

A6 CLAPHAM BYPASS
ARCHAEOLOGICAL FIELD EVALUATION.
STAGE 1: NON-INTRUSIVE SURVEY

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Preface

Every effort has been made in the preparation of this document to provide as complete an assessment as possible, within the terms of the specification. All statements and opinions in this document are offered in good faith. Bedfordshire County Archaeology Service (BCAS) cannot accept responsibility for errors of fact or opinion resulting from data supplied by a third party, or for any loss or other consequence arising from decisions or actions made upon the basis of facts or opinions expressed in this document.

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Fieldwalking was supervised by Tony Walsh, assisted by Sally Dicks, James Pixley, Jerry Stone and Julian Watters (Project Technicians). Artefacts were catalogued and analysed by Jackie Wells.

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Non-Technical Summary

Bedfordshire County Archaeology Service was commissioned by Thorburn Colquhoun, on behalf of the Highways Agency, to undertake a non-intrusive archaeological survey along the proposed route of the A6 Clapham Bypass. The work comprised a desk-based assessment, surface artefact collection and geophysical survey. The bulk of the fieldwork was concentrated on the northern half of the route, from the second river crossing northwards, where potential for archaeological survival appeared greater and where current land use was more favourable to non-intrusive survey.

The results of the survey allow an initial assessment of the distribution and significance of archaeological remains on the line of the route and the likely impact of construction of the road. However, it may be necessary to consider trial excavation as a final stage in the survey of baseline conditions. This will provide more information on the condition, significance and depth of burial of any archaeological remains. This will be desirable to help finalise mitigation measures.

Extensive quarrying of gravel and clay, both on and near the southern half of the route, has revealed considerable evidence for former settlement, particularly for the Iron Age and Romano-British periods. However, much of the route crosses previously quarried land where it is highly unlikely that there will be any archaeological impact. Fieldwork was very limited on this part of the route and did not identify any archaeological sites. However, even though much of the route is embanked in this area, it may have an impact on any archaeological sites that could well survive between the areas of quarrying.

There has been much less modern disturbance to the north of the second river crossing. Surface artefact collection and geophysical survey identified a previously unknown, extensive Iron Age and Romano-British site to the south and north of Oakley Road. It includes enclosure ditches, pits, a possible kiln, field boundaries and is likely to be associated with a cremation burial found in the 19th century. This site probably represents a rural farmstead and is likely to be of at least regional significance. The road is at or below ground level at this point and is likely to have a considerable impact on the site.

The surface artefact collection also produced small quantities of prehistoric flint, together with pottery and building material of medieval and post-medieval date. However, these do not appear to be indicative of buried archaeological remains. They are more likely to represent chance loss or to have entered the ploughsoil as a result of manuring.

Despite the tentative identification of archaeological features on aerial photographs, the geophysical survey did not identify any magnetic anomalies of definite archaeological origin between Oakley Road and the northern end of the route. This appears to corroborate the results of the surface artefact collection and suggest that the majority of the northern half of the route has low archaeological potential. However, given the low magnetic contrast of the clay soils around Oakley Hill, it is possible that archaeological features, not detectable by gradiometry, may exist. Much



of the route in this area is in a cutting and would have a considerable impact on any surviving archaeological remains.

The field names, Nether Dead Man's Furlong and Farther Dead Man's Furlong, were recorded to the south and north of Highfield Road, respectively, in 1737. These may be indicative of a burial site, although this suggestion is highly tentative, and other explanations for their origin may be possible. Part of Farther Dead Man's Furlong will be crossed by a stretch of the route constructed below existing ground level.



1. INTRODUCTION

1.1 *Planning Background*

The Highways Agency plans to proceed with construction of the A6 Clapham Bypass, passing between Clapham and Oakley to the north-west of Bedford and rejoining the A6 to the south of Milton Ernest. This project was the subject of Public Inquiries in 1991 and 1994, the relevant Line and Side Roads Orders being made in 1992 and 1995.

It has been agreed that the Environmental Statement should be updated in line with Government Policy. The County Archaeological Officer (CAO) issued a *Brief for the Archaeological Field Evaluation of the Route of the A6 Clapham Bypass, Bedfordshire*. Bedfordshire County Archaeology Service were commissioned by Thorburn Colquhoun, acting on behalf of the Highways Agency to undertake an initial stage of field evaluation comprising a non-intrusive survey of the proposed route. A *Project Design For Archaeological Evaluation Stage 1: Non-Intrusive Survey* was prepared by BCAS

1.2 *Stages of Non-Intrusive Survey.*

This report presents the results of the non-intrusive survey of the proposed route undertaken by BCAS in January and February 2000. Section 2 comprises the Desk-Based Assessment, Section 3 presents the results of the Fieldwalking, Section 4 presents the results of the Geophysical Survey and Section 5 presents a Synthesis of the results. An assessment of the likely impact of the proposed route is presented in Section 6.

1.3 *Site Location and Description*

The corridor for the proposed route is generally 50m wide although additional land will be taken for a roundabout at the southern end of the route and for access roads from Oakley Road and Highfield Road (Fig 1).

The proposed route crosses two distinct topographical areas. The southern section of the route traverses a loop in the river Ouse. This area is generally flat at around 34m OD. Between Cut Throat Lane and the river the area is mainly covered by rough scrub and there are numerous services, including electricity pylons. The underlying geology is gravel with outcrops of Cornbrash and Great Oolite Limestone, although extensive quarrying has occurred and much of the area within the loop of the river is now landfill which has been returned to pasture. Deep deposits of alluvium have previously been encountered closer to the river.

The northern section of the proposed route crosses arable fields rising from c.37m OD to 71m OD on the summit of Oakley Hill before falling again to nearer 40m OD to the south of Milton Ernest. The underlying geology is predominantly Oxford Clay overlain by Boulder Clay. The proposed route will avoid Judge's Spinney on the south slope of Oakley Hill.



The land take for the proposed bypass comprises between 16ha and 20ha to the south and between 20ha and 25ha to the north.

1.4 Archaeological Background

The Ouse valley has been the focus of continuous human occupation and activity from the Palaeolithic period to the present day.

1.4.1 The Palaeolithic Period (c.150,000BC - c.8,000BC).

The river gravels of the Ouse valley have produced a number of archaeological sites dating to the Palaeolithic period (Tilson, 1993). Although there are no known sites of this date within the immediate vicinity of the proposed route, a Palaeolithic hand axe found in Clapham (HER 610), less than 400m to the east, may indicate an area of early activity.

In other river plains, notably the Thames valley, gravel islands formed naturally and acted as foci for occupation or other activity. At Biddenham, gravel deposits represent the highest terrace of the River Ouse (Rogerson, 1987) and may reflect the presence of a gravel island. Palaeolithic artefacts have been recovered from two sites in this area. Exposed gravel beds at Deep Spinney Pit produced Palaeolithic flint implements, as well as mammalian and molluscan remains (HER 327). Gravel extraction during the 1860s was reported to have unearthed hundreds of pointed axes, cores and flakes (HER 328), (Harding et al, 1991). The absence of any known Palaeolithic sites from the southern half of the proposed route, immediately to the north of Biddenham, could be due to the depth of alluvial deposits (BCAS, 93/21). Nevertheless, hunter gatherer groups, following seasonally migrating herds, were clearly active in the area throughout the glacial period.

1.4.2 The Mesolithic Period (c.8,000BC - c.3,000BC).

Seasonal occupation continued into the Mesolithic period when an increasingly sophisticated and varied range of tools and implements came into use. Excavations at Ursula Taylor Lower School, c. 700m to the east of the proposed route, produced three discreet features containing Mesolithic flint artefacts (HER 15607). A number of residual Mesolithic flint implements were also unearthed during excavations at Church Farm, Clapham (HER 16471), c 1km to the east of the proposed route (BCAS 97/11).

1.4.3 The Neolithic and Bronze Age (c.3,000BC - c.700BC)

There are no known Neolithic or Bronze Age sites within the immediate vicinity of the proposed route. Residual flint artefacts of Neolithic date were recovered during excavations at Ursula Taylor Lower School (HER 15607) and Church Farm, Clapham (HER 164710). The latter also produced residual artefacts of possible Bronze Age date. A cropmark ring ditch (HER16587) south of Clapham may indicate the presence of a funerary monument of Neolithic or Bronze Age date. The development of agriculture from the 4th millennium BC was accompanied by the establishment of permanent settlements and the construction of communal field monuments and burial mounds. However, current knowledge suggests a lower level of activity in the Clapham area compared to, for example, the Biddenham Loop, 1 km to the



south-west, where funerary monuments and evidence for sustained long term settlement are known (BCAS 98/8).

1.4.4 The Iron Age (c.700BC - AD43)

For the Iron Age and Roman periods there is a much greater density of sites in the Clapham area. Three Iron Age sites have been found within 250m of the proposed route. An Iron Age building (HER 329) was uncovered close to the southern end of the route in 1947. Posthole concentrations of Iron Age date (HER 565) were discovered to the west of the railway line during gravel extraction in the 1970s. A cremation burial (HER 9827) was found during gravel extraction to the north of Oakley Road.

Between Clapham and Oakley there are two sets of cropmarks, known from aerial photographs, which are interpreted as possible Iron Age enclosures (HER 16560 and 16562). HER 16562 has been characterised as a large rectangular enclosure with internal features abutting a linear feature to the east (Simco, A, 10/99); it lies on the proposed route of the bypass. The relative absence of cropmarks south of Clapham may be due to the thick deposits of silt that have accumulated when low lying areas were under water for long periods (Tilson, 1993).

1.4.5 The Roman Period (AD43 - AD410)

A possible Romano-British cremation cemetery (HER 5124) was reportedly found close to the southern end of the proposed route in the 19th century. The site of a possible villa or substantial Roman building (HER 1819) has been recognised from cropmarks on aerial photographs of Pavenham, immediately to the north of the end of the proposed route. Further evidence of possible Roman activity has been identified as cropmarks on aerial photographs of Clapham (HER 16563).

Extensive evidence of Iron Age and Roman settlement was uncovered during excavations at Ursula Taylor Lower School (HER 15607) and Church Farm, (HER 16471) to the south-east of Clapham, less than 1km to the east of the proposed route. Masonry within the Saxon-Norman tower of Clapham Church points to a source of Roman brick or tile in the vicinity (Simco, 1984) and a lead coffin of Roman date (HER 1318) has also been found in Clapham. A Roman gold ring (HER 15864) was found to the south of Clapham.

Rescue excavations to the north of Bromham uncovered evidence for occupation from the mid-first century BC through to the third century AD (HER 975) located c.600m to the west of the proposed route.

A suggested Roman Road between Clapham and Oakley (HER 10459) has been discounted by Simco (Simco, 1984).

1.4.6 The Anglo-Saxon Period (5th century AD - 11th century AD)

There are no known sites of Saxon date within 250m of the proposed route. However, the tower of Clapham Church (HER 851) is dated to the Saxo-Norman period and it is likely to have formed the core of the settlement at that



date. A beam slot containing pottery of Saxo-Norman date (HER 16471) was found during excavations at Church Farm, 200m to the north of the church. The absence of Saxo-Norman features or artefacts at Ursula Taylor Lower School, suggests that settlement was limited to a small area around the church (BCAS 97/11).

1.4.7 The Medieval Period (11th century AD - 16th century AD).

There are no known medieval sites on the route of the bypass. Part of the medieval settlement of Clapham is indicated by earthworks (HER 2522) located around Clapham Green, c. 1.7km to the east of the proposed route. Excavations beneath the present Ursula Taylor Lower school uncovered extensive remains of the former medieval manor (HER 3879). Two phases of building were identified the first dated to 12th/13th century and the second phase to the 15th century. The manor was finally demolished in 1871 (BCAS 94/25).

The site of a medieval mill (HER 1199) is situated to the south of the medieval core of Clapham on the Ouse. Two silted inlets located further along the river to the east, are believed to indicate the site of a medieval harbour (HER 14761).

A possible moated site with trackway (HER 1359) survives as earthworks within the Parish of Bromham, to the west of the proposed route. Cropmarks identified from aerial photographs (HER 2004 and HER 2771) provide evidence of former ridge and furrow cultivation in the fields to the north of the moat. Judge's Spinney also preserves the remains of ridge and furrow cultivation (HER 6130).

1.4.8 The Post-Medieval Period (AD1500 onwards)

Industrialisation in the form of the brickworks on the outskirts of Bedford, extensive quarrying within the loop of the river and the construction of the railway, has had a marked effect on the land south of Clapham. With the exception of the expansion of the villages of Clapham and Oakley there have been fewer changes to the landscape of the northern part of the route.



2. DESK-BASED ASSESSMENT

2.1 The Study Area

Section 10.6.1 of the *Brief* stated that detailed data should be collected for the proposed route of the bypass itself and also from an area extending at least 250m to the east and west of the proposed route. In fact information was collected from an area extending up to 1.7km from the proposed route. It was felt that this wider collection area would provide a better indication of the nature of a landscape, parts of which have remained largely undeveloped and have accordingly produced relatively little archaeological evidence.

2.2 Previous Work by BCAS

Only one archaeological project has been carried out by BCAS on the line of the proposed route (Table 1). An archaeological field evaluation, comprising field walking and trial trenching, was undertaken in advance of construction of the Southern Orbital Sewer, Clapham to Bromham connection, in 1993. Worked flints of Neolithic or Bronze Age date were collected during fieldwalking. Trial trenching established that alluvial clays of varying thickness between 600mm and 1500mm thick directly overlaid gravel. These alluvial deposits were in turn overlaid by topsoil up to 300mm thick. No surviving archaeological levels were encountered and no artefacts were recovered from the alluvial clays (BCAS 93/21). A subsequent watching brief also failed to identify surviving archaeological levels.

Two further projects have been undertaken to the east of Clapham. Rescue excavations on the site of the medieval manorial complex at Ursula Taylor Lower School uncovered diverse archaeological material. The earliest features comprised Mesolithic quarry pits. Extensive late Iron Age features, including a roundhouse and considerable quantities of Iron Age pottery were also discovered. Medieval remains, including a truncated post-built structure of likely 13th/14th century date, and adjacent cobbled surfaces confirmed the presence of the medieval manorial complex. Trial trenching at Church Farm in 1997, uncovered ditches, postholes, structural slots and walls, ranging in date from the Iron Age, Roman and Saxon periods and also to the late Medieval period. The remains of a 19th century farm building shown on historical maps were also located.

Project No.	HER No.	Project Name	Location	Description
370		Southern Orbital Sewer	Bromham	Field Survey, trial trenching and watching brief in 1993.
380	15607	Ursula Taylor Lower School	TL03305240	Excavations in 1987
452	16471	Church Farm, Clapham	TL03305270	Geophysics, fieldwalking and trial trenching in 1997.

Table 1. Previous BCAS Projects.



2.3 Previous Archaeological Work

Archaeological finds from the Study Area date back to the 19th century. Extensive evidence of Iron Age and Romano-British activity has been uncovered within the southern half of the Study Area. Over 50 funnel shaped pits (HER 5124), discovered on the site of a former brickworks close to the southern end of the proposed route, are believed to have been Romano-British cremations (Dyer, 1976 17). An Iron Age building (HER 329), which had been partly truncated by the railway cutting, was discovered on allotments in 1947 (Simco, 1973, 16) to the east of the proposed route. A second Iron Age hut circle (HER 565), located to the north, was found during gravel extraction on the west side of the railway in 1971 (Tilson, 1975). Further evidence of Iron Age-Romano British settlement (HER975), including boundary features and a corn dryer, was excavated in advance of quarrying no more than 250m to the east of the proposed route (Tilson, 1973). A gold ring (HER15864) dating from the 3rd century AD was found to the east of the proposed route. To the north of the river, a late Iron Age cremation (HER9827) comprising a Belgic butt-beaker containing cremated bones, a pair of bronze tweezers and a bronze fibula brooch is believed to have been found during gravel extraction in the early 20th century. Belgic pottery sherds (HER321) and a Romano-British lead coffin (HER1318) have been found well to the east of the proposed route.

HER No.	Location	Period	Nature of work	Brief Description
321	TL03525261	Iron Age	Chance find	Belgic pottery sherds.
329	TL03435088	Iron Age	Chance find	Iron Age hut site discovered on allotments in 1947.
565	TL02605180	Iron Age	Watching brief	Iron Age hut site found during gravel extraction in 1971.
610	TL02505300	Palaeolithic	Chance find	Flint hand axe
975	TL02705230	Iron Age/RB	Excavation	Belgic settlement excavated prior to quarrying.
1318	TL02505390	RB	Chance find	Lead coffin and pot.
5124	TL03805080	RB	Chance find	Probable Roman cremations found in the 19th century.
9827	TL22005300	Iron Age	Chance find	Belgic cremation found during gravel extraction in the early 20th century.
15864	TL03055210	RB	Chance find	Gold ring dated to the 3rd Century AD

Table 2. Previous Archaeological work.

2.4 Other HER Sites

At least four possible cropmark sites (see Table 3) have been identified from aerial photographs of the Study Area taken in 1996 (see Table 4). A sub-rectangular enclosure with a possible opening to the south (HER 16560), is located to the north of Highfield Road. A possible enclosure (HER 16562) is located to the south of Judge's Spinney on the line of the proposed access road leading from Highfield Road. An area of roughly parallel linear cropmarks (HER 16563) has been identified between Highfield Road and Oakley Road, to the east of the proposed route. A larger than average cropmark ring ditch, c.40m in diameter, with an opening to the north (HER 16587) has been identified in the south of the Study Area to the east of the proposed route.

HER No.	Location	Period	Nature of work	Brief Description
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16560	TL01505420	Iron Age?	Cropmarks	Sub-rectangular enclosure with a slightly ridged top..
16562	TL01905400	Iron Age?	Cropmarks	Large rectangular enclosure with possible internal features, abutting linear feature to the east
16563	TL02005340	Iron Age?	Cropmarks	Roughly parallel straight cropmarks, also a curvilinear cropmark to the south
16587	TL02985212	Iron Age?	Cropmarks	Larger than average ring ditch (c40m) with apparent entrance towards the north.
14761	TL 02905230	Medieval	Earthworks	Possible harbour
1199	TL03155230	Medieval	Documentary	Mill site
1359	TL01905160	Medieval	Earthworks	Possible moated site
2522	TL03805280	Medieval	Earthworks	Settlement
2771	TL01705220	Medieval	Earthworks	Ridge and furrow
2004	TL01605270	Medieval	Earthworks	Ridge and furrow
851	TL03405240	Medieval	Building	Saxo-Norman tower of Clapham Church
1819	TL01005500	RB	Cropmarks	Villa or substantial building.

Table 3. Other HER sites

Sortie No.	Run	Frame	Date	Scale	Repository/Copyright
AF/96/COL/564	9	2334	18.7.96	1:10000	BCC/Aerofilms
AF/96/COL/564	9	2333	18.7.96	1:10000	BCC/Aerofilms
AF/96/COL/564	9	2331	18.7.96	1:10000	BCC/Aerofilms
AF/96/COL/564	9	2332	18.7.96	1:10000	BCC/Aerofilms

Table 4. Vertical aerial photographs of the Study Area, taken in 1996.

2.5 Historical Map Regression

All of the available historic maps of the Study Area held by the Bedfordshire and Luton Archives and Records Service (BLARS) were examined (Table 5).

2.5.1 Map of the Parish of Oakley & Manor of Oakley Reynes 1737 CRO R.1/57

The earliest useful map shows the northern part of the Study Area. The pre-Enclosure field names relate to the medieval open fields of the Parish of Oakley. The Study Area crosses Broad field to the north and Church field to the south. The furlong names are clearly marked with ownership of some of the strips also shown.

Milton Mill is located to the west of the present A6, a road simply marked "White Way" at its northern end. A green lane, marked "Broad Green" branches off White Way and follows a curving NE to S route towards Laumpitts Common on the western edge of the Study Area. A second green way, marked "Wood Way" leads eastwards from Laumpitts Common to White Way. To the north of Wood Way, the furlongs are called Burleigh Hill to the west, Barristers Hills, Bucket Hole Furlong and Farther Dead Man's Furlong to the east. The proposed route will pass through Farther Dead Man's Furlong and Barristers Hills. The latter name is probably self-explanatory but the former may be more significant. Similar field and furlong names, believed to refer to a place where a person died or a body was found, have been recorded in a number of counties. Deadman's Furlong in Peterborough dates back to 1380, while a similar field name from Acton records a Civil War cemetery (Field 1989, pp 60-61).



A small rectangular plantation, marked Judge's Spinney, is shown to the south of Wood Way (Fig 3). Boy Croft Furlong is located to the west, Nether Deadman's Furlong is located to the east, with Furlong Below Wood Way and Long Beancroft Furlong to the south. An unmarked green way follows a curving route south from Laumpitts Common, before curving towards White Way, to the east. The proposed route will cross Boy Croft Furlong and Long Bean Croft Furlong. The origin of the Boy Croft field name remains obscure but Long Bean Croft may refer to the shape of the field with its curving boundary, rather than any crop which may have been grown there. The proposed access road from the A6 around the east of Judge's Spinney will cross Nether Dead Man's Field (see above).

Short Bean Croft Furlong and Upper Brook Furlong are located immediately to the south of the unmarked track. A green way known as Knaves Bush Way follows a line from NW to SE across the study Area. Knaves Bush Way has been postulated as a Roman road linking Clapham and Oakley but this suggestion has been refuted (Simco 1984). Ditch Piece Furlong to the west, and Furlong Below Knaves Bush Way to the east, abut Knaves Bush Way. Copthorn Furlong and Furlong Above Bedford Way lie immediately to the south. A road marked Bedford Way extends E-W across the study area. Hunger Hill Furlong and Furlong Below Bedford Way abut the south side of Bedford Way. A "Gravel Pitt" is clearly shown abutting the Bedford Way within Hunger Hill Furlong. The proposed route will cross Knaves Bush Way, Short Bean Croft Furlong, Furlong Below Knaves Bush Way, Furlong above Bedford Way and Furlong below Bedford Way.

2.5.2 Plan of the Lordship of Oakley Reynes in the C(ounty) of B(edford) property of His Grace the D(uke) of B(edford) 1795 CRO R1/265

This pre enclosure map shows the northern part of the Study Area in the Parish of Oakley and may have been based on the earlier map of 1737. Within Broad field to the north and Church field to the south, large areas of the furlongs are now indicated as owned by 'Eton College' and 'The Vicar'. These areas of ownership cross the brook dividing Church field and Broad field. Although land ownership has changed land use and field names appear to have remained roughly the same. The road along the eastern side of the Study Area (the present A6) previously shown as "White Way" is now simply marked "to Kettering" at its northern end and "to Clapham and Bedford" at its southern end. Barristers Hills is shown as Bannisters Hills (Fig. 4) and Laumpitts Common is shown as Lampitts Common.

2.5.3 A plan of the Parish of Bromham ...principally belonging to the Rt. Honorable Lord Hampden 1798. CRO X.152

This map shows the southern part of the Study Area in the Parish of Bromham. The loop of the river Ouse provides the limits of the Parish of Bromham. Collagers Meadow abuts the south side of the river with three fields, Further Asplands, Middle Asplands and Hither Asplands descending southwards. The latter abuts an unmarked road linking Clapham and Bromham, now known as Lower Farm Road. A field called simply Twenty Six Acres abuts the road to the east of Hither Asplands. The proposed route will cross Collagers Meadow,



the Asplands fields and may clip Twenty Six Acres. Asplands field name may refer to land on or near which Aspen trees grow (Field 1989); the other names are fairly self explanatory.

Two fields called Twelve Acres abut the south side of the road. Lower Farm, located to the south, is surrounded by large rectangular fields called Home Close. A small rectangular paddock marked "Orchard" is located immediately to the north of the farm. Lake Meadow and Twelve Acres abut the river which forms the southern boundary of the study area. A culvert or drain extends eastwards from the river across Lake Meadow. The proposed route will cross one or both of the fields marked twelve acres to the south of the road and continue through the two large fields marked Home Close, passing close to Lower Farm. The route appears to coincide with the boundary between Twelve Acres and Lake Meadow. The latter name may refer to inundation of this field. The culvert clearly appears to be an attempt to improve drainage. (Fig. 5).

2.5.4 The 1883 1st Edition Ordnance Survey 25" to a mile, Sheet 89.

This map sheet, showing the northern part of the Study Area in the Parish of Clapham and Oakley, was surveyed in 1882. Milton Mill to the north of the Study Area and the river Ouse are clearly marked but the main road to the east (the present A6) and the road which runs west are unmarked. The track known as Broad Green on the 18th century maps is still shown but is no longer marked. A footpath leads south from this track and eventually joins up with the main road to the east. The small plantation shown to the south of the road on the 18th century maps has been enlarged to its present roughly semicircular shape and is now clearly marked "Judges Spinney". Some of the former furlong boundaries have been removed to create the large rectangular fields to the north and south of Judge's Spinney (Fig 6).

2.5.5 The 1901 2nd Edition Ordnance Survey 25" to a mile, Sheet 89.

This map sheet was revised in 1900 and shows few changes from the 1st Edition. The main road to the east is marked "to Higham Ferrers" and "from Bedford" at its northern and southern ends respectively. The fields adjacent to the main road are marked "allotments". The extent of Judge's Spinney is shown as 4.513 acres.

2.5.6 The 1926 3rd Edition Ordnance Survey 25" to a mile, Sheet 89.

This map sheet was revised in 1924 and again shows few changes from the 1st and 2nd Editions. The allotments adjacent to the main road are no longer marked as such, but they have been amalgamated into a single field. A small enclosure with a single building is shown on the north side of Judge's Spinney.

2.5.7 The 1882 1st Edition Ordnance Survey 25" to a mile, Sheet 101.

This map sheet shows the central part of the Study Area in the Parishes of Clapham and Oakley. The main road to the east is unmarked. The Midland Railway forms the western boundary of the Study Area. The path which formerly delineated a curved boundary between Broad field to the north and Church field to the south has been re-routed to follow the angular boundaries



of the fields. Knaves Bush Way has been reduced to an unmarked footpath. An unmarked road (the present Oakley Road) extends westwards across the Study Area from the main road to the east. A field subdivided by footpaths running north and south from the former Knaves Bush Way is marked Clapham Folly. A single large field to the south of the road is bounded on its eastern side by a culvert leading to the river; the railway forms its western boundary and there is a tree-lined boundary on its southern side. A small paddock is situated between this southern boundary and the river. Two small islands planted with trees are shown in the middle of the river. Two water filled drains lead to/from the river across a small paddock on the south side of the river. The legend "Liable to flood" extends across the small paddocks on either side of the river. A large field abutting the railway is marked by a tree-lined boundary to the east.

2.5.8 The 1901 2nd Edition Ordnance Survey 25" to a mile, Sheet 101.

This map sheet was revised in 1900 and shows few changes from the 1st Edition. Clapham Folly is now also marked allotments. A "Gravel Pit" is also shown in this area. The tree-lined boundary to the south of the river has been removed to create a single large field.

2.5.9 The 1926 3rd Edition Ordnance Survey 25" to a mile, Sheet 101.

This map sheet was revised in 1924. The gravel pit has been enlarged and is recorded as 3.426 acres in extent. The railway is now marked "London, Midland and Scottish Railway".

2.5.10 The 1883 1st Edition Ordnance Survey 25" to a mile, Sheet 113.

This map sheet was surveyed in 1882 and shows the southern part of the Study Area in the Parish of Bromham. Extensive cuttings are visible adjacent to the railway which crosses the Study Area from north-west to south-east. An unmarked road leads under the railway and extends west-east before turning to the north-east. A footpath extends north from this road and leads south to Lower Farm which is no longer marked as such. A small pond is shown to the south of the farm. Field boundaries have been removed to create large fields. Further to the south, a tree-lined, water filled drain extends roughly east-west from the bend of the river and then heads roughly north-west to south-east to form the boundary between two fields, formerly Lake Meadow and Twenty Acres. A small plantation follows the bend of the river on its southern side. Bedford Water Works is shown on the south side of the River Ouse. The paddocks adjacent to the river are marked liable to flood. A single large field abuts the Bedford Municipal Boundary to the south. A track marked "Cut Throat Lane" leads west from the main road (Fig. 7). The proposed route will pass to the south of the site of the Bedford Water Works.

2.5.11 The 1901 2nd Edition Ordnance Survey 25" to a mile, Sheet 113.

This map sheet was revised in 1900 and shows few changes from the 1st Edition. The water works is now marked "Pumping Station (Bedford Corporation Water Works)". A building marked "Sanatorium (Harpur Grammar School)" is shown on the north side of Cut Throat Lane (Fig. 8).



The proposed route will pass between Bedford Water Works and the site of the Sanatorium.

2.5.12 The 1926 3rd Edition Ordnance Survey 25" to a mile, Sheet 113.

This map sheet was revised in 1924. Lower Farm is clearly marked. A tree-lined avenue and a new building have been added to the north-west of the Sanatorium which is now marked "(Bedford School)".

2.5.13 1931 Land Utilisation Survey, Sheet 27.

This survey is based on the revised 1926 Ordnance Survey 6" to 1 mile map sheet. In the north of the Study Area the large field adjacent to the main road is marked arable. The fields around Judge's Spinney are all shown as pasture. The fields on either side of Oakley Road are marked arable. Not surprisingly, the fields adjacent to the river are shown as pasture. The large field to the west of Lower Farm and the field on the north side of the footpath are arable. The remainder of the fields in the southern part of the Study Area are shown as pasture, with the exception of the field between the water works and the Sanatorium, which is arable.

2.5.14 1966? Ordnance Survey 1:10,560 Sheet TL05 SW

Houses with rear gardens are clearly shown in the north-east corner of the field on the south side of Oakley Road and also adjacent to the railway to the north-west. An electricity pylon is shown immediately to the north of Oakley Road and another is located in the field to the south.

Stippled areas, presumably denoting former quarrying are shown adjacent to the railway in the vicinity of Oakley Junction. Further areas of disturbance are shown immediately to the north of Lower Farm and a little farther to the south.

2.5.15 1972 Ordnance Survey 1:10,560 Sheet TL05 SW

A building is shown on the north side of the track leading from Lower Farm Road, adjacent to the railway. Various paths are shown encircling the area of quarrying immediately to the north of Lower Farm.





Date	Document Ref. No.	Surveyor	Description
1737	R.1/57	John Davis	Parish of Oakley & Manor of Oakley Reynes.
1795	R1/265	Unknown	Plan of the Lordship of Oakley Reynes.
1798	X.152	Thorpe	A plan of the Parish of Bromham
1883	Sheet Nos. 89, 101, 113.	Ordnance Survey	1st Edition Covering the Parishes of Clapham, Bromham, Oakley and Biddenham, 25".
1902	89, 101, 113.	Ordnance Survey	2nd Edition.
1926	89, 101, 113.	Ordnance Survey	3rd Edition.
1931	27		Land Utilisation Survey, 6".
1966?	TL05 SW	Ordnance Survey	1:10,560
1972	TL05 SW	Ordnance Survey	1:10,560

Table 5. Maps consulted in the Bedfordshire and Luton Archives and Records Service.

2.6 Quarrying

Information held in the Historic Environment Record and evidence from early maps was collated to produce a plan of previously quarried areas (Fig 9)..

The site of the allotments to the north of Oakley Road has been the site of quarrying from the 18th century onwards. At its greatest extent the quarry appears to have been at least 1.2 ha. Several episodes of quarrying are recorded in the loop of the river Ouse in the south of the Study Area. An area of approximately 10 ha adjacent to the railway line on the line of the route south of Clapham appears to have been quarried. Further to the south, an area of approximately 7 ha in the vicinity of Lower Farm appear to have been quarried. An area of approximately 4 ha abutting the floodplain to the east also appears to have been quarried.

The proposed route and its access roads will coincide with most if not all of these areas of quarrying.





3. FIELD ARTEFACT COLLECTION

3.1 *Introduction*

The purpose of field artefact collection is to systematically recover a collection of artefacts from the surface of land under arable cultivation. Significant clusters of material, ploughed up from buried archaeological sites, are likely to be indicative of past human occupation or other activity. The results of such a survey can be used in the targeting of subsequent investigative techniques.

3.2 *Method Statement*

All of the available arable fields to the west of Clapham, approximately 17.5 hectares, and a single arable field to the north of Lower Farm Road, were walked over a period of four days (14-17th February) by a team of five experienced fieldwalkers (Fig. 10). Weather conditions varied from dry and bright to overcast.

The level of visibility was determined by the variable ground conditions encountered. The field to the south of Oakley Road was freshly ploughed. The fields to the north of Oakley Road were planted with crops of winter wheat (*c.* 30-40mm high) and included areas of set aside around the field margins. To the north of Lower Farm Road the Brussels sprouts crop, obscured visibility in places by up to 70%.

Due to the linear nature of the road scheme it was not practicable to align the survey collection units on the National Grid. A series of transects were used, orientated along the line of the road. These were marked by canes, whose National Grid co-ordinates were calculated.

The transects were numbered consecutively from south to north. Rows were identified by letters, A-ZZ. Row A was taken to be the first collection area, at the western side of the route. When an area lay to the W of the road the letters were assigned in reverse, ZZ-A. Each transect measured 40m long and 10m wide.

Artefacts recovered from each transect were placed in individually labelled bags noting the relevant collection unit identification code.

Given the size of the survey area and complexity of the collection units, distributions in this report have been broadly referenced using OS Grid co-ordinates.

3.3 *Artefact Assemblage*

All material considered to be humanly made was retrieved, although debris of an obviously modern nature was ignored as far as possible. Artefacts collected were washed, quantified, weighed and recorded in a field artefact collection database. Where possible, diagnostic objects were dated. Pottery





identifications are alpha-numeric codes in accordance with the Bedfordshire Ceramic Type Series, held by BCAS.

3.3.1 Flint

Twenty-three pieces of worked flint, weighing 230g were recovered. The majority comprise debitage and cores (three examples). Core products include flakes, retouched flakes and possible rejuvenation flakes. The presence of multi-platform flake core fragments suggests a later Neolithic / early bronze age date for the assemblage. Implements are restricted to a thumbnail scraper, and four end or end-and-side scrapers. The material includes both patinated and unpatinated flint, most of which has sustained edge damage characteristic of a plough zone assemblage.

3.3.2 Pottery

A total of 245 datable pottery sherds was recovered, ranging in date from the early / middle Iron Age to the post-medieval period. A further fifteen sherds could not be attributed to a particular period. Types are summarised below in chronological order (Table 6). Most sherds are small (average sherd weight 10g), too small in fact to allow the form of the vessel to be identified. With the exception of the post-medieval material, most of the sherds are abraded, which indicates that they have been present on the surface of the field for a considerable time.





Fabric Type	Common Name	Sherd: Wt	Form
Iron Age (9% diag. assemblage)	c. BC 800-AD 43	24:203	
Type F19	sand and organic		upright rim jar
Type F28	fine sand		
Type F05	grog and shell		everted rim jar
Type F06B	medium grog		
Type F06C	coarse grog		
Type F07	shell		
Type F09	grog and sand		
Roman (34% diag. assemblage)	c. AD 43-400	83:978	
Type R06B	coarse greyware		everted rim jar
Type R06C	fine greyware		jar with undercut rim, flanged bowl, rouletted body sherd
Type R06D	micaceous greyware		
Type R07B	fine blackware		
Type R07C	gritty blackware		flanged bowl, bead rim jar
Type R11F	Oxford mortaria		mortaria
Type R12A	Nene Valley mortaria		mortaria
Type R12B	Nene Valley colour coat		flanged bowl
Type R13	shell		combed storage jars, everted, triangular and rectangular rim jars
Medieval (7% diag. assemblage)	c. AD 1100-1500	17:98	
Type B07	shell		
Type C53	sandy		
Type C60	Hertfordshire-type greyware		everted rim jar, jug handle
Type C61	calcareous inclusions		
Type E02	late medieval oxidised		
Type E03	late medieval smooth		
Post-medieval (50% diag. assemblage)	c. AD 1500+	121:1304	
Type P01	fine glazed red earthenware		
Type P02	coarse glazed red earthenware		
Type P03	black-glazed earthenware		
Type P25	Frechen stoneware		
Type P30	Staffordshire slipware		
Type P38	Creamware		
Type P41	Wedgwood black basalt		
Type P45	Transfer-printed ware		
Type P48	English stoneware		

Table 6: Pottery Type Series

3.3.3 Ceramic building material

Roman - 4 fragments, 168g

Four abraded pieces of oxidised, sand tempered building material have been tentatively classified as Roman tile and brick fragments. Although totally undiagnostic, (*i.e.* their form cannot be determined) the fragments differ from all other building material collected and are more extensively battered and abraded, suggesting an earlier date.

Late medieval / post-medieval - 719 fragments, 20.1kg

The majority of the ceramic building material derives from sand tempered, flat roof tiles of peg type, with smaller quantities of pantiles and brick present. A further 159 fragments (8.6kg) comprise land drain and modern brick.

Undiagnostic - 216 fragments, 4.7kg

A number of fragments were too fragmentary, undiagnostic and degraded to be accurately classified.





3.3.4 Metal objects

Metal objects comprise abraded copper alloy fragments of a ?17th century trading token and a late Roman bracelet. The latter is part of a terminal, decorated with a series of transverse grooves; *c.f.* examples from Colchester (Crummy 1983, fig 44/1689). The former is too distorted to be further classified.

3.3.5 Glass

The fourteen glass fragments recovered derive mainly from post-medieval wine bottles and drinking vessels. A single fragment of window glass with a grozed edge was also identified, likely to be of 16th-17th century origin.

3.3.6 Slag

Eleven fragments of ferrous slag weighing 393g were identified. These are likely to derive from smithing processes, although no date range can be assigned to this class of material. It may be significant that a small concentration of this material coincided with concentrations of Iron Age and Roman pottery to the south of Oakley Road.

3.4 Artefact Distribution

3.4.1 Earlier Prehistoric (Fig. 11)

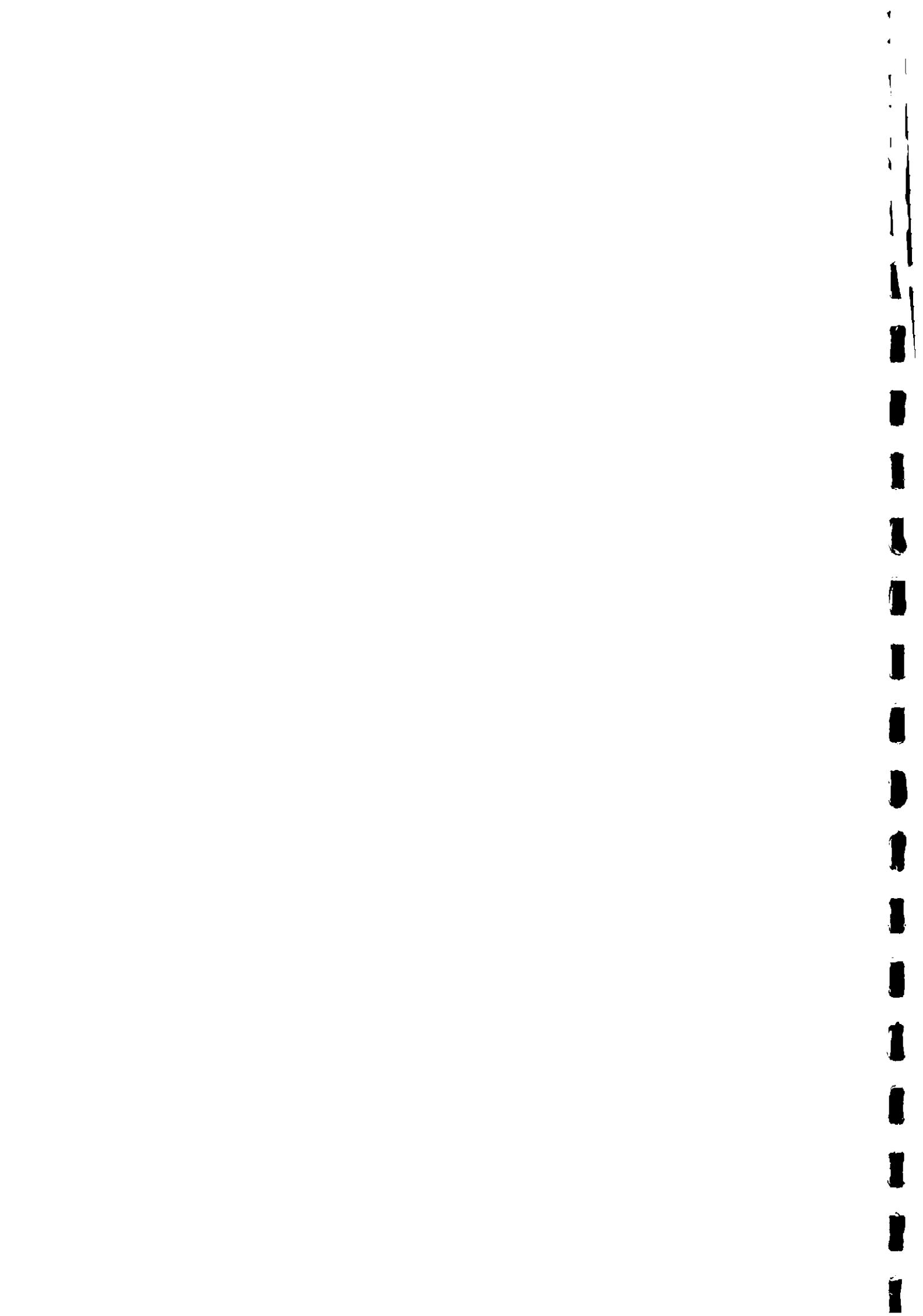
Low density spreads of lithic material were identified mainly in the south of the survey area. The majority derive from the area between the second river crossing and Oakley Road, with smaller quantities occurring to the north of Oakley Road (TL021529, TL020530 and TL020531). Three of the five tools identified were recovered from TL021528. A single flint was recovered from the area immediately to the south of Judge's Spinney (TL019540). The assemblage may suggest sporadic activity during the earlier prehistoric period, at least towards the southern extent of the survey area.

3.4.2 Late Iron Age / Roman (Fig. 12)

The incidence of late Iron Age and Roman artefacts is restricted to the area between the second river crossing and Oakley Road. Roman pottery is concentrated mainly within TL021527, as is the spread of late Iron Age material. The combined assemblage weighs 1.2kg, and is sufficient to suggest a potential site of this period. Fragments of probable Roman building material also occur mainly in this area, although these are insufficient to suggest the presence of substantial structures. The late Roman copper alloy bracelet fragment also derives from this area.

3.4.3 Medieval (Fig. 13)

Although small, the medieval assemblage comprises a range of fabric types which span the entire medieval period. Although insufficient to definitely suggest settlement within the survey area, the material attests a prolonged medieval presence in the locality. The greatest quantity derived from the area between the second river crossing and Oakley Road. No medieval pottery was recovered from the fields to the north of Highfield Road.



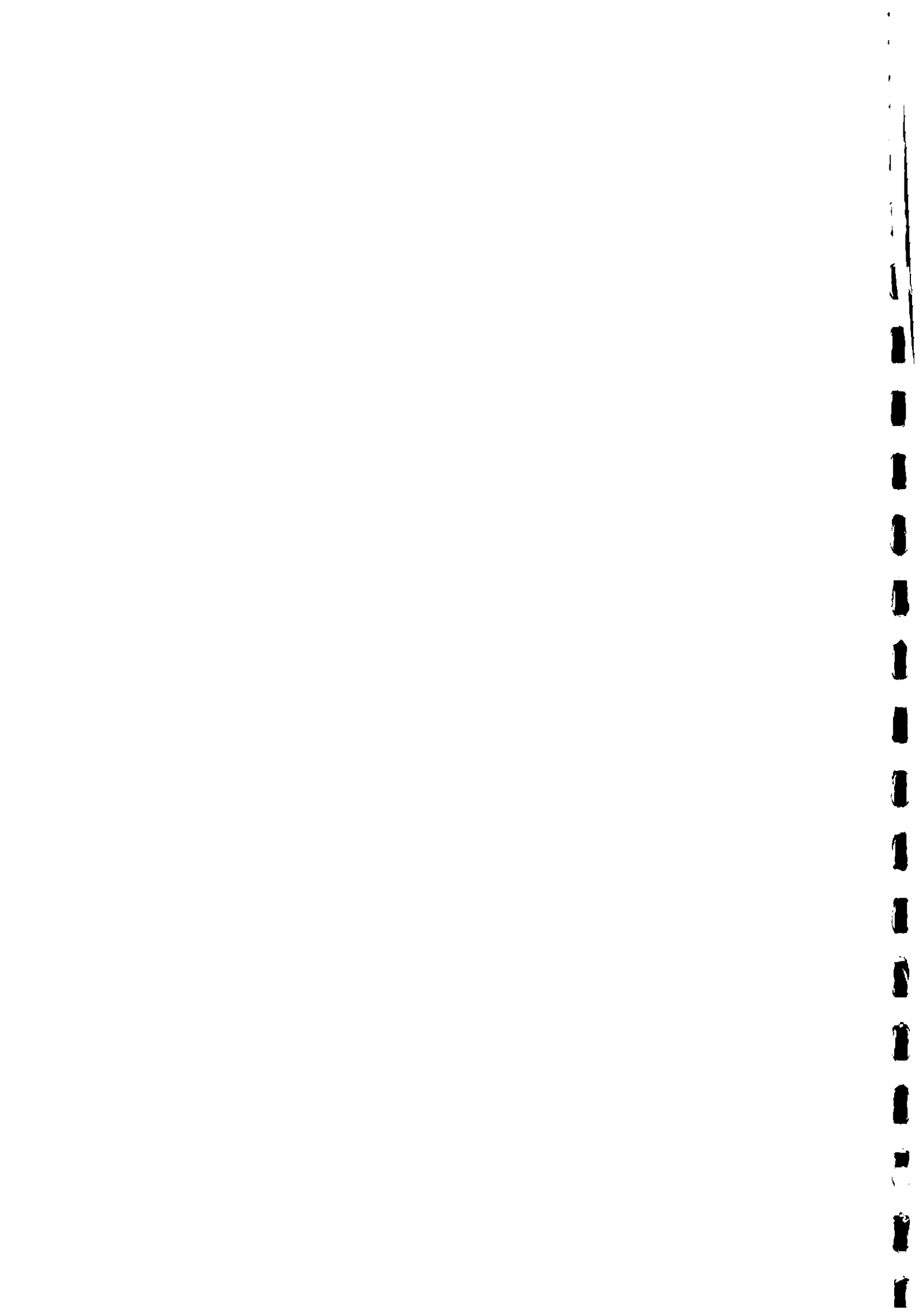


3.4.4 Post-medieval (Fig. 14)

Post-medieval pottery was recovered from most collection units within the survey area. Three clusters of pottery occurred, in the area between the second river crossing and Oakley Road, north of Oakley Road centred on TL018534, and to the north of Highfield Road extending northwards from TL016543.

Concentrations of late medieval / post-medieval building material occurred immediately to the north and south of Oakley Road, to the west of Judge's Spinney and, corresponding with the largest pottery cluster, to the north of Highfield Road.

A negligible quantity of randomly distributed post-medieval pottery and building material also derived from the field to the north of Lower Farm Road.





4. GEOPHYSICAL SURVEY

4.1 Introduction

BCAS commissioned the specialist sub-contractor West Yorkshire Archaeology Service (WYAS) to carry out a geophysical survey of the available arable fields north of the second river crossing. The survey was carried out in two stages. A magnetic scan of the entire site was followed by selected detailed gradiometer survey.

The survey is reported in detail in WYAS Report No. 792, and is summarised below.

4.2 Scanning

Scanning identified magnetic anomalies in the field to the south of Oakley Road. Some magnetic anomalies were also detected in the fields to the north of Highfield Road but these could not definitely be ascribed to an archaeological origin.

The magnetic response of the soil was variable, generally decreasing on the higher ground around Judge's Spinney. This may reflect changes in the underlying geology.

No magnetic anomalies were detected in the area of cropmarks to the south of Judge's Spinney.

4.3 Detailed Survey

Six blocks were selected for detailed surveying based on the results of the scanning and the fieldwalking survey (Fig. 15).

Block 1 and Block 2 were located to the north of Highfield Road, Block 3 was located on the west side of Judge's Spinney, Block 4 and Block 5 were located to the north of Oakley Road and Block 6 was located to the south of Oakley Road.

No anomalies of obvious archaeological origin were detected in Blocks 1-4 (Fig. 16-19). Areas of disturbance detected in Blocks 1 and 3 could, conceivably indicate archaeological ferrous material but they are more likely to be modern.

An interrupted linear anomaly, following a roughly SE-NW alignment across the northern end of Block 5 is possibly archaeological. It does not appear to coincide with any of the boundaries marked on the historic maps. The majority of the isolated anomalies in Block 5 are probably geological but an archaeological origin for many of the isolated responses cannot be ruled out (Fig. 20).





A dense concentration of strong magnetic responses was recorded in Block 6 (Fig. 21). The major feature (D) appears to be part of a double-ditched rectilinear enclosure with a possible opening to the south. A broad band of isolated anomalies within the enclosure may represent a pit alignment, or possibly, a structure. There are numerous isolated magnetic responses, typical of pits or areas of burning, to the east of the enclosure which may indicate an area of industrial activity. There is a marked decrease in the number of magnetic responses to the south of the enclosure. This may be a result of an increased depth of alluvium masking archaeological features.

A broad linear anomaly (C), aligned north-east to south-west, and two strong perpendicular anomalies detected to the north of enclosure D probably represent field enclosure ditches. Several weaker linear anomalies aligned parallel to the NE-SW feature may represent an associated trackway.

A series of weak linear anomalies (B) detected within the north of this block may be geological but are suggestive of ridge and furrow or modern cultivation. They are on a similar alignment to the probable archaeological features to the south and there are also isolated anomalies typical of pits or areas of burning close by so an archaeological origin for these features cannot be discounted.

A broad, irregular curvilinear anomaly on the eastern edge of the block is possibly of archaeological origin. However, the breadth of this anomaly may indicate a geological origin. It could be part of a palaeochannel or a broad plough damaged ditch. A large isolated anomaly to the south has a magnetic response suggestive of a large, infilled pit or possibly a kiln.

4.4 Limitations

The background magnetic susceptibility was moderately high in the south around Oakley Road but decreased to the north, particularly to the north of Highfield Road where the readings were very low. It is possible, therefore, that there are archaeological features present in the north of the survey area, but that they are not detectable by gradiometry due to a low magnetic contrast. On a similar site, on similar geology, substantial archaeological features no more than 300mm below the ground surface were not detected by gradiometry (BCAS 2000). However, the higher readings in the south are clearly the result of human activity (*i.e.* represent buried archaeological remains) and the low susceptibility in the north could indicate an absence of such evidence.





5. SYNTHESIS OF THE RESULTS

5.1 Introduction

The results of the non-intrusive survey permit an initial assessment of both the distribution and the significance of archaeological remains on the line of the bypass. The bulk of the work has been concentrated on the northern half of the route, where potential for archaeological survival appears greater and where current land use was more favourable to non-intrusive survey. The results are presented on the basis of the two distinct topographical areas described in the introduction (section 1.3)

Where the location, type and significance of any important archaeological remains, and how they might be affected by the route, are not known with reasonable certainty, or where more information is desirable to help finalise mitigation measures, it may be necessary to consider trial excavation as a final stage in the survey of baseline conditions. This is particularly important for assessing potential impacts (see below, section 6) where the relationship between depth below ground level of sub-surface archaeological remains and the vertical alignment of the road will be critical.

5.2 Southern Half of the Route

5.2.1 Cut Throat Lane to the River Ouse

Two known sites are recorded in this area to the south-east of the river, although neither coincides with the proposed route. The Iron Age hut circle (HER 329) could belong to a larger settlement complex, which may extend eastwards. Similarly, the Roman cemetery (HER 5124) and any associated settlement could extend northwards to coincide with the proposed roundabout at the southern end of the route. Both sites are known simply from chance finds made in the mid-20th and 19th centuries respectively. It is, therefore, difficult to establish their significance with any degree of certainty.

The map regression analysis indicates that this area remained largely under arable cultivation until WW2. A pumping station and sanatorium, both now demolished, appear to have been the only known buildings. The land is currently derelict, overgrown and disturbed to a certain extent by modern services. Current land use did not permit surface artefact collection or geophysical survey.

5.2.2 River Ouse Floodplain and Terrace between the Two River Crossings

Extensive quarrying within this area has revealed considerable evidence for former settlement of the river terrace, notably in the Iron Age and Romano-British periods. Two sites in particular (HER 565 and HER 975) lie no more than 250m from the line of the proposed route. By contrast, archaeological work both before and during the construction of the Southern Orbital Sewer failed to detect any sites either in the floodplain or on the terrace/floodplain boundary. It seems likely that the slightly higher ground on the terrace was the





preferred location for farmsteads of this date, exploiting the resources of the river and its floodplain. No significant sites of this date, in the Ouse valley north of Bedford, have been investigated using modern techniques. Any sites in this area, surviving between former quarries, are likely to be of at least regional significance.

The map regression analysis provides evidence for post-enclosure, 18th century agricultural exploitation of the land enclosed by the loop of the river. There is a clear distinction between meadow land on the floodplain and arable land on the terrace. The first edition OS 25" indicates that the former was subject to seasonal inundation. The maps also provide clear evidence for the extensive gravel extraction in this area.

A very limited amount of surface artefact collection was undertaken in this area on one of the few arable fields, not located over the site of an infilled gravel quarry. However, no significant concentrations of artefacts were identified.

5.3 Northern Half of the Route

5.3.1 Land to the north and south of Oakley Road

The most significant archaeological evidence (again dating to the Iron Age and Romano-British periods) on this part of the route lies on either side of Oakley Road, immediately to the north of the second river crossing. On the site of the present-day allotments a late Iron Age burial (HER 9827) was recorded during gravel quarrying in the early nineteenth century. This is likely to be related to a much bigger Iron Age and Romano-British site identified to the south of Oakley Road during surface artefact collection and geophysical survey.

The ploughed field to the south of the road produced a significant quantity of pottery, together with smaller quantities of tile, ferrous slag and part of a late Roman copper alloy bracelet. Geophysical survey of the same area detected strong magnetic anomalies, in the form of a ditched enclosure with associated field boundaries. Evidence for pits, indicating possible industrial areas or structures, and a discrete anomaly reminiscent of a kiln were also detected. The alignment of the enclosure ditches suggest that this site may extend into the allotments to the north of the road, where the burial was discovered. A linear anomaly of possible archaeological origin in geophysical survey area 5 may also be related to this site. The former green lane, Knaves Bush Way, which has previously been postulated as a Roman Road is located immediately to the north.

Taken together, this evidence indicates the presence of an extensive, previously unknown Iron Age to Romano-British settlement (probably a rural farmstead) of at least regional significance.

Small quantities of prehistoric struck flint were also recovered from the fields immediately to the north and south of Oakley Road. Dateable and functionally diagnostic tools were scarce. Very little material of this type was recovered



elsewhere on the route. The apparent concentration in this area is likely to be a function of the more favourable ground conditions for surface artefact collection rather than a genuine indication of a site of this date.

Varying quantities of medieval and post-medieval pottery and ceramic building material were found in this area. This material appears to concentrate on the road frontages, thinning out into the fields themselves. It is likely to represent refuse dumping or manuring and is not significant in terms of site location.

5.3.2 Land to the North and South of Highfield Road

The possible Iron Age enclosure (HER16562) to the south of Judge's Spinney, tentatively identified from aerial photographs, could not be corroborated either by the surface artefact collection or by geophysical survey. The current balance of probability must be that such a site does not exist in this area.

Geophysical survey areas 1 to 3 failed to detect any magnetic anomalies of archaeological origin.

In general, the distribution of medieval and post-medieval pottery and ceramic building material was similar to that observed at the southern end of this section of the route. The only possible exception was a concentration of post-medieval pottery at the extreme northern end of the route. Again, however, geophysical survey in this area failed to detect any magnetic anomalies of archaeological origin. The current balance of probability is that this material is derived from refuse dumping or manuring rather than from a buried site which has been disturbed by ploughing.

Field name evidence from the area around Judge's Spinney, "Farther Dead Man's Furlong" and "Nether Dead Man's Furlong", may indicate a possible burial ground, but such evidence should be treated with caution as other explanations for the origin of the name are possible.



6. POTENTIAL IMPACTS ON ARCHAEOLOGICAL REMAINS

6.1 Southern Half of the Route

The proposed bypass will be embanked above present ground level over much of its length. With the exception of a short stretch to the south of Oakley Road the section between Cut Throat Lane and Oakley Road will be entirely embanked.

Although superficially it may appear that embanking will protect archaeological remains surviving below ground, any earthmoving, in particular topsoil stripping, could potentially be damaging. Drainage runs or associated services alongside the road may also have a detrimental effect. The extent of any damage will be dependent on how deeply buried any surviving archaeological remains are.

It is highly unlikely that any archaeological remains survive on the site of the former gravel and clay quarries along the southern half of the route. The bypass will, therefore, have no archaeological impact in these areas.

6.2 Northern Half of the Route

Immediately to the north of the second river crossing, the impact on the previously undetected site to the south of Oakley Road is likely to be considerable. At least half of the identified site coincides with a stretch of the route which will be at or near existing ground level. The presence of artefacts on the surface of the field suggests that *in situ* archaeological remains will survive from the base of the ploughsoil to a depth which is currently unknown. The ploughsoil itself in this area should also be considered part of the archaeological resource, as it will contain considerable quantities of material brought up by the plough from the underlying archaeological deposits.

Immediately to the north of Oakley Road, the proposed route will be below existing ground level. Any continuation of the site to the south of Oakley Road is likely to be affected by the proposed junction in this area.

Further to the north, with the exception of a short stretch to the south-west of Judge's Spinney, the proposed route will be at or below the present ground level. The area of cropmarks to the south of Judge's Spinney will be intersected by an access road which will be below existing ground level. The surface artefact collection and geophysical survey both failed to detect archaeological remains in this area. Trial excavation is likely to be necessary to determine whether or not the road will have an archaeological impact.

The possible burial ground, "Farther Dead Man's Furlong", will also be crossed by a stretch of the route constructed below existing ground level.



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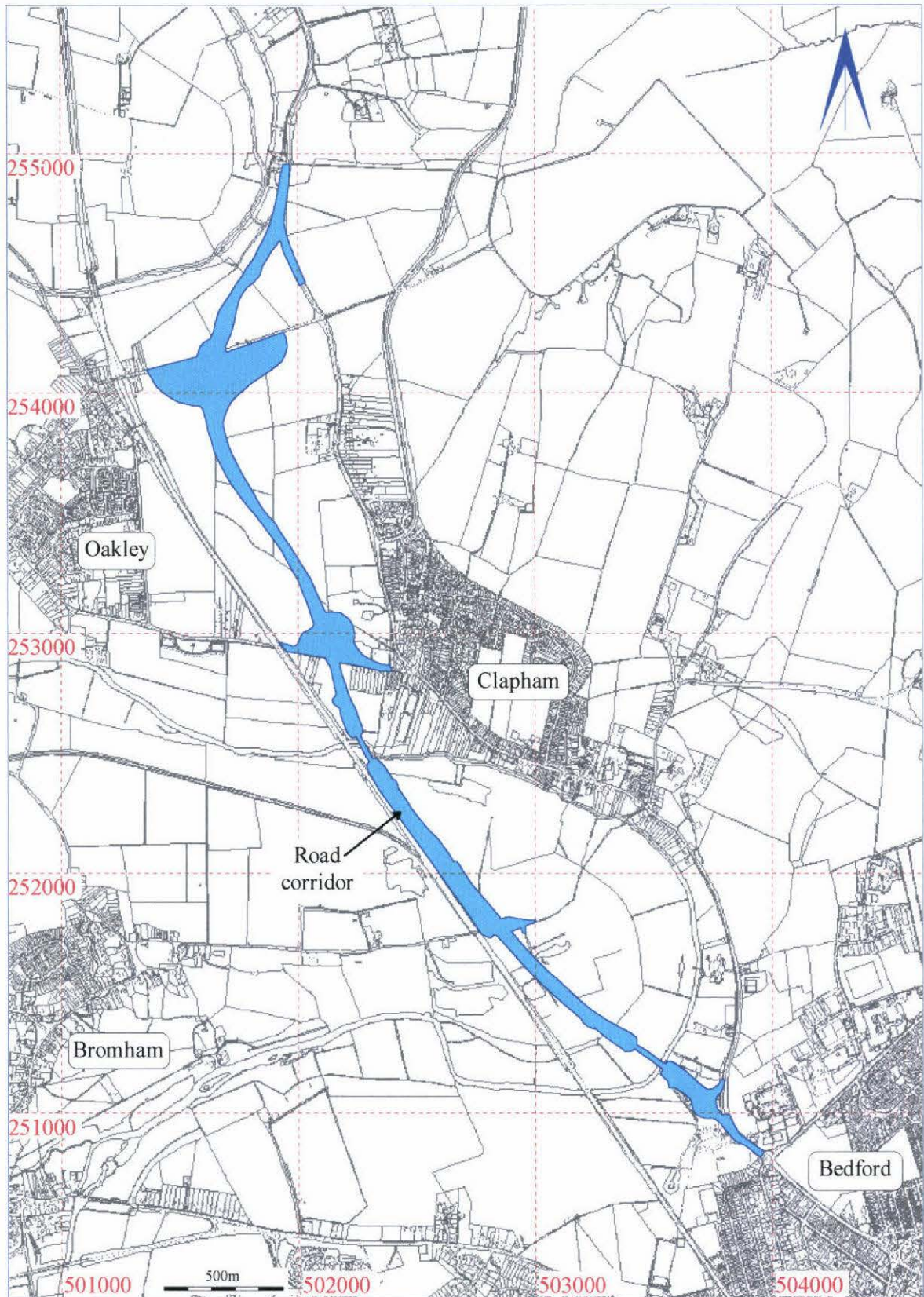


Fig. 1: Site location.

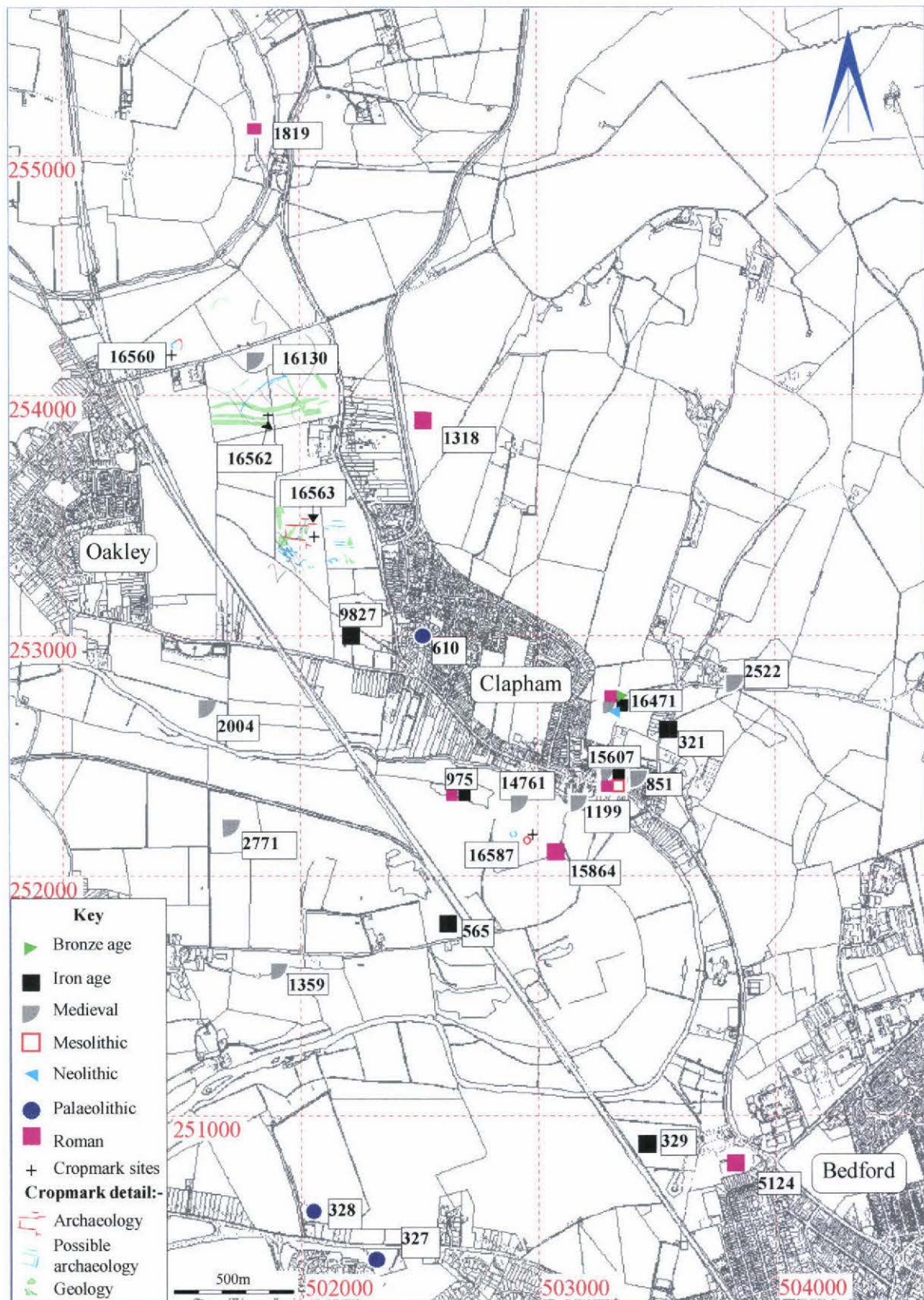


Fig. 2: Known sites along the proposed route.



Fig. 3: Extract from the 1737 map.

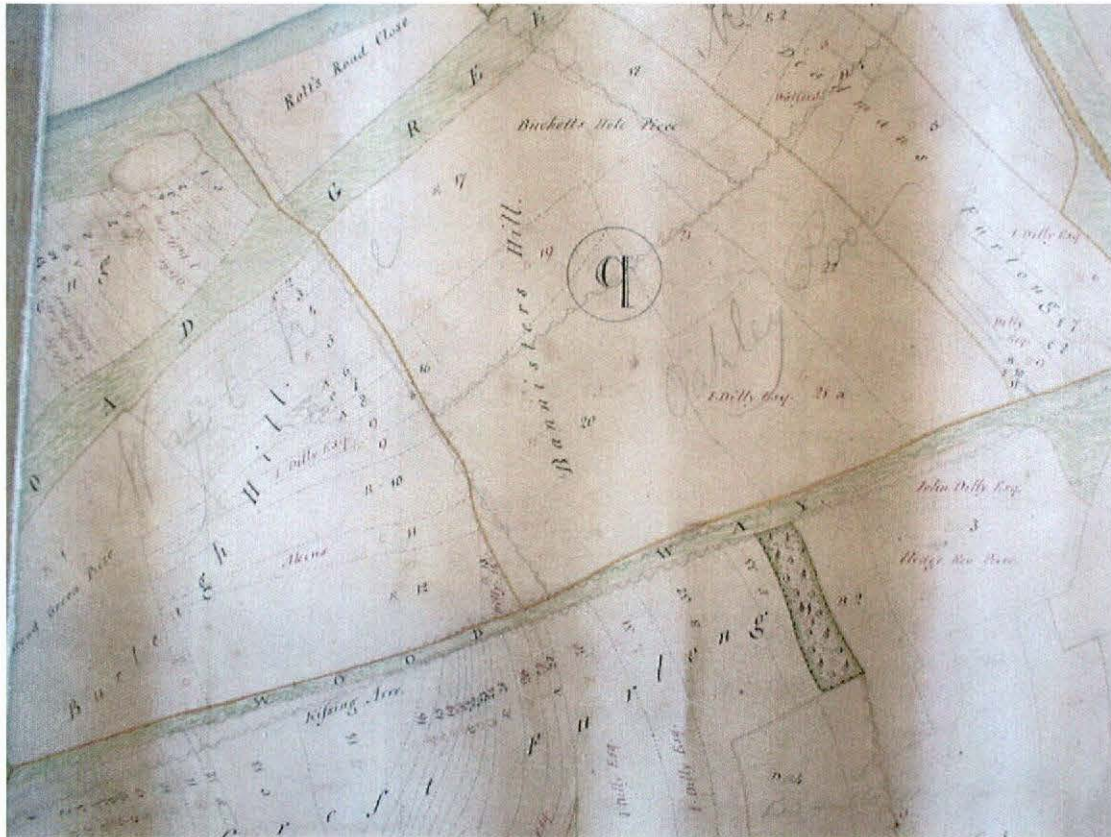


Fig. 4: Extract from the 1795 map.

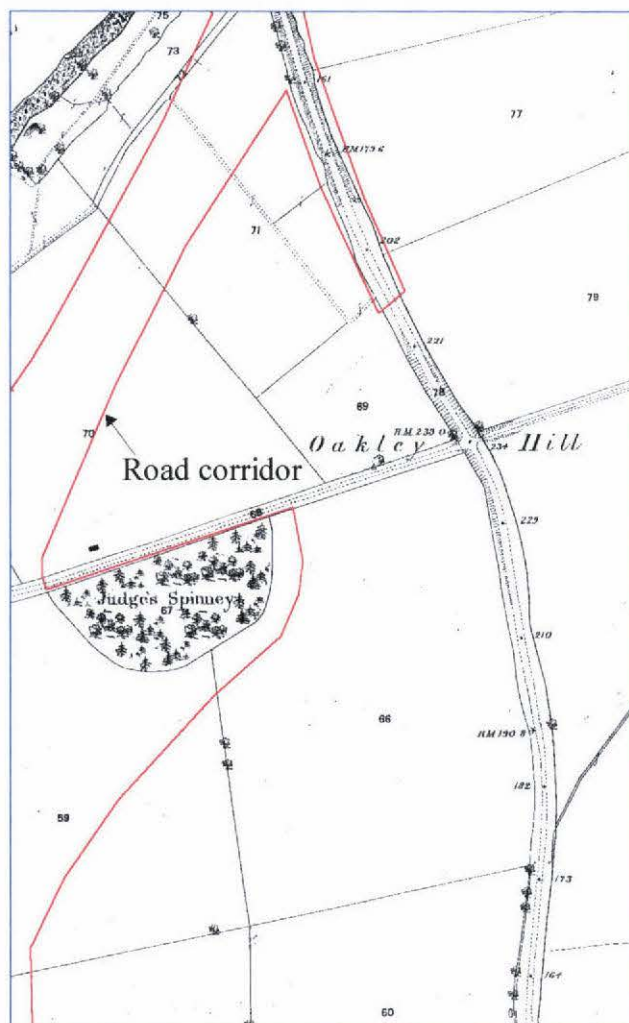


Fig. 6: Extract from the 1st Edition Ordnance Survey 25", Sheet 89.

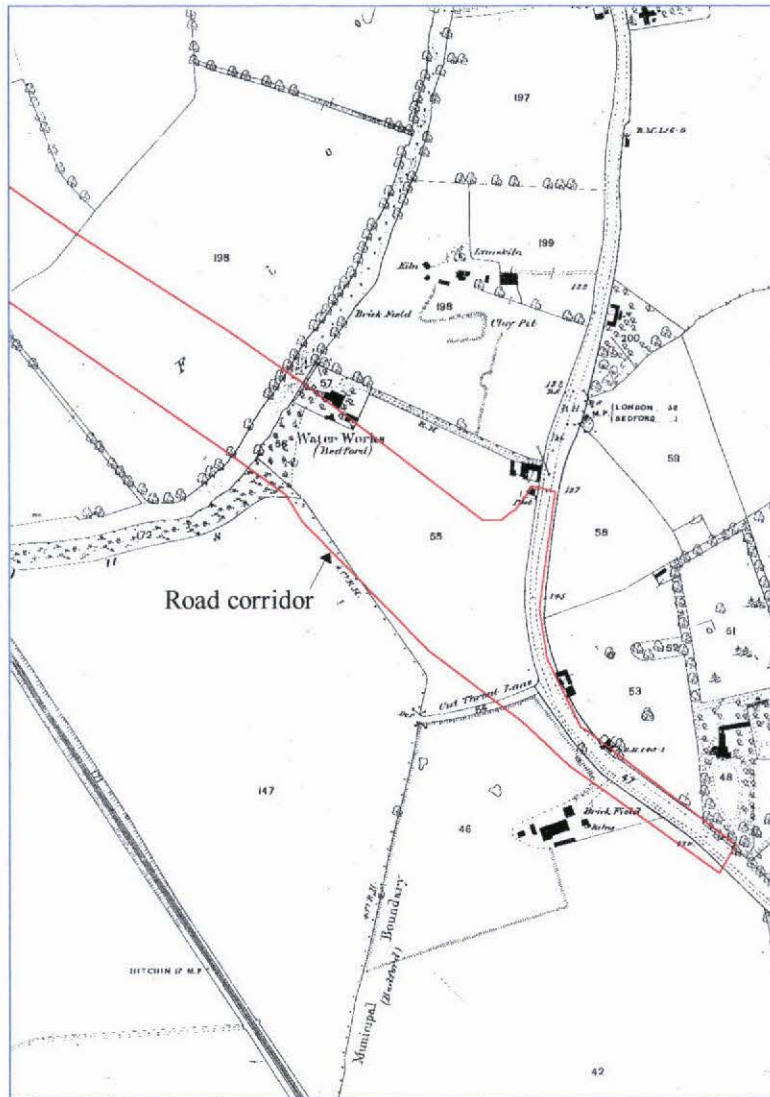


Fig. 7: Extract from the 1st Edition Ordnance Survey 25", Sheet 89.

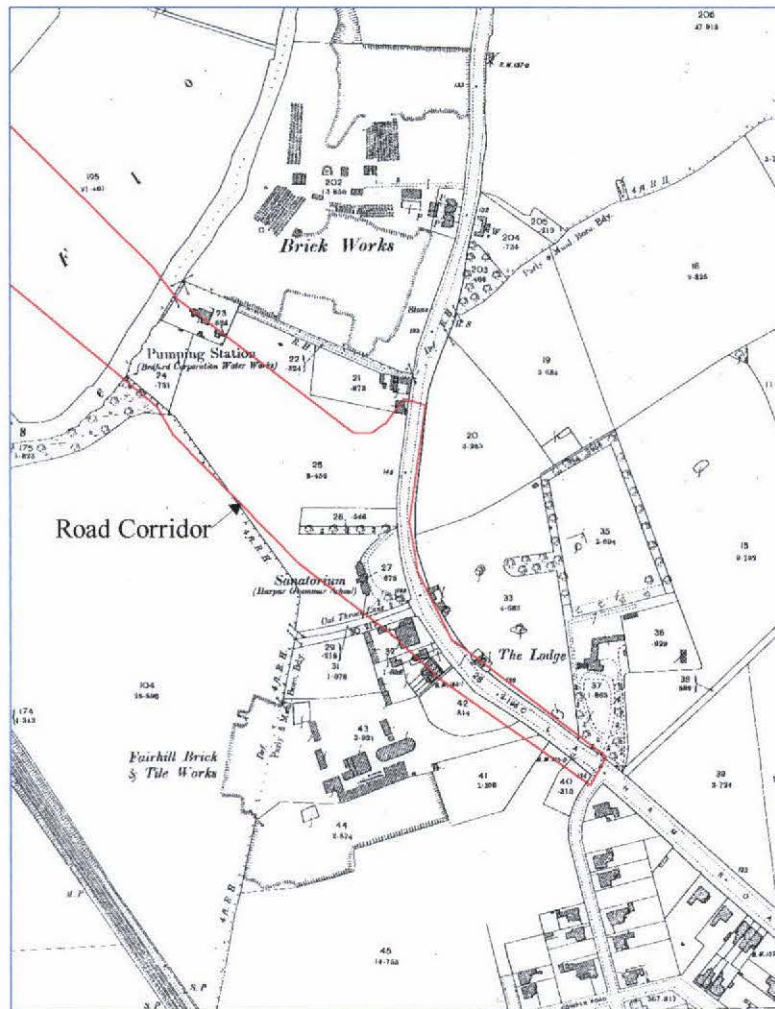


Fig. 8: Extract from the 2nd Edition Ordnance Survey 25'', Sheet 113.

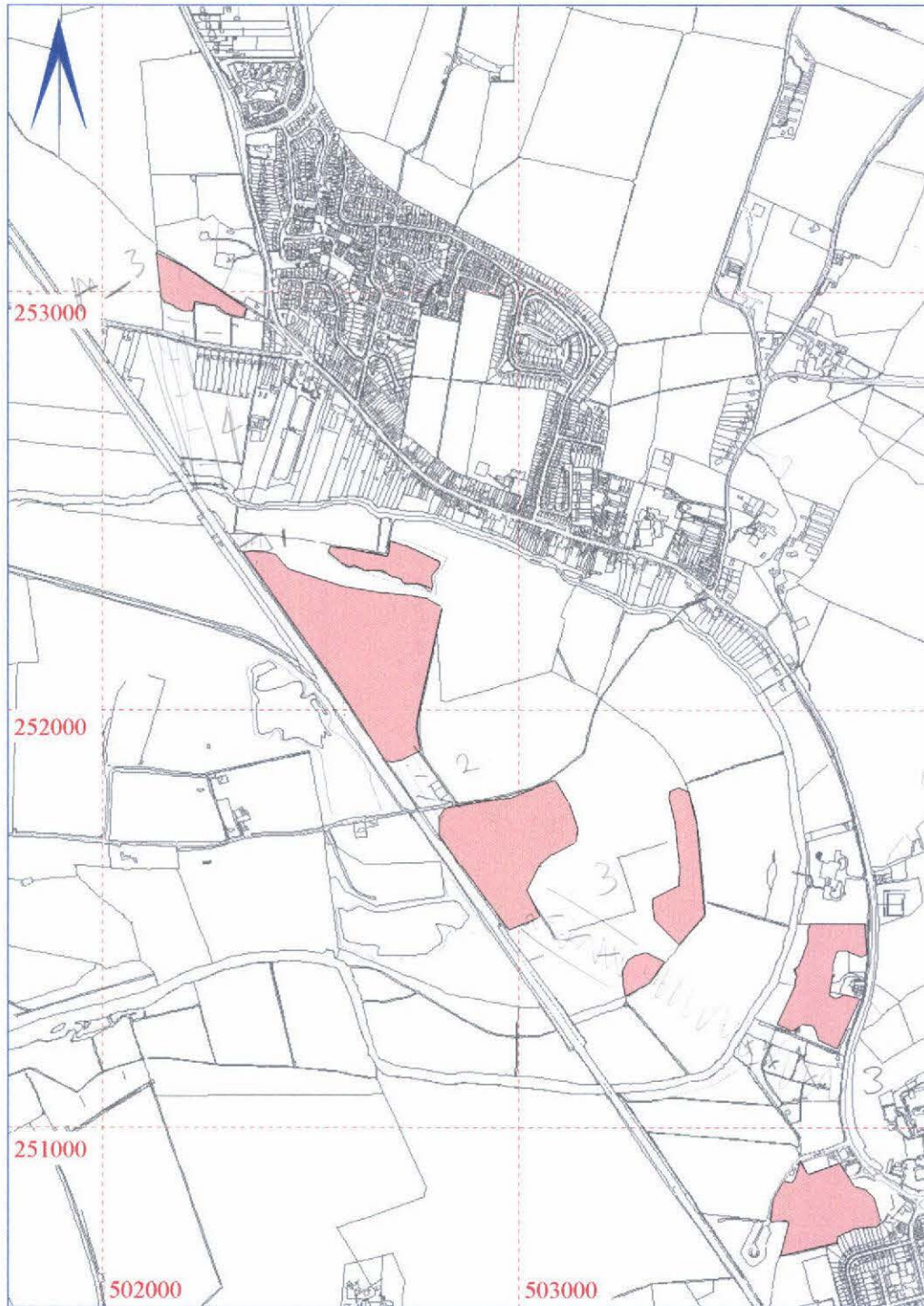


Fig. 9: Extent of quarrying.

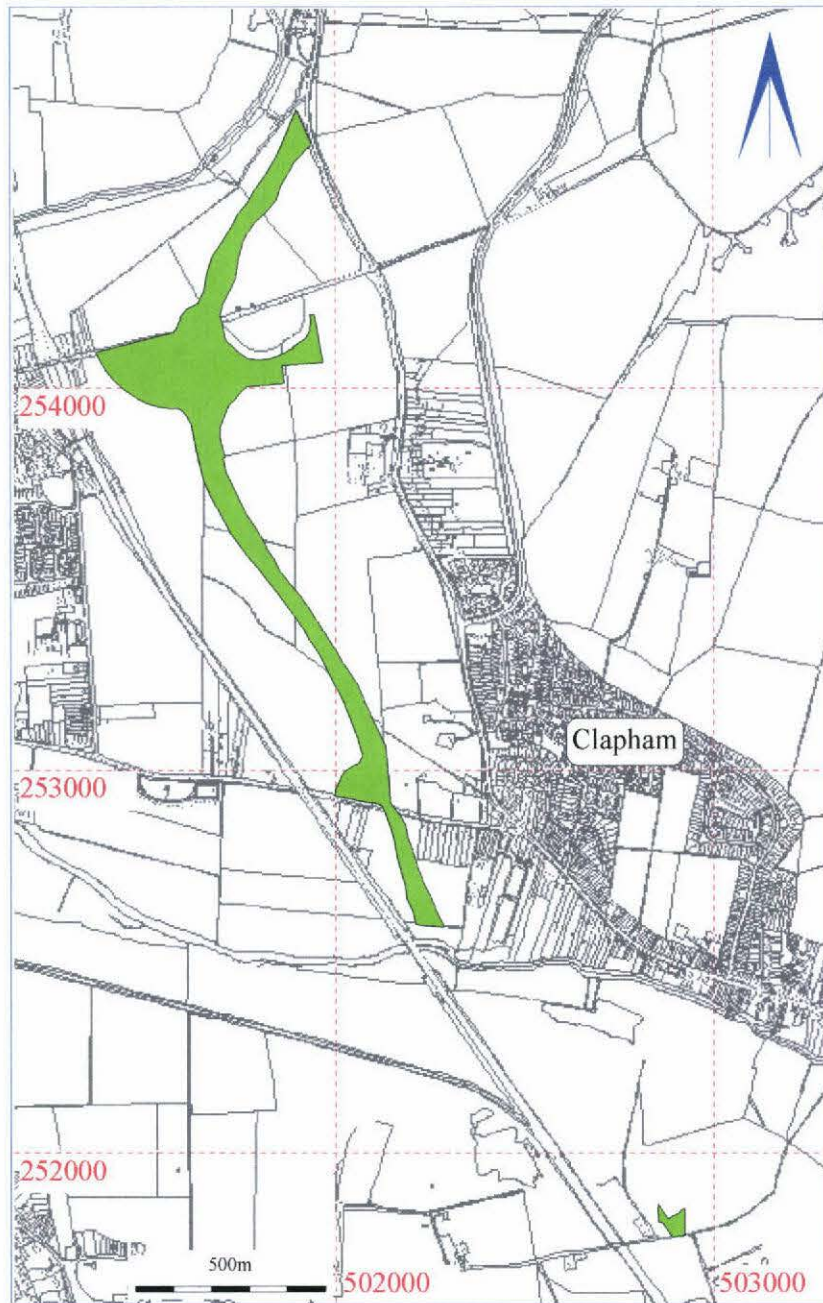


Fig. 10: Location of field walking grid.

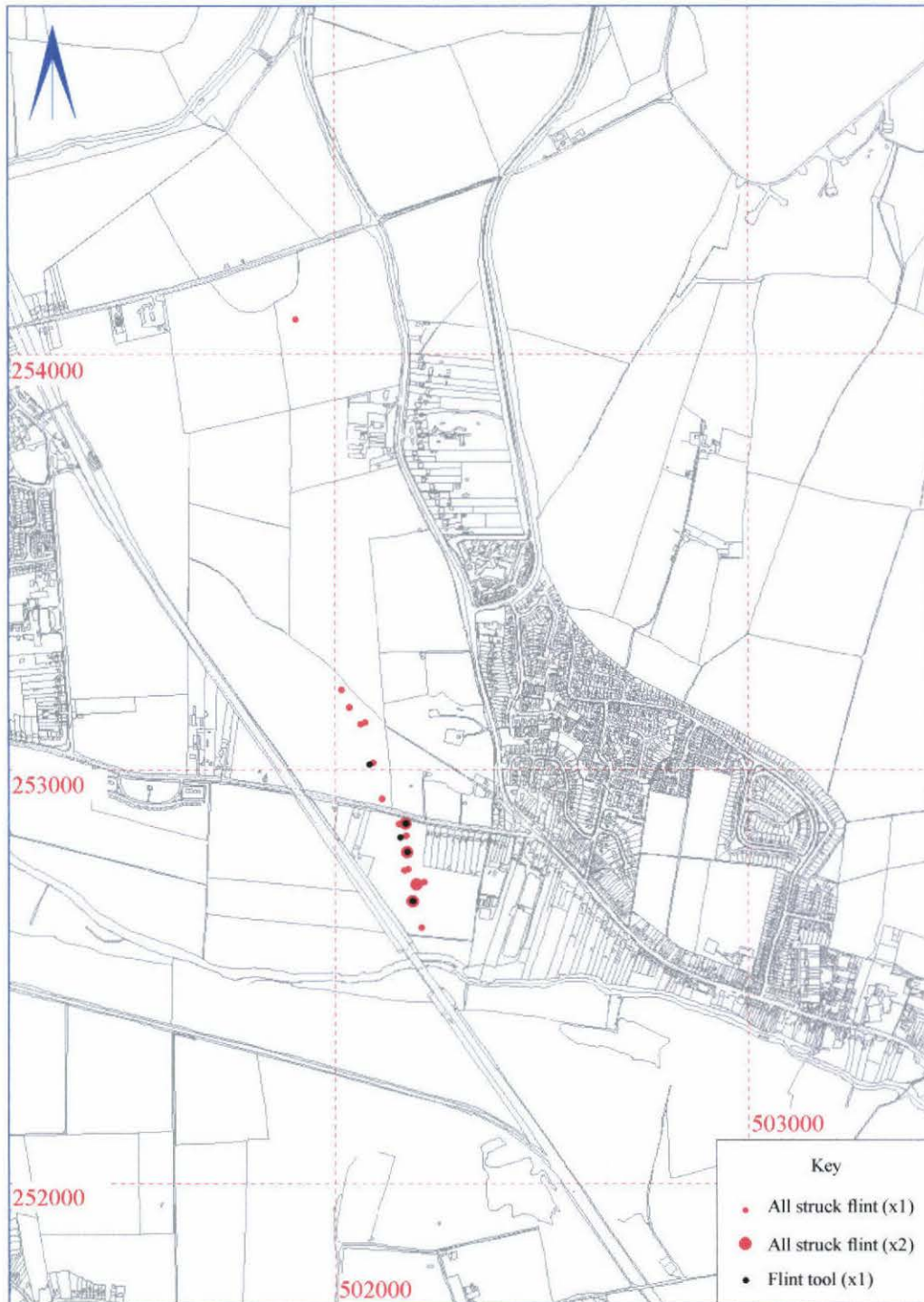


Fig. 11: Flint distribution.

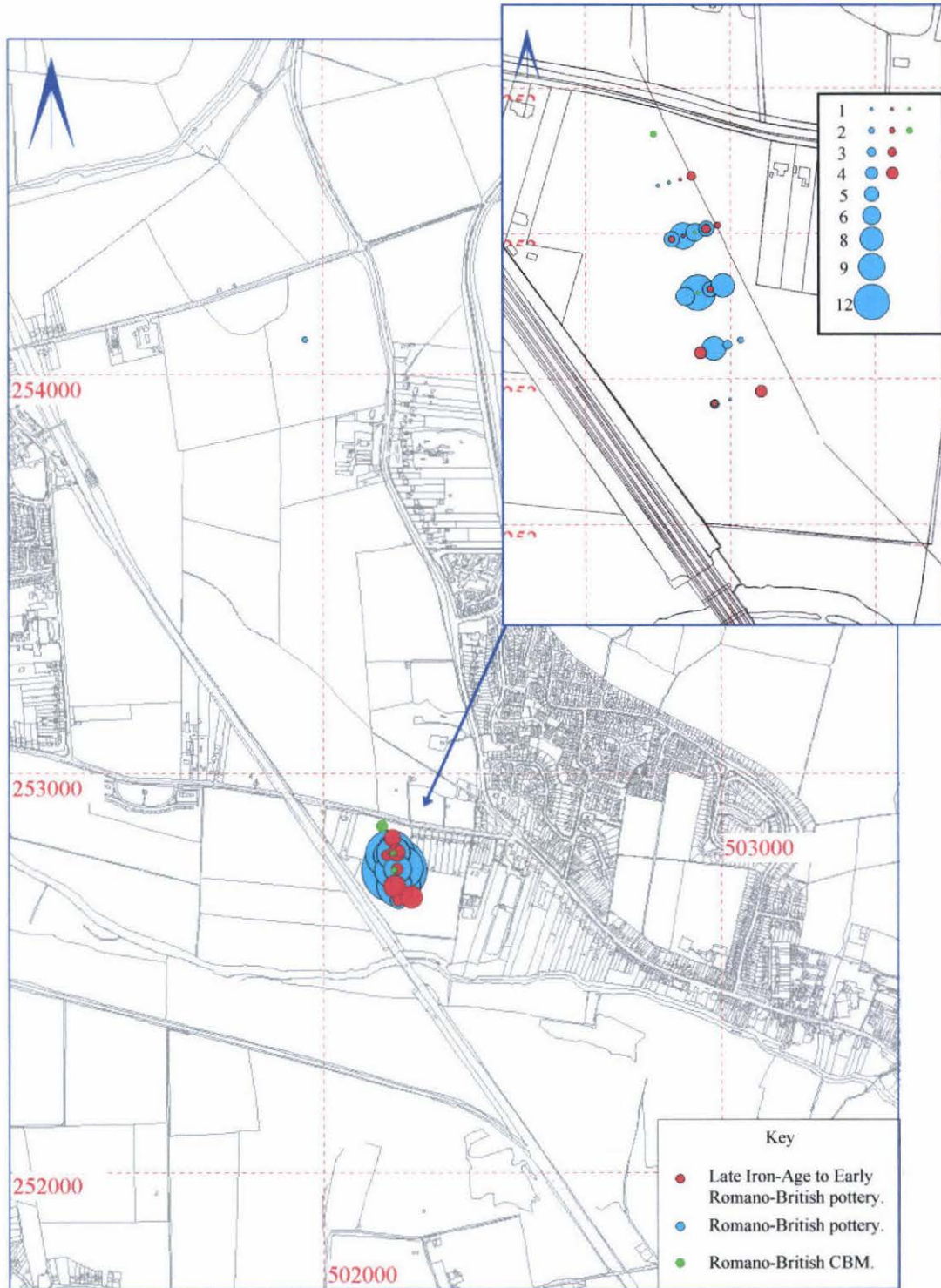


Fig. 12: Late Iron Age and Romano-British finds distribution.

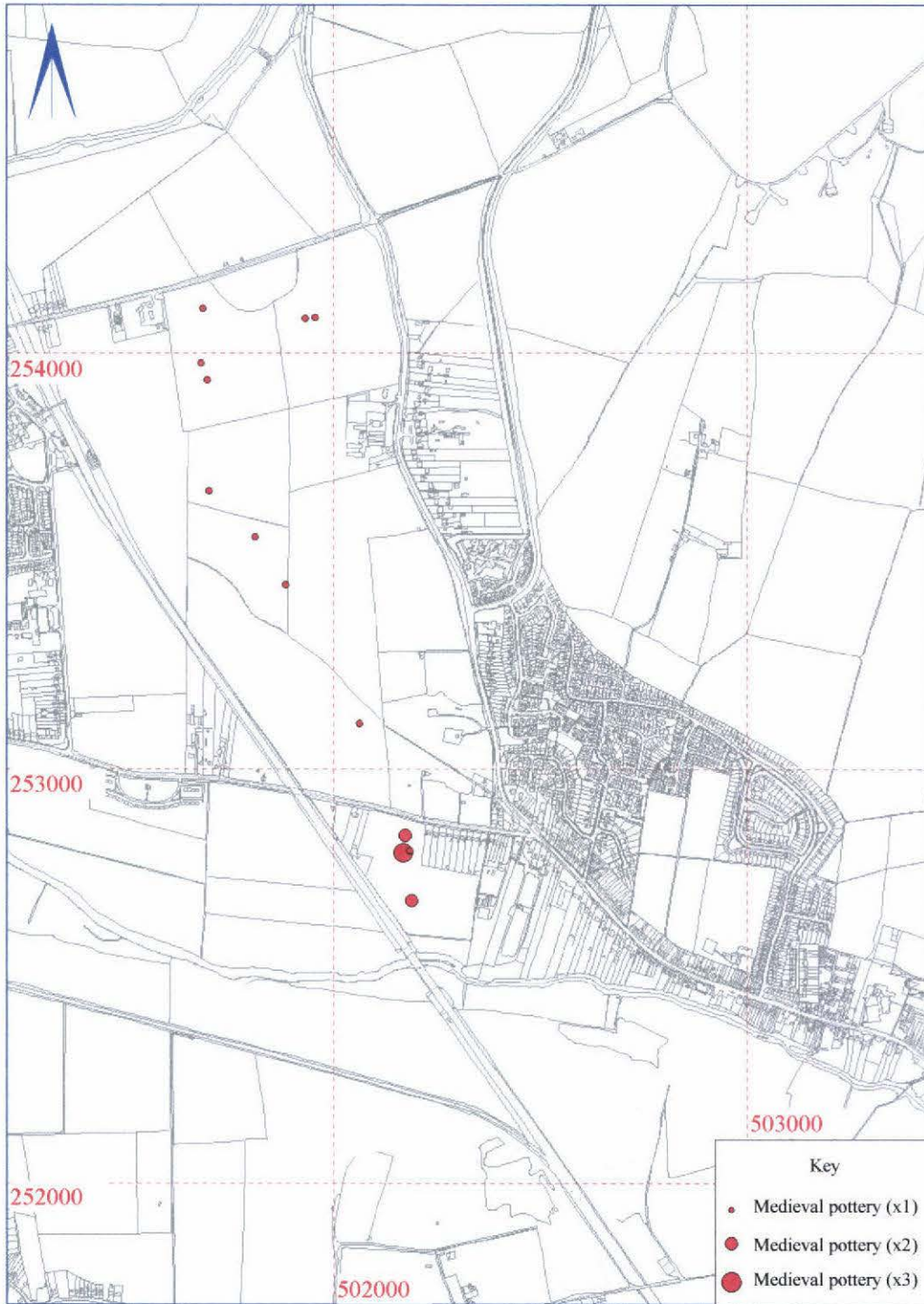


Fig. 13: Medieval pottery distribution.

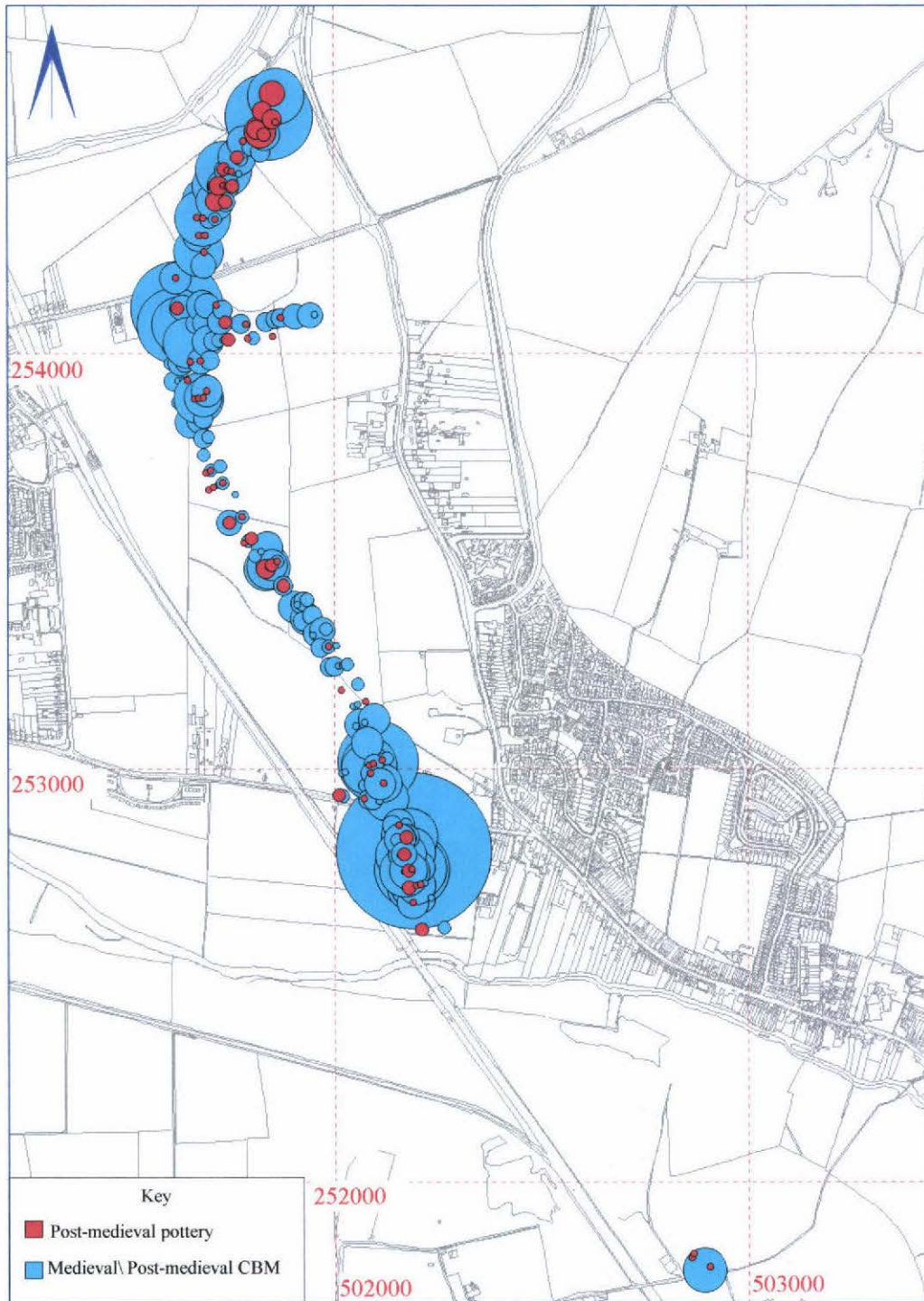


Fig. 14: Post-medieval finds distribution.

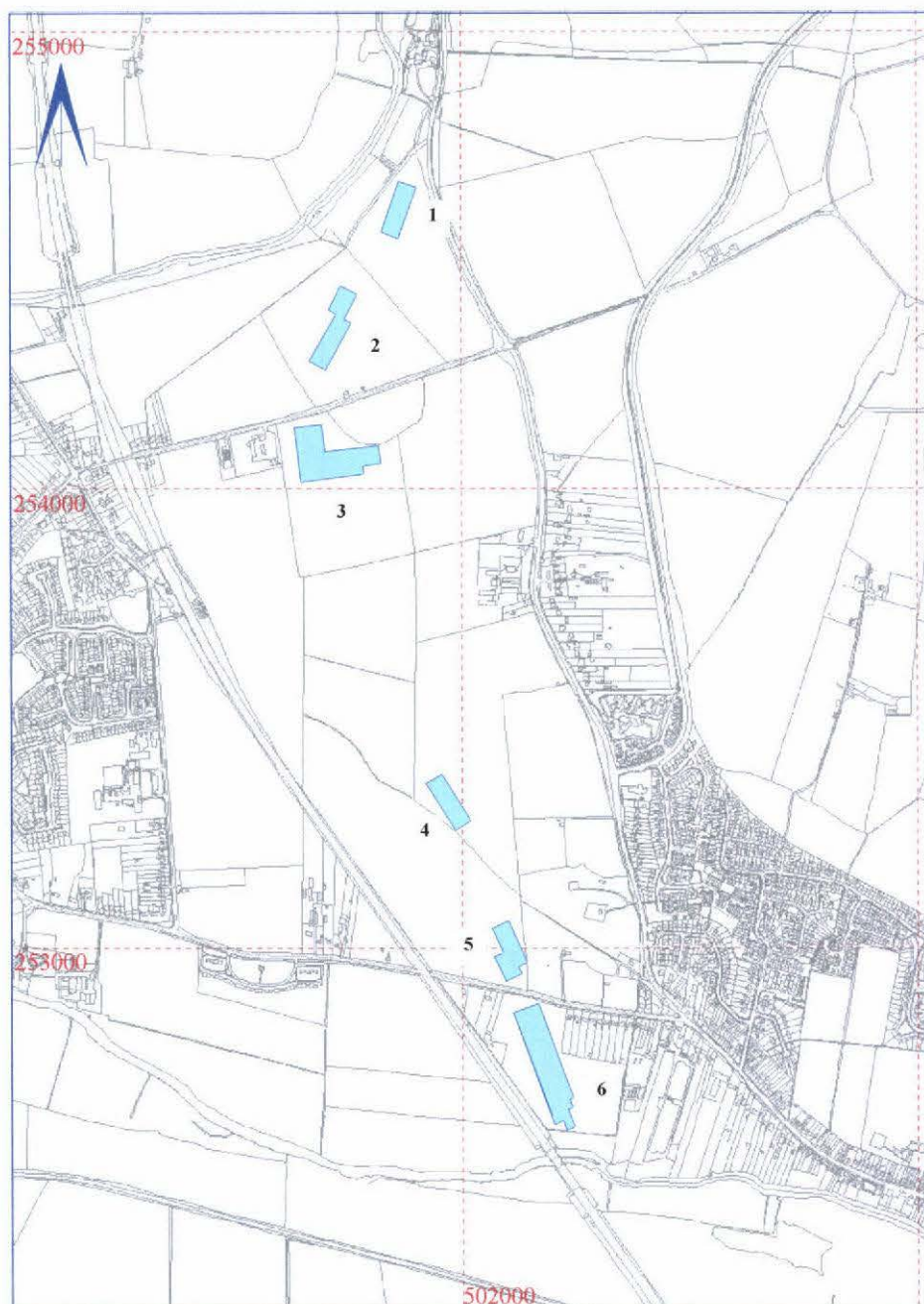


Fig. 15: Geophysical survey areas.

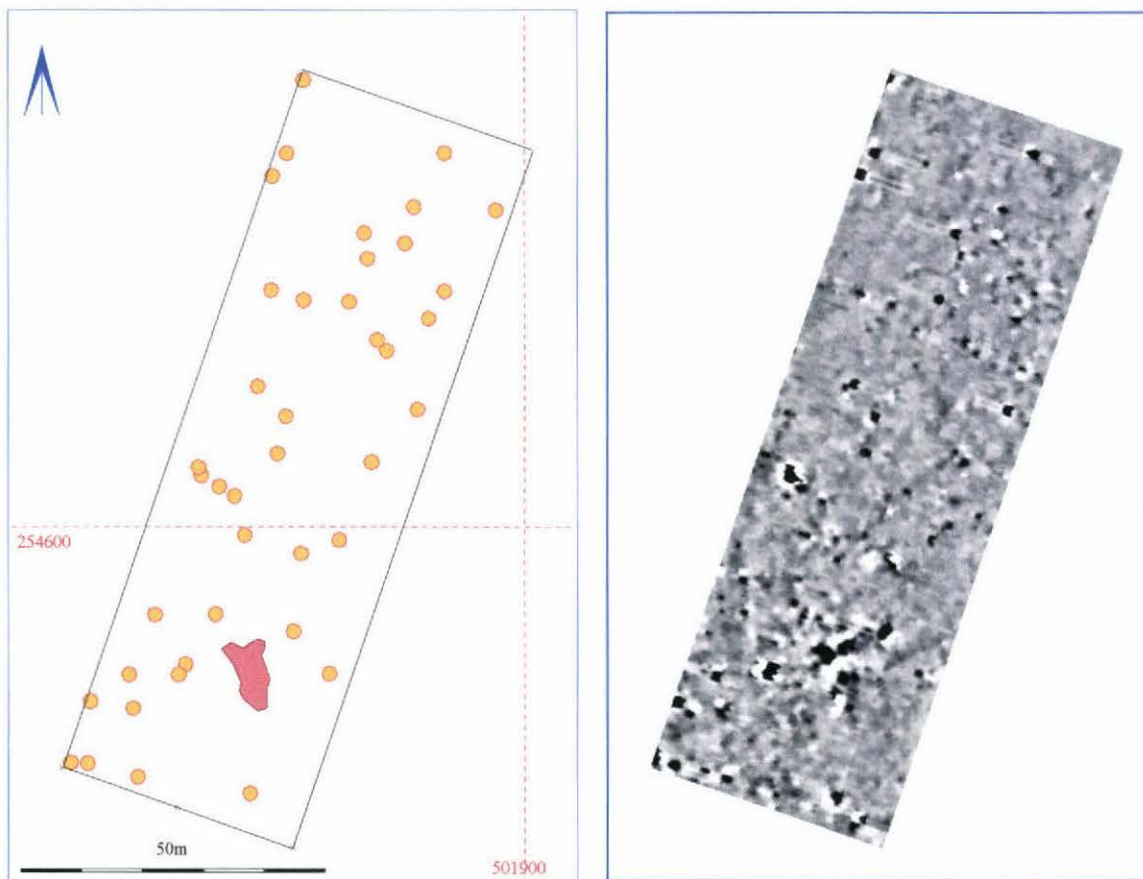
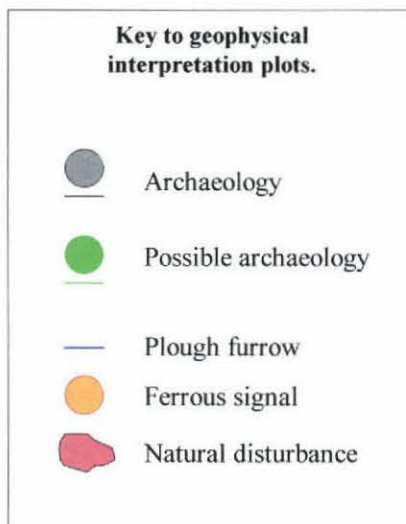


Fig. 16: Geophysical survey area 1, Interpretation and greyscale.



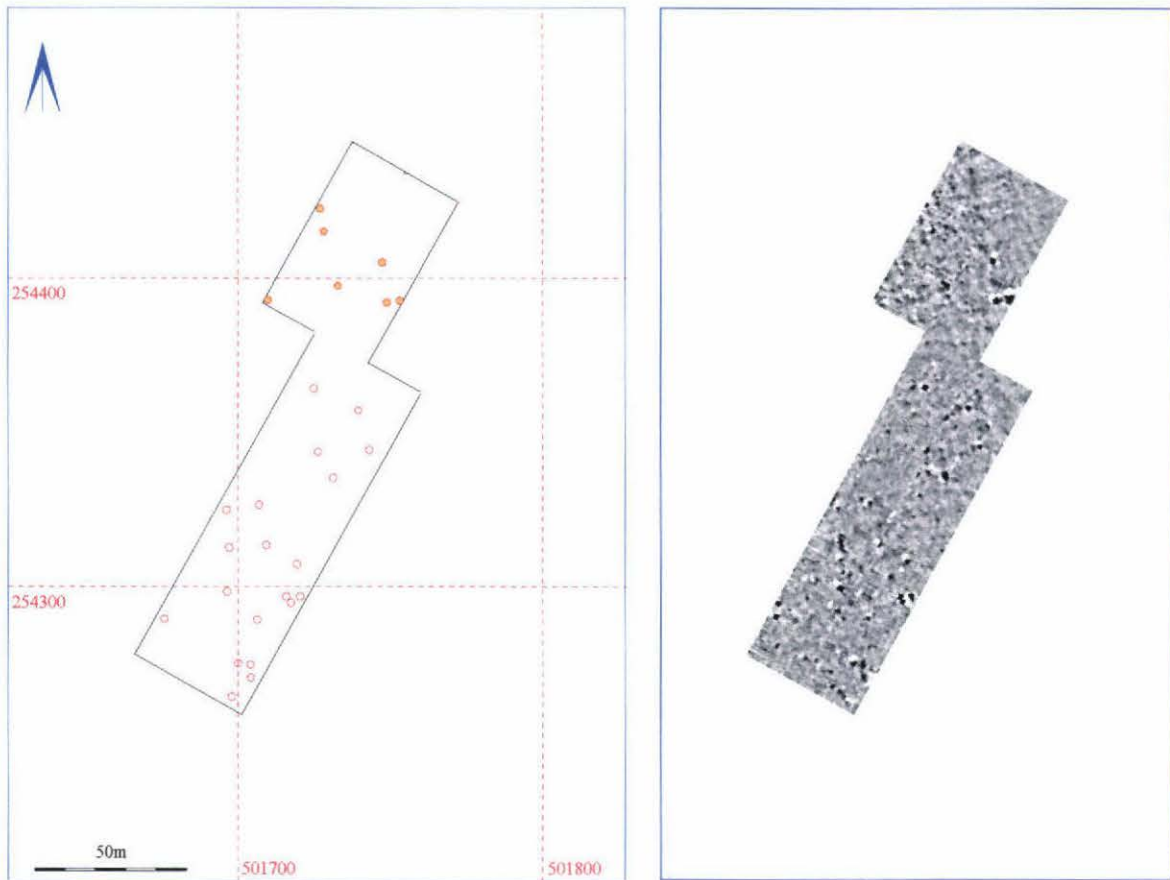


Fig. 17: Geophysical survey area 2, Interpretation and greyscale.

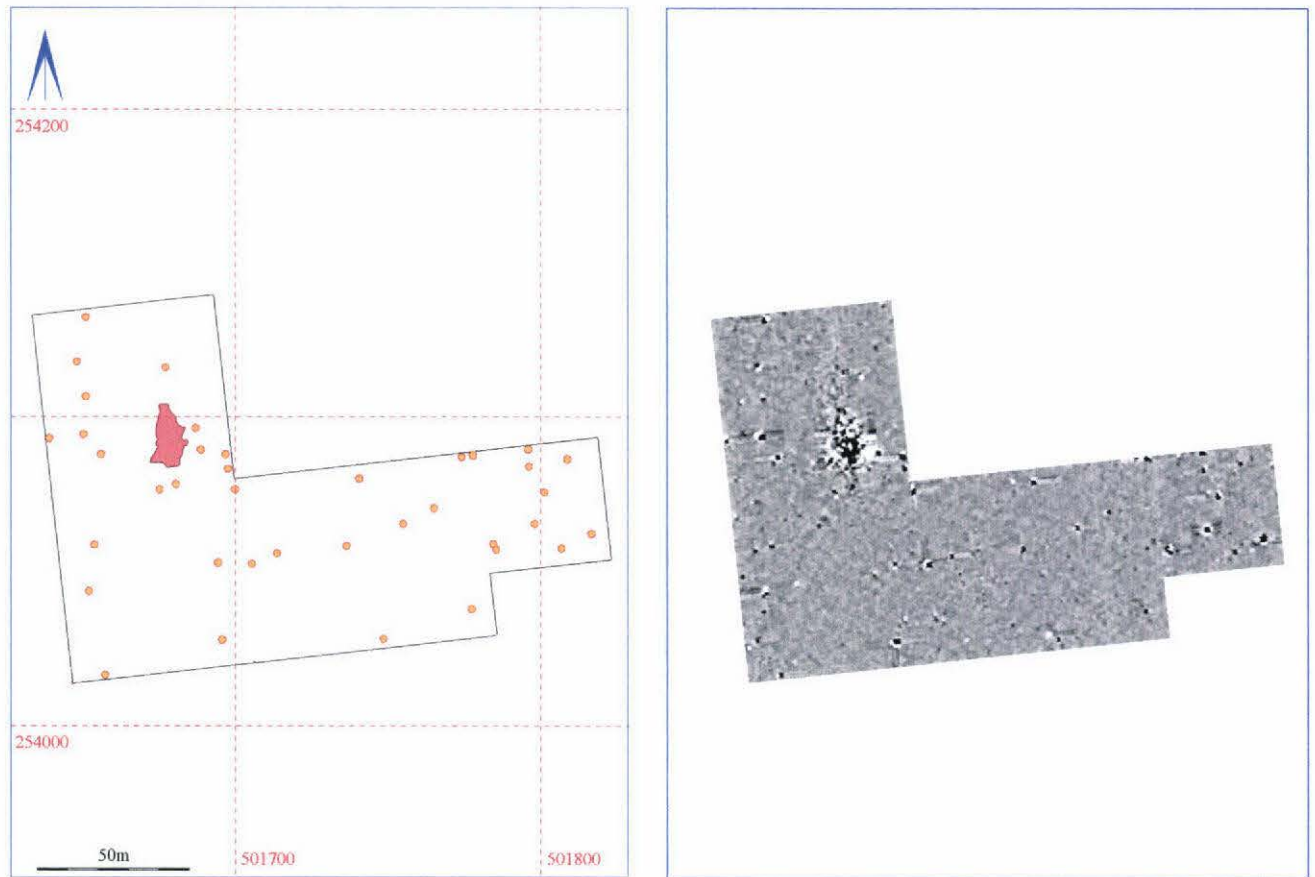


Fig. 18: Geophysical survey area 3, Interpretation and greyscale.



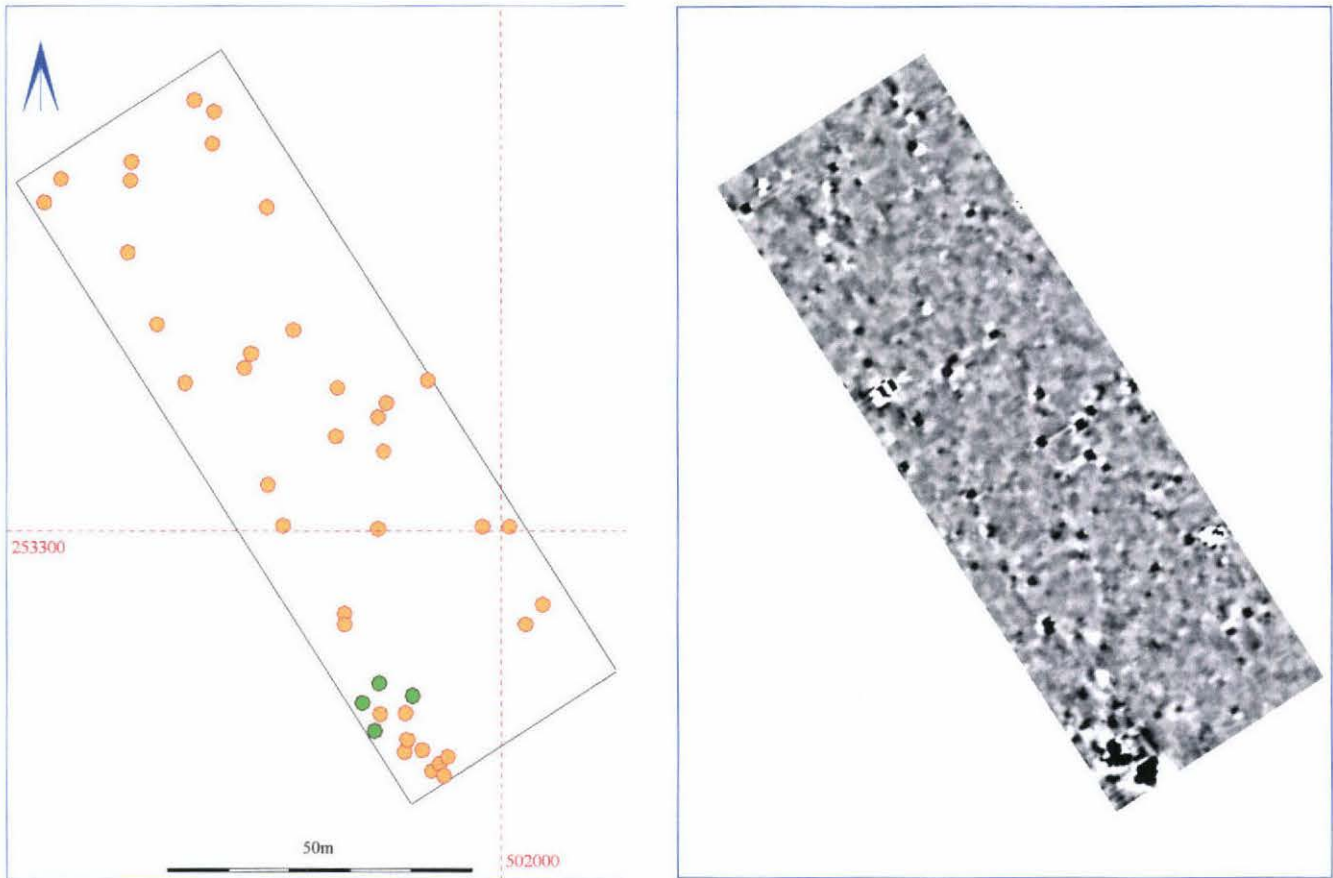


Fig. 19: Geophysical survey area 4, Interpretation and greyscale.



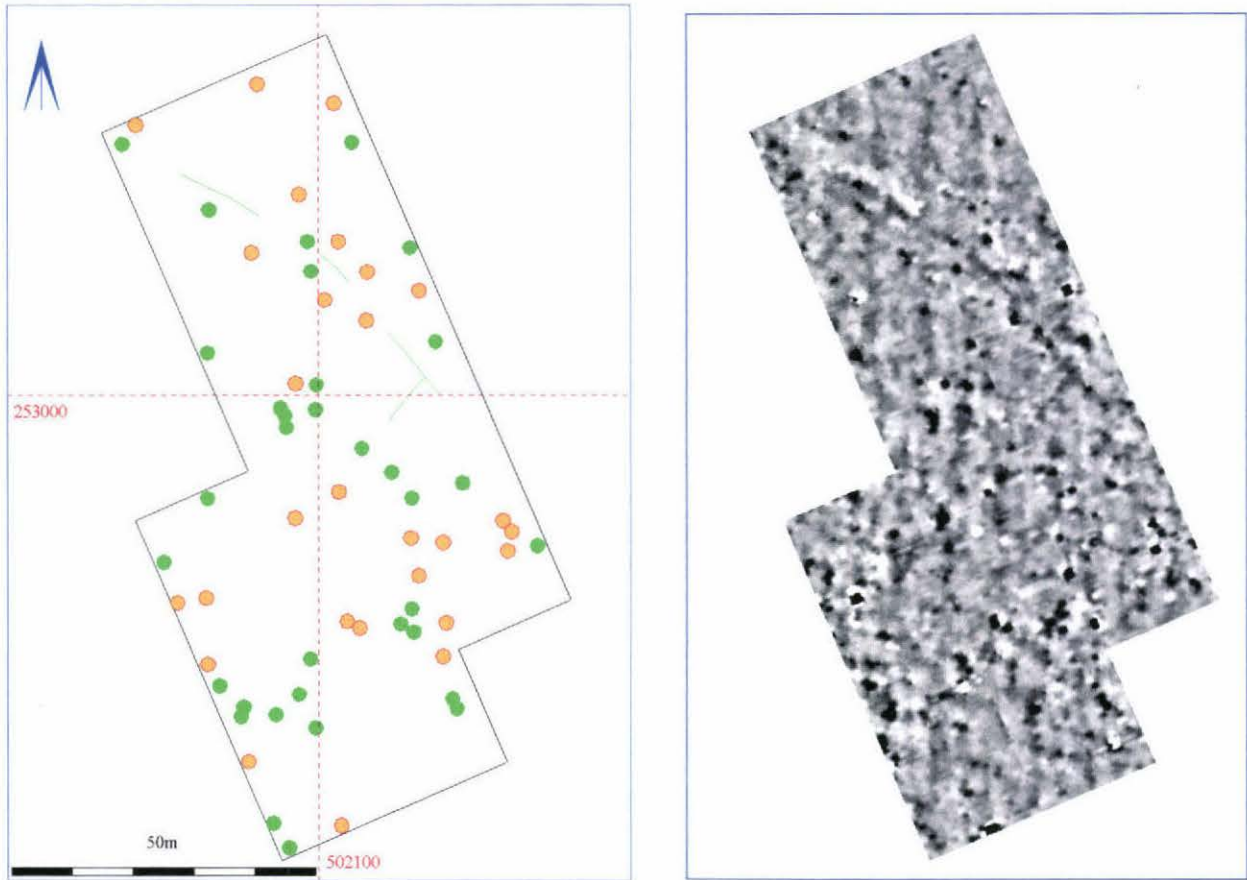


Fig. 20: Geophysical survey area 5, Interpretation and greyscale.

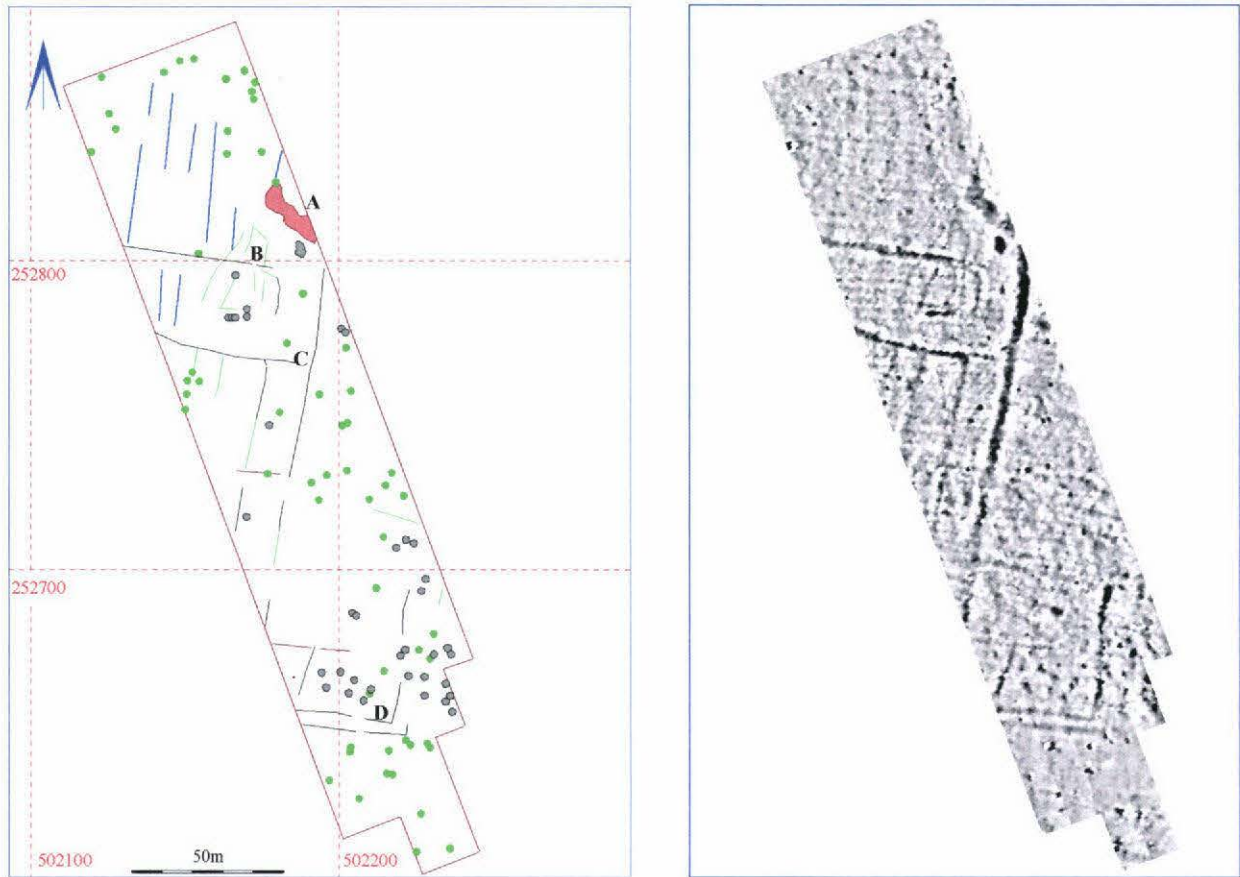


Fig. 21: Geophysical survey area 6, Interpretation and greyscale.

