post-medieval |
| WSM 21279 | SO 8280 5960 | Cropmarks (ring ditch) west of Timbers Coppice, Hallow | Later prehistoric |
| WSM 22531 | SO 8380 5950 | Bridge. Crossing of River Severn; Bevere Island Bridge, N Claines | Post-medieval |
| WSM 22791 | SO 8363 6074 | Watching brief on Roman Fort, Grimley. Fort and pit | Roman |
| WSM 22792 | SO 8372 6070 | Watching brief at Wagon Wheel, Grimley. Occupation site | Post-medieval |
| WSM 22924 | SO 8350 5920 | Camp House Ferry, Grimley | Post-medieval |
| WSM 23808 | SO 8370 5950 | Fish weir, Bevere Island, N Claines | Medieval |
| WSM 26406 | SO 8270 6030 | Area of archaeological potential, Grimley Raceway | Unassigned |
| WSM 27063 | SO 8357 6027 | The Dallows, Grimley, identified building | Unassigned |
| WSM 27204 | SO 8366 6075 | Watching brief at Riverdale, Grimley | Unassigned |

Table 1 Sites registered with the SMR within the defined study area (continued)

| SMR ref/status | OS grid ref | Site name/description | Date |
|----------------|-------------|-----------------------|------|
|----------------|-------------|-----------------------|------|

| | | | |
|-----------|--------------|--|---|
| WSM 27244 | SO 8287 6076 | Land at Ball Mill, Grimley | Unassigned |
| SAM 27499 | SO 8377 6073 | Medieval fishponds and ridge cultivation remains and medieval-post-medieval hollow way, east of Grimley village. | Medieval – post-medieval |
| WSM 28877 | SO 8404 5924 | Park and garden at Bevere Manor | Post-medieval to modern |
| SAM 209 | SO 82776143 | Enclosures south of Upper Barn, Holt | Unassigned |
| WSM 27906 | SO 8356 6054 | Church Farm, Grimley | Unassigned |
| WSM 29605 | SO 8301 6117 | Desk-based assessment of enclosures south of Top Barn Farm | Early Iron Age to Roman Early Neolithic to Late Bronze Age |
| WSM 29807 | SO 8370 5950 | Salvage recording at Retreat Farm, Grimley | Early Bronze Age to Post Medieval |
| WSM 29812 | SO 8372 6050 | Survey of Grimley ponds | Medieval to post-medieval |
| WSM 29917 | SO 8361 6057 | Watching brief at Grimley and Holt primary school | Negative result |
| WSM 29918 | SO 8362 6056 | Evaluation at Grimley and Holt primary school, Grimley | Medieval – post-medieval |
| WSM 29927 | SO 8362 6136 | Evaluation at Church Farm, Grimley | Neolithic |
| WSM 29977 | SO 8414 5919 | Three fishponds by Bevere Manor | Post-medieval |
| WSM 30069 | SO 8370 6090 | Watching brief at Grimley sewage works | Medieval – post-medieval |
| WSM 30111 | SO 8376 6073 | Watching brief at Grimley fishponds. Track way and pond identified | Unassigned |
| WSM 30182 | SO 8361 6040 | Watching brief at Dark Lane, Grimley | Negative result |
| WSM 30290 | SO 8357 6048 | Evaluation at Church Farm Yard, Grimley, identified ground surface, ditch and structure | Post-Medieval - Modern |
| WSM 31046 | SO 8266 5970 | Field name: Little Street, Hallow | Unassigned |
| WSM 31056 | SO 8253 5955 | Field name: Nether Street, Hallow | Unassigned |
| WSM 31144 | SO 8358 6015 | Enclosure south of Retreat Farm Cottage, Grimley. Identified ? fortlet | Roman |
| WSM 31615 | SO 8370 6128 | Field name: High Bridge, Grimley | Unassigned |
| WSM 31940 | SO 8290 5978 | Woodland bank on boundary of Hallow and Grimley | Post-medieval |
| WSM 31941 | SO 8295 5068 | Ditch and hedge forming E boundary of Tinkers Coppice | Post-medieval |

A number of archaeological fieldwork and survey projects are included within this SMR listing and these have been summarised with relevant bibliographic references in Appendices 1 and 2.

In addition, this project has identified additional information and potential archaeological sites not recorded by the SMR (see Table 2).

Table 2 Additional site

| OS grid reference | Site name/description | Date |
|-------------------|-----------------------|------|
|-------------------|-----------------------|------|

| | | |
|------------|--|----------|
| SO 829 595 | Ditched enclosures and pits identified within aerial photographic interpretation | May 2003 |
|------------|--|----------|

4.1.1 Prehistoric and Roman

The quarry lies towards the southern end of a well-documented series of cropmarks stretching along the gravel terraces west of the Severn. These were first identified and photographed in the 1950s by A Baker and J Pickering (Hunt *et al* 1986, 7) and are principally believed to represent prehistoric and Roman period features.

In 1969 and 1970, C J Bond, the then Worcestershire County Archaeological Officer, plotted many of the aerial photographs available at the time. Gravel extraction in the area was beginning, and the serious effect it was having on the archaeological sites represented by the cropmarks led to a series of small scale rescue excavations, carried out between 1970 and 1975 (Hunt *et al* 1986). The areas excavated, and also those fieldwalked, are situated approximately 1.5km north of the current study area.

Further elements of the cropmark series (lying mostly to the north of the study area) were plotted by the RCHME and the results of this work to 1980 are shown in Figure 4, overlain onto a map background. The southern elements of this series (WSM 4503) correspond to features A, D, E, G and J discussed in the aerial photographic assessment undertaken as part of this project (Appendix 3) and shown in Figure 5. The aerial photographic assessment states that there is “clear evidence of buried traces of past occupation, agriculture and funerary land use” echoing the results of previous work and conclusions of a recent desk-based assessment (Edwards 1997). This interpretation also points not only to the multi-phase nature of the cropmarks but also to the diversity of the activities and uses of the landscape that they represent.

More recent archaeological investigations, carried out in the 1980s and 1990s, have largely been undertaken in advance of development as part of the planning control process. These have been limited in extent and again have largely been confined to the northern end of the study area (Appendix 1 and 2), although salvage recording was undertaken in the field to the immediate north of the outstanding permitted area. This recorded low levels of both prehistoric and Roman activity (Jackson 1991).

There is currently no evidence for Palaeolithic or Mesolithic activity within the study area while evidence for Neolithic activity is typically limited, only being represented by a thin scatter of artefacts. Bronze Age activity is better represented, notably including a barrow cemetery extending along the gravel terrace to the north of the study area (Fig 4; WSM 743 and 4525). Bronze Age activity has also been identified within the study area, including to the immediate north of the currently threatened area. Here, boundary features probably reflect early division of the landscape into fields. The latter, identified through salvage recording during construction of a conveyor (WSM 4503), lie within an area identified by the aerial photographic assessment as including elements of field systems and possibly settlement enclosures as well as a ring-ditch with a central pit (Fig 5, Features D and G; Appendix 4). Along with further ring-ditches within the overall cropmark complex, the evidence indicates that earlier prehistoric funerary monuments formed an important element of a landscape (see Features D, L and J, Appendix 4), which was already being parcelled up into fields.

Many of the remaining cropmark enclosures and associated field systems can be provisionally dated on the basis of morphology to the later prehistoric and Roman periods. These indicate that settlement and activity of this date is widespread within the study area. To the north, Roman and Romano-British activity has been identified through excavation and salvage recording focussed around a fort at the north end of Grimley village (SAM H&W 243; Fig 5, Feature A). Two other scheduled areas (SAM H&W 209, Fig 4; and SAM H&W 213; Fig 5, Feature D) also probably include settlement and agricultural activity of this period, although it should be noted that one of these two sites (SAM H&W 213; Fig 5, Feature D) was quarried away during the early 1970's. In addition to the enclosure sites,

prehistoric and Romano-British finds have been recorded within the study area (WSM 02583, WSM 02597 and WSM 04055).

Evidence of prehistoric and Roman activity at the southern end of the study area is also recorded. In addition to the recovery of a Bronze Age flat axe and stone axe hammer as well as Romano-British coins from Bevere Island, Claines (WSM 07895), several cropmark sites in this area can be fairly confidently assigned to the prehistoric and Romano-British periods. A total of five distinct cropmark groups have been identified (Fig 5; Features F, H, K, L and M; Appendix 3). With the exception of 'Feature K', these are listed within the Worcestershire SMR (WSM 15157/31144, WSM 06068, WSM 01191 and WSM 21279 respectively), although the SMR listing only categorically identifies two of these sites as prehistoric and Roman features; WSM 15157 listed as an Iron Age enclosure and WSM 31144 listed as a Roman fortlet. However, the nature of the remaining cropmark features; ditched enclosures, pits and possible ring-ditches almost certainly indicates other areas of both prehistoric and Romano-British settlement and funerary activity in this part of the study area.

One of these cropmark groups (Fig 5; 'Feature L') lies within the area of permitted quarrying at Retreat Farm and has largely been removed by the ongoing work. However, one part of the group, the north-eastern 'area of pits' survived at the time of this project and was subject to further investigation (see below).

4.1.2 Anglo Saxon and medieval

In the Anglo-Saxon period, Grimley and Moseley comprised the large estate of *Wican* which was granted to the church by Offa in the mid-eighth century (Hooke 1990). Following this, in 851AD, Grimley is again mentioned when a grant of land at Grimley is made by Berhtwulf, King of Mercia, to the church of St Mary in Worcester (Hooke 1990).

The name Grimley, written as *Grimanleage*, means 'the wood or clearing of Grim', furthermore the name Grim is a nick-name for the god Woden. The use of the name Grim is often linked to the presence of inexplicable earthworks and earthworks that have thus been associated with superstition. Given these connotations the presence of numerous Roman and prehistoric sites within the parish of Grimley, including a Roman fortlet and the remains of numerous Bronze Age barrows (which may have been fairly visible earthworks during this period), may well account for the use of this name.

Previous work in this area has noted that no archaeological evidence for post-Roman or Anglo-Saxon activity has been identified. However, it has also been observed that this would be very difficult to distinguish, as this period is virtually aceramic in rural areas in the region (Edwards 1997).

The manor of Grimley was still held by the church in 1086. The Domesday survey records that the manor comprises 0.5 by 0.5 leagues of woodland, the remains of an extensive area of woodland known as *Weogorena leah* in the Anglo-Saxon period. In addition 15 plough-teams are listed as working and the population is recorded as 34 individuals (Hooke 1990). There is also note of a fishery yielding a render of eels and a mill owned by the church (VCH III).

The SMR listing includes several sites and monuments, which reflect the nature of medieval occupation and cultivation. The church of St Bartholomew, which is located at the northern end of the present village, contains extant fabric reflecting its Norman origins (WSM 08021) and a churchyard cross in the village is also listed as medieval (WSM 05562, SAM 27527). In addition, several fishponds (WSM 01172, WSM 06730 and SAM 27499) have been identified all of which are focused in proximity to the River Severn and very likely relate to the fisheries mentioned in the Domesday survey. The Ball Mill (WSM 02598), situated to the north-west of Grimley, is also recorded as having medieval origins and continued in use until at least 1648 when it was sold as part of the Manor of Grimley by the parliamentary commissioners (VCH III).

Evidence of the field systems is provided by cropmarks showing several areas of broad ridge and furrow, typical of medieval cultivation. These features have been identified in fields to the north, east and west of Grimley (WSM 04535 WSM 04503 and WSM 15158) and are noted in the aerial photographic assessment (Appendix 3).

In addition the WSMR listing assigns the initial occupation on Bevere Island (WSM 02286) to the early medieval period.

4.1.3 Post-medieval and modern

There is typically no indication of any break in occupation of Grimley from the medieval to the post-medieval period, although shifts in the settlement pattern following the medieval period are reflected by the settlement shrinkage recorded at Manor House (WSM 12978) to the north of the present village.

There is no direct evidence for the early post-medieval landuse of the fields surrounding Grimley. The earliest mapped evidence is the 1840 tithe map, which shows fairly small plots of land typical of the inclosure period (Fig 5). A number of these field boundaries appear to correspond to the more modern boundaries and the alignment of the broad ridge and furrow observed, in the aerial photographic assessment, to the north, east and west of Grimley (Cox 2003; WSM 04535 WSM 04503 and WSM 15158). The correlation between the alignment of the ridge and furrow and the tithe field systems suggests a continuity in the field boundaries from the medieval period.

The inclosure map also contains field names, which may give some indication of former landuse. Often the use of field names, much as with manorial and village names, can suggest far earlier origins, landform or usage. The majority of field names, such as *middle meadow*, *upper orchard* and *sheep piece*, refer to either arable or pastoral use of the land. However there are also more specialised usage's implied. Immediately to the west of the River Severn several fields bear names such as, *ten brick kilns*, *wire meadow brick kiln and cott and great and little brick kiln meadow cottages and coal yard*, which strongly suggest a concentration of brick industries and associated activities along the banks of the river. To the south of Grimley Brook, a concentration of field names pertaining to a mill are evident such as *mill perry* and *mill field*, which almost certainly reflect their proximity to Ball Mill which lies to the west. Other names include *Willow bed and meadow* and *Rowton Hop Yard*, which again imply the specific crop and usage of land.

The 1886 edition map covering the study area indicates that several smaller fields noted on the inclosure map have been amalgamated to form larger field units resulting in fewer boundaries (Fig 6). There is no information regarding landuse at this time, other than the presence of brickworks and old clay pits to the west of the river which reflects the field names shown for this area on the tithe map. However apart from the clay pits there is no record of any other quarrying in the area at this time. The map also indicates that area is liable to floods along the western banks of the river. This would correlate with the known geology of the area, which comprises gleyic brown alluvial deposits.

Within the SMR several listings for the post-medieval and modern periods exist, representing both occupation, Park Lodge and park and garden building (WSM 212178 WSM 21277) and transport, in the form of the camp House Ferry and the bridge crossing the River Severn to Bevere Island (WSM 22924 WSM 22531).

5 Non-intrusive field investigations

5.1 Site visit and appraisal

A site visit was made on the 4th June 2003 to appraise landscape features and usage. A large extent of the site had already been quarried, with the north-east field (c 6.5ha) the only

outstanding area (Fig 7). This is divided in two by a post and wire fence and is under permanent pasture, grazed to the south by sheep. The boundaries of the site at the time were covered by a bund, which masked the original ground profile. The remaining area is fairly undulating and slopes gently down towards the south-east corner.

5.2 Geophysical survey

Following completion of the desk-based appraisal, aerial photographic assessment and site visit, a geophysical survey was undertaken by GSB Prospection of the surviving area. Scanning was undertaken across the whole of this allowing selection of two areas totalling 1 ha for detailed survey.

The southern area of detailed survey produced the most significant results, with a series of small-scale responses consistent with pits and perhaps indicating unenclosed settlement (Appendix 4). Tentative evidence for a ploughed out sub-circular feature was also recorded.

The northern area was the smaller of the two and produced weak anomalies consistent with a row of possible pits within a larger east to west trend, probably reflecting activity along a former and relatively recent boundary (Appendix 4).

6 Evaluation Trenching

6.1 Description

Upon completion of the desk-based assessment, walkover survey, aerial photographic assessment and geophysical survey, an area of higher archaeological potential was identified within the surviving portion of the permitted quarry where both the aerial photographic assessment and geophysical survey had indicated the presence of 'pit type' anomalies of possible archaeological interest.

6.2 Structural analysis

The results of the structural analysis are summarised below and presented in more detail in Appendix 1. The trenches and features recorded are shown in Fig 8.

6.2.1 Phase 1 Natural deposits

Natural deposits were observed in all trenches and comprised a combination of mid brown/orange/red sand with 'pea grit' gravels (c 55-60%) and larger gravels (c 5-10%) present at a thickness of between 0.37m and 0.50m below the ground surface (contexts 102, 202 and 302).

6.2.2 Phase 2 Romano-British deposits

No features were dated to the Roman period on the basis of artefactual evidence, although a small fragment of Roman ceramic building material (CBM) was recovered from an amorphous feature (context 213) in Trench 2. Furthermore, a small sherd of pottery relating to this period was retrieved during machining in Trench 3.

6.2.3 Phase 3 Post-medieval and modern deposits

No features were dated to the post-medieval and modern period on the basis of artefactual evidence. A small assemblage of pottery, glass and ceramic building materials dating to these periods was retrieved during machine removal of topsoil and subsoil deposits.

6.2.4 Undated deposits

A number of features resulting from tree root and tree bowl activity were observed within the evaluation trenches. These were mainly amorphously shaped in plan and contained a well compacted light yellow silty fill. Excavation carried out on a large percentage of these features revealed evidence of fills running under the well established natural, as a result of root action, and highly diffuse edges which did not look the result of human activity.

Several features were also identified within Trench 2 that could, because of their shape in plan and profile, be archaeological (contexts 206 and 208). In plan, one of these appeared linear (feature 206) and measured approximately 5.50m in length and 0.56m in width. This ran in a roughly north-west to south-east direction across Trench 2, while excavation revealed gradually breaking sides and a concave base at a depth of about 0.32m from the top of the feature. In plan, the north-west end of this feature was tapering out, making it possible that this also represented tree root/tree bowl activity. As for the other feature (context 208), in plan it measured approximately 0.50m in length and 0.62m in width, while excavation revealed gently breaking sides and a concave base at a depth of about 0.15m from the top of the feature. Because in both cases the cuts were quite well defined against the natural it seems that they may have been the result of human activity, however, this remains uncertain and neither the character or dating of any activity represented could be established.

6.3 Discussion

6.3.1 Romano-British

No deposits of Romano-British date were revealed within the evaluated area, although a single sherd of pottery and a small fragment of ceramic building material were recovered, probably reflecting manuring of arable land with domestic refuse during this period.

6.3.2 Post-medieval and modern

The small amount of post-medieval and modern residual artefacts within the evaluated area would seem to suggest agricultural use of the land. This would concur with information shown on the 1840's Tithe Map of Grimley, which indicates that the area was at that time being used as an orchard and a hopyard (Fig. 5), while the 1882 Ordnance Survey seems to show a field of trees (Fig 6).

6.3.3 Undated deposits

The occurrence of a high number of amorphous features, that are probably the result of tree root and tree bowl activity, would seem to suggest agricultural use of the land. While no dating evidence was recovered from any of these, the archaeological evidence is in line with information shown on Figures 5 and 6 and discussed in Section 6.2.2.

6.4 Conclusion

The results of the evaluation trenching provided only a single fragment of pottery and ceramic building material dating to the Roman period, while no evidence dating to the medieval period was recovered. The deposits revealed suggest that the ground to the east of the area of higher potential was used as an orchard or hop yard at least as early as 1840. While the 1st edition Ordnance Survey map still shows the area being used as such around 1882, it would seem to be going out of use around the end of the 19th century.

7 Significance

No evidence of any significant archaeological remains were encountered during the evaluation

8 Recommendation

In light of recent fieldwork carried out at Retreat Farm no further monitoring will be required.

9 Publication summary

The Service has a professional obligation to publish the results of archaeological projects within a reasonable period of time. To this end, the Service intends to use this summary as the basis for publication through local or regional journals. The client is requested to consider the content of this section as being acceptable for such publication.

A staged programme of archaeological work comprising desk-based assessment, geophysical survey and evaluation trenching was undertaken of land at Retreat Farm Quarry, Grimley, Worcestershire (NGR SO 8320 5970). The project was supported by English Heritage through the Aggregates Sustainability Levy (ALSF). The land lies within a permitted quarry of which only a small area remained for extraction.

The permitted area and surviving land parcel within it is situated at the southern extent of a large complex of cropmark features representing multi-period activity, ranging from the Neolithic to the medieval period. Much of this complex has been removed by quarrying including cropmarks representative of former field systems and possibly occupation enclosures and funerary activity within the already quarried part of the permitted area. Evidence of medieval settlement in the vicinity was focused around the village of Grimley with associated cultivation represented by ridge and furrow in fields to the east, west and south.

Fieldwork focussed on the outstanding part of the permitted area, which included evidence for survival of pits, possibly indicative of unenclosed occupation or activity of prehistoric or Roman date. As a surviving remnant of the wider cropmark complex, sample trenching of this area was considered to have the potential to contribute to the understanding of the character of the previously quarried areas as well as evaluate the nature and level of preservation of any remaining features. Consequently three trenches were excavated. These identified features considered to represent disturbance by tree roots and tree boles, probably relating to an orchard which is recorded on the 1840 Grimley tithe map. This would seem to indicate that the 'pit type anomalies', revealed by the cropmark assessment and geophysical survey, are in fact natural root disturbance. In the absence of archaeological remains of any potential significance, further investigation during quarrying is not recommended for this particular location.

10 The archive

The archive consists of:

- 3 Context records AS1
- 4 Fieldwork progress records AS2
- 1 Photographic records AS3
- 6 Scale drawings
- 1 Box of finds

-
- | | |
|---|---|
| 3 | Photographs |
| 1 | A4 card folder of photocopies and SMR data print-outs |
| 1 | Geophysical survey report |
| 1 | Aerial photographic assessment |

The project archive is intended to be placed at:

Worcestershire County Museum
Hartlebury Castle
Hartlebury
Near Kidderminster
Worcestershire DY11 7XZ
Tel Hartlebury (01299) 250416

11 Acknowledgements

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12 Personnel

The fieldwork and report preparation was led by Anna Deeks. The project manager responsible for the quality of the project and production of the UPD was Robin Jackson. Fieldwork was undertaken by Anna Deeks and Marc Steinmetzer, and illustration by Steve Rigby. Chris Cox contributed the Aerial photographic assessment. GSB Prospection Ltd undertook the geophysical survey.

13 Bibliography

Archaeological Investigations Limited, 1998 *Dark Lane, Grimley, Worcestershire: an archaeological watching brief*, Hereford Archaeology Series, **362**

AS, 2001 *Proposal for an archaeological evaluation south of Top Barn Farm, Holt, Worcestershire (SAM Here & Worcs 209; WCM4507 and 4511)*, Archaeological Service, Worcestershire County Council, unpublished document dated 6th August 2001

AS, 2003a *Proposal for an archaeological desk-based assessment at Retreat Farm, Grimley, Worcestershire*, Archaeological Service, Worcestershire County Council, unpublished document dated 19th February, P2339

AS, 2003b *Assessment and Updated Project Design: Retreat Farm Quarry, Grimley, Worcestershire*, Archaeological Service, Worcestershire County Council, 20th October, P2339

Beard, G R, Cope, D W, Jones, R J A, Palmer, R C, and Whitfield, W A D, 1986 *Soils of Worcester and the Malverns District*, Soil Survey of England and Wales, Sheet **150**

CAS, 1995 (as amended) *Manual of Service practice: fieldwork recording manual*, County Archaeological Service, Hereford and Worcester County Council, internal report, **399**

Cook, M, 1999 *Watching brief at Riverdale, Grimley, Worcestershire (WSM 27204)*

- Edwards, 1997 Desk-based assessment of enclosures south of Top Barn Farm, Holt, Hereford and Worcester. County Archaeological Service, Worcestershire County Council, unpublished document dates 24th November 1997, **P1493**
- Fagan, L, 1992 *Evaluation at Church Farm East, Grimley*, Archaeological Service, Hereford and Worcester County Council, internal report, **153**
- Fagan, L, 1993 *Evaluation at Grimley and Holt Primary School, Grimley*, County Archaeological Service, Hereford and Worcester County Council, **174**
- Field, J, 1972 *English Field Names. A Dictionary*. David & Charles: Newton Abbott
- Glyde, M, 1999 *Mapping and interpretation of grass marks north of Riverdale, Grimley, Worcestershire*, unpublished typescript
- Hooke, D, 1990. *Studies in Anglo-Saxon History II*. Worcestershire Anglo-Saxon charter-bounds. The Boydell Press
- Hunt, A M, Shotliff, A, and Woodhouse, J, 1986 A Bronze Age barrow cemetery and Iron Age enclosure at Holt, *Trans Worcestershire Archaeol Soc*, 3 ser, **10**
- Hurst, J D, Pearson, E A, and Ratkai, S, 1995 *Salvage Recording at the Wagon Wheel, Grimley*, Archaeological Service, Hereford and Worcester County Council, internal report, **380**
- IFA, 1999a *Standard and guidance for archaeological desk-based assessment*, Institute of Field Archaeologists
- IFA, 1999b *Standard and guidance for archaeological field evaluations*, Institute of Field Archaeologists
- IFA, 1997 *Code of approved practice for the regulation of contractual arrangements in field archaeology*), Institute of Field Archaeologists
- IFA, nd *Guidelines for finds work*, Institute of Field Archaeologists
- IGMTAU (Ironbridge Gorge Museum Trust Archaeology Unit), nd *Grimley fishponds, Grimley, Worcestershire: watching brief for National Rivers Authority*, Ironbridge Archaeological Series, **52**
- Jackson, R, 1991 *Salvage recording at Retreat Farm, Grimley*, Archaeological Service, Hereford and Worcester County Council, internal report, **82**
- Lockett, N, 2001 *Archaeological evaluation at Church Farm, Grimley, Worcestershire*, Archaeological Service, Worcestershire County Council, **883**
- Lockett, N J, and Jones, L, 2001 *Watching brief at Grimley Sewage Treatment Works, Worcestershire*, Archaeological Service, Worcestershire County Council, **870**
- Mawer, A, and Stenton, F M, 1927 *The place-names of Worcestershire*, Cambridge University Press, London
- Nash, 1795 *History of Worcestershire*, Volume, **III**
- Peltenburg, E J, 1967 Excavations at Grimley, Worcestershire, *Trans Worcestershire Archaeol Soc (1965-7)*, 3 ser, **1**, 11-14

Ragg, J M, Beard, G R, George, H, Heaven, F W, Hollis, J M, Jones, R J A, Palmer, R C, Reeve, M J, Robson, J D, and Whitfield, W A D, 1984 *Soils and their use in midland and western England*, Soil Survey of England and Wales, **12**

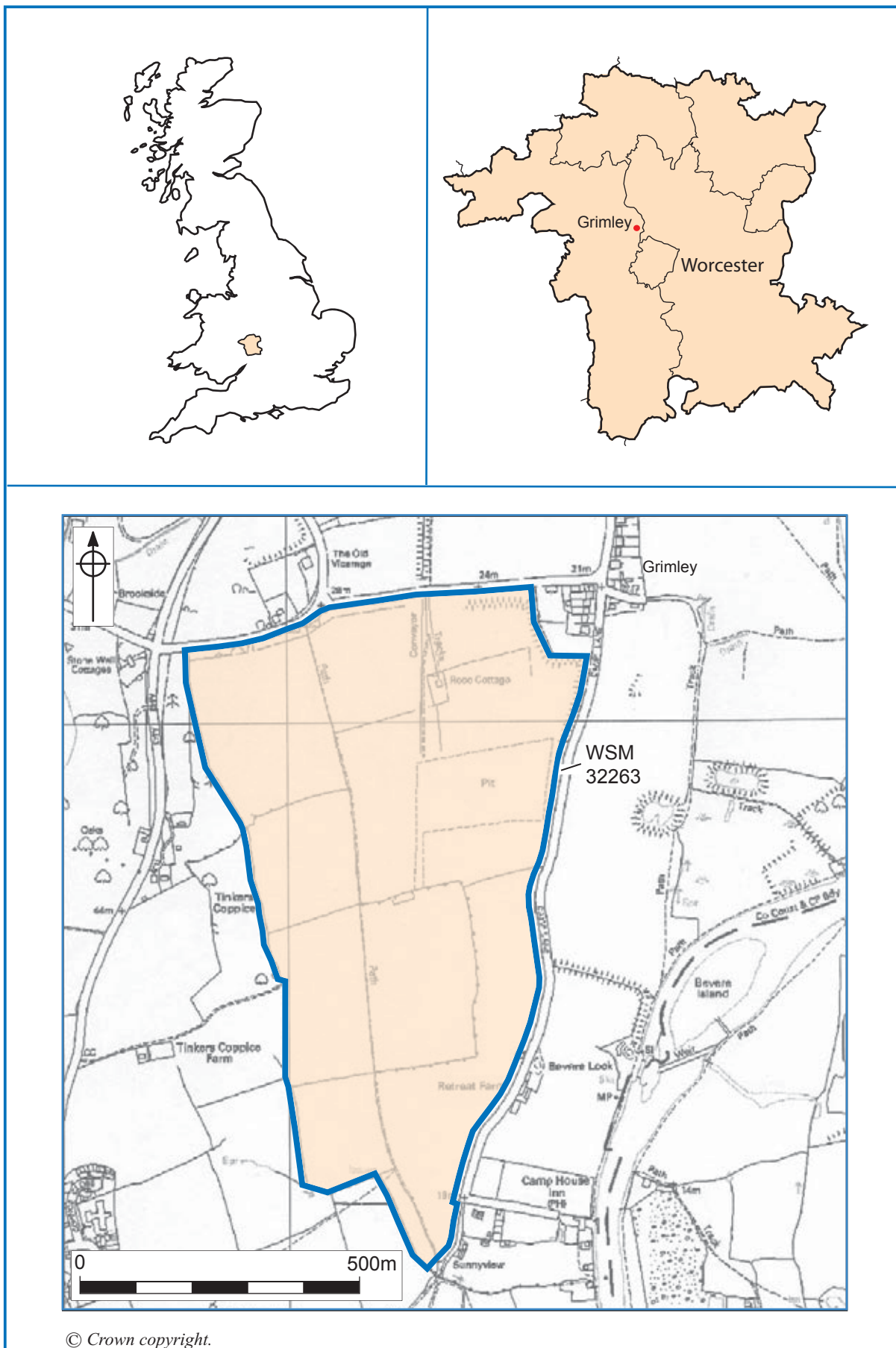
VCH I, Doubleday, H, A (ed), 1971 *Victoria History of the County of Worcestershire*, Dawsons of Pall Mall Folkstone and London

VCH III, Page, W (ed), 1971 *Victoria History of the County of Worcestershire*, Dawsons of Pall Mall Folkstone and London

Wichbold, D, nd *Watching brief at Grimley and Holt Primary School, Grimley (HWCM 12978)*, Hereford and Worcester County Council, internal report, **194**

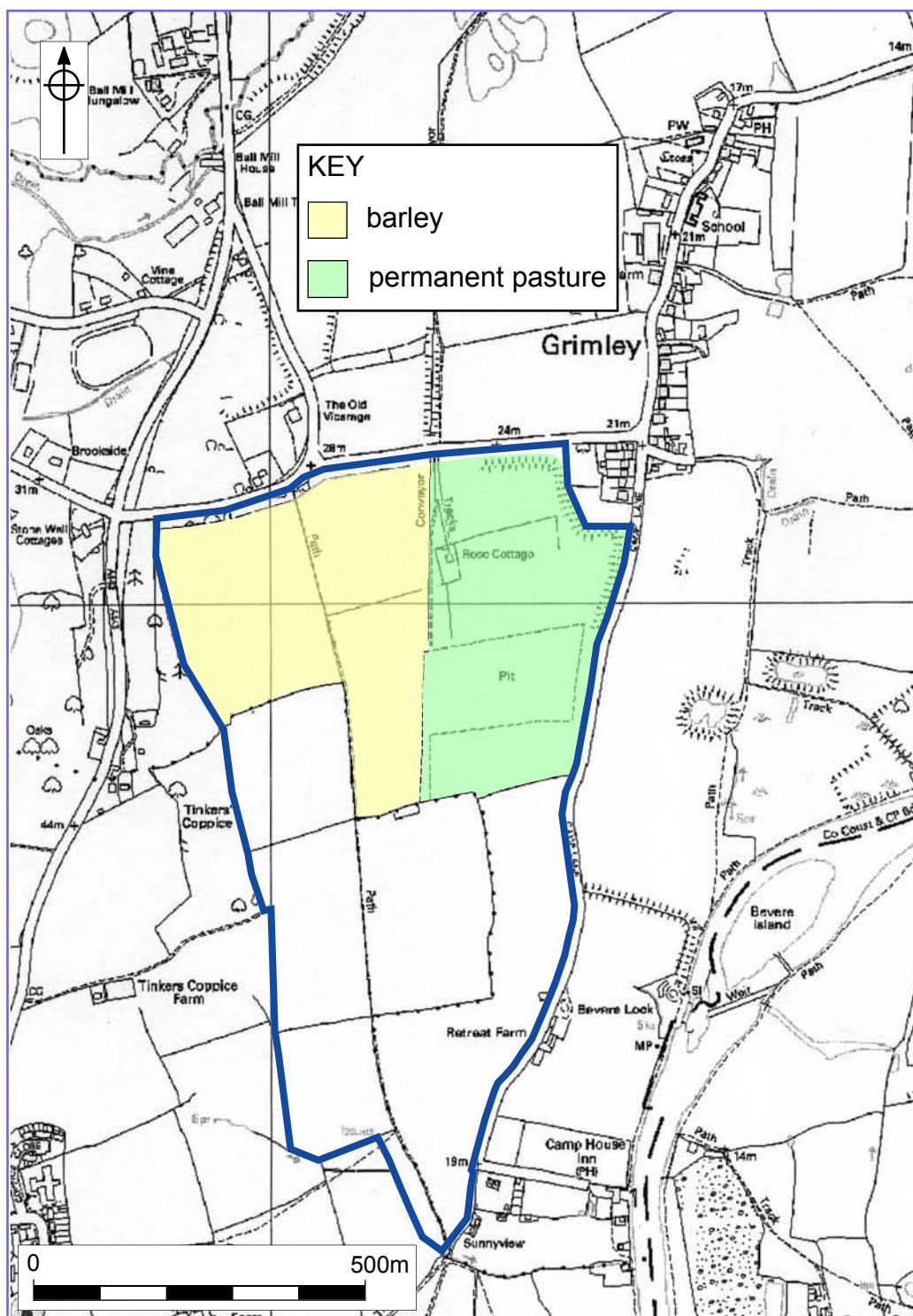
14 Abbreviations

| | |
|------|---|
| WSM | Numbers prefixed with ‘WSM’ are the primary reference numbers used by the Worcestershire County Sites and Monuments Record. |
| WCRO | Worcestershire County Records Office. |
| SMR | Sites and Monuments Record. |



Location of the site.

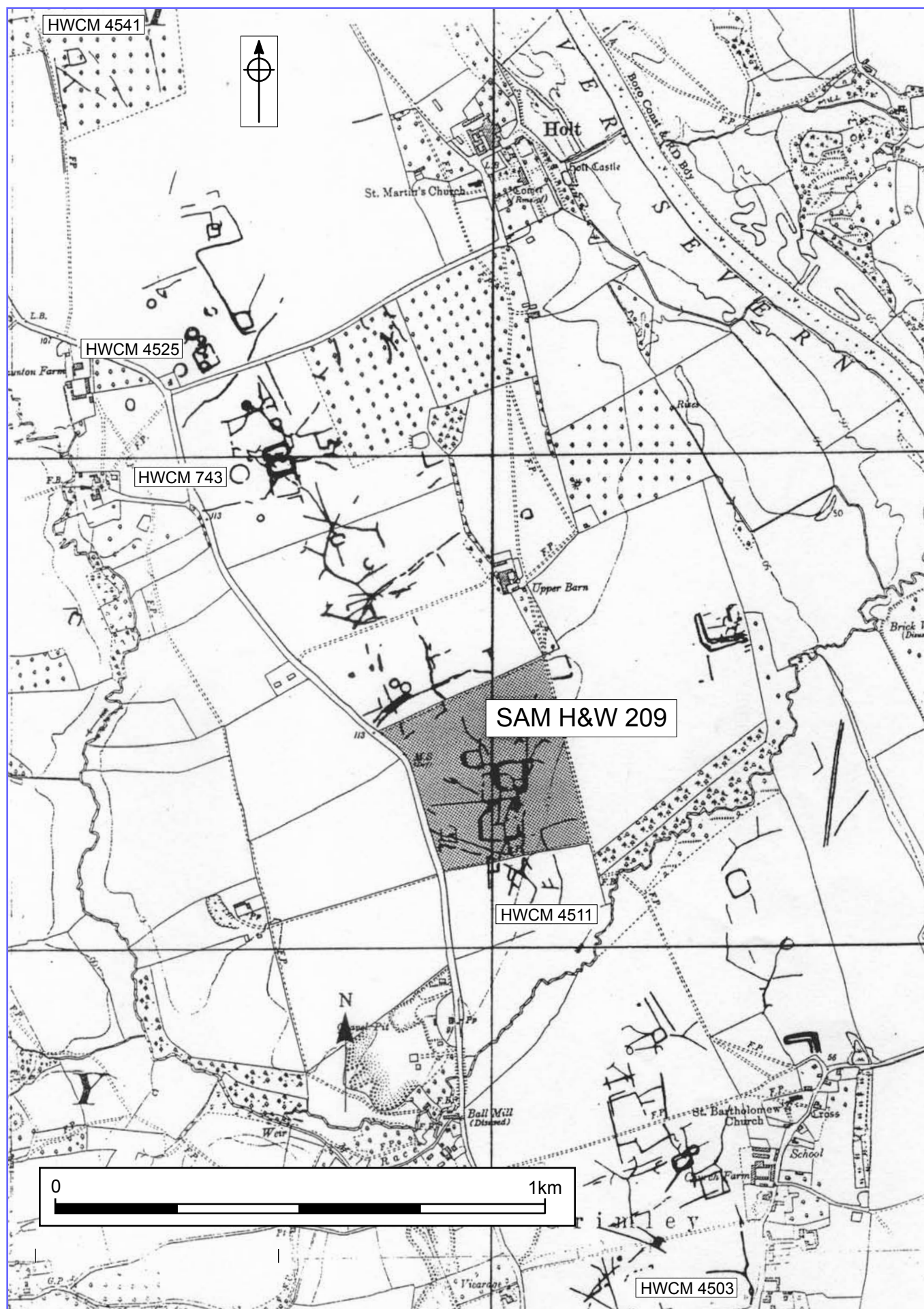
Figure 1



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Map of recent land use

Figure 2



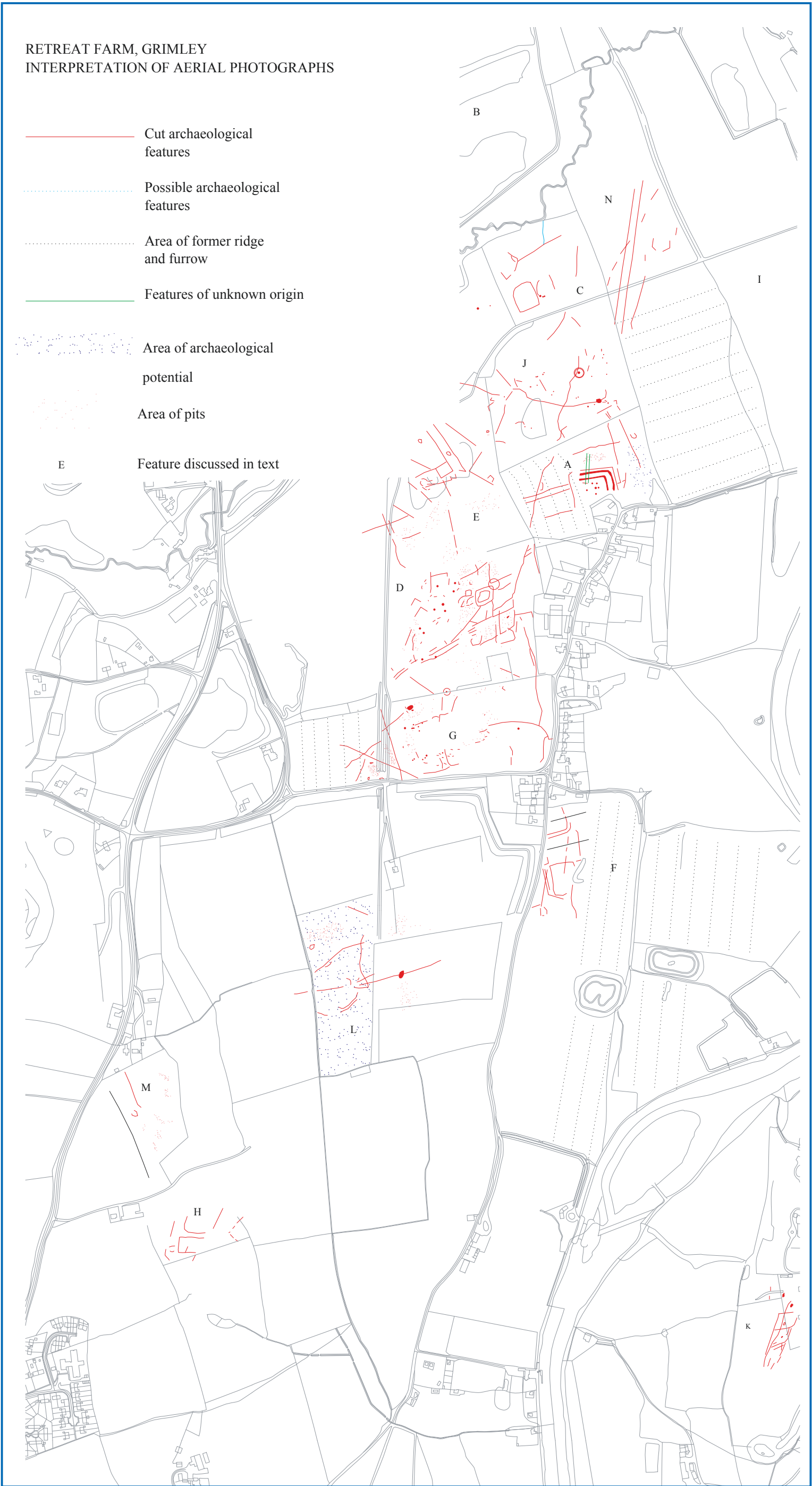
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1980 RCHME plot of cropmarks to north, superimposed on 1:10560 base map

Figure 4

RETREAT FARM, GRIMLEY
INTERPRETATION OF AERIAL PHOTOGRAPHS

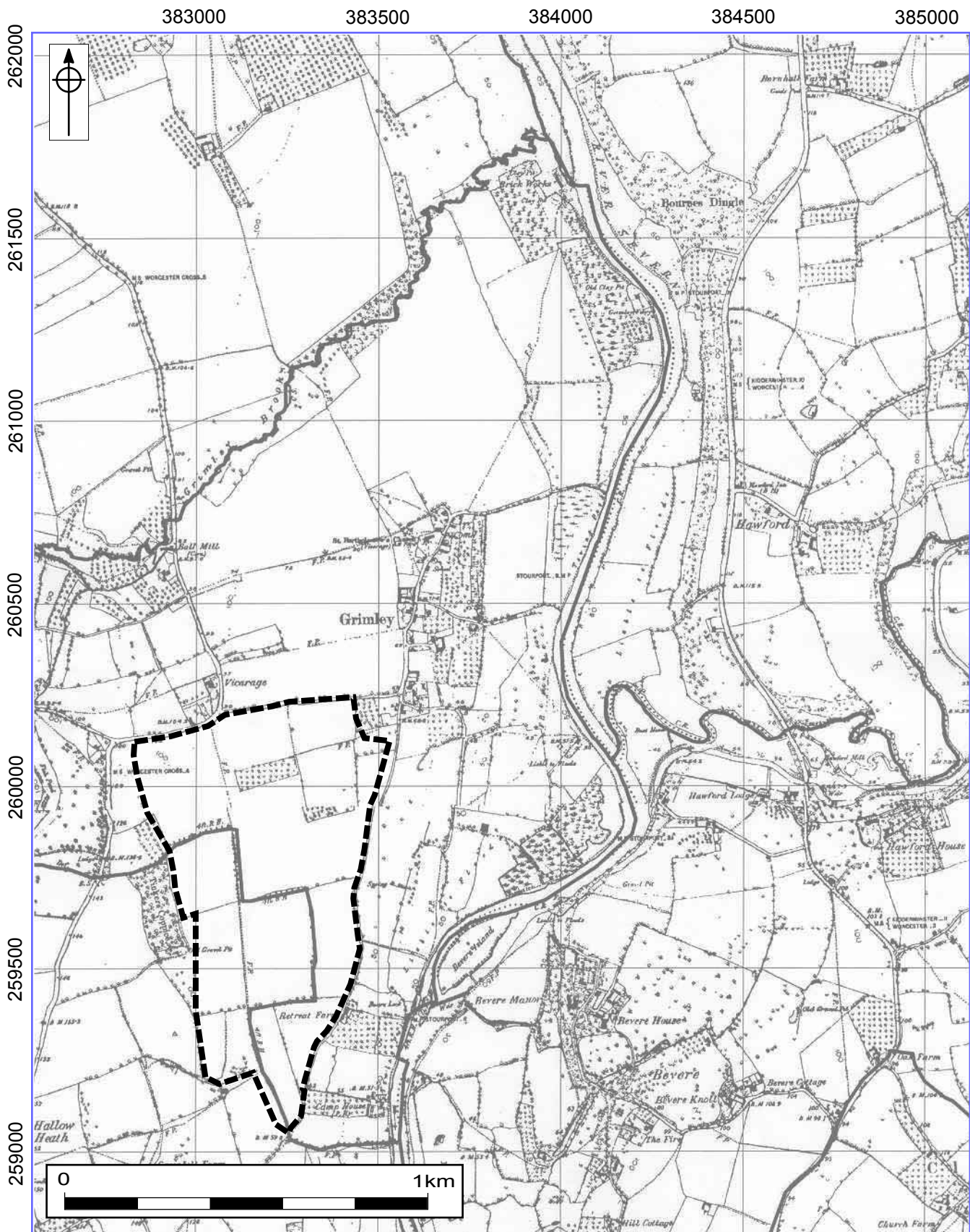
- Cut archaeological features
- Possible archaeological features
- Area of former ridge and furrow
- Features of unknown origin
- Area of archaeological potential
- Area of pits
- E Feature discussed in text



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Aerial photographic interpretation plot

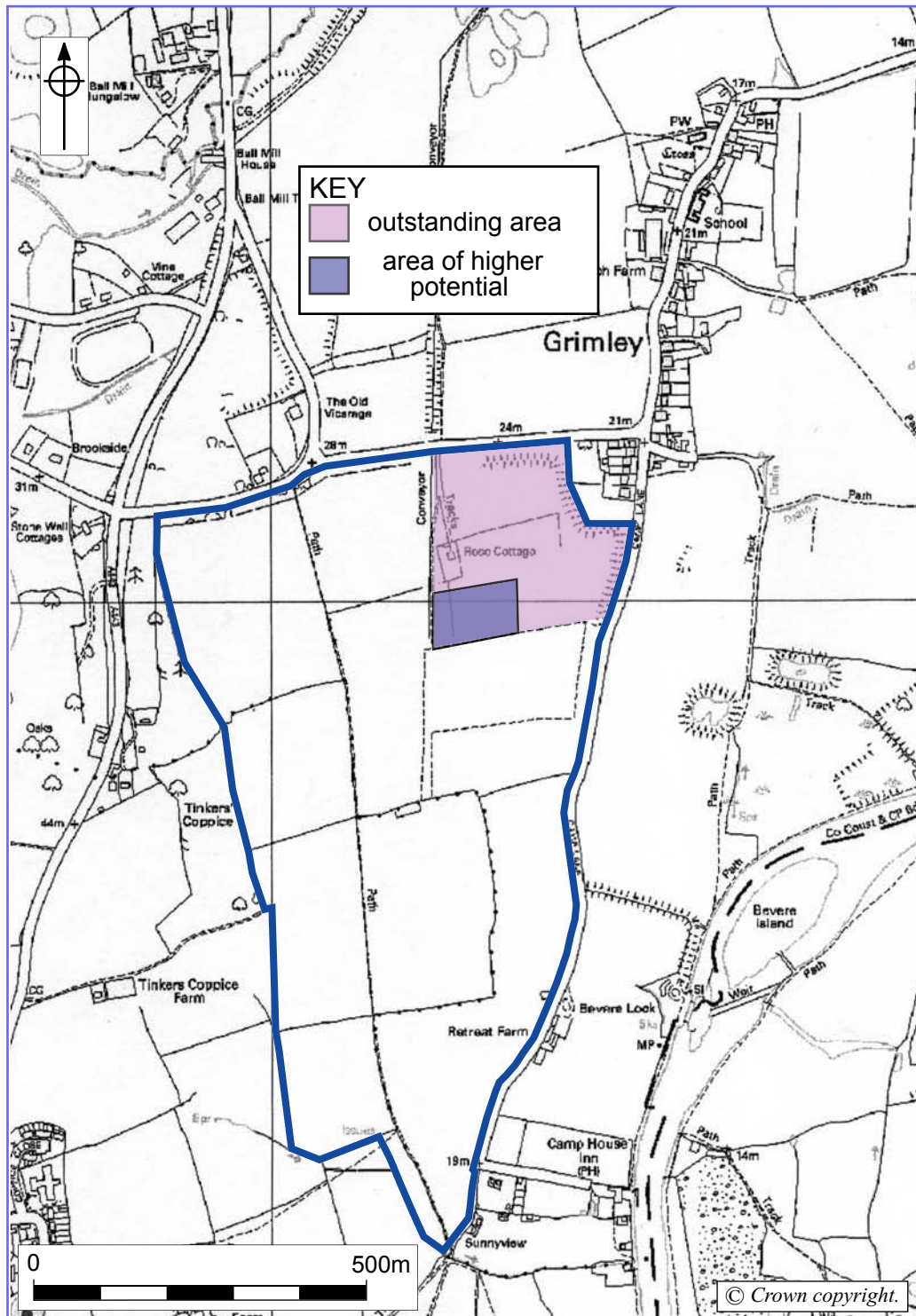
Figure 5



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1882 edition map of the study area

Figure 7



Plan of Retreat Farm quarry showing outstanding area

Figure 8



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Trench locations

Figure 9

Appendix 1: Archaeological sources

| Date | Title | Reference |
|--------|--|--|
| n/d | Grimley fish ponds, Grimley, Worcestershire. Watching Brief for the National Rivers Authority | IGMTAU nd |
| n/d | Watching brief at Grimley and Holt primary school, Grimley | Wichbold, nd |
| 1965-7 | Excavations at Grimley, Worcestershire | Peltenburg, 1965-7 |
| 1991 | Salvage recording at Retreat Farm, Grimley | Jackson 1991 |
| 1992 | Evaluation at Church Farm East, Grimley | Fagan 1992 |
| 1993 | Evaluation at Grimley and Holt primary school, Grimley | Fagan 1993 |
| 1995 | Survey of Grimley Ponds | Cook 1995 |
| 1995 | Salvage recording at the Wagon Wheel, Grimley, Worcestershire | Hurst, Pearson and Ratkai 1995 |
| 1998 | Dark Lane, Grimley. An archaeological watching brief | Archaeological Investigations Ltd 1998 |
| 1999 | Watching brief at Riverdale, Grimley, Worcestershire | Cook 1999 |
| 1999 | Mapping and interpretation of grassmarks north of Riverdale, Grimley, Worcestershire | Glyde 1999 |
| 2001 | Archaeological evaluation at Church Farm, Grimley, Worcestershire | Lockett 2001 |
| 2001 | Watching brief at Grimley sewage treatment works, Worcestershire | Lockett & Jones 2001 |

Appendix 2: Excavated sites in the vicinity (after AS 2001)

| Excavation/Year | Summary | Terrace | Soil cover | Landuse | Cropmarks | Ridge and furrow | Survival-general | Surfaces/ earthworks | Structures | Truncated features | Ploughsoil finds | Plough damage |
|--------------------------------|--|-----------------|-------------------------------|--------------|-----------|------------------|---|-------------------------|-----------------------|--------------------|--|---|
| Jackson 1991 | Evaluation on cropmark. Roman ditch corresponded to cropmark. Also possible prehistoric enclosure ditch corresponding to cropmark | 2 nd | 0.30 – 0.40m thick ploughsoil | Arable | Yes | Not recorded | Poor/moderate. Prehistoric ditches up to 0.80m. Roman ditch up to 0.60m | Nil | Yes-undated postholes | Yes | Present | Yes-truncation noted |
| Fagan 1992 | Evaluation on cropmark. Late Neolithic boundaries corresponding to some of the cropmarks. However, other investigated cropmarks (of trackway) did not survive as sub-surface feature | 2 nd | 0.30 – 0.50m thick ploughsoil | Arable | Yes | Not recorded | Poor. Ditches between 0.15m and 0.30m deep | Nil | Nil | Yes | Present – flint recovered in field walking concentrating in one area | Yes-truncation noted |
| Hurst, Pearson and Ratkai 1995 | Watching brief on cropmark. Three Roman ditches co-inciding with cropmarks of Roman fort. One internal feature | 2 nd | 0.30m thick ploughsoil | Arable | Yes | Not recorded | Moderate. Enclosure ditches and internal feature but no horizontal Roman or earlier stratigraphy. Roman ditches 0.90m plus deep | Nil | Yes | Yes | None recorded | Yes-absence of banks and/or contemporary surfaces |
| Cook 1999 | Watching brief adjacent to cropmark. Pit? Within fort area | 2 nd | Not recorded | Not recorded | No | Not recorded | Poor. Only one pit 0.80m deep | Nil | Nil | Yes | None recorded | N/A |

Appendix 3: Aerial photographic assessment

CONTENTS

- 1 INTRODUCTION**
- 2 THE STUDY AREA, FIGURE 1**
- 3 ARCHAEOLOGY FROM AERIAL PHOTOGRAPHS**
- 4 AERIAL PHOTOGRAPHS: TYPES AND SOURCES**
- 5 INTERPRETATION AND MAPPING METHODOLOGY**
- 6 MAPS**
- 7 RESULTS**
- 8 CONCLUSION**

APPENDIX 1

Aerial Photographs Consulted At the NMR

FIGURE

See report Figure 5

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1 INTRODUCTION

- 1.1 Chris Cox BA MA MIFA, of CgMs Consulting, undertook this assessment of aerial photographs during May 2003.
- 1.2 It was completed on behalf of Worcestershire County Archaeological Service, to identify and provide detailed mapping of archaeological features visible on aerial photographs within the study area at Retreat Farm, Grimley, Worcestershire.

2 **THE STUDY AREA (see Report Figure 5)**

2.1 **Location**

- 2.1.1 The site lies to the south of Grimley village on the west bank of the River Severn. It centres upon National Grid Reference SO 830595.

2.2 **Soils and Geology**

- 2.2.1 The study area lies on first terrace sand and gravels, overlain by Brown Earth soils of the Bromsgrove and Whimple 3 associations. The well-drained soils and substrates allow the formation of marks in crops over buried cut features in times of soil moisture deficit, which may be seen clearly from the air.

2.3 **Archaeology**

- 2.3.1 The study site and its environs contain evidence for human activity in the prehistoric, Iron Age, Roman and medieval periods. Clear evidence for buried trace of past occupation, agricultural and funerary land use is seen on aerial photos.

2.4 **Land-use and condition**

- 2.4.1 The area is relatively level and lies partially on the first gravel terrace of the River Severn. The majority of the area is in arable cultivation, and features contained within the top and sub soils may be heavily eroded. The northern end of the area has been extensively quarried over the last 50 years, and some of the land is reclaimed and the boundaries have changed considerably.

3 **ARCHAEOLOGY FROM AERIAL PHOTOGRAPHS**

3.1 **The role of aerial photographic interpretation**

- 3.1.1 Air photo interpretation provides a unique overview of landscape history and changes in land-use. It provides informed guidance for subsequent desk and ground-based investigations and complements cartographic and documentary research.
- 3.1.2 Information gained from aerial photographs cannot easily be detected by other means and the interpretation of contemporary and archival aerial photographs is thus an important component of multi-disciplinary archaeological investigation.
- 3.1.3 Interpretation of aerial photographs allows the accurate mapping of archaeological sites recorded as crop, grass or vegetation marks (caused by the differential growth of plants over buried features); soil marks (caused by differences in soil colour over ploughed buried features) and shadows cast by upstanding earthworks and features seen in relief. In this instance, features were seen as positive marks in crops.

3.2 **Limitations of the data**

- 3.2.1 Aerial photographic evidence is limited by seasonal, agricultural, meteorological and environmental factors which affect the extent to which either buried or upstanding archaeological features can be detected. It is thus advantageous to examine a range of photos taken under a variety of environmental conditions in order to build up a comprehensive interpretation of the archaeological landscape.
- 3.2.2 The visibility of archaeological features may differ from year to year. Individual photographs thus often record only a small percentage of the actual extent of buried or upstanding features. In this case, I consider that the buried features which show as crop marks are likely to be much more extensive in both area and complexity than shown by existing aerial photographs.

4 AERIAL PHOTOGRAPHS: TYPES AND SOURCES

4.1 Types

- 4.1.1 Two types of aerial photograph are used for archaeological interpretation. Vertical aerial photographs are taken for general-purpose survey using a camera mounted inside a modified aircraft. The aircraft is flown on a pre-planned set of overlapping flight-lines which cover the survey area completely. The camera points straight towards the ground. The vertical viewpoint provides aerial photographic coverage from a fixed scale and constant 180° angles at the centre of each frame. The overlap between the areas covered by each consecutive frame is usually 60%. This overlap between frames enables the photo interpreter to study each pair of vertical photos under a stereoscope.
- 4.1.2 The stereoscope combines the two images to allow the interpreter to see one three-dimensional image of the ground surface. Vertical aerial photographs carry inherent distortions introduced by variations in perspective and ground height, but are essentially 'map-like' in appearance. They are generally taken for non-archaeological, civil and military purposes and form the basic data from which most modern maps are compiled. Vertical aerial photographs are a very useful source of archaeological data, particularly in areas where features survive as earthworks. They also constitute historical documents.
- 4.1.3 Oblique aerial photographs are taken using a hand held camera by an aerial archaeologist to portray features which have been identified during specialist survey. These photos are extremely useful, but contain inherent perspective distortions, which must be accounted for in rectification and mapping procedures. All features recorded during this assessment were interpreted from oblique aerial photographs, and supplementary data were derived from verticals.

4.2 **Sources of data**

- 4.2.1 Vertical and oblique aerial photographs taken between 1946 and 2002 were interpreted. These are archived at the English Heritage National Monuments Record (NMR - EH Coversearch number AP 55475, 31-03-03, at Appendix 1), at Cambridge University and Worcestershire SMR.

5 **INTERPRETATION AND MAPPING METHODOLOGY**

- 5.1 Photographic interpretation, rectification and mapping were carried out following procedures defined by IFA Technical Paper Number 12. All photographs were closely examined, under 1.5x and 4x magnification and interpreted with the aid of a mirror stereoscope where appropriate.
- 5.2 Transparent interpretative overlays were prepared, from which archaeological and associated relevant data were scanned for rectification to the map base.
- 5.3 Interpreted features were rectified, where appropriate, by computer using ortho-photo rectification software, AirPhoto 2.17. This software calculates values for the closeness of control point match between the photograph and an accurately surveyed digital map base. It utilises an initial plane surface mathematical rectification technique to match photo and map data.
- 5.4 The mean error value of the control points when matched to the map lay between 1.4 and 4.3 metres which is acceptable when matching to maps surveyed at 1:2500 scale with additional controls derived from older 1:10000 scale maps surveyed prior to quarrying and boundary changes.

6 **Maps**

- 6.1 Aerial photographic data were rectified to an OS digital map base. This base was used for geo-referencing and presentation of the results in both digital and paper formats.
- 6.2 The mapping was produced using AutoCAD Map Release 14 and 2000 and may be exported as required subject to checking of complete data transfer and positional accuracy by the client.

7 RESULTS (Report Figure 5)

7.1 The following features were identified within the Site:

Feature A

| | |
|-----------------|----------------------------|
| NGR | SO 836607 |
| WSM | 04534 |
| Principle photo | SO 8360/61, 74-78; BUF 035 |
| Location | Grimley |

Buried triple ditched rectilinear enclosure with internal and external features, recorded by the SMR as a Romano-British fort. The site cuts, or is cut by, two parallel ditches which may be modern agricultural features, although this interpretation is conjectural.

The features show as positive marks in crops. The area to the immediate east of the site carries further potential for discovery of archaeological remains, probably associated with the enclosure. This area contains evidence for pits and areas of deeper soil, which may be indicative of external settlement or rubbish disposal. Part of the enclosure underlies the northern end of the modern settlement at Grimley.

The area to its west and north contains further evidence for ditched features, and for subsequent ploughing in the medieval or post-medieval period.

A possible Roman road, noted by the National Monuments Record as RRX 55, may be seen to the north of the enclosure and is recorded as feature N.

Feature B

| | |
|--------------|----------------------|
| NGR | SO 834616 |
| WSM | 04512 |
| Photo number | BBW 42; SO8361/30-32 |
| Location | Holt |

Double ditched rectilinear enclosure, pits and tracks which show as marks in crop at Location B. these features have not been accurately mapped as there are not sufficient control points which match between map and photographs, but their presence has been noted.

Feature C

| | |
|--------------|------------------------|
| NGR | SO 835612 |
| WSM | 04510 |
| Photo number | ABF 81; SO8361/26 & 54 |
| Location | Now Church Farm Quarry |

Buried ditched enclosure, fragment of a possible further enclosure, pits and ditches. These features showed as positive marks in crops prior to their removal by quarrying at Church Farm.

Feature D

| | |
|--------------|----------------------|
| NGR | SO 833605 |
| WSM | 04538, SAM 213 |
| Photo number | SO8360/50; AFX 51 |
| Location | Church Farm, Grimley |

An extensive and complex area of multi-period buried features which comprise a double ditched sub-rectangular enclosure, further ditched enclosures, ring ditch, track ways and many pits and fragmentary ditched features. The ring ditch and enclosure are partially superimposed, and represent different phases, and possibly types of past land use.

The enclosures and track form part of a larger, probably late prehistoric or Iron Age/Romano British landscape which extends over the northern part of this study area.

Feature E

| | |
|-----------------|-----------------|
| NGR | SO 833606 |
| WSM | 4501 |
| Principle photo | SO8361/11 |
| Location | West of Grimley |

Further traces of buried features which comprise enclosures, pits, possible tracks or fragments of field system and a possible pit alignment, which is documented by the SMR but has not been seen clearly on aerial photographs.

These features form part of the extensive past landscape in the area and are truncated to the north by quarrying and change in the field boundaries to accommodate the extractive processes.

Feature F

| | |
|--------------|--|
| NGR | SO 836601 |
| Photo number | SO8360/27-29 |
| WSM | 15157, 15158 |
| Location | East of Camp Lane, south of Ivy House, Grimley |

Sinuuous and linear ditches with associated double ditched incomplete enclosure, which is partially overlain by the modern village. The double ditched enclosure may be a further Roman site.

These features are overlain by traces of ploughed-out ridge and furrow.

Feature G

| | |
|--------------|--------------------------|
| NGR | SO 832602 |
| WSM | 04503 |
| Photo number | VD 7; SO8360/8 |
| Location | East of The Old Vicarage |

Sinuuous and linear buried ditches indicative of a former field system with fragmentary stock penning and settlement enclosures. Extensive areas of dense pits, of varying shapes and sizes. The northern modern field boundary cuts a buried ring ditch with central pit, which is likely to have been a Bronze Age burial mound (round barrow). These features form part of the extensive archaeological landscape in the area surrounding Grimley village.

Feature H

| | |
|--------------|---|
| NGR | SO 829595 |
| Photo number | SO8259/1,3,4 |
| WSM | 06068 |
| Location | South and east of Tinker's Coppice Farm |

Ditched enclosures which are now buried and show as positive marks in crops.

Feature I

| | |
|--------------|-------------------------------|
| NGR | SO 840612 |
| Photo number | SO8461/2 |
| WSM | 15255, 15256 |
| Location | North east of Grimley village |

Ditched enclosures which are now buried and show as positive marks in crops, and amorphous features which may be archaeological. These features are not mapped due to lack of matching control points on both photos and maps.

Feature J

| | |
|--------------|--------------------------------|
| NGR | SO 836609 |
| Photo number | SOABF 76; SO8360/15; SO8361/20 |
| WSM | 04505 |
| Location | Church Farm, Grimley |

Sinuuous ditches indicative of a buried field system, extensive pits and cut area features. This location contains a double ring ditch which is likely to have been a Bronze Age round barrow. All features are now buried and show as positive marks in crops.

Feature K

| | |
|--------------|----------------------------|
| NGR | SO 829595 |
| Photo number | SO8359/1 |
| WSM | - |
| Location | South west of Bevere Manor |

Ditched enclosures and pits which are now buried and show as positive marks in crops.

Feature L

| | |
|--------------|--------------------------|
| NGR | SO 832598 |
| Photo number | SO8360/68 |
| WSM | 01191 |
| Location | East of Tinker's Coppice |

Sinuuous and linear buried ditches, large pit and possible ring ditch. As with the majority of sites in this area, the field shows traces of many small cut features, indicating high archaeological potential.

Feature M

| | |
|--------------|--------------------------|
| NGR | SO 828596 |
| Photo number | SO8259/1,3,4 |
| WSM | 21279 |
| Location | West of Tinker's Coppice |

Very faint crop marked features which may indicate the position of a possible ring ditch and linear ditches. These features have not been photographed directly, but show in the background of photos which portray sites to the south.

Feature N

| | |
|--------------|------------------|
| NGR | SO 836612 |
| Photo number | AKM 136 |
| WSM | 04535 |
| Location | North of Grimley |

Parallel ditched features and other sinuous and fragmentary features. The parallel ditches may be the fossae which bounded a former Roman road, and are listed on the former NMR records as such.

8 **CONCLUSION**

- 8.1 The study area contains several extensive complexes of multi period cut features.
- 8.2 All are now ploughed and eroded. The ditches are buried and show only as crop marks.
- 8.3 Ring ditches probably indicate the position of eroded Bronze Age burial mounds, and further features are likely to be later prehistoric, Iron Age and Romano-British field systems and areas of enclosed and open settlement and stock penning areas.
- 8.4 The features are likely to be much more extensive than indicated by the major features which show on aerial photos, and to be heavily truncated by ploughing.
- 8.5 The area was farmed and settled in the medieval period, and some traces of ridge and furrow survive.

AERIAL PHOTOGRAPH APPENDIX

Aerial photographs consulted at EH NMR

ENGLISH HERITAGE - NATIONAL MONUMENTS RECORD
National Monuments Record - Air Photos Library

Summary report for specialist collection

Date : 31-Mar-2003 Time : 10:17:49

Customer Enquiry Reference No. 55475

| NGR Index Number | Accession Number | Frame Number | Original Number | Copy right | Repos itory | Film Details | Date Flown | DF | 6 Fig NGR |
|---------------------|---------------------|-----------------|--------------------|---------------|----------------|------------------------|---------------|----|-----------|
| SO8258/1 | CAP 8380 | 5 | VD | CAP | CAP | B Unknown Black& white | | | SO823588 |
| SO8258/2 | WAB 86 | 66 | | WAB | NMR | B 5x5" Black& white | 01-JUL-1968 | 2 | SO828584 |
| SO8258/3 | WAB 11624 | ORACLE40 | 499 | WAB | NMR | B Unknown Black& white | 01-JAN-1957 | 3 | SO822589 |
| SO8258/4 | WAB 11624 | 500 | 500 | WAB | NMR | B Unknown Black& white | 01-JAN-1957 | 3 | SO822589 |
| SO8258/7 | CAP 8380 | 6 | VD | CAP | CAP | B Unknown Black& white | 16-JUN-1957 | 1 | SO823588 |
| SO8259/1 | WAB 138 | 51 | | CAP | NMR | B 5x5" Black& white | 01-JUL-1969 | 2 | SO828593 |
| SO8259/2 | CAP 7920 | 87 | BUF | CAP | CAP | B Unknown Black& white | 12-JUL-1975 | 1 | SO829594 |
| SO8259/3 | WAB 902 | 191 | | WAB | NMR | B 5x5" Black& white | 01-JUL-1975 | 2 | SO828592 |
| SO8259/4 | WAB 902 | 192 | | WAB | NMR | B 5x5" Black& white | 01-JUL-1975 | 2 | SO828592 |
| SO8260/1 | WAB 11620 | 256 | 256 | WAB | NMR | B Unknown Black& white | 01-JAN-1956 | 3 | SO826609 |
| SO8260/2 | JAP 5318 | 708 | 16 | JAP | NMR | B 35 mm Copy slide | 17-JUL-1986 | 1 | SO825603 |
| SO8260/3 | JAP 5318 | 710 | 16 | JAP | NMR | B 35 mm Copy slide | 17-JUL-1986 | 1 | SO825605 |
| SO8260/4 | JAP 6969 | 709 | 86.22 | JAP | NMR | B 35 mm Copy slide | 17-JUL-1986 | 1 | SO824604 |
| SO8261/1 | WAB 11657 | 3504 | 65 | WAB | NMR | B Unknown Black& white | 01-JAN-1965 | 3 | SO828615 |
| SO8261/2 | CAP 8380 | 9 | VD | CAP | CAP | B Unknown Black& white | | | SO827617 |
| SO8261/3 | CAP 8380 | 10 | VD | CAP | CAP | B Unknown Black& white | | | SO827617 |
| SO8261/4 | WAB 86 | 60 | | WAB | NMR | B 5x5" Black& white | 01-JUL-1968 | 2 | SO827619 |
| SO8261/5 | WAB 86 | 62 | | WAB | NMR | B 5x5" Black& white | 01-JUL-1968 | 2 | SO827619 |
| SO8261/6 | WAB 86 | 63 | | WAB | NMR | B 5x5" Black& white | 01-JUL-1968 | 2 | SO827619 |
| SO8261/7 | WAB 11628 | 895 | 895 | WAB | NMR | B Unknown Black& white | 01-JAN-1959 | 3 | SO827617 |
| SO8261/8 | WAB 11631 | 1512 | 1512 | WAB | NMR | B Unknown Black& white | 01-JAN-1960 | 3 | SO826616 |
| SO8261/9 | WAB 11631 | 1638 | 1638 | WAB | NMR | B Unknown Black& white | 01-JAN-1960 | 3 | SO828615 |
| SO8261/10 | WAB 11620 | 245 | 245 | WAB | NMR | B Unknown Black& white | 01-JAN-1956 | 3 | SO827619 |
| SO8261/11 | WAB 11624 | 264 57 | 264 57 | WAB | NMR | B Unknown Black& white | 01-JAN-1957 | 3 | SO828617 |
| SO8261/12 | WAB 11624 | 265 57 | 265 57 | WAB | NMR | B Unknown Black& white | 01-JAN-1957 | 3 | SO828617 |
| SO8261/13 | WAB 11624 | 266 57 | 266 57 | WAB | NMR | B Unknown Black& white | 01-JAN-1957 | 3 | SO828617 |
| SO8261/14 | WAB 11624 | 267 57 | 267 57 | WAB | NMR | B Unknown Black& white | 01-JAN-1957 | 3 | SO828617 |
| SO8261/15 | WAB 11624 | 316 57 | 316 57 | WAB | NMR | B Unknown Black& white | 01-JAN-1957 | 3 | SO827617 |

Retreat Farm, Grimley, Worcestershire, Aerial Photographic Interpretation.

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| NGR Index Number | Accession Number | Frame | Original Number | Copy right | Repos itory | Film Details | Date Flown | DF | 6 Fig NGR |
|---------------------|---------------------|----------|--------------------|---------------|----------------|--------------|---------------|---------------|-----------|
| S08261/16 | WAB 11624 | 317 57 | 317 57 | WAB | NMR | B Unknown | Black& white | 01-JAN-1957 3 | S0827617 |
| S08261/17 | WAB 11624 | 320 57 | 320 57 | WAB | NMR | B Unknown | Black& white | 01-JAN-1957 3 | S0827617 |
| S08261/18 | WAB 11624 | 321 57 | 321 57 | WAB | NMR | B Unknown | Black& white | 01-JAN-1957 3 | S0827617 |
| S08261/19 | WAB 11624 | 324 57 | 324 57 | WAB | NMR | B Unknown | Black& white | 01-JAN-1957 3 | S0827617 |
| S08261/20 | WAB 11624 | 322 57 | 322 57 | WAB | NMR | B Unknown | Black& white | 01-JAN-1957 3 | S0825615 |
| S08261/21 | WAB 11624 | 323 57 | 323 57 | WAB | NMR | B Unknown | Black& white | 01-JAN-1957 3 | S0825615 |
| S08261/22 | WAB 11624 | 326 57 | 326 57 | WAB | NMR | B Unknown | Black& white | 01-JAN-1957 3 | S0828615 |
| S08261/23 | WAB 11624 | 328 57 | 328 57 | WAB | NMR | B Unknown | Black& white | 01-JAN-1957 3 | S0828615 |
| S08261/24 | WAB 11624 | 329 57 | 329 57 | WAB | NMR | B Unknown | Black& white | 01-JAN-1957 3 | S0828615 |
| S08261/25 | WAB 11624 | ORACLE41 | 441 | WAB | NMR | B Unknown | Black& white | 01-JAN-1957 3 | S0828615 |
| S08261/26 | WAB 11624 | ORACLE42 | 442 | WAB | NMR | B Unknown | Black& white | 01-JAN-1957 3 | S0827617 |
| S08261/27 | WAB 11624 | ORACLE43 | 444 | WAB | NMR | B Unknown | Black& white | 01-JAN-1957 3 | S0827617 |
| S08261/28 | WAB 136 | 76 | | WAB | NMR | B 5x5" | Black& white | 01-JUL-1969 2 | S0821616 |
| S08261/29 | JAP 328 | 12A | 71 16 | JAP | NMR | B 35 mm | Black& white | 21-JUL-1971 1 | S0829613 |
| S08261/30 | JAP 328 | 13A | 71 16 | JAP | NMR | B 35 mm | Black& white | 21-JUL-1971 1 | S0829613 |
| S08261/31 | WAB 319 | 67 | | WAB | NMR | B 5x5" | Black& white | 21-JUL-1971 1 | S0829613 |
| S08261/33 | CAP 8380 | 11 | VD | CAP | CAP | B Unknown | Black& white | 16-JUN-1957 1 | S0828618 |
| S08261/34 | CAP 8427 | 72 | YS | CAP | CAP | B Unknown | Black& white | 16-JUN-1957 1 | S0828618 |
| S08261/35 | CAP 7728 | 100 | ASL | CAP | CAP | B Unknown | Black& white | 04-JUL-1967 1 | S0828615 |
| S08261/36 | CAP 7894 | 14 | RQH | CAP | CAP | B Unknown | Black& white | 09-JUL-1974 1 | S0828615 |
| S08261/37 | JAP 1731 | 34 | 878 | JAP | NMR | B 35 mm | B&W copy clr | 21-JUL-1979 1 | S0821616 |
| S08261/38 | JAP 1731 | 35 | 879 | JAP | NMR | B 35 mm | B&W copy clr | 21-JUL-1979 1 | S0821616 |
| S08261/39 | NMR 21686 | 32 | | EHC | NMR | B 35 mm | Colour neg | 15-JUL-2002 1 | S0829612 |
| S08261/40 | NMR 21686 | 33 | | EHC | NMR | B 35 mm | Colour neg | 15-JUL-2002 1 | S0829613 |
| S08261/41 | NMR 21686 | 34 | | EHC | NMR | B 35 mm | Colour neg | 15-JUL-2002 1 | S0829613 |
| S08262/1 | WAB 11640 | 2115 | 2115 | WAB | NMR | B Unknown | Black& white | 01-JAN-1962 3 | S0825620 |
| S08262/2 | WAB 11640 | 2116 | 2116 | WAB | NMR | B Unknown | Black& white | 01-JAN-1962 3 | S0825620 |
| S08262/3 | WAB 11640 | 2202 | 2202 | WAB | NMR | B Unknown | Black& white | 01-JAN-1962 3 | S0825620 |
| S08262/4 | WAB 11625 | ORACLE55 | 646 | WAB | NMR | B Unknown | Black& white | 01-JAN-1958 3 | S0823621 |
| S08262/5 | WAB 11628 | 864 | 864 | WAB | NMR | B Unknown | Black& white | 01-JAN-1959 3 | S0822621 |
| S08262/6 | WAB 11628 | 869 | 869 | WAB | NMR | B Unknown | Black& white | 01-JAN-1959 3 | S0823622 |
| S08262/13 | WAB 11628 | 892 | 892 | WAB | NMR | B Unknown | Black& white | 01-JAN-1959 3 | S0825620 |
| S08262/14 | WAB 11631 | 1639 | 1639 | WAB | NMR | B Unknown | Black& white | 01-JAN-1960 3 | S0825620 |
| S08262/15 | WAB 11631 | 1640 | 1640 | WAB | NMR | B Unknown | Black& white | 01-JAN-1960 3 | S0825620 |
| S08262/18 | WAB 11620 | 221 | 221 | WAB | NMR | B Unknown | Black& white | 01-JAN-1956 3 | S0824621 |
| S08262/19 | WAB 11620 | 243 | 243 | WAB | NMR | B Unknown | Black& white | 01-JAN-1956 3 | S0825620 |
| S08262/20 | WAB 11620 | 254 | 254 | WAB | NMR | B Unknown | Black& white | 01-JAN-1956 3 | S0825620 |

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| NGR Index Number | Accession Number | Frame | Original Number | Copy right | Repository | Film Details | Date Flown | DF | 6 Fig NGR | |
|------------------|------------------|-------|-----------------|------------|------------|--------------|--------------|-------------|-----------|----------|
| SO8262/26 | WAB 138 | 57 | | WAB | NMR | B 5x5" | Black& white | 01-JUL-1969 | 2 | SO824622 |
| SO8262/27 | WAB 138 | 65 | | WAB | NMR | B 5x5" | Black& white | 01-JUL-1969 | 2 | SO824622 |
| SO8262/28 | WAB 138 | 66 | | WAB | NMR | B 5x5" | Black& white | 01-JUL-1969 | 2 | SO824622 |
| SO8262/29 | WAB 138 | 67 | | WAB | NMR | B 5x5" | Black& white | 01-JUL-1969 | 2 | SO824622 |
| SO8262/30 | WAB 138 | 74 | | WAB | NMR | B 5x5" | Black& white | 01-JUL-1969 | 2 | SO824622 |
| SO8262/31 | WAB 138 | 75 | | WAB | NMR | B 5x5" | Black& white | 01-JUL-1969 | 2 | SO824622 |
| SO8262/32 | WAB 138 | 77 | | WAB | NMR | B 5x5" | Black& white | 01-JUL-1969 | 2 | SO824622 |
| SO8262/33 | WAB 138 | 78 | | WAB | NMR | B 5x5" | Black& white | 01-JUL-1969 | 2 | SO824622 |
| SO8262/34 | WAB 226 | 65 | | WAB | NMR | B 5x5" | Black& white | 18-JUL-1970 | 1 | SO826620 |
| SO8262/35 | JAP 328 | 10A | 71 16 | JAP | NMR | B 35 mm | Black& white | 21-JUL-1971 | 1 | SO823622 |
| SO8262/36 | JAP 328 | 11A | 71 16 | JAP | NMR | B 35 mm | Black& white | 21-JUL-1971 | 1 | SO823622 |
| SO8262/37 | WAB 319 | 68 | | WAB | NMR | B 5x5" | Black& white | 21-JUL-1971 | 1 | SO824622 |
| SO8262/38 | WAB 319 | 69 | | WAB | NMR | B 5x5" | Black& white | 21-JUL-1971 | 1 | SO824622 |
| SO8262/39 | WAB 319 | 70 | | WAB | NMR | B 5x5" | Black& white | 21-JUL-1971 | 1 | SO824622 |
| SO8262/40 | WAB 319 | 71 | | WAB | NMR | B 5x5" | Black& white | 21-JUL-1971 | 1 | SO824622 |
| SO8262/41 | WAB 319 | 72 | | WAB | NMR | B 5x5" | Black& white | 21-JUL-1971 | 1 | SO824622 |
| SO8262/42 | WAB 319 | 73 | | WAB | NMR | B 5x5" | Black& white | 21-JUL-1971 | 1 | SO824622 |
| SO8262/43 | WAB 319 | 74 | | WAB | NMR | B 5x5" | Black& white | 21-JUL-1971 | 1 | SO824622 |
| SO8262/44 | WAB 319 | 75 | | WAB | NMR | B 5x5" | Black& white | 21-JUL-1971 | 1 | SO824622 |
| SO8262/45 | WAB 319 | 76 | | WAB | NMR | B 5x5" | Black& white | 21-JUL-1971 | 1 | SO824622 |
| SO8262/46 | WAB 319 | 77 | | WAB | NMR | B 5x5" | Black& white | 21-JUL-1971 | 1 | SO824622 |
| SO8262/47 | WAB 319 | 78 | | WAB | NMR | B 5x5" | Black& white | 21-JUL-1971 | 1 | SO824622 |
| SO8262/48 | WAB 319 | 81 | | WAB | NMR | B 5x5" | Black& white | 21-JUL-1971 | 1 | SO824622 |
| SO8262/52 | CAP 8413 | 16 | XO | CAP | CAP | B Unknown | Black& white | 24-JUL-1958 | 1 | SO825620 |
| SO8262/55 | CAP 7582 | 32 | ADP | CAP | CAP | B Unknown | Black& white | 06-JUL-1961 | 1 | SO827620 |
| SO8262/56 | CAP 7582 | 33 | ADP | CAP | CAP | B Unknown | Black& white | 06-JUL-1961 | 1 | SO827620 |
| SO8262/57 | CAP 7607 | 52 | AFX | CAP | CAP | B Unknown | Black& white | 10-JUL-1967 | 1 | SO827620 |
| SO8262/58 | CAP 7607 | 53 | AFX | CAP | CAP | B Unknown | Black& white | 10-JUL-1967 | 1 | SO827620 |
| SO8262/59 | CAP 7733 | 36 | AST | CAP | CAP | B Unknown | Black& white | 10-JUL-1967 | 1 | SO827620 |
| SO8358/1 | WAB 86 | 65 | | WAB | NMR | B 5x5" | Black& white | 01-JUL-1968 | 2 | SO831585 |
| SO8358/2 | WAB 86 | 67 | | WAB | NMR | B 5x5" | Black& white | 01-JUL-1968 | 2 | SO831585 |
| SO8359/1 | CAP 7607 | 49 | AFX | CAP | CAP | B Unknown | Black& white | 07-JUL-1962 | 1 | SO839592 |
| SO8360/1 | WAB 11640 | 2201 | 2201 | WAB | NMR | B Unknown | Black& white | 01-JAN-1962 | 3 | SO834605 |
| SO8360/2 | WAB 11640 | 2203 | 2203 | WAB | NMR | B Unknown | Black& white | 01-JAN-1962 | 3 | SO834605 |
| SO8360/3 | WAB 11649 | 3077 | 3077 | WAB | NMR | B Unknown | Black& white | 01-JAN-1963 | 3 | SO833607 |
| SO8360/4 | WAB 11649 | 3078 | 3078 | WAB | NMR | B Unknown | Black& white | 01-JAN-1963 | 3 | SO833607 |
| SO8360/5 | WAB 11649 | 3079 | 3079 | WAB | NMR | B Unknown | Black& white | 01-JAN-1963 | 3 | SO833607 |

Retreat Farm, Grimley, Worcestershire, Aerial Photographic Interpretation.

| NGR Index Number | Accession Number | Frame | Original Number | Copy right | Repos itory | Film Details | Date Flown | DF | 6 Fig NGR | |
|---------------------|---------------------|----------|--------------------|---------------|----------------|--------------|---------------|-------------|-----------|----------|
| SO8360/6 | WAB 11655 | 3354 | 3354 | WAB | NMR | B Unknown | Black& white | 01-JAN-1964 | 3 | SO834605 |
| SO8360/7 | WAB 11655 | 3357 | 3357 | WAB | NMR | B Unknown | Black& white | 01-JAN-1964 | 3 | SO837608 |
| SO8360/8 | CAP 8380 | 7 | VD | CAP | CAP | B Unknown | Black& white | | | SO833603 |
| SO8360/9 | WAB 11631 | 1510 | 1510 | WAB | NMR | B Unknown | Black& white | 01-JAN-1960 | 3 | SO837608 |
| SO8360/10 | WAB 11631 | 1636 | 1636 | WAB | NMR | B Unknown | Black& white | 01-JAN-1960 | 3 | SO837608 |
| SO8360/11 | WAB 11631 | 1637 | 1637 | WAB | NMR | B Unknown | Black& white | 01-JAN-1960 | 3 | SO833607 |
| SO8360/12 | WAB 11620 | 218 | 218 | WAB | NMR | B Unknown | Black& white | 01-JAN-1956 | 3 | SO837608 |
| SO8360/13 | WAB 11620 | 219 | 219 | WAB | NMR | B Unknown | Black& white | 01-JAN-1956 | 3 | SO837608 |
| SO8360/14 | WAB 11620 | 223 | 223 | WAB | NMR | B Unknown | Black& white | 01-JAN-1956 | 3 | SO837608 |
| SO8360/15 | WAB 11620 | 255 | 255 | WAB | NMR | B Unknown | Black& white | 01-JAN-1956 | 3 | SO833608 |
| SO8360/16 | WAB 11620 | 290 | 290 | WAB | NMR | B Unknown | Black& white | 01-JAN-1956 | 3 | SO837608 |
| SO8360/17 | WAB 11620 | 291 | 291 | WAB | NMR | B Unknown | Black& white | 01-JAN-1956 | 3 | SO837608 |
| SO8360/18 | WAB 11624 | 330 57 | 330 57 | WAB | NMR | B Unknown | Black& white | 01-JAN-1957 | 3 | SO834604 |
| SO8360/19 | WAB 11624 | ORACLE44 | 437 | WAB | NMR | B Unknown | Black& white | 01-JAN-1957 | 3 | SO835603 |
| SO8360/20 | WAB 11624 | ORACLE45 | 439 | WAB | NMR | B Unknown | Black& white | 01-JAN-1957 | 3 | SO832602 |
| SO8360/21 | WAB 11624 | ORACLE46 | 440 | WAB | NMR | B Unknown | Black& white | 01-JAN-1957 | 3 | SO832602 |
| SO8360/22 | WAB 11624 | ORACLE47 | 443 | WAB | NMR | B Unknown | Black& white | 01-JAN-1957 | 3 | SO832602 |
| SO8360/23 | WAB 11624 | ORACLE48 | 438 | WAB | NMR | B Unknown | Black& white | 01-JAN-1957 | 3 | SO836607 |
| SO8360/24 | WAB 11624 | ORACLE49 | 496 | WAB | NMR | B Unknown | Black& white | 01-JAN-1957 | 3 | SO834603 |
| SO8360/25 | WAB 11624 | ORACLE50 | 497 | WAB | NMR | B Unknown | Black& white | 01-JAN-1957 | 3 | SO834603 |
| SO8360/26 | WAB 11624 | ORACLE51 | 610 | WAB | NMR | B Unknown | Black& white | 01-JAN-1957 | 3 | SO834603 |
| SO8360/27 | WAB 138 | 52 | | WAB | NMR | B 5x5" | Black& white | 01-JUL-1969 | 2 | SO836600 |
| SO8360/28 | WAB 138 | 61 | | WAB | NMR | B 5x5" | Black& white | 01-JUL-1969 | 2 | SO836600 |
| SO8360/29 | WAB 138 | 70 | | WAB | NMR | B 5x5" | Black& white | 01-JUL-1969 | 2 | SO836600 |
| SO8360/30 | WAB 138 | 53 | | WAB | NMR | B 5x5" | Black& white | 01-JUL-1969 | 2 | SO836608 |
| SO8360/31 | WAB 138 | 62 | | WAB | NMR | B 5x5" | Black& white | 01-JUL-1969 | 2 | SO836608 |
| SO8360/32 | WAB 138 | 69 | | WAB | NMR | B 5x5" | Black& white | 01-JUL-1969 | 2 | SO836608 |
| SO8360/33 | WAB 138 | 71 | | WAB | NMR | B 5x5" | Black& white | 01-JUL-1969 | 2 | SO833607 |
| SO8360/34 | WAB 226 | 63 | | WAB | NMR | B 5x5" | Black& white | 18-JUL-1970 | 1 | SO835603 |
| SO8360/35 | WAB 226 | 64 | | WAB | NMR | B 5x5" | Black& white | 18-JUL-1970 | 1 | SO833607 |
| SO8360/36 | CAP 8143 | 44 | NE | CAP | CAP | B Unknown | Black& white | 12-AUG-1953 | 1 | SO836608 |
| SO8360/37 | CAP 8243 | 66 | OU | CAP | CAP | B Unknown | Black& white | 09-JUL-1954 | 1 | SO833607 |
| SO8360/38 | CAP 8243 | 67 | OU | CAP | CAP | B Unknown | Black& white | 09-JUL-1954 | 1 | SO833607 |
| SO8360/39 | CAP 8243 | 68 | OU | CAP | CAP | B Unknown | Black& white | 09-JUL-1954 | 1 | SO833607 |
| SO8360/41 | CAP 8413 | 8 | XO | CAP | CAP | B Unknown | Black& white | 24-JUL-1958 | 1 | SO836608 |
| SO8360/42 | CAP 7547 | 72 | ABF | CAP | CAP | B 5x5" | Black& white | 17-JUN-1960 | 1 | SO836609 |
| SO8360/43 | CAP 7547 | 74 | ABF | CAP | CAP | B 5x5" | Black& white | 17-JUN-1960 | 1 | SO834608 |

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|------------------|------------------|-------|-----------------|------------|-------------|-----------------------------|-------------|----|-----------|
| S08360/44 | CAP 7547 | 75 | ABF | CAP | CAP | B 5x5" Black& white | 17-JUN-1960 | 1 | S0834608 |
| S08360/45 | CAP 7547 | 76 | ABF | CAP | CAP | B 5x5" Black& white | 17-JUN-1960 | 1 | S0836609 |
| S08360/46 | CAP 7607 | 51 | AFX | CAP | CAP | B Unknown Black& white | 07-JUL-1962 | 1 | S0834605 |
| S08360/47 | CAP 7646 | 136 | AKM | CAP | CAP | B Unknown Black& white | 04-AUG-1964 | 1 | S0836608 |
| S08360/48 | CAP 7646 | 138 | AKM | CAP | CAP | B Unknown Black& white | 04-AUG-1964 | 1 | S0836608 |
| S08360/49 | CAP 7699 | 17 | AOV | CAP | CAP | B Unknown Black& white | 02-JUL-1966 | 1 | S0830609 |
| S08360/50 | CAP 7729 | 1 | ASM | CAP | CAP | B Unknown Black& white | 04-JUL-1967 | 1 | S0834605 |
| S08360/51 | CAP 7849 | 47 | BGD | CAP | CAP | B Unknown Black& white | 15-JUL-1971 | 1 | S0830609 |
| S08360/52 | CAP 7849 | 49 | BGD | CAP | CAP | B Unknown Black& white | 15-JUL-1971 | 1 | S0836608 |
| S08360/53 | CAP 7920 | 85 | BUF | CAP | CAP | B Unknown Black& white | 12-JUL-1975 | 1 | S0836608 |
| S08360/54 | JAP 1434 | 28 | 861 | JAP | NMR | B 35 mm B&W copy clr | 10-AUG-1977 | 1 | S0836608 |
| S08360/55 | JAP 1434 | 29 | 860 | JAP | NMR | B 35 mm B&W copy clr | 10-AUG-1977 | 1 | S0832606 |
| S08360/56 | JAP 1434 | 30 | 859 | JAP | NMR | B 35 mm B&W copy clr | 10-AUG-1977 | 1 | S0836608 |
| S08360/57 | JAP 1730 | 13 | 440 | JAP | NMR | B 35 mm B&W copy clr | 28-JUL-1979 | 1 | S0838605 |
| S08360/58 | JAP 1730 | 14 | 439 | JAP | NMR | B 35 mm B&W copy clr | 28-JUL-1979 | 1 | S0836602 |
| S08360/60 | CAP 8143 | 45 | NE | CAP | CAP | B Unknown Black& white | 12-AUG-1953 | 1 | S0836608 |
| S08360/61 | CAP 8143 | 46 | NE | CAP | CAP | B Unknown Black& white | 12-AUG-1953 | 1 | S0836608 |
| S08360/62 | CAP 8243 | 62 | OU | CAP | CAP | B Unknown Black& white | 09-JUL-1954 | 1 | S0833607 |
| S08360/63 | CAP 8243 | 63 | OU | CAP | CAP | B Unknown Black& white | 09-JUL-1954 | 1 | S0833607 |
| S08360/64 | CAP 8243 | 64 | OU | CAP | CAP | B Unknown Black& white | 09-JUL-1954 | 1 | S0833607 |
| S08360/65 | CAP 8243 | 65 | OU | CAP | CAP | B Unknown Black& white | 09-JUL-1954 | 1 | S0833607 |
| S08360/66 | WAB 902 | 188 | | WAB | NMR | B 5x5" Black& white | 01-JUL-1975 | 2 | S0836608 |
| S08360/67 | WAB 902 | 189 | | WAB | NMR | B 5x5" Black& white | 01-JUL-1975 | 2 | S0833600 |
| S08360/68 | WAB 902 | 190 | | WAB | NMR | B 5x5" Black& white | 01-JUL-1975 | 2 | S0833600 |
| S08360/69 | NMR 18410 | 35 | | EHC | NMR | B 35 mm Colour neg | 26-JUL-1999 | 1 | S0836607 |
| S08360/70 | NMR 18410 | 36 | | EHC | NMR | B 35 mm Colour neg | 26-JUL-1999 | 1 | S0836608 |
| S08360/71 | NMR 18433 | 18 | | EHC | NMR | B 70mm,120,220 Black& white | 26-JUL-1999 | 1 | S0836608 |
| S08360/72 | NMR 18433 | 19 | | EHC | NMR | B 70mm,120,220 Black& white | 26-JUL-1999 | 1 | S0835608 |
| S08360/73 | NMR 18433 | 20 | | EHC | NMR | B 70mm,120,220 Black& white | 26-JUL-1999 | 1 | S0835608 |
| S08360/74 | NMR 18411 | 01 | | EHC | NMR | B 35 mm Colour neg | 26-JUL-1999 | 1 | S0836608 |
| S08360/75 | NMR 18411 | 02 | | EHC | NMR | B 35 mm Colour neg | 26-JUL-1999 | 1 | S0836608 |
| S08360/76 | NMR 18411 | 03 | | EHC | NMR | B 35 mm Colour neg | 26-JUL-1999 | 1 | S0836608 |
| S08360/77 | NMR 18395 | 06 | | EHC | NMR | B 35 mm Colour slide | 26-JUL-1999 | 1 | S0836607 |
| S08360/78 | NMR 18395 | 07 | | EHC | NMR | B 35 mm Colour slide | 26-JUL-1999 | 1 | S0836608 |
| S08361/1 | WAB 11657 | 3502 | 65 | WAB | NMR | B Unknown Black& white | 01-JAN-1965 | 3 | S0837614 |
| S08361/2 | WAB 11657 | 3503 | 65 | WAB | NMR | B Unknown Black& white | 01-JAN-1965 | 3 | S0835617 |
| S08361/3 | WAB 11649 | 3074 | 3074 | WAB | NMR | B Unknown Black& white | 01-JAN-1963 | 3 | S0831611 |

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|---------------------|---------------------|----------|--------------------|---------------|----------------|--------------|---------------|-------------|-------|----------|
| S08361/4 | WAB 11649 | 3075 | 3075 | WAB | NMR | B Unknown | Black& white | 01-JAN-1963 | 3 | S0831611 |
| S08361/5 | WAB 11649 | 3076 | 3076 | WAB | NMR | B Unknown | Black& white | 01-JAN-1963 | 3 | S0834610 |
| S08361/6 | WAB 11655 | 3355 | 3355 | WAB | NMR | B Unknown | Black& white | 01-JAN-1964 | 3 | S0835617 |
| S08361/7 | WAB 11655 | 3356 | 3356 | WAB | NMR | B Unknown | Black& white | 01-JAN-1964 | 3 | S0835617 |
| S08361/8 | CAP 8380 | 8 | VD | CAP | CAP | B Unknown | Black& white | | | S0830613 |
| S08361/9 | CAP 8380 | 23 | VD | CAP | CAP | B Unknown | Black& white | | | S0830613 |
| S08361/10 | WAB 86 | 61 | | WAB | NMR | B 5x5" | Black& white | 01-JUL-1968 | 2 | S0831612 |
| S08361/11 | WAB 86 | 64 | | WAB | NMR | B 5x5" | Black& white | 01-JUL-1968 | 2 | S0831612 |
| S08361/12 | WAB 11628 | 868 | 868 | WAB | NMR | B Unknown | Black& white | 01-JAN-1959 | 3 | S0830611 |
| S08361/13 | WAB 11628 | 896 | 896 | WAB | NMR | B Unknown | Black& white | 01-JAN-1959 | 3 | S0830611 |
| S08361/14 | WAB 11628 | 897 | 897 | WAB | NMR | B Unknown | Black& white | 01-JAN-1959 | 3 | S0830611 |
| S08361/15 | WAB 11631 | 1507 | 1507 | WAB | NMR | B Unknown | Black& white | 01-JAN-1960 | 3 | S0830613 |
| S08361/16 | WAB 11631 | 1508 | 1508 | WAB | NMR | B Unknown | Black& white | 01-JAN-1960 | 3 | S0830613 |
| S08361/17 | WAB 11631 | 1511 | 1511 | WAB | NMR | B Unknown | Black& white | 01-JAN-1960 | 3 | S0834610 |
| S08361/18 | WAB 11620 | 217 | 217 | WAB | NMR | B Unknown | Black& white | 01-JAN-1956 | 3 | S0830613 |
| S08361/19 | WAB 11620 | 222 | 222 | WAB | NMR | B Unknown | Black& white | 01-JAN-1956 | 3 | S0830613 |
| S08361/20 | WAB 11620 | 241 | 241 | WAB | NMR | B Unknown | Black& white | 01-JAN-1956 | 3 | S0837610 |
| S08361/21 | WAB 11620 | 242 | 242 | WAB | NMR | B Unknown | Black& white | 01-JAN-1956 | 3 | S0830614 |
| S08361/22 | WAB 11620 | 249 | 249 | WAB | NMR | B Unknown | Black& white | 01-JAN-1956 | 3 | S0830614 |
| S08361/23 | WAB 11620 | 250 | 250 | WAB | NMR | B Unknown | Black& white | 01-JAN-1956 | 3 | S0830614 |
| S08361/24 | WAB 11620 | 252 | 252 | WAB | NMR | B Unknown | Black& white | 01-JAN-1956 | 3 | S0830614 |
| S08361/25 | WAB 11620 | 253 | 253 | WAB | NMR | B Unknown | Black& white | 01-JAN-1956 | 3 | S0830614 |
| S08361/26 | WAB 11620 | 340 | 340 | WAB | NMR | B Unknown | Black& white | 01-JAN-1956 | 3 | S0835612 |
| S08361/27 | WAB 11624 | 327 57 | 327 57 | WAB | NMR | B Unknown | Black& white | 01-JAN-1957 | 3 | S0837617 |
| S08361/28 | WAB 11624 | ORACLES2 | 495 | WAB | NMR | B Unknown | Black& white | 01-JAN-1957 | 3 | S0835611 |
| S08361/29 | WAB 11624 | ORACLES3 | 609 | WAB | NMR | B Unknown | Black& white | 01-JAN-1957 | 3 | S0831611 |
| S08361/30 | WAB 138 | 54 | | WAB | NMR | B 5x5" | Black& white | 01-JUL-1969 | 2 | S0834616 |
| S08361/31 | WAB 138 | 55 | | WAB | NMR | B 5x5" | Black& white | 01-JUL-1969 | 2 | S0834616 |
| S08361/32 | WAB 138 | 68 | | WAB | NMR | B 5x5" | Black& white | 01-JUL-1969 | 2 | S0834616 |
| S08361/33 | WAB 138 | 56 | | WAB | NMR | B 5x5" | Black& white | 01-JUL-1969 | 2 | S0830618 |
| S08361/34 | WAB 138 | 58 | | WAB | NMR | B 5x5" | Black& white | 01-JUL-1969 | 2 | S0830613 |
| S08361/35 | WAB 138 | 59 | | WAB | NMR | B 5x5" | Black& white | 01-JUL-1969 | 2 | S0830613 |
| S08361/36 | WAB 138 | 60 | | WAB | NMR | B 5x5" | Black& white | 01-JUL-1969 | 2 | S0830613 |
| S08361/37 | WAB 138 | 63 | | WAB | NMR | B 5x5" | Black& white | 01-JUL-1969 | 2 | S0830613 |
| S08361/38 | WAB 138 | 64 | | WAB | NMR | B 5x5" | Black& white | 01-JUL-1969 | 2 | S0830613 |
| S08361/39 | WAB 138 | 72 | | WAB | NMR | B 5x5" | Black& white | 01-JUL-1969 | 2 | S0830613 |
| S08361/40 | WAB 138 | 73 | | WAB | NMR | B 5x5" | Black& white | 01-JUL-1969 | 2 | S0830613 |

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|---------------------|---------------------|---------|--------------------|---------------|----------------|----------------|---------------|-------------|-----------|----------|
| S08361/41 | WAB 11669 | ORACLE1 | SITE 26 | WAB | NMR | B Unknown | B&W copy b&w | 10-AUG-1955 | 1 | S0834616 |
| S08361/42 | WAB 319 | 66 | | WAB | NMR | B 5x5" | Black& white | 21-JUL-1971 | 1 | S0834610 |
| S08361/43 | JAP 1174 | 21 | 902 | JAP | NMR | B 35 mm | B&W copy clr | 06-JUL-1976 | 1 | S0830616 |
| S08361/44 | JAP 1174 | 22 | 901 | JAP | NMR | B 35 mm | B&W copy clr | 06-JUL-1976 | 1 | S0833614 |
| S08361/45 | JAP 1174 | 23 | 900 | JAP | NMR | B 35 mm | B&W copy clr | 06-JUL-1976 | 1 | S0833614 |
| S08361/46 | JAP 1240 | 2 | 903 | JAP | NMR | B 35 mm | B&W copy clr | 06-JUL-1976 | 1 | S0830616 |
| S08361/47 | CAP 8350 | 5 | TI | CAP | CAP | B Unknown | Black& white | 14-JUN-1956 | 1 | S0830613 |
| S08361/51 | CAP 8390 | 56 | VN | CAP | CAP | B Unknown | Black& white | 02-JUL-1957 | 1 | S0836613 |
| S08361/52 | CAP 8427 | 67 | YS | CAP | CAP | B Unknown | Black& white | 20-JUN-1959 | 1 | S0830613 |
| S08361/53 | CAP 8427 | 69 | YS | CAP | CAP | B Unknown | Black& white | 20-JUN-1959 | 1 | S0830613 |
| S08361/54 | CAP 7547 | 81 | ABP | CAP | CAP | B 5x5" | Black& white | 17-JUN-1960 | 1 | S0835611 |
| S08361/55 | CAP 7639 | 14 | AJG | CAP | CAP | B Unknown | Black& white | 25-JUN-1964 | 1 | S0835616 |
| S08361/56 | CAP 7639 | 16 | AJG | CAP | CAP | B Unknown | Black& white | 25-JUN-1964 | 1 | S0835616 |
| S08361/57 | CAP 7639 | 17 | AJG | CAP | CAP | B Unknown | Black& white | 25-JUN-1964 | 1 | S0830610 |
| S08361/58 | CAP 7639 | 19 | AJG | CAP | CAP | B Unknown | Black& white | 25-JUN-1964 | 1 | S0832616 |
| S08361/59 | CAP 7728 | 96 | ASL | CAP | CAP | B Unknown | Black& white | 04-JUL-1967 | 1 | S0832616 |
| S08361/60 | CAP 7728 | 98 | ASL | CAP | CAP | B Unknown | Black& white | 04-JUL-1967 | 1 | S0830612 |
| S08361/61 | CAP 7811 | 42 | BBW | CAP | CAP | B Unknown | Black& white | 15-JUN-1970 | 1 | S0834616 |
| S08361/62 | CAP 7882 | 19 | BOE | CAP | CAP | B Unknown | Black& white | 13-JUL-1973 | 1 | S0835616 |
| S08361/63 | CAP 7894 | 15 | BQH | CAP | CAP | B Unknown | Black& white | 09-JUL-1974 | 1 | S0830613 |
| S08361/64 | CAP 7894 | 16 | BQH | CAP | CAP | B Unknown | Black& white | 09-JUL-1974 | 1 | S0830613 |
| S08361/65 | CAP 7894 | 17 | BQH | CAP | CAP | B Unknown | Black& white | 09-JUL-1974 | 1 | S0830613 |
| S08361/66 | JAP 1731 | 25 | 869 | JAP | NMR | B 35 mm | B&W copy clr | 21-JUL-1979 | 1 | S0830614 |
| S08361/67 | JAP 1731 | 26 | 870 | JAP | NMR | B 35 mm | B&W copy clr | 21-JUL-1979 | 1 | S0830614 |
| S08361/68 | JAP 1731 | 27 | 871 | JAP | NMR | B 35 mm | B&W copy clr | 21-JUL-1979 | 1 | S0830614 |
| S08361/69 | NMR 1575 | 9-12 | | CRW | NMR | B 70mm,120,220 | Black& white | 05-JUL-1979 | 1 | S0830613 |
| S08361/70 | NMR 1575 | 13-14 | | CRW | NMR | B 70mm,120,220 | Black& white | 05-JUL-1979 | 1 | S0831613 |
| S08361/71 | NMR 1809 | 382-386 | | CRW | NMR | B 70mm,120,220 | Black& white | 25-JUN-1980 | 1 | S0830610 |
| S08361/72 | NMR 21694 | 07 | | EHC | NMR | B 70mm,120,220 | Black& white | 15-JUL-2002 | 1 | S0830613 |
| S08361/73 | NMR 21694 | 08 | | EHC | NMR | B 70mm,120,220 | Black& white | 15-JUL-2002 | 1 | S0830613 |
| S08361/74 | NMR 21694 | 09 | | EHC | NMR | B 70mm,120,220 | Black& white | 15-JUL-2002 | 1 | S0830613 |
| S08361/75 | NMR 21694 | 10 | | EHC | NMR | B 70mm,120,220 | Black& white | 15-JUL-2002 | 1 | S0830613 |
| S08361/76 | NMR 21686 | 35 | | EHC | NMR | B 35 mm | Colour neg | 15-JUL-2002 | 1 | S0830613 |
| S08361/77 | NMR 21686 | 36 | | EHC | NMR | B 35 mm | Colour neg | 15-JUL-2002 | 1 | S0830613 |
| S08361/78 | NMR 21686 | 37 | | EHC | NMR | B 35 mm | Colour neg | 15-JUL-2002 | 1 | S0830613 |
| S08458/1 | JAP 1168 | 24 | C 184 | JAP | NMR | B 35 mm | B&W copy clr | 21-JUL-1975 | 1 | S0843587 |
| S08458/2 | NMR 4644 | 15 | | CRW | NMR | B 70mm,120,220 | Black& white | 10-JUN-1990 | 1 | S0842589 |

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| S08459/1 | WAB 11657 | 3501 | 65 | WAB | NMR | B Unknown Black& white | 01-JAN-1965 | 3 | S0841596 |
| S08459/2 | WAB 11640 | 2204 | 2204 | WAB | NMR | B Unknown Black& white | 01-JAN-1962 | 3 | S0840591 |
| S08459/3 | WAB 11624 | 332 57 | 332 57 | WAB | NMR | B Unknown Black& white | 01-JAN-1957 | 3 | S0841596 |
| S08459/4 | WAB 11624 | 333 57 | 333 57 | WAB | NMR | B Unknown Black& white | 01-JAN-1957 | 3 | S0841596 |
| S08459/5 | WAB 11624 | 331 57 | 331 57 | WAB | NMR | B Unknown Black& white | 01-JAN-1957 | 3 | S0841596 |
| S08459/6 | WAB 11667 | ORACLE1 | SITE 17 | WAB | NMR | B Unknown B&W copy b&w | 04-AUG-1955 | 1 | S0841596 |
| S08459/7 | CAP 8380 | 1 | VD | CAP | CAP | B Unknown Black& white | 16-JUN-1957 | 1 | S0841596 |
| S08459/8 | CAP 8380 | 3 | VD | CAP | CAP | B Unknown Black& white | 16-JUN-1957 | 1 | S0841596 |
| S08459/9 | CAP 7656 | 58 | ALD | CAP | CAP | B Unknown Black& white | 17-JUN-1965 | 1 | S0841596 |
| S08459/10 | CAP 7920 | 82 | BUF | CAP | CAP | B Unknown Black& white | 12-JUL-1975 | 1 | S0843594 |
| S08459/11 | NMR 4644 | 10 | | CRW | NMR | B 70mm,120,220 Black& white | 10-JUN-1990 | 1 | S0843594 |
| S08459/12 | NMR 4644 | 11 | | CRW | NMR | B 70mm,120,220 Black& white | 10-JUN-1990 | 1 | S0841595 |
| S08459/13 | NMR 4644 | 12 | | CRW | NMR | B 70mm,120,220 Black& white | 10-JUN-1990 | 1 | S0841595 |
| S08459/14 | NMR 4644 | 13 | | CRW | NMR | B 70mm,120,220 Black& white | 10-JUN-1990 | 1 | S0842595 |
| S08459/15 | NMR 4644 | 14 | | CRW | NMR | B 70mm,120,220 Black& white | 10-JUN-1990 | 1 | S0842595 |
| S08459/16 | JAP 19142 | X136 | E23 | JAP | JAP | B 35 mm Colour slide | 16-JUL-1996 | 1 | S0841595 |
| S08459/17 | JAP 19142 | X137 | E23 | JAP | JAP | B 35 mm Colour slide | 16-JUL-1996 | 1 | S0841595 |
| S08460/1 | WAB 11625 | ORACLE86 | 645 | WAB | NMR | B Unknown Black& white | 01-JAN-1958 | 3 | S0845603 |
| S08460/2 | WAB 11625 | ORACLE87 | 647 | WAB | NMR | B Unknown Black& white | 01-JAN-1958 | 3 | S0845603 |
| S08460/3 | WAB 11625 | ORACLE88 | 648 | WAB | NMR | B Unknown Black& white | 01-JAN-1958 | 3 | S0845603 |
| S08460/4 | WAB 11628 | 861 | 861 | WAB | NMR | B Unknown Black& white | 01-JAN-1959 | 3 | S0845603 |
| S08460/5 | WAB 11628 | 862 | 862 | WAB | NMR | B Unknown Black& white | 01-JAN-1959 | 3 | S0845603 |
| S08460/6 | WAB 11628 | 863 | 863 | WAB | NMR | B Unknown Black& white | 01-JAN-1959 | 3 | S0845603 |
| S08460/10 | CAP 8143 | 48 | NE | CAP | CAP | B Unknown Black& white | 12-AUG-1953 | 1 | S0845604 |
| S08460/11 | CAP 8413 | 1 | XO | CAP | CAP | B Unknown Black& white | 24-JUL-1958 | 1 | S0845604 |
| S08460/12 | CAP 8413 | 4 | XO | CAP | CAP | B Unknown Black& white | 24-JUL-1958 | 1 | S0845604 |
| S08460/13 | CAP 7607 | 48 | AFX | CAP | CAP | B Unknown Black& white | 07-JUL-1962 | 1 | S0845604 |
| S08460/14 | CAP 7699 | 18 | AOV | CAP | CAP | B Unknown Black& white | 02-JUL-1966 | 1 | S0845604 |
| S08460/18 | CAP 8143 | 47 | NE | CAP | CAP | B Unknown Black& white | 12-AUG-1953 | 1 | S0845604 |
| S08460/20 | CAP 8143 | 49 | NE | CAP | CAP | B Unknown Black& white | 12-AUG-1953 | 1 | S0845604 |
| S08460/21 | CAP 8143 | 50 | NE | CAP | CAP | B Unknown Black& white | 12-AUG-1953 | 1 | S0845604 |
| S08460/22 | CAP 8143 | 51 | NE | CAP | CAP | B Unknown Black& white | 12-AUG-1953 | 1 | S0845604 |
| S08460/23 | CAP 8283 | 75 | QM | CAP | CAP | B Unknown Black& white | 06-JUL-1955 | 1 | S0844603 |
| S08460/25 | CAP 7535 | ORACLE2 | | CAP | CAP | B Unknown Black& white | | | S0845603 |
| S08460/29 | NMR 18433 | 21 | | EHC | NMR | B 70mm,120,220 Black& white | 26-JUL-1999 | 1 | S0845607 |
| S08460/34 | NMR 18411 | 05 | | EHC | NMR | B 35 mm Colour neg | 26-JUL-1999 | 1 | S0845607 |
| S08460/35 | NMR 18411 | 06 | | EHC | NMR | B 35 mm Colour neg | 26-JUL-1999 | 1 | S0844607 |

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|---------------------|---------------------|-------|--------------------|---------------|----------------|--------------|---------------|-------------|------------|
| S08460/36 | NMR 18411 | 07 | | EHC | NMR | B 35 mm | Colour neg | 26-JUL-1999 | 1 S0845607 |
| S08461/1 | JAP 1731 | 28 | 872 | JAP | NMR | B 35 mm | B&W copy clr | 21-JUL-1979 | 1 S0840610 |
| S08461/2 | JAP 1731 | 29 | 873 | JAP | NMR | B 35 mm | B&W copy clr | 21-JUL-1979 | 1 S0840610 |

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| RAF/106G/UK/1333 | 274 | FV | 7302 | 7304 | P | S0823606 S0835608 | 29-MAR-1946 | 1 | AB | 9900 | 20.00 | BW87 | MOD | RAF |
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| RAF/106G/UK/1333 | 274 | V | 5444 | 5446 | P | S0837586 S0825587 | 29-MAR-1946 | 1 | AB | 9900 | 20.00 | BW87 | MOD | RAF |
| RAF/CPE/UK/1873 | 532 | FP | 1016 | 1018 | P | S0837602 S0827603 | 04-DEC-1946 | 1 | AC | 12000 | 36.00 | BW87 | MOD | RAF |
| RAF/82/1372 | 1738 | F22 | 212 | 215 | P | S0837591 S0825591 | 23-MAR-1956 | 1 | AC | 5000 | 20.00 | BW87 | MOD | CRW |
| RAF/543/401 | 1878 | F22 | 4 | 6 | N | S0839617 S0839604 | 26-SEP-1958 | 1 | B | 10000 | 36.00 | BW87 | MOD | CRW |
| RAF/543/401 | 1878 | F22 | 7 | 9 | P | S0840598 S0839586 | 26-SEP-1958 | 1 | B | 10000 | 36.00 | BW87 | MOD | CRW |
| RAF/543/401 | 1878 | F22 | 76 | 76 | P | S0836587 S0836587 | 26-SEP-1958 | 1 | B | 10000 | 36.00 | BW87 | MOD | CRW |
| RAF/543/401 | 1878 | F22 | 77 | 77 | N | S0835592 S0835592 | 26-SEP-1958 | 1 | B | 10000 | 36.00 | BW87 | MOD | CRW |
| RAF/58/2697 | 1889 | F21 | 65 | 65 | N | S0848608 S0848608 | 28-JAN-1959 | 1 | BC | 19400 | 20.00 | BW87 | MOD | CRW |
| RAF/58/2697 | 1889 | F21 | 66 | 67 | P | S0835607 S0821607 | 28-JAN-1959 | 1 | BC | 19400 | 20.00 | BW87 | MOD | CRW |
| RAF/58/2736 | 1891 | F21 | 83 | 84 | P | S0838611 S0838599 | 16-MAR-1959 | 1 | BC | 20000 | 20.00 | BW87 | MOD | CRW |
| RAF/58/3971 | 2005 | V | 79 | 79 | P | S0827618 S0827618 | 06-DEC-1960 | 1 | BC | 12000 | 6.00 | BW99 | MOD | CRW |
| RAF/58/3971 | 2005 | V | 80 | 80 | N | S0829611 S0829611 | 06-DEC-1960 | 1 | BC | 12000 | 6.00 | BW99 | MOD | CRW |
| RAF/58/3971 | 2005 | V | 81 | 81 | P | S0831605 S0831605 | 06-DEC-1960 | 1 | BC | 12000 | 6.00 | BW99 | MOD | CRW |
| RAF/58/3971 | 2005 | V | 82 | 82 | N | S0833598 S0833598 | 06-DEC-1960 | 1 | BC | 12000 | 6.00 | BW99 | MOD | CRW |
| RAF/58/3971 | 2005 | V | 83 | 83 | P | S0836591 S0836591 | 06-DEC-1960 | 1 | BC | 12000 | 6.00 | BW99 | MOD | CRW |
| RAF/58/5965 | 2183 | F21 | 282 | 283 | P | S0837606 S0830606 | 09-OCT-1963 | 1 | AB | 10000 | 20.00 | BW87 | MOD | CRW |
| OS/69332 | 9383 | V | 3 | 4 | P | S0817586 S0837586 | 04-JUL-1969 | 1 | A | 22000 | 6.00 | BW99 | NMR | CRW |
| OS/69256 | 9411 | V | 44 | 44 | P | S0828589 S0828589 | 10-JUN-1969 | 1 | A | 22000 | 6.00 | BW99 | NMR | CRW |
| OS/62058 | 9414 | V | 62 | 64 | P | S0826599 S0838593 | 07-JUN-1962 | 1 | A | 7000 | 12.00 | BW99 | NMR | CRW |
| OS/62058 | 9414 | V | 69 | 69 | N | S0838606 S0838606 | 07-JUN-1962 | 1 | A | 7000 | 12.00 | BW99 | NMR | CRW |
| OS/62058 | 9414 | V | 70 | 71 | P | S0832609 S0826612 | 07-JUN-1962 | 1 | A | 7000 | 12.00 | BW99 | NMR | CRW |
| OS/68168 | 9427 | V | 170 | 172 | P | S0829607 S0828592 | 10-JUN-1968 | 1 | A | 7500 | 12.00 | BW99 | NMR | CRW |
| OS/68295 | 9428 | V | 30 | 33 | P | S0840613 S0841593 | 06-SEP-1968 | 1 | A | 7500 | 12.00 | BW99 | NMR | CRW |
| OS/89107 | 13454 | V | 818 | 821 | P | S0840588 S0839602 | 03-MAY-1989 | 1 | A | 5100 | 12.00 | BW99 | OS | CRW |
| EA/AEL/94C/725 | 40076 | V | 2304 | 2306 | N | S0828605 S0834605 | 09-FEB-1994 | 1 | A | 3000 | 6.00 | CC99 | AEL | EA |
| EA/AEL/94C/725 | 40076 | V | 2307 | 2308 | P | S0836606 S0839606 | 09-FEB-1994 | 1 | A | 3000 | 6.00 | CC99 | AEL | EA |
| EA/AEL/94C/725 | 40076 | V | 2336 | 2337 | P | S0840601 S0837600 | 09-FEB-1994 | 1 | A | 3000 | 6.00 | CC99 | AEL | EA |

Retreat Farm, Grimley, Worcestershire, Aerial Photographic Interpretation.

-2-

| Sortie Number | Library Number | Can Pos | Start Frame | End Frame | Held | National Reference Start | Reference End | Date | Date | Qual Flag | Scale ity 1: | Focal Length | Format | Repos itory | Copy Right |
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| EA/AEL/94C/725 | 40076 | V | 2338 | 2338 | N | S0835600 | S0835600 | 09-FEB-1994 | 1 | A | 3000 | 6.00 | 0099 | AEL | EA |
| EA/AEL/94C/725 | 40076 | V | 2339 | 2340 | N | S0836589 | S0836591 | 09-FEB-1994 | 1 | A | 3000 | 6.00 | 0099 | AEL | EA |
| EA/AEL/94C/725 | 40076 | V | 2404 | 2405 | N | S0838597 | S0838595 | 09-FEB-1994 | 1 | A | 3000 | 6.00 | 0099 | AEL | EA |

Total 15 Sorties 68 Prints

Appendix 4: Geophysical survey report

GSB Prospection: Geophysical survey report 2003/73

SITE SUMMARY SHEET

2003 / 73 Retreat Farm, Grimley, Worcestershire

NGR: SO 837 601 (approximate centre).

Location, topography and geology

The site is situated north of Worcester between the A443 road and the village of Grimley. To the south and the west of the study area is an existing quarry. The two fields that are the focus of the investigation are flat, with close cropped pasture. The soils at the site are deep well drained coarse loamy and sandy soils of the Wick 1 association (541r) and overlie glaciofluvial or river terrace gravels (SSEW 1983).

Archaeology

Although significant archaeology is known to exist in the locality of the survey area, very little has been proved to exist within it. Low earthworks appear to be present within the study area, although it is not certain if they relate to former agricultural boundaries or ridge and furrow.

Aims of Survey

The aim of the magnetometer survey was to locate anomalies of potential archaeological within the area of interest. The geophysical survey forms part of a larger investigation undertaken by **Worcestershire Historic Environment and Archaeology Service (WHEAS)**.

Summary of Results *

A scan using fluxgate gradiometers revealed a low magnetic background throughout the area investigated. On the basis of the scan two areas were chosen for detailed survey.

The detailed survey covered a total of 1ha and confirmed the low magnetic background suggested by the scan. A number of pit type anomalies were detected in both survey areas. Of these, the most promising was a group of anomalies in the south west corner of the area of investigation (Area 1). Several curving trends in this block may also have some archaeological interest. By way of contrast, the group in the northern part of the investigation area (Area 2) is likely to be part of a former field boundary.

*** It is essential that this summary is read in conjunction with the detailed results of the survey.**

SURVEY RESULTS

2003 / 73 Retreat Farm, Grimley, Worcestershire

1. Survey Area

- 1.1 Scanning with a fluxgate gradiometer assessed approximately 7.5ha of land. On the basis of the scan, two areas totalling 1ha were chosen for detailed survey. Figure 1 shows the location of the survey areas on the basemap at a scale of 1:2500
- 1.2 The survey grid was set out by **GSB Prospection** and tied in to existing boundaries using an EDM. Detailed tie-in information has been lodged with the client.

9 Display

- 2.1 The results are displayed as X-Y traces, dot density plots and greyscale images. These display formats are discussed in the *Technical Information* section, at the end of the text.
- 2.2 Figures 2 and 3 are a summary greyscale image and an interpretation of the survey results superimposed on the basemap at a scale of 1:1250. Figures 4 to 7 are data plots and interpretation diagrams of each survey area produced at a scale of 1:500.
- 2.3 Letters in parentheses in the text of the report refer to anomalies highlighted in the relevant interpretation diagram.

3. General Considerations - Complicating Factors

- 3.1 The two pasture fields provided good survey conditions over the majority of the study area.
- 3.2 The soils are of a type that would be expected to provide a reasonable level of magnetic response particularly where remains of occupation and industrial activity are likely to be present.

4. Results of Survey

- 4.1 With gradiometers in scanning mode, the evaluation area was examined along traverses spaced at intervals of approximately 10-15m. During this operation, fluctuations in magnetic signal were observed on the instruments' display panel. Any significant variations were investigated more closely to determine their likely origin and those anomalies considered to have archaeological potential were marked with canes for detailed, recorded survey.
- 4.2 The site was found to be magnetically quiet, with few anomalies of possible interest located. This suggested low potential for significant settlement or other large scale archaeological activity. However, sufficient anomalies were found in both of the fields to produce a sampling strategy that covered all the responses and was extended to give good spatial cover.

Area 1

- 4.3 This is the larger of the two detailed survey areas and is situated in the southern of the two fields that were scanned.
- 4.4 The detailed survey confirmed the low background response, although a number of ferrous 'spikes' are evenly distributed across the survey area. These responses are likely to be modern in origin.
- 4.5 The most interesting anomalies are a series of small scale responses that are located in the south west corner of the proposed extraction area. The archaeological interpretation of these suggests that they may be the result of pits, perhaps indicating unenclosed settlement of some kind. This interpretation is cautious, however, as natural variation in the subsoil can produce similar responses.
- 4.6 Additional to the pit type responses is a series of trends in the central and western part of the survey area. While it is possible that the trends are due to ploughing, those at (A) may be of greater archaeological interest as they may represent a ploughed out sub-circular feature.

Area 2

- 4.7 This sample lies within the northern of the two fields in this evaluation.
- 4.8 The evidence for archaeological type anomalies in the data is slight. While there is a row of possible pit type anomalies the signal is very weak and the interpretation is equally tentative. The putative pits lie within a larger trend and it is possible that they are part of a former boundary.

5. Conclusions

- 5.1 The gradiometer scan suggested a low level of magnetic background response and few anomalies of archaeological interest were identified.
- 5.2 The detailed survey confirmed the general impression suggested by the scan, revealing generally low levels of background fluctuation. Some archaeological type anomalies were detected in both detailed survey blocks. Area 1 revealed the presence of possible pits and some trends that may be of archaeological interest. An archaeological interpretation for the few pit type anomalies detected in Area 2 is more tentative and they may be part of a former boundary.

Project Co-ordinator: Dr C F Gaffney
Project Assistants: C Stephens & B Urmston

Start of Survey: 22nd September 2003
Date of Report: 3rd October 2003

References:

SSEW 1983 *Soils of England and Wales. Sheet 3, Midland and Western England.* Soil Survey of England and Wales.

Terms commonly used in the graphical interpretation of gradiometer data

Ditch / Pit

This category is used only when other evidence is available that supports a clear archaeological interpretation e.g. cropmarks or excavation.

Archaeology

This term is used when the form, nature and pattern of the response is clearly or very probably archaeological but where no supporting evidence exists. These anomalies, whilst considered anthropogenic, could be of any age. If a more precise archaeological interpretation is possible then it will be indicated in the accompanying text.

? Archaeology

The interpretation of such anomalies is often tentative, with the anomalies exhibiting either weak signal strength or forming incomplete archaeological patterns. They may be the result of variable soil depth, plough damage or even aliasing as a result of data collection orientation.

Areas of Increased Magnetic Response

These responses show no visual indications on the ground surface and are considered to have some archaeological potential.

Industrial

Strong magnetic anomalies, that due to their shape and form or the context in which they are found, suggest the presence of kilns, ovens, corn dryers, metal-working areas or hearths. It should be noted that in many instances modern ferrous material can produce similar magnetic anomalies.

Natural

These responses form clear patterns in geographical zones where natural variations are known to produce significant magnetic distortions e.g. palaeochannels or magnetic gravels.

? Natural

These are anomalies that are likely to be natural in origin i.e geological or pedological.

Ridge and Furrow

These are regular and broad linear anomalies that are presumed to be the result of ancient cultivation. In some cases the response may be the result of modern activity.

Ploughing Trend

These are isolated or grouped linear responses. They are normally narrow and are presumed modern when aligned to current field boundaries or following present ploughing.

Trend

This is usually an ill-defined, weak, isolated or obscured linear anomaly of unknown cause or date.

Areas of Magnetic Disturbance

These responses are commonly found in places where modern ferrous or fired materials are present e.g. brick rubble. They are presumed to be modern.

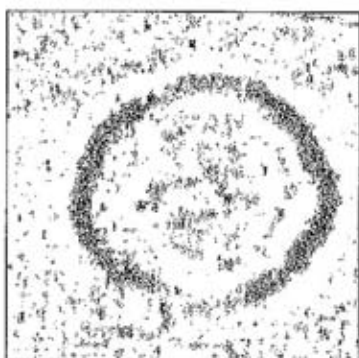
Ferrous Response

This type of response is associated with ferrous material and may result from small items in the topsoil, larger buried objects such as pipes or above ground features such as fence lines or pylons. Ferrous responses are usually regarded as modern. Individual burnt stones, fired bricks or igneous rocks can produce responses similar to ferrous material.

NB This is by no means an exhaustive list and other categories may be used as necessary.

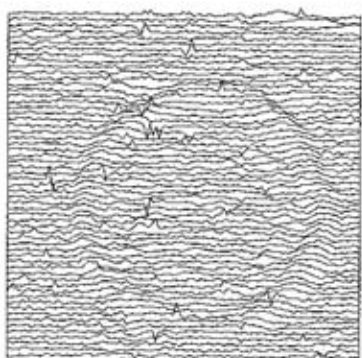
Display Options

The following is a description of the display options used. Unless specifically mentioned in the text, it may be assumed that no filtering or smoothing has been used to enhance the data. For any particular report a limited number of display modes may be used.



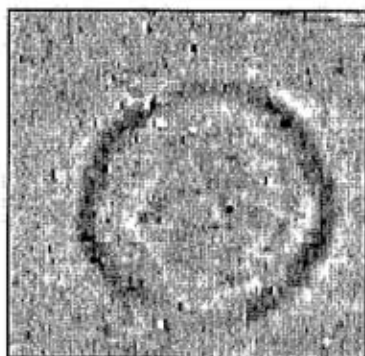
(a) Dot Density

In this display minimum and maximum cut-off levels are chosen. Any value that is below the minimum will appear white, whilst any value above the maximum will be black. Values that lie between these two cut-off levels are depicted with a specified number of dots depending on their relative position between the two levels. Assessing a lower than normal reading involves the use of an inverse plot that reverses the minimum and maximum values, resulting in the lower values being presented by more dots. In either representation, each reading is allocated a unique area dependent on its position on the survey grid, within which numbers of dots are randomly placed. The main limitation of this display method is that multiple plots have to be produced in order to view the whole range of the data. It is also difficult to gauge the true strength of any anomaly without looking at the raw data values. However, this display is favoured for producing plans of sites, where positioning of the anomalies and features is important.



(b) XY Plot

This involves a line representation of the data. Each successive row of data is equally incremented in the Y axis, to produce a stacked profile effect. This display may incorporate a hidden-line removal algorithm, which blocks out lines behind the major peaks and can aid interpretation. The advantages of this type of display are that it allows the full range of the data to be viewed and shows the shape of the individual anomalies. The display may also be changed by altering the horizontal viewing angle and the angle above the plane. The output may be either colour or black and white.



(c) Greyscale

This format divides a given range of readings into a set number of classes. These classes have a predefined arrangement of dots or shade of grey, the intensity increasing with value. This gives an appearance of a toned or grey-scale. Similar plots can be produced in colour, either using a wide range of colours or by selecting two or three colours to represent positive and negative values. While colour plots can look impressive and can be used to highlight certain anomalies, greyscales tend to be more informative.

TECHNICAL INFORMATION

The following is a description of the equipment and display formats used in **GSB Prospection Ltd (GSB)** reports. It should be emphasised that whilst all of the display options are regularly used, the diagrams produced in the final reports are the most suitable to illustrate the data from each site. The choice of diagrams results from the experience and knowledge of the staff of **GSB**.

All survey reports are prepared and submitted on the basis that whilst they are based on a thorough survey of the site, no responsibility is accepted for any errors or omissions.

Instrumentation

(a) Fluxgate Gradiometer - Geoscan FM36/FM256 and Bartington *Grad601-2*

Both the Geoscan and Bartington instruments comprise of two fluxgate magnetometers mounted vertically apart at a distance of 500mm and 1000mm, respectively. The gradiometers are carried by hand, with the bottom sensor approximately 100-300mm from the ground surface. At each survey station, the difference in the magnetic field between the two fluxgates is conventionally measured in nanoTesla (nT), or gamma. The fluxgate gradiometer suppresses any diurnal or regional effects. Generally features up to one metre deep may be detected by this method. Readings are logged at 0.25 or 0.5m intervals along traverses 1.0m apart, unless stated otherwise in the report. Having two gradiometer units mounted laterally with a separation of 1.0m, the Bartington instrument can collect two lines of data per traverse. The *Grad601-2* has marginally greater sensitivity afforded by the increased fluxgate separation, unfortunately this also increases the instrument's susceptibility to external sources of interference.

(b) Resistance Meter - Geoscan RM15

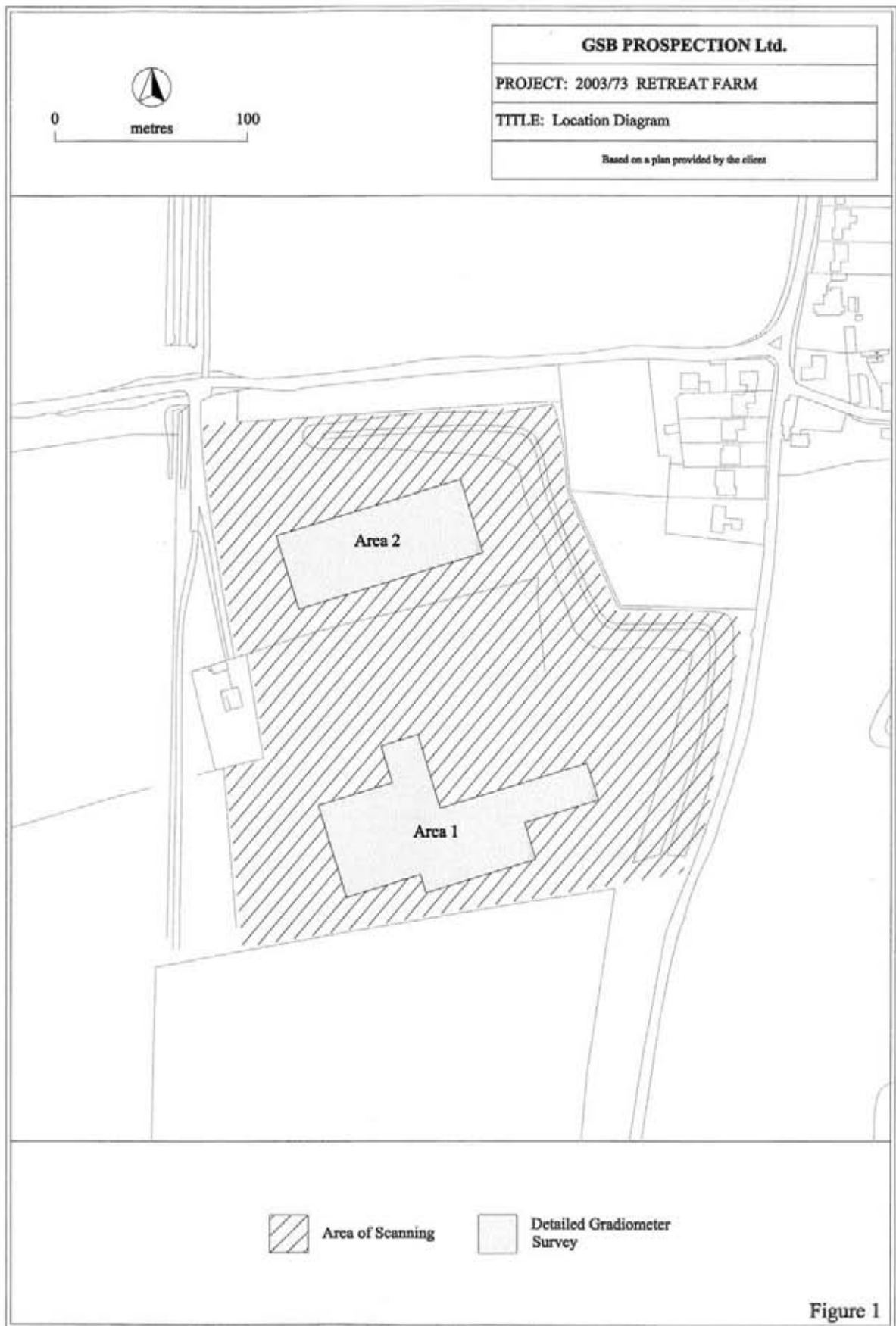
This measures the electrical resistance of the earth, using a system of four electrodes (two current and two potential.) Depending on the arrangement of these electrodes an exact measurement of a specific volume of earth may be acquired. This resistance value may then be used to calculate the earth resistivity. The "Twin Probe" arrangement involves the pairing of electrodes (one current and one potential) with one pair remaining in a fixed position, whilst the other measures the resistance variations across a fixed grid. The resistance is measured in Ohms and the calculated resistivity is in Ohm-metres. The resistance method as used for area survey has a depth resolution of approximately 0.75m, although the nature of the overburden and underlying geology will cause variations in this generality. The technique can be adapted to sample greater depths of earth and can therefore be used to produce vertical "pseudo sections". In area survey readings are logged at 1.0m x 1.0m intervals, unless stated otherwise in the report.

(c) Magnetic Susceptibility

Variations in the magnetic susceptibility of subsoils and topsoils occur naturally, but greater enhanced susceptibility can also be a product of increased human/anthropogenic activity. This phenomenon of susceptibility enhancement can therefore be used to provide information about the "level of archaeological activity" associated with a site. It can also be used in a predictive manner to ascertain the suitability of a site for a magnetic survey. Sampling intervals vary widely but are often at the 10m or 20m level. The instrument employed for measuring this phenomenon is either a field coil or a laboratory based susceptibility bridge. The field coil measures the susceptibility of a volume of soil. The laboratory procedure determines the susceptibility of a specific mass of soil. For the latter 50g soil samples are collected in the field. These are then air-dried, ground down and sieved to exclude the coarse earth (>2mm) fraction. Readings are made using an AC-coil and susceptibility bridge, with results being expressed either as SI/kg x 10⁻⁸ or m³/kg.

List of Figures

| | | |
|----------|---|--------|
| Figure 1 | Location Diagram | 1:2500 |
| Figure 2 | Summary Greyscales | 1:1250 |
| Figure 3 | Summary Interpretation | 1:1250 |
| Figure 4 | Area A: XY Trace | 1:500 |
| Figure 5 | Area A: Dot Density Plot | 1:500 |
| Figure 6 | Area A: Interpretation Diagram | 1:500 |
| Figure 7 | Area B: XY Trace, Dot Density Plot & Interpretation | 1:500 |



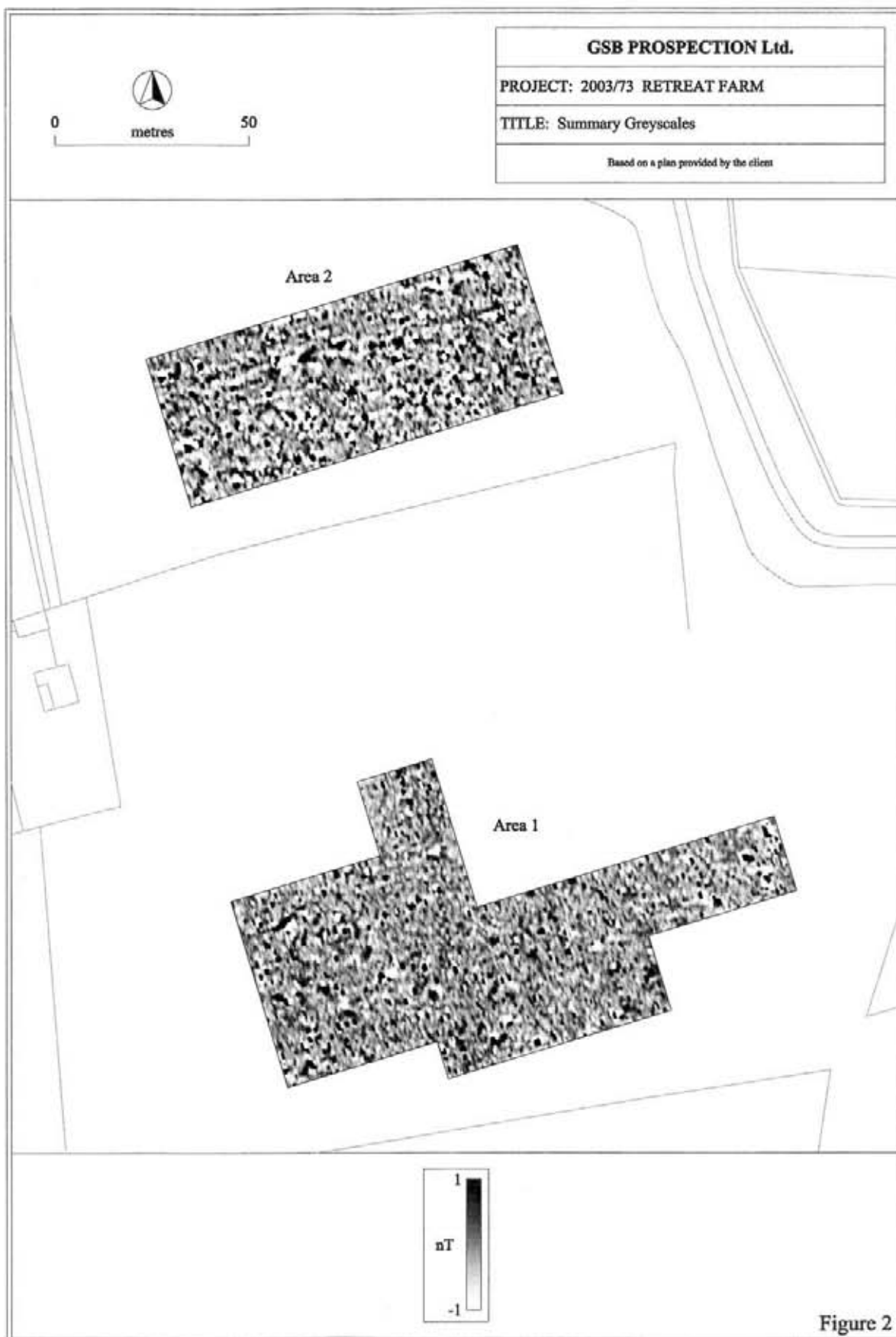
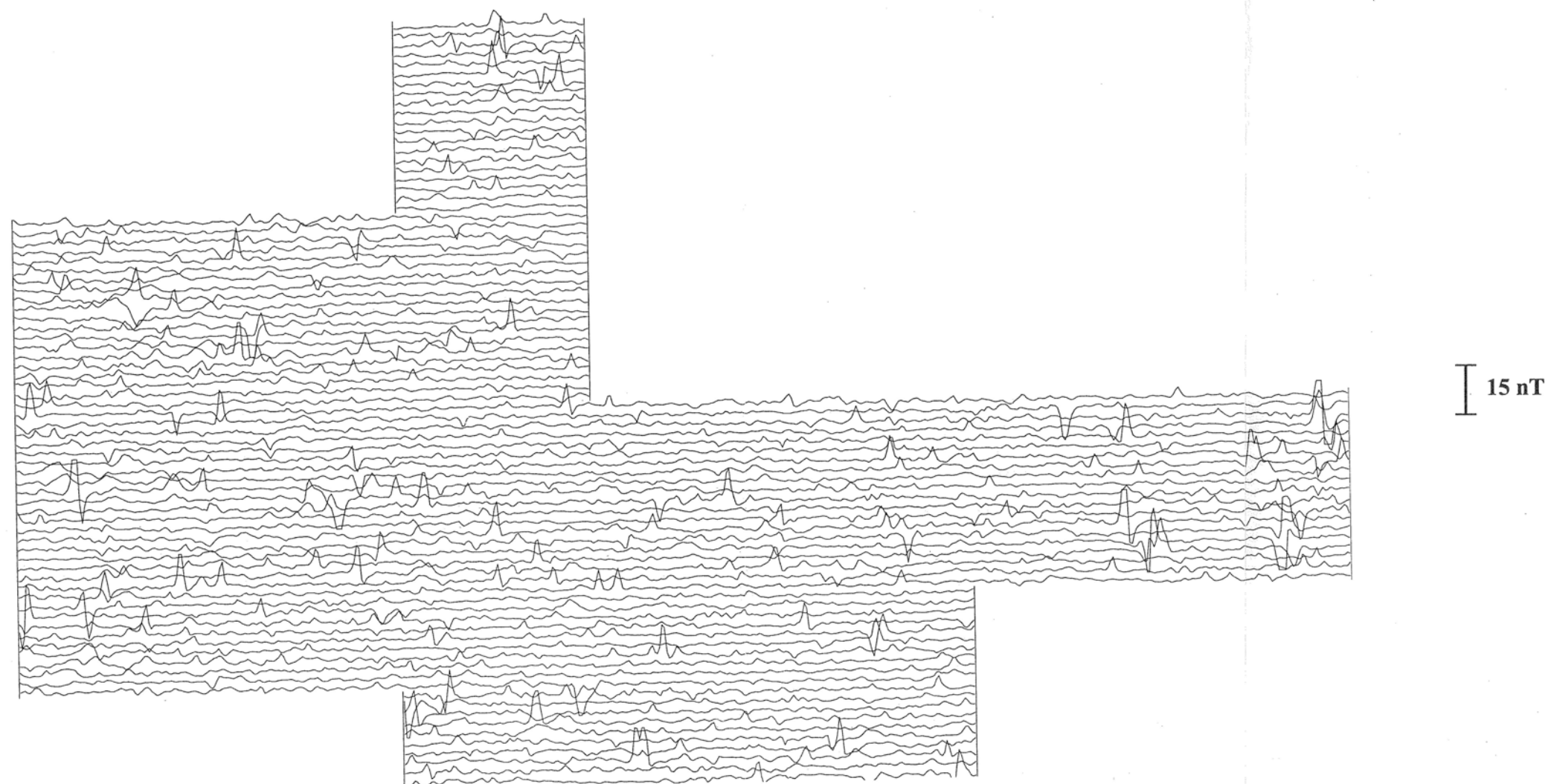


Figure 2



Figure 3

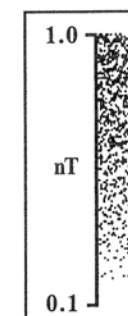
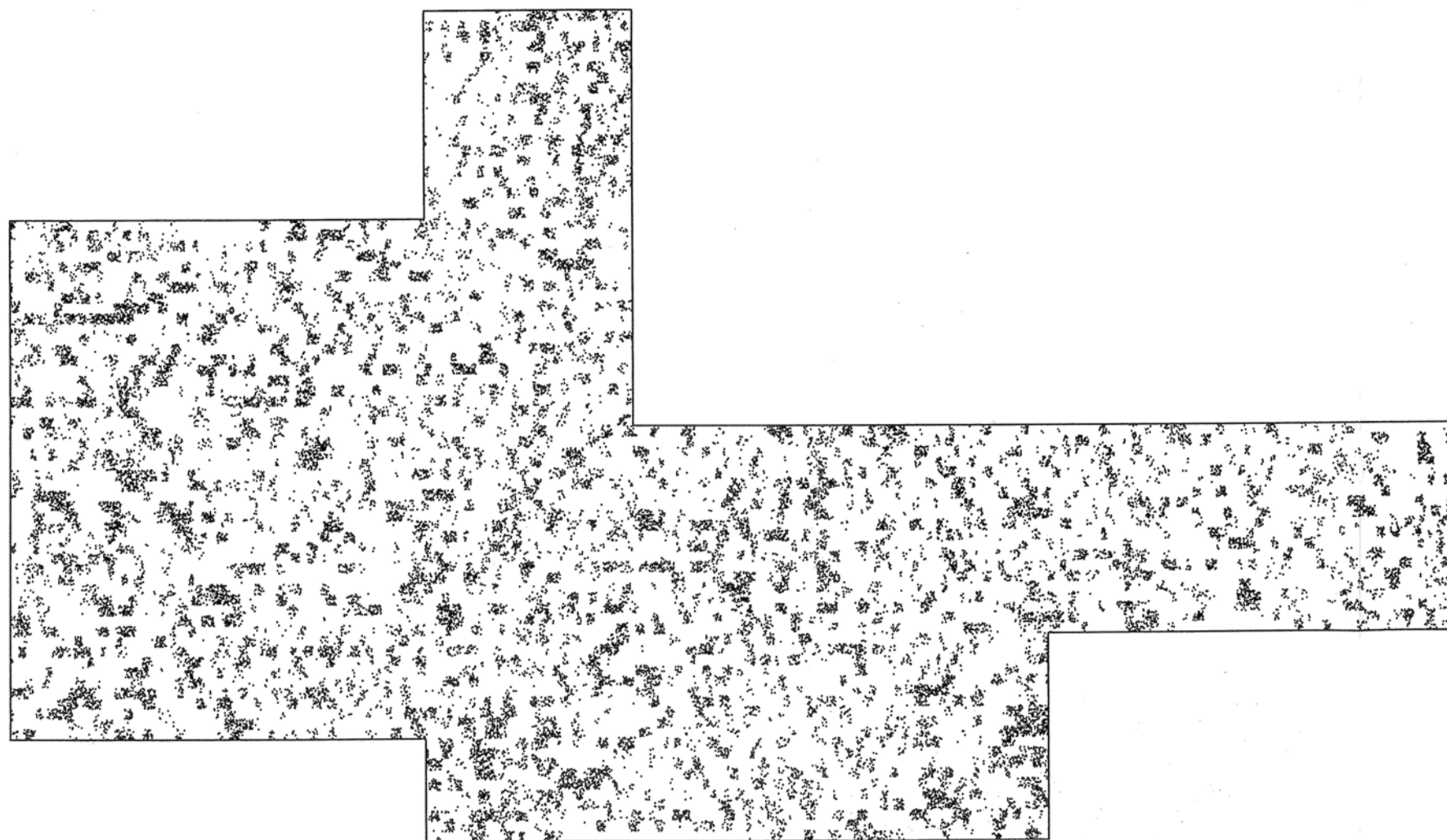
RETREAT FARM
Area 1



GSB Prospection 2003/73

Figure 4

RETREAT FARM
Area 1



GSB Prospection 2003/73

Figure 5

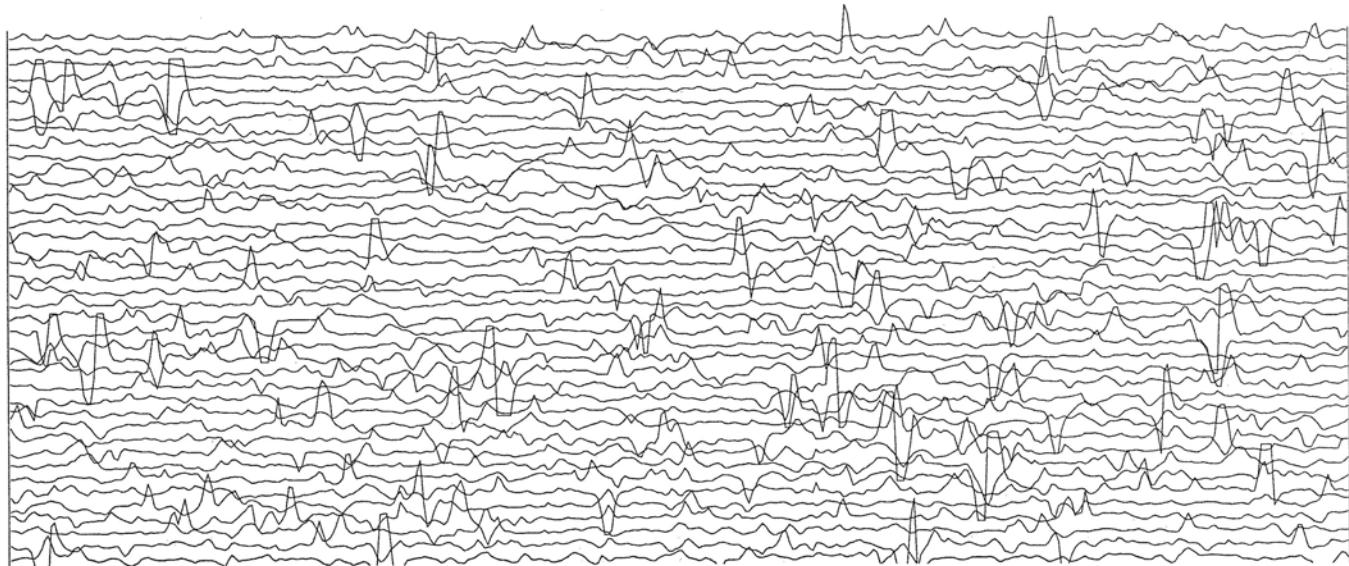
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Area 1



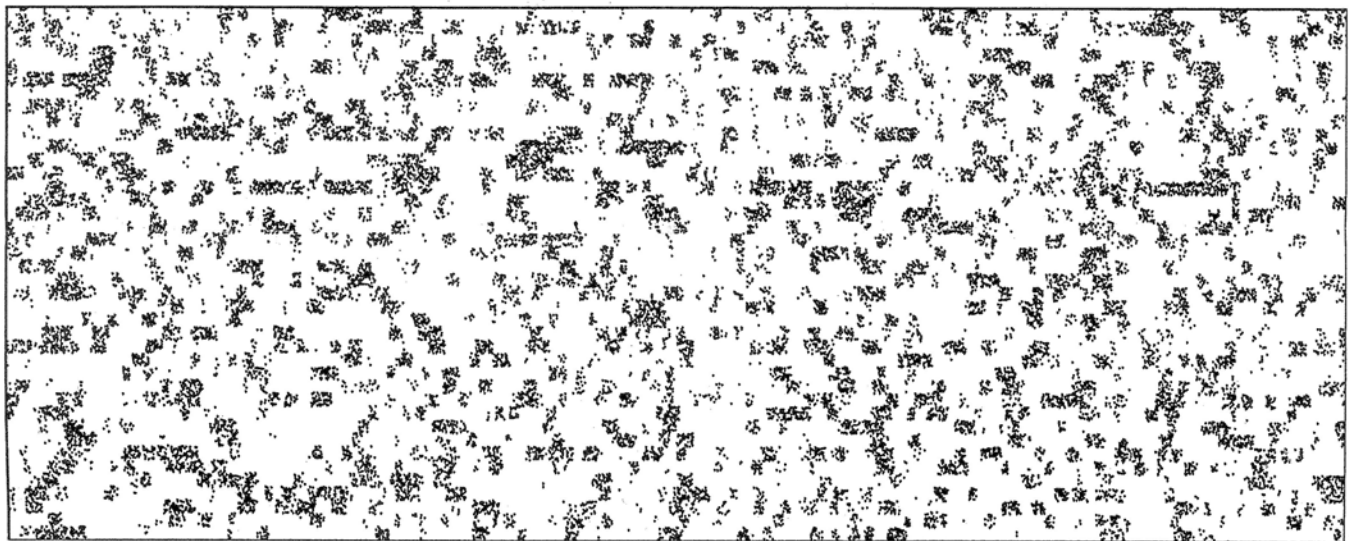
GSB Prospection 2003/73

Figure 6

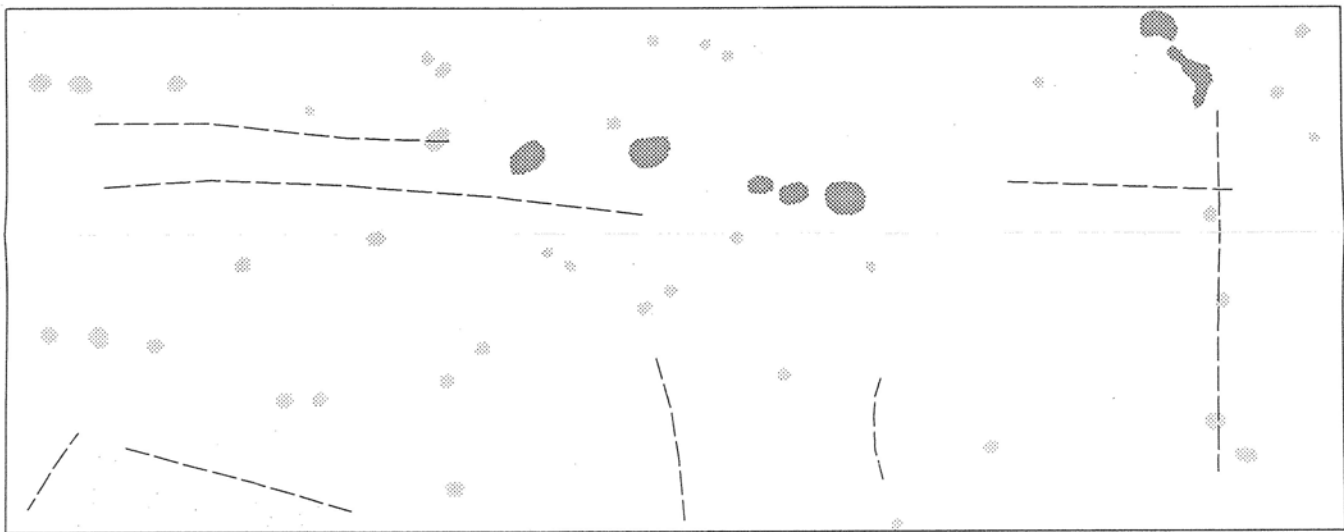
RETREAT FARM
Area 2



15 nT



1.0
nT
0.1



?Archaeology
Trend
Ferrous



0 m 20

Appendix 5: Trench descriptions

Trench 1

Maximum dimensions: Length: 49.0m Width: 3.50m Depth: 0.50m

Orientation: North-South

Main deposit description

| Context | Classification | Description | Depth below ground surface (b.g.s) – top and bottom of deposits |
|---------|----------------|--|---|
| 100 | Topsoil | Sticky mid brown silty loam with large gravel (c 2-3%) and CBM flecks (c 1%) | 0.0 – 0.30m |
| 101 | Subsoil | Sticky, light to mid brown yellow silty sandy loam with large gravel (c 5%) and ‘peagrit’ (c 2-3%) | 0.30 – 0.50m |
| 102 | Natural | Loose light to mid brown red silty sand with large gravels (c 55-60%) and ‘peagrit’ (c 5-10%) | 0.50m |

Trench 2

Maximum dimensions: Length: 50.0m Width: 3.50m Depth: 0.44m

Orientation: North-South

Main deposit description

| Context | Classification | Description | Depth below ground surface (b.g.s) – top and bottom of deposits |
|---------|---------------------------------|--|---|
| 200 | Topsoil | Sticky mid brown silty loam with large gravel (c 2-3%) and CBM flecks (c 1%) | 0.0 – 0.26m |
| 201 | Subsoil | Sticky light to mid brown yellow silty loam with large Gravel (c 5%) and 'peagrit' (c 2-3%) | 0.26 – 0.37m |
| 202 | Natural | Loose light to mid brown red silty sand with large Gravel (c 55-60%) and 'peagrit' (c 5-10%) | 0.37m |
| 203 | Tree bowl | Amorphous shape. Compact mid grey brown silt with large gravel (c 2-3%) and charcoal flecks (c 1%) and c 0.22m thick | 0.37 – 0.59m |
| 204 | Tree bowl | Sub-oval shaped. Compact mid grey brown silt with large gravel (c 2-3%). Not excavated | 0.37m |
| 205 | Fill of possible gully | Compact mid grey brown silt with large gravel (c 2-3%). 0.23m thick | 0.37 – 0.60m |
| 206 | Cut of possible gully | Linear with gradually breaking sides and a concave base. Approx 0.56m wide and c 0.23m deep | 0.37 – 0.60m |
| 207 | Fill of possible gully terminus | Compact mid grey brown silt with large gravel (c 2-3%). 0.15m thick | 0.37 – 0.52m |
| 208 | Cut of possible gully terminus | Semi-circular. Gently breaking sides. Concave base. Approx 0.62m wide and c 0.15m deep | 0.37 – 0.52m |
| 209 | Tree bowl | Sub-rounded. Compact mid grey brown silt with large gravel (c 2-3%) and c 0.15m thick | 0.37 – 0.52m |
| 210 | Tree bowl | Amorphous shaped. Compact mid grey brown silt with large gravel (c 2-3%) and c 0.20m thick | 0.37 – 0.57m |
| 211 | Tree bowl | Amorphous shaped. Compact mid grey brown silt with large gravel (c 2-3%) and c 0.20m thick | 0.37 – 0.57m |
| 212 | Tree bowl | Amorphous shaped. Compact mid grey brown silt with large gravel (c 2-3%). Not excavated | 0.37 |
| 213 | Tree bowl | Amorphous shaped. Compact light yellow brown silt with CBM flecks (c 1%) and c 0.31m thick | 0.37 – 0.68m |

| Context | Classification | Description | Depth below ground surface (b.g.s) – top and bottom of deposits |
|---------|----------------|--|---|
| 214 | Tree bowl | Amorphous shaped. Compact light yellow brown silt and c 0.26m thick | 0.37 – 0.63m |
| 215 | Tree bowl | Curvilinear shaped. Compact mid grey brown silt with large Gravel (c 2-3%) and c 0.24m thick | 0.37 – 0.61m |

Trench 3

Maximum dimensions: Length: 50.0m Width: 3.50m Depth: 0.50m

Orientation: East-West

Main deposit description

| Context | Classification | Description | Depth below ground surface (b.g.s) – top and bottom of deposits |
|---------|----------------|---|---|
| 300 | Topsoil | Sticky mid brown silty loam with large gravel (c 2-3%) and CBM flecks (c 1%) | 0.0 – 0.30m |
| 301 | Subsoil | Sticky light to mid brown yellow silty sandy loam with large gravel (c 5%) and ‘peagrit’ (c 2-3%) | 0.30 – 0.50m |
| 302 | Natural | Loose light to mid brown red silty sand with large gravel (c 55-60%) and ‘peagrit’ (c 5-10%) | 0.50m |
| 303 | Tree bowl | Amorphous shaped Compact mid grey brown silt with large gravel (C 2-3%) and c 0.30m thick | 0.50 – 0.80m |
| 304 | Tree bowl | Amorphous shaped. Compact mid grey brown silt with large gravel (c 2-3%) and c 0.16m thick | 0.50 – 0.66m |
| 305 | Tree bowl | Amorphous shaped. Compact mid grey brown silt with large gravel (c 5%). Not excavated | 0.50m |
| 306 | Tree bowl | Amorphous shaped. Compact mid grey brown silt with large gravel (c 2-3%) and c 0.20m thick | 0.50 – 0.70m |
| 307 | Tree bowl | Amorphous shaped. Compact mid grey brown silt with large gravel (c5%) and c 0.16m thick | 0.50 – 0.66m |