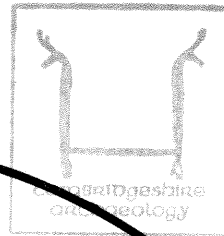
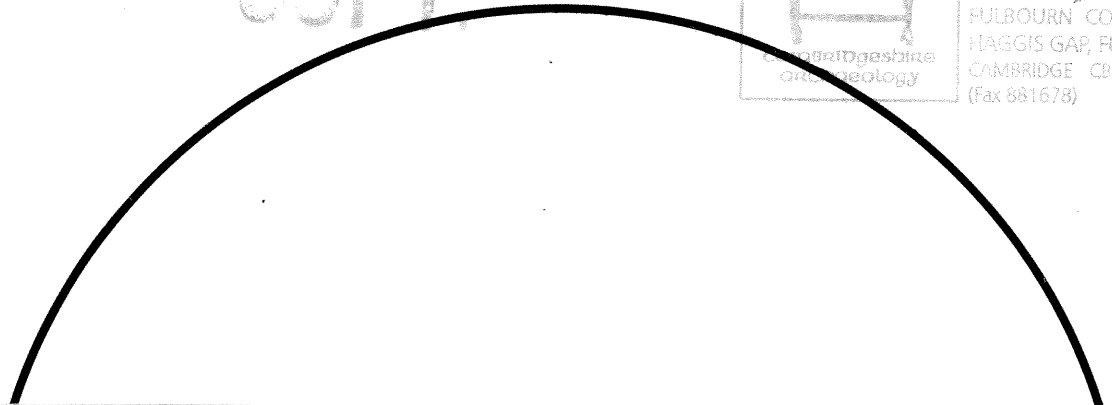


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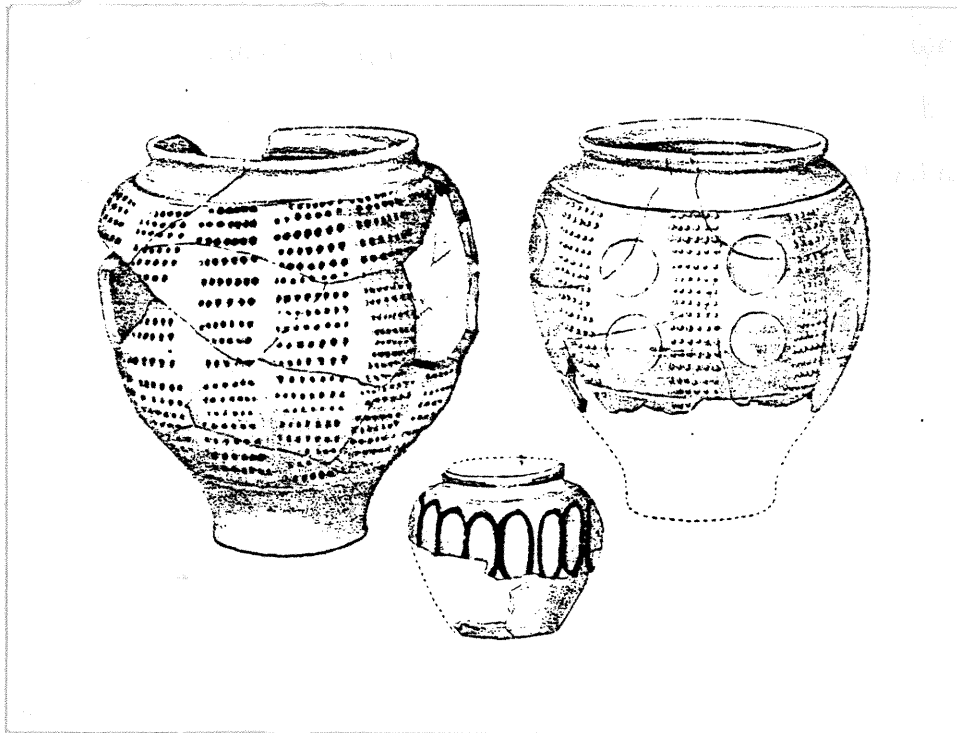


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Cambridge Southern Relief Road

An Archaeological Desk-Top Study



Cambridgeshire
County Council

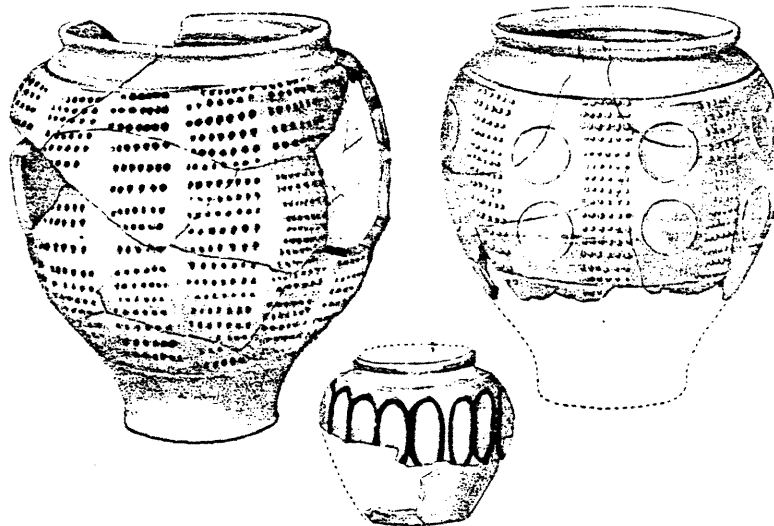
Rural Strategy

Cambridge Southern Relief Road

An Archaeological Desk-Top Study

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Name or report no. 33

Pottery from War Ditches (Mckenny Hughes 1904)



Cambridge Southern Relief Road An Archaeological Desk-top Study

Table of Contents

Introduction.....	1
Geology and Topography.....	1
The Sites and Monuments Record.....	2
Aerial Photographic Assessment.....	5
Implications and Recommendations for Future work.....	9
Conclusion.....	15
Bibliography.....	16
Appendix A Archaeological guideline's for road schemes.....	17
Appendix B Flow chart for archaeological works.....	18
Appendix C Planning guidelines.....	19
Appendix D Detailed descriptions of aerial photographs.....	20

Introduction

This desk-top study has been produced to define the extent of known archaeological remains likely to be affected by the construction of the Cambridge Southern Relief Road.

No nationally important archaeological remains were discovered within this desk-top information. Further areas have been defined which will merit field evaluation. This stage may lead to preservation or full excavation of such sites.

County planning guidelines concerning archaeology have been reproduced in Appendix C.

On the basis of information supplied, the area has been divided into two Areas

Area A Sites which are likely to be destroyed by the proposed road.

Area B Sites lying within the defined corridor.

This work consists of a search of the Sites and Monuments Record (Part 1) and an evaluation of the aerial photographic evidence by Air Photo Services (Part 2). These sources are considered together in Part 3 where the implications for known sites is considered in order to demonstrate the need for further levels of work.

Geology and Topography

The corridor defined for the study is located to the south and east of Cambridge, lying between junction 11 of the M11 (A10 and A1309) and the Cambridge to Fulbourn road at the Fulbourn Hospital. The proposed route is approximately 6 km long.

The topography of the area has been described as subdued, characterised by gently rising rounded hills in the south-east and east, to broad, shallow valleys in the west. The maximum contours along the route are approximately 30m O.D. (*Cambridge Southern Relief Road Draft Report 1991*)

The solid geology of the area is composed of cretaceous deposits. Middle chalk outcrops on the highest ground towards the eastern end of the route and the older lower chalk can be found in the valleys and lower flanks of rising ground.

Drift geology in the area comprises Pleistocene Terrace gravel deposits generally confined to the valleys.

Alluvium is likely to be present in the vicinity of Hobsons Brook which may be a palaeo-channel of the River Cam, and in the tributary valley to the east. (*Cambridge Southern Relief Road Draft Report 1991*)

Part 1**The Sites and Monuments Record**

The gazetteer lists known archaeological sites lying within the area of proposed development and is compiled from the Sites and Monuments Record. The Sites and Monuments Record is a computerised database, listing known archaeological sites within county defined areas. This information is accessible by archaeologists and members of the public involved in research, and is used to offer planning guidance to developers and local government planning offices.

The Sites and Monuments Record for Cambridgeshire is held by the Archaeology Section, Cambridgeshire County Council.

The data presented is based on currently available information, and should not be seen as a definitive list of archaeological sites within the defined area. Other sites are likely to be discovered during further levels of evaluation.

The gazetteer has been divided into two levels of search dependent on the likely affects of the proposed development

Area A Sites which are likely to be destroyed by the proposed road.

Area B Sites lying within the proposed corridor, extending between 100 and 300 metres either side of the routeway. Sites lying outside the routeway but which may have 'integral' components within the corridor have also been considered, especially where unscheduled areas of a scheduled monument are likely to be affected.

Gazetteer of Archaeological Sites**Area A**

Record No.	National Grid Ref.	Description
04529		Hobson's conduit, an early seventeenth century fresh water system supplying the city of Cambridge. The system comprised an artificial channel which tapped a stream, the Vicars (later Hobsons) brook. This artificial brook connects Nine Wells to the conduit.
07970	637/473 to 240/717	Roman road running between Haverhill and Godmanchester possibly originating at Colchester. This site is a <i>scheduled ancient monument</i> between 493/547 to 559/499 and a Site of Special Scientific Interest between 493/546 and 561/498.

Record No.	National Grid Ref.	Description
08338	474/543	Complex cropmark site, with rectilinear enclosures and linear features. In 1989 Mr. T. Malim observed ridge and furrow in the area. 2 flint artefacts and post-mediaeval pottery were found during fieldwalking 1989.
08339	459/546	Extensive cropmark complex with multi-ditched rectilinear enclosures and linear features. Other features are believed to exist but could not be deciphered from the aerial photographs.
08357	452/545	Cropmarks of a ditched system. Probably of Romano-British date.

Area B

Record No.	National Grid Ref.	Description
02763	488/555	Cropmark. Two ring ditches
04461	458/538	Cropmarks of an Iron Age and Roman settlement site. The site is associated with 04463. Field walking in the area has confirmed the Roman date. The most complex area of the cropmarks are judged to be <i>nationally important</i>
04462	461/536	Finds scatter including 1 Neolithic biface, 2 scrapers and many other flint artefacts found during field walking of field adjacent to 04461.
04463	463/533	Cropmarks of two sub-rectangular enclosures with two parallel ditches running northwest towards the Roman settlement (04461).
04776	491/559	Cropmark, ring ditches and Neolithic/ Bronze Age finds scatter. 1 arrowhead, 2 ? scrapers and 6 flakes.
04777	491/557	Bronze Age finds scatter. 2 flint scrapers and 4 waste flakes.
04830	486/555	Indications of Celtic fields
04963	4840/5555	Site of 'War Ditches', a circular earthwork enclosure possibly a 'hillfort' (White 1963) consisting of a single bank and ditch. This site has a chequered archaeological history of excavation and recording (1904, 1939 and 1962). The site appears to be of Iron Age date with later Roman occupation and burials of various dates (possibly Anglo-Saxon). Other finds include Bronze Age and Mediaeval pottery. The area appears to have been largely destroyed by quarrying.

Record No.	National Grid Ref.	Description
04964	4849/5576	Excavated Bronze Age barrows. No remains survive above ground. The primary burial has been destroyed, and parts of the ditches were exposed during quarrying.
04965	4856/5580	Two barrows lying 200 yards to the north-east of the 'War Ditches' along with 9 Anglo-Saxon burials.
05106	475/546	Finds scatter. 3 flint artefacts, Mediaeval and post-Mediaeval pottery found by the Cambridge Archeological Field Group (CAFG).
07808	455/555	Cropmarks of enclosures, track systems and searchlight installations.
07892	480/552	Cropmarks.
08356	467/544	Cropmarks. Rectilinear enclosure, possibly part of a field system.
08707	4691/5465	1 Prehistoric flint artefact found by the CAFG during the laying of a gas pipeline in 1985.
08708	4734/5469	1 sherd of post-Mediaeval pottery found by CAFG during the laying of a gas pipeline in 1985.
08709	4750/5471	1 sherd of Roman pottery and 4 of unknown date were found by the CAFG during the laying of a gas pipeline in 1985.
08710	4771/5476	1 Prehistoric flint artefact found by the CAFG during the laying of a gas pipeline in 1985.
08880	491/560	Cropmarks of three ring ditches
09640	449/537	Cropmark of hexagonal 'ring ditch'.
09716	442/544	A series of pits and ditches dated to the Iron Age and Roman periods were found during soil improvement operations in 1978. It is suggested that the site may be part of a larger settlement partially excavated by Davidson and Curtis in 1976, and Miller and Miller (1977). Prehistoric pottery was also found 650 m. to the east in 1907.
09956	478/545	A series of square ditched enclosures to the north of Caius College Farm

Aerial Photographic Assessment

**By Air Photo Services
C.Cox and R.Palmer**

Introduction

For the assessment area all available oblique and vertical photographs from the Cambridge University Collection of Aerial Photographs (CUCAP) were consulted as were specialist oblique cover and the Crawford Collection verticals from the National Library of Air Photographs (NLAP) of the Royal Commission on the Historical Monuments of England. The 1:5000 vertical survey of the relief road, taken for Travers Morgan by the Ordnance Survey (OS) in 1991 was used throughout this assessment.

Photographs were interpreted, digitally rectified and mapped at 1:2500 as individual 'sites', usually having an SMR number, and comment made, in each case, on the types of archaeological feature likely to be encountered on the potential route of the relief road. Recent field boundaries and drains, quarries and other subsoil disturbance, plus some geological/pedological features have been mapped where they may be relevant to field investigation along the potential route.

Other than the addition of specific, and identified, non-archaeological detail, the plans produced for this assessment differ considerably from those made for the 1:10000 SMR - but this should be expected. Any 1:10000 mapping is likely to result from a rapid scan of photographs covering a large area with the aim to indicate the presence, and general characteristics, of features recorded from the air. For this assessment, a high level of detail in interpretation and mapping will facilitate the rapid and accurate field location of archaeological features in precise correlation to the road construction route. Consideration of the mapped results should lead to more accurate estimation of the required field archaeological input, and give a deeper understanding of features which may be encountered during field investigation in advance of construction.

Content of this report

The assessment area is summarised in the form of three 1:10000 unedited computer plots with tabulated description. The table on page 8 summarises the features which were interpreted and mapped from aerial photographs with SMR numbers where they exist. This information is explanatory to the 1:10000 plots which show the sites in relationship to one another, highlight the potential of the blank areas, and present the whole in relation to the relief road route.

Archaeological assessment reports on each 'site' follow in National Grid Reference order, progressing from west to east along the potential route, with SMR numbers noted where they exist.

Limitations of Evidence

Due to many factors, aerial photographic information is by no means a complete archaeological record. Further features may be discovered as a result of field investigation. Fieldwork is also required to identify positively and evaluate the archaeological significance of features mapped from aerial photos.

Other than in one instance, areas between mapped 'sites' are not herein discussed. It should be emphasised that archaeological features are likely to occur in these 'blank areas', and that there are many reasons why the aerial record will never reveal all past traces. The archaeological assessment reports indicate whether 'sites' are likely to extend beyond their presently recorded limits, and in which directions.

Mapping Accuracy

The software used for rectification of interpretations provides error values for the matching of map to photograph control points. For this assessment, the accuracy of digital mapping for the control points of all rectified air photographs was matched at less than 2.0m.

The location of mapped features is accurate to the stated figures within the limits of OS map accuracy, photographic information and digital mapping technology. Ground height variations may cause slight locational error.

SUMMARY OF SITES

<u>NGR</u>	<u>SMR</u>	<u>Description</u>
TL444537	--	Geological features, not mapped
TL448540	--	Agricultural features, not mapped
TL458539	04461	Not re-interpreted
TL451544	08357	Ditched fields, droves, linear ditches
TL457553	--	East of SMR 07808. Likely to continue roads, linear ditches and probable enclosure
TL460548	08339	Two ditched complex systems plus tracks and traces of fields and other enclosures
TL467544	08356	Enclosures, ring ditches, linear ditches and pits
TL461554	09591	Not re-interpreted
TL474544	08338	Four conjoined ditched enclosures with internal settlement evidence. Also adjacent features
TL475547	09956	Series of enclosures continuing the alignment of SMR 08338
TL476548	--	Headland
TL477545	--	Headland
TL478548	--	?Natural mound
TL479550	--	Headlands
TL480551	07892	D-shaped ditched enclosure
TL484556	04830	Not re-interpreted: no aerial evidence
TL486555	--	Ploughed banks
TL4955	--	Mediaeval fields
TL4955	--	Headland
TL490554	02763	Two ring ditches

<u>NGR</u>	<u>SMR</u>	<u>Description</u>
TL491559	08880	Three ring ditches
TL494556	--	Headland

DRAWING CONVENTIONS

1:10000 unedited computer output

Ditches	Red line
Ring ditches	Red cross
Bank/metalling	Green line

Drawn onto 1:10,000 base maps

Potential road route	Purple line
Survey area	Brown line

Drawn onto a transparent overlay

The aerial photographic report and plots have been archived with Cambridgeshire County Council Archaeology Section.

Implications and Recommendations for Future work

The implications and recommendations listed below are based on evidence provided by the Sites and Monuments Record and a search of aerial photographic archives. This information has been used to provide an initial programme on further levels of archaeological work needed to meet *structure plan policies* (Appendix C)

The commissioning of the aerial photographic assessment had a significant bearing on the recommendations listed below. Several new areas of complex cropmarks have been defined which will require further levels of field evaluation.

Damage to the archaeological remains will occur at several different levels during the construction of the Cambridge Southern Relief Road.

Sites may be totally destroyed, or important elements of a site may be drastically altered where they lie within the proposed route or within areas to be disturbed by associated workings. Therefore it is important at this stage to define areas which should be preserved or evaluated with regard either for *preservation* of the site, recording the site by *excavation* or showing that areas of land have little or *no archaeological or historical significance*.

On the basis of guidelines to road schemes written by Cambridgeshire County Council Archaeology Section (Appendix A) the route should undergo a series of investigatory stages to define the extent of sites, degree of preservation and archaeological potential and allow realistic costings for successive levels of field evaluation.

- | | |
|----------------|---|
| Stage 1 | The whole route should be fieldwalked, in order to locate presently unrecorded sites and define areas requiring further field evaluation more accurately. |
| Stage 2 | Those areas defined for field evaluation on the basis of this desk-top evaluation and fieldwalking should be examined by limited trial trenching/ test pitting and geophysical survey. Details of the specific archaeological field work required should be sought from the County Archaeologist. On the basis of this information an informed judgement can be made as to whether a site should be preserved in situ, by record (excavation) or require no further comment. (Appendix B) |
| Stage 3 | Some sites will require total excavation, including analysis, conservation, archiving and publication of the excavated materials. |
| Stage 4 | Recording brief during topsoil stripping to record features not examined during stages 2 and 3. |

Area A

Record No	Implications	Recommendations
04529	The road route cuts across the course of the artificial channel.	This artificial channel is an integral part of a series of archaeological features associated with the historical development of Cambridge. This channel should be preserved either by bridging or an alternative method acceptable to the County Archaeological Office.
07970	The predicted course of the Roman road will be crossed by the proposed modern road. This will destroy a segment of the Roman road. Early work by Professor Hughes (1904) suggested there was a link between 'Worts Causeway' and 'War Ditches'.	This area should be field evaluated in order to assess the presence of ancillary activities in this area and accurately locate the position of the road. The Roman road should be excavated and recorded.
08338	The proposed route will cut through a number of ditched enclosures with internal evidence for settlement. This is an element of a complex settlement site extending into 09956	This area of cropmarks should be field evaluated. These areas will require excavation
08339	This area will be affected by the construction of the road. The area of cropmarks in the region of 461/547 are suggestive of a domestic settlement.	The area within the corridor should be field evaluated for archaeological remains. On the basis of the aerial photographic evidence this area is likely to require further excavation.
08357	The proposed route should miss the main concentration of cropmarks. The alignment of cropmarks suggests that this may be part of a more extensive system extending to the north, east and south.	This area should be field evaluated. Evaluation should include areas outside the known extent of the cropmarks. This should clarify the extent, preservation and type of site. Further excavation may be required.

Area B

Record No	Implications	Recommendations
02763	The aerial photographic shows this site to be at 491/544. The site lies within 100m of the marked road and may be affected by construction.	This site should be field evaluated to assess the extent of the site, and whether there are any associated Neolithic/Bronze Age activity concentrations. This will lead to excavation if such concentrations are affected by construction work.
04461	The known area of cropmarks <i>scheduled ancient monument</i> (SAM 57) lies outside the corridor and is unlikely to be affected by the construction work.	The area to the north of this cropmark site should be examined by limited field evaluation in order to assess whether cropmarks in this area are blanketed by alluvium, and for the presence of sites associated with the cropmark site. Should such sites be found they may require excavation if they are likely to be disturbed during the construction activities.
04462	No implication. Outside proposed corridor. This site shows that other activity centres are likely to be found outside the presently defined boundaries of archaeological significance.	
04463	No implication. Site associated with SAM 57.	
04776 04777	Bronze Age finds scatters associated with ring ditches, lying within corridor.	This site may be affected by the road construction and should be field evaluated to define its extent. On the basis of this information a decision can be made as to whether further excavation will be required.
04830	These field systems were not observed during the aerial photographic search.	This area should be evaluated because of its proximity to 'War Ditches'. (see 04963)

Record No	Implications	Recommendations
04963 04964 04965	The site of the 'War Ditches' appears to be outside the corridor. The settlement site may have extended beyond the ditch boundaries excavated during quarrying, other remains including Anglo-Saxon burials are known from the area. Mckenny Hughes (1904) has marked a possible ditch running between the hillfort and Worts Farm. This may have an implication for the location of the Roman road and the evaluation of the area.	The area around the site of 'War Ditches' one of high archaeological significance; therefore the fields to the south and east should be field evaluated to define areas which will be affected by construction work. On the basis of this work it will be possible to judge the archaeological significance in a <i>local</i> or <i>national framework</i> , and decide whether such sites should be excavated or preserved.
07808	This cropmark includes traces of two roads and indications of settlement which appear to extend into the playing fields. The playing fields are currently under pasture and therefore unresponsive to cropmarks.	This site including areas of pasture should be field evaluated to allow a considered judgement to be made on the significance of the archaeological features. Excavation is likely to be required for settlement and road areas affected by the development.
07892	Cropmark lying within the corridor.	This site will need field evaluation if construction work is likely to encroach on the area of cropmarks.
08356	Cropmark lying within the southern part of the corridor extending up to the proposed road. Work in the area by Cambridgeshire County Council (Malim 1990) suggests that further evaluation in the area is required to assess whether the site will need protecting.	This area should be field evaluated . Excavation is likely to be required. The possible ring ditches/ round houses may have special archaeological significance (see Malim 1990).
08707	No implication unless further artefacts are found during field walking.	

Record No	Implications	Recommendations
08708 08709 08710 05106	A cluster of prehistoric, Roman and post-Mediaeval finds found near Newbury farm.	This area requires further field evaluation initially by fieldwalking. The concentration may be associated with sites 08338 and 09956.
08880	A series of ring ditches lying partially within the corridor. These sites are approximately 100m from the proposed route line and may be affected by construction work.	If these sites are to be disturbed they should be field evaluated . Depending on the results of this work further excavation or preservation will be required.
09640	Dubious cropmarks lying just outside the corridor.	If this area is affected by construction the site will need to be evaluated.
09716	There appears to be no implication as the known extent of the site lies outside the corridor. References have been made to similar finds occurring to the east, and the assemblage as being part of a larger site (Miller and Miller 1977)	Depending on the results of the field walking an field evaluation may be required to the south-east of this area. This may lead to excavation if archaeological remains are identified.
09956	This site appears to be a continuation of 08338, with further settlement elements are present	Evaluation of archaeological remains will be required. This is likely to be followed by excavation where these remains will be affected by construction activities.

Area with no clear site boundaries

The area of land lying between 08357,08339,07808, and 04461 (see map overlays) should be **field evaluated** due to the high probability of archaeological remains surviving in the area without being visible at this level of analysis due to unresponsive ground conditions. This area may provide information concerning the interrelationships of the four observed sites.

Minor features observed on the aerial photographs (Appendix C) such as an ovate mound at 478/548 may require evaluation in order to disprove their archaeological significance.

Ancillary development works

Any further activities such as the construction of camps associated with the road works should be located so as to avoid areas of archaeological significance. Where ground works are to take place evaluation may be required.

These archaeological works should be timed to occur well in advance of any construction activities and allow the planning of a seasonal framework for field walking, evaluation, and excavation.

Conclusion

This desk-top assessment has defined a number of archaeological sites which will be affected by the proposed relief road. These sites include cropmark areas and finds scatter sites. Sites known to be of national importance, and the most complex of the cropmark areas have been avoided at a previous planning stage by early consultation with the Archaeology Section.

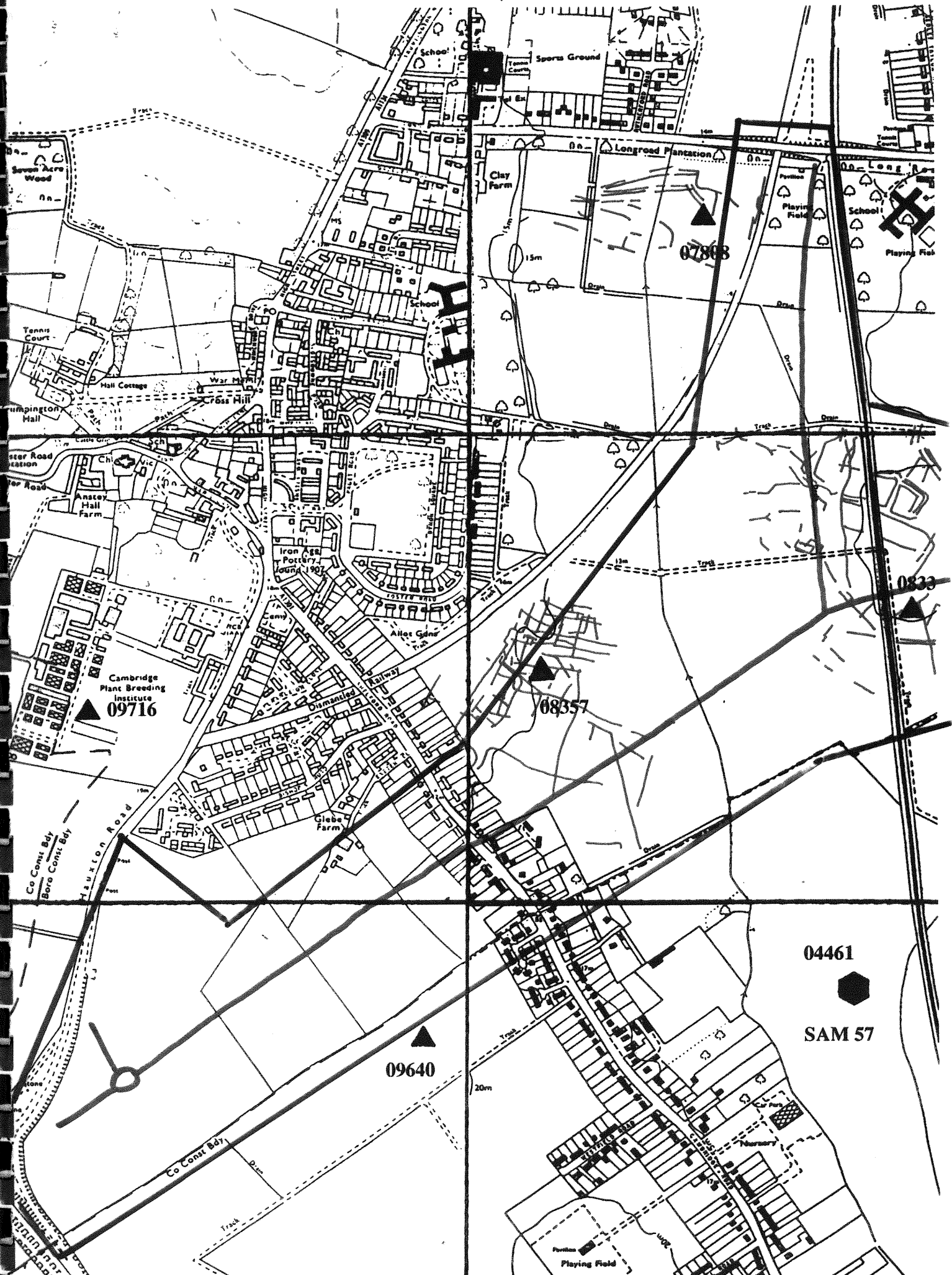
The road corridor should be fieldwalked as the first stage of archaeological field evaluation as laid down by the County Council Archaeological Office (Appendix A). This should be followed by evaluation of known archaeological sites and areas of high archaeological potential in which ground conditions may not have been responsive to other forms of archaeological investigation (see recommendations). Work should include limited trial trenching and geophysical surveys. Detailed requirements for the field evaluation should be sought from the County Archaeological Office. (see Appendix B for phasing of archaeological works)

The field evaluation stage may define as yet unrecognised areas of *national* or *local* importance which may require preservation. Other sites affected by the construction activities have been identified which are likely to require further investigation by sample excavation. Particularly significant sites may merit larger scale excavations.

All phases of archaeological work should be carried out well in advance of the construction work by professional archaeological contractors recognised by the County Council. All archaeological work should be funded by the developer. This should include all fieldwork, all post-fieldwork analysis, conservation, storage of the finds and publication costs.

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04461

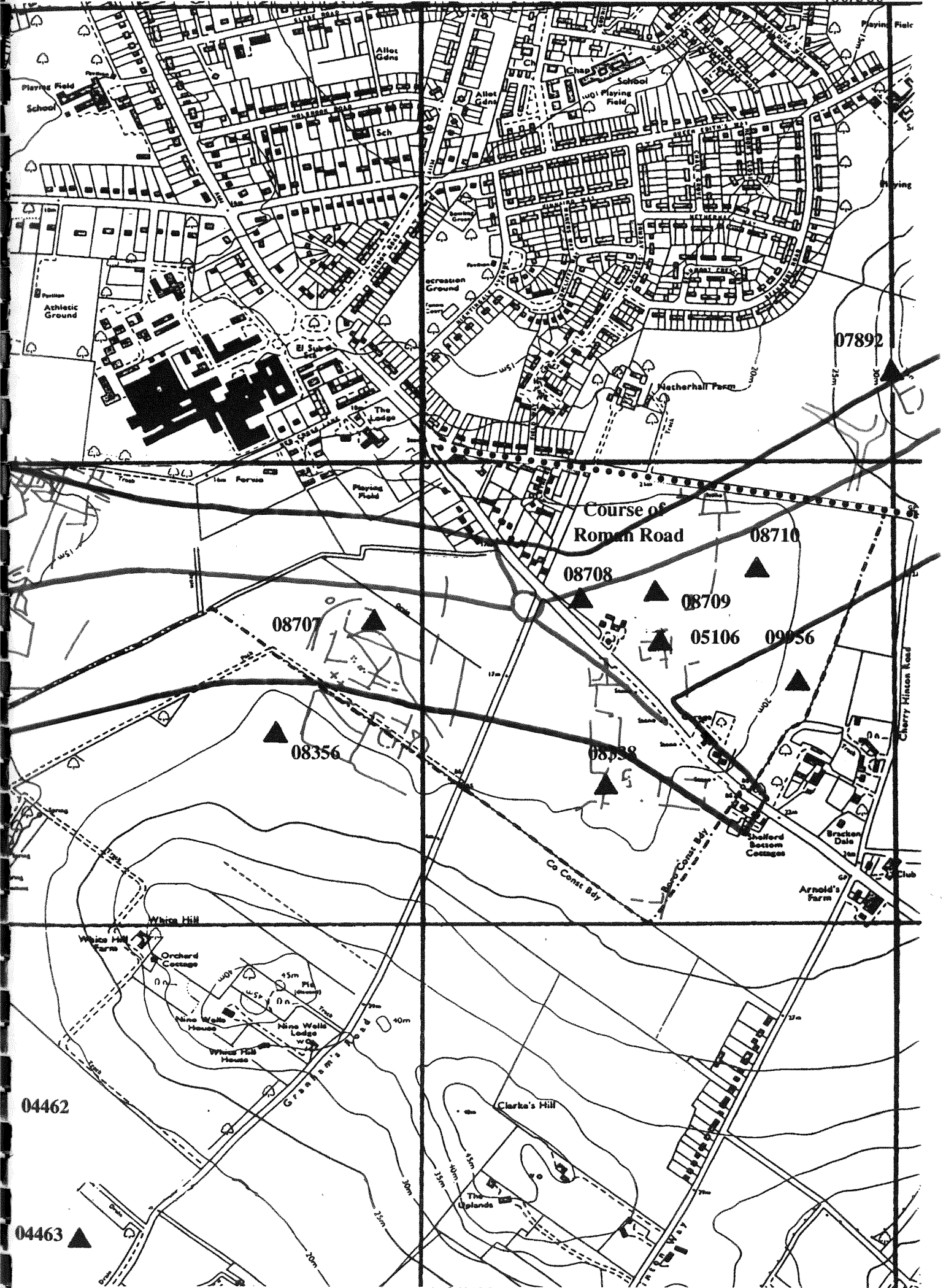
SAM 57

09640

07808

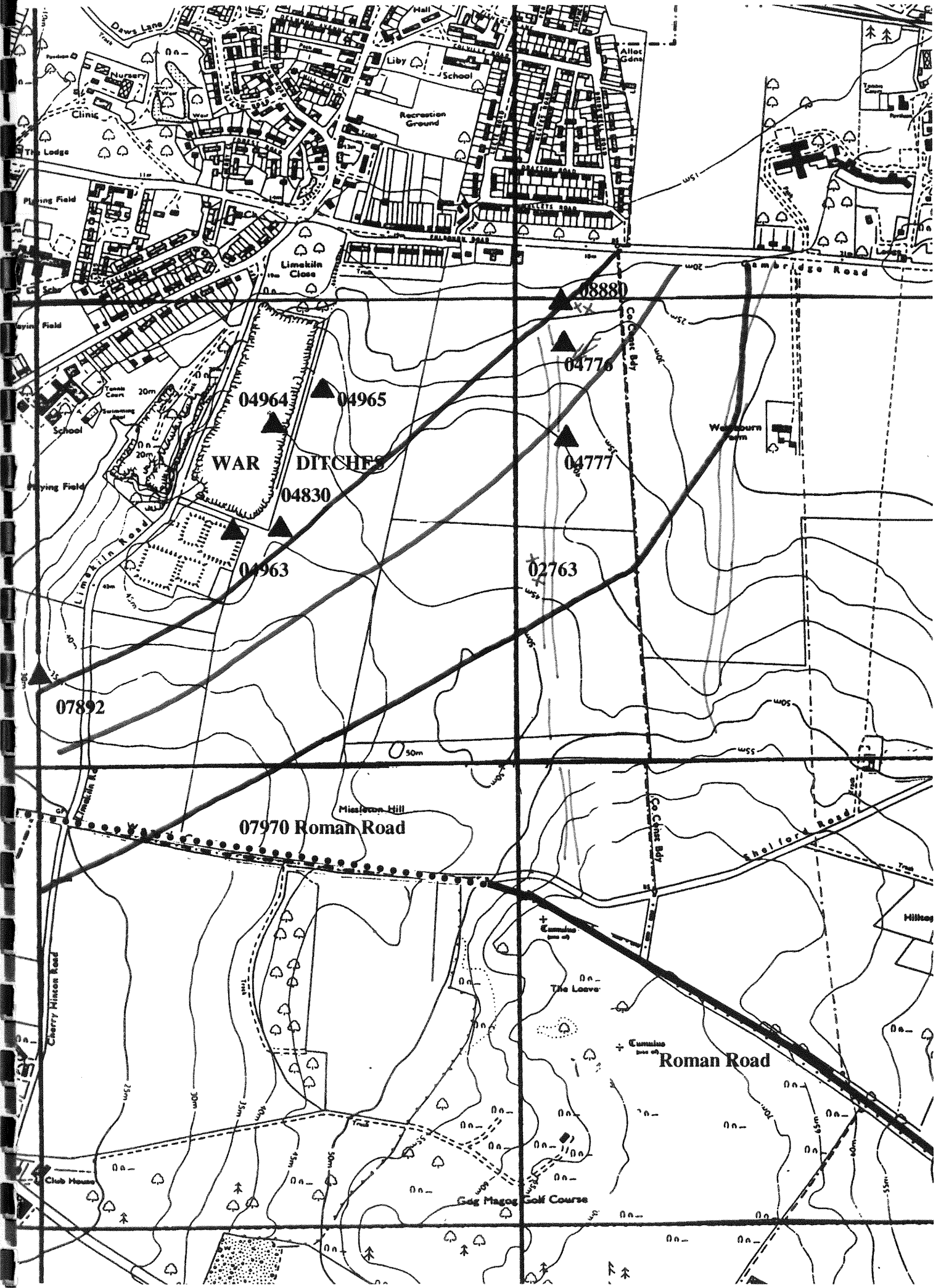
08357

0833



04462

04463



Appendix A

Guide Lines For Road Schemes - Archaeology

Phase 1 (Route Selection, Pre-Public Consultation /Planning Application)

Desk-top assessment of known archaeological sites
Assessment of aerial photographs
Site visits to evaluate condition of known sites
Field-walking of proposed corridor in suitable conditions
Landscape historical research and summary
Liaison with the DTP/ DOT planners and engineers
Recommendations for route alterations avoiding important sites which require preservation - field evaluation may be necessary
Requirements for further work, where damage to archaeological remains cannot be avoided, in consultation with County Archaeology Office

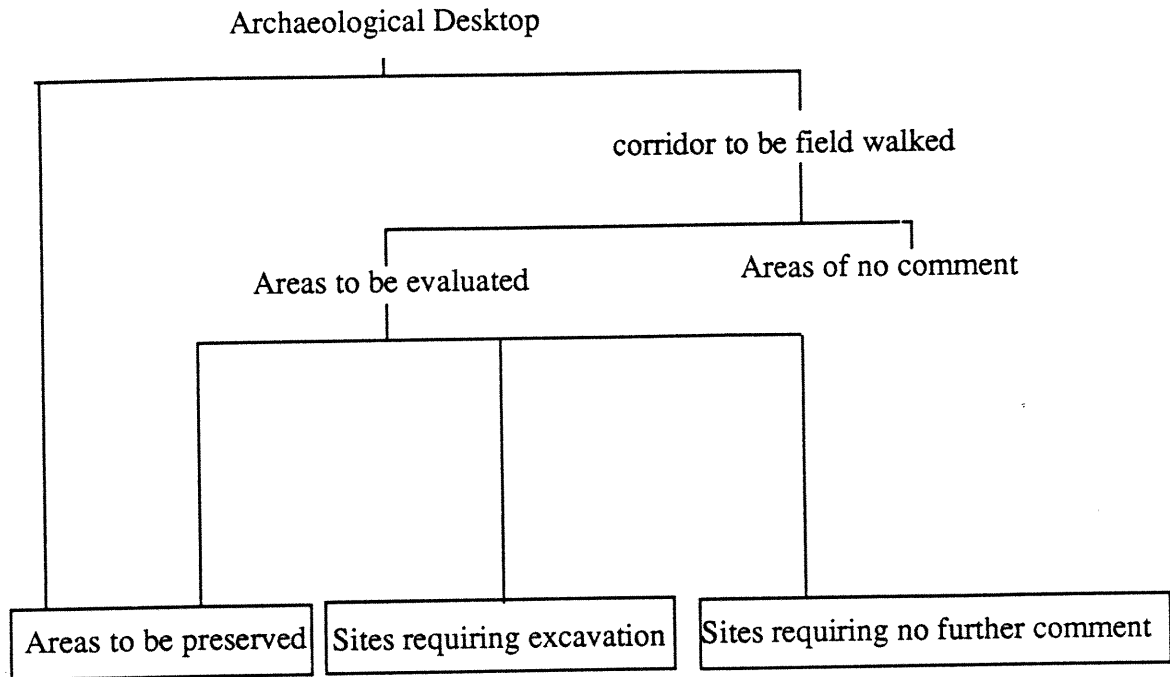
Phase 2 (after Route Selection)

Detailed site evaluation - earthwork survey, fieldwalking, trial trenching, geophysical survey
Recommendations to engineers on known sites of high potential
Excavation or Preservation of newly identified sites of importance
Sample excavation of other archaeological sites and features
Post-excavation analysis, conservation of artefacts and publication of results

Phase 3 (during Construction Work)

Provision for recording brief as necessary during soil stripping operations and construction works

Appendix B
Flow chart of archaeological works



Appendix C

Planning Guidelines

The draft report for The Cambridge Relief Road (Travers Morgan 1991) recognises the affect of road construction on archaeological sites

- 5.56 "road construction works are considered to be highly destructive to archaeological remains as they involve the removal of both topsoil and subsoil along the proposed routes as well affecting wider areas by cuttings, embankments, service works and construction camps".

Cambridgeshire County Council structure plan

- Policy P14/12** The local plan authorities will exercise their powers of development control to preserve scheduled monuments and other important archaeological sites in the county.
- Policy P14/13** Where there is no overriding case for the preservation of an archaeological site, opportunities will be sought prior to the granting of planing permission, for excavation and recording of the site.

National guideline's concerning archaeology can be found in the Planning Policy Guidance 16, November 1990.

Appendix D**Aerial Photographic search****TL451544 SMR 8357***Photographs consulted***CUCAP**

Obliques:	BFB 8-10	20 April 1971
	CJJ 68-69	13 July 1979
Verticals:	RC8-AQ 219-221	18 July 1974
	RC8-BA 144-145	11 June 1975 (not seen)
	RC8-EO 74-75	2 July 1982

NLAP

Obliques:	TL4554/5	11 April 1988
Verticals	TL4455/1	?1930s
	TL4553/1	?1930s

Best illustration: BFB 9

Digitally rectified photographs: BFB 9-10, CJJ 68

Comment

The archaeological site in this area comprises a series of small fields or paddocks, droves and linear ditches. It is crossed by other ditched features which include recent boundaries and field drains and other linear features which might also be archaeological. The field contains quarries of unknown date.

Alignments suggest the main archaeological features may be part of a more extensive system of fields which continue north to Long Road (SMR 7808: TL454555: not mapped for this assessment). One linear ditch also appears to cross the field in a west to east direction and continue its alignment north of SMR 4461 in the field centred TL457542. No evidence of settlement (ie huts or pits) was seen on the photographs.

Most of the mapped features are north of the potential route of the road but lie within the survey limits. The potential route cuts some recognised archaeological ditches as well as recent boundaries and quarries. It crosses the field in a part which has always lain in the background of the oblique air photographs and may therefore be more prolific of cut features than can be currently identified. Other unmapped features may also be masked by the slightly deeper (or different) soil which lies in the eastern part of the field.

Field examination may help determine the southern and eastern extents of the system.

Area East of SMR 7808

This triangle, TL454550-458550-457556, comprises a playing field and (to its south) an arable field. It has never been specifically photographed but appears in the following frames:

CUCAP

Obliques:	ADE 72-74	8 June 1961
	BCH 33-34	23 June 1970
	BEX 82	27 March 1971
	BFB 4	20 April 1971
	CDR 45-47	29 July 1977

Verticals:	RC8-AQ 220-222	18 July 1974
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NLAP

Obliques:	TL4455/4/382-384	2 August 1977
	TL4554/2/386-387	2 August 1977
	TL4555/6/365-366	1 June 1978
	TL4655/2/231-232	6 July 1977

Vertical:	TL4655/1	?1930s
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OS

Verticals:	91-020:80-82	6 April 1991
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Best illustration: none of the above is informative

Digitally rectified photographs: BCH 33
TL4455/4/383 (part)

Comment

The fields affected by the potential route and those within the broader survey area have been photographed only accidentally or as part of a routine vertical block. The principal adjacent target has been that to the west, also lying south of Long Road. This latter site, SMR 7808, has not been fully reinterpreted for this assessment but can be seen to comprise enclosures (some with internal indications of settlement), linear ditches, probable fields, and at least two ditched and metalled roads. The roads appear to focus on a point at c.TL45255552 from whence they run, slightly divergently, to the east. Both roads apparently stop, crossed at right angles by a north-south ditch, at TL45485557 and TL45475552.

Neither these nor any linear ditches to their south align precisely with the "Course of Roman Road" projected west from its OS mapped location in field centred TL461553. This projected course leads towards the focus at TL45255552 but there is no trace of this in otherwise unresponsive crops so either the road changes course west of the OS location, comes to

an end, is incorrectly located, or does not exist. If it can be assumed that the OS reference to, and alignment of, the road is correct it would pass through the assessment area as indicated: crossing the railway at c.TL45805538 and the disused railway at c.TL45625543. This area within the survey zone - a meeting of unaligned roads - may prove to be an unidentified settlement site and more should be expected in the field than has been identified to date.

A probable enclosure is cut by the disused railway at TL45665549 and is likely to extend into the playing field. Few further indications of archaeological features likely to be encountered can be made from the evidence in adjacent fields. Immediately west of the disused railway there is a band of deeper soil (or different geology) which may mask features cut into the subsoil. Geological cracks are likely to be revealed when the route is stripped as they are present north of Long Road (in field TL456558) and among the archaeological features west of this assessment triangle. Some continuation, or extension, of ditches and features mapped as SMR 8339 must also be expected.

A ?pipeline, running NW-SE, cuts the route through field TL457553.

TL460548 SMR 8339
Photographs consulted

CUCAP

Obliques:	ADE 72-74	8 June 1961
	BEX 82	27 March 1971
	BFB 4-7	20 April 1971

NLAP

Obliques:	TL4554/2/386-387	2 August 1977
	TL4554/6	14 May 1990

Vertical:	TL4655/1	?1930s
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OS

Verticals:	91-020: 80-81	
	118-120	6 April 1991

Best illustration: N-S link: TL4554/2/386, BFB 7
 E-W route: BFB 7, ADE 73, 91-020: 120

Digitally rectified photographs: ADE 73 (part), ADE 74, BFB 4, 7
 TL4554/2/386, TL4554/6,
 91-020: 120

Comment

The main photographic targets in this area have been two adjacent ditched complex systems: TL45905487 and TL46165496. They do not appear to be physically linked other than by what appears to be a later track which fortuitously crosses both sites. Unfortunately the two sites do not show equally clearly on any one set of photographs and any direct association between them remain murky.

South of these, and possibly linked by a linear ditch or hollow way to TL46165496 is an area of unclear enclosures and tracks (TL46125467). This area straddles the potential E-W route of the relief road which cuts the features at a point of maximum confusion. At least two chronologically different systems are superimposed in the area TL46075470: one - probably the earlier - comprises the enclosures and a broad track while the other is part of a more extensive, and possibly recent, series of parallel boundary ditches running NNW-SSE which include a narrow track. Field investigation may suggest which of these features are of archaeological interest and which, if any, are of recent origin.

The potential route linking the relief road with Long Road runs west of the best recorded parts of the complex system centred TL45905487. However, the system does appear to continue to the

west although photo interpretation was hampered by geological masking and by the fact that this area shows on only four photographs. There appears to be a track, continuing that within the complex, which runs WNW from TL45795486 towards a possible small enclosure at TL45555499 (the north side of which - if it has one - lies in a different, and unresponsive, field). Within the band of the potential route in this area marks on the air photographs are extremely ephemeral but field examination ought to verify the presence of this ditched track and locate other, possibly associated, ditches. To the south, and still on the potential route, lie ?two small rectilinear features of extreme dubiousness. Their appearance on the photographs ought to be due to some sub-surface disturbances which may be confirmed on the ground. The field centred TL456549 was in use for some kind of constructional activities at the time of the 1961 photography. No trace of this is apparent on later cover and ground disturbances appear to be minimal.

The enclosure complexes at TL45905487 and TL46165496 have morphological characteristics attributable to settlement sites although no pits or hut circles are apparent on the photographs. It is likely that the geological background would mask these even if they were present. No other definite settlement areas were noted within the SMR boundary but it is possible that the small features in area TL461547 may reflect domestic occupation. Some of these are cut by the potential route.

The plan covering SMR 8339 has been edited from eight separate rectified interpretations with an average error of control point fit of <2.0m. However, most of the photographs centre on the complex systems and the E-W potential route is covered only in the background of the more oblique of these. Features mapped from these are liable to some displacement and their location may be slightly less accurate.

Geological features will confuse field evaluation along these parts of the route.

TL467544 SMR 8356*Photographs consulted*

CUCAP

Obliques:	ADE 78-80	8 June 1961
	ADJ 76	14 June 1961
	AXR 44-47	11 June 1969

Verticals:	RC8-EO 38-40	2 July 1982
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NLAP

Obliques:	TL4654/2/388-389	2 August 1977
	TL4654/3/390-391	2 August 1977
	TL4654/4/392-393	2 August 1977
	TL4654/5/48-50	13 July 1982

Vertical:	TL4654/1	?1930s
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Best illustration: ADE 79 (ring ditches); RC8-EO 39 (linear ditches and circular features).

Digitally rectified photographs: ADE 79; RC8-EO 39.

Comment

Most of the features recorded under SMR 8356 lie south of the potential route.

South of the survey zone are two conjoined enclosures one of which contains two circular features. The alignment of these enclosures is continued to the north by a series of linear ditches - possibly fields - parts of which are cut by the potential route.

A group of five ring ditches show at TL467545 (group centre), with a possible narrower ring ditch at TL46745460. A possible seventh ditch shows lies over or under this ditch at TL46815454.

A sinuous ditch runs approximately NW-SE, describing a curve in its erratic course! This ditch crosses the linear ditches described above, and may be a possible former wood boundary. Adjacent to this is a small group of pits, which may be grubbed out trees, centring TL46855457. This interpretation may be checked by comparison with 1st edition OS maps.

The whole area is rather mottled in appearance, the photos ADE 78-80 showing numerous vehicle tracks and ground disturbance in addition to the mapped features.

TL474544 SMR 8338*Photographs consulted*

CUCAP

Obliques:	HN 1-3	19 June 1952
	ACZ 1-2	16 May 1961
	ADE 75-77, 81-84	8 June 1961
	ADM 76	30 June 1961
	ADR 64-65	11 July 1961

NLAP

Obliques:	TL4754/2/327-328	11 July 1976
Verticals:	TL4754/1	?1930s
	TL4854/1	?1930s

OS

Verticals:	91-020: 88-89	122-123	6 April 1991
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Best Illustration: ADE 82

Digitally rectified photographs: TL4754/2/327; ADE 81-82.

Comment

The features centring upon TL474544 south of Brabaham Road, lies directly on the potential route.

Four rectilinear conjoined ditched enclosures are aligned N-S from TL47375457 to TL47395442, with a further adjoining linear ditch TL47395432 to TL47375424, bisected by a short ditch running E-W. A further length of E-W aligned ditch, joined to the site, may indicate a further feature at TL47435437.

The northernmost enclosure shows only on the 1976 NLAP photos TL4754/2/327-328. This enclosure will be bisected by the potential route at TL47355455, and is an element of a complex settlement site. The enclosure has evidence of internal divisions and possible repositioning of the southern side ditch. This enclosure is part of a complex which also extends to the north of the Brabaham road, discussed as SMR 9956, which lies on the same alignment and is also directly affected by the potential route.

Two of the conjoined enclosures contain small circular pits at TL47365442 and 47395436, which are comparable in appearance to pits seen within and around archaeological features described below which occur in the same modern field. The outer enclosure ditches have

rounded corners, and exhibit 'dark splodges' (seemingly integral with the ditch) at TL47405445 and TL47355440. These features are again similar to those showing elsewhere in the field.

The southernmost complete enclosure has a possible entrance in its eastern side and contains a possible hut circle, which shows only on photo ADE 81.

This complex of enclosures is cut by a modern ?pipeline which extends roughly N-S through this field and those adjacent to it.

To the east of the enclosure complex there is evidence of a smaller enclosure feature and a small pit at TL47435432. Another apparently isolated pit may indicate continuation of settlement features at TL47465427.

A straight sided rectilinear enclosure centres upon TL47435437 47555427, having a 'dark splodge' in its southern side, which is similar in appearance to 'splodges' associated with the enclosure complex to the West. This feature falls within the survey area.

Further lengths of linear ditch run N-S, TL47545413 to TL47505402. Two sides of what may be an enclosure lie immediately to the west of these ditches. The southern side of this feature exhibits a 'dark splodge'.

The whole evident settlement complex has been mapped to aid understanding of its extent and nature. There is a high probability that settlement features may extend further than is indicated by the aerial photographic evidence. This supposition is upheld by the distribution of pits and small ditches between the two definite foci of enclosures. The existence of the northernmost enclosure is only attested on two photos, and the seemingly blank areas may equally well contain further features.

This complex is of high archaeological importance and field investigation of those features which will be directly affected by construction is recommended.

The whole field shows evidence of linear marks resembling ridge and furrow, which are likely to be agricultural in origin.

TL475547 SMR 9956

Photographs consulted

CUCAP

Verticals: RC8-EO 33-34

2 July 1982

RC8-JM 143-144

30 June 1987

Best illustration: RC8-JM 144

Digitally rectified photograph: RC8-JM 144

Comment

A series of enclosures, or parts of possible enclosures, lying on, or close to, a common axis. The majority have the appearance of slight ditches and probably bound what were once fields, but one enclosure (TL47495459) has broader ditches and an internal division and may be a settlement enclosure.

The mapped features show in a narrow band of responsive crop and are likely to extend to the west and east as well as to the north of Worts Causeway. As yet there is no evidence to substantiate this.

The site is almost certainly a northern continuation of that mapped as SMR 8338 (TL474544) immediately to its south. Both show similar morphological characteristics and lie on a common alignment.

A broad headland, noted separately under *Minor Features*, crosses these ditches in an E-W direction. It has not been drawn on the 1:2500 plan of SMR 9956 but is illustrated with its text entry below.

TL480551 SMR 7892

Photographs consulted

CUCAP

Obliques: VS 27-28

13 July 1957

OS

Verticals: 91-020: 90-92

6 April 1991

Best illustration: VS 28 (enclosure), 91-020: 91 (enclosure and headlands).

Digitally rectified photograph: 91-020: 91

Comment

A D-shaped enclosure with an entrance on the south side. The western enclosure ditch continues its line to the north, indicating the possible presence of adjoining features. The size and morphological characteristics of this feature indicate that it was probably a settlement enclosure.

An area of possible coprolite digging centred TL484552 is evident to the south of the enclosure. This feature is comparable with local examples in Cambridgeshire, and shows as striations of irregular width on the CUCAP photos VS 27-28. These photos do not show the full extent of the digging, and it does not show on any other photos.

The headlands running East-West and North-South are separately described under *Minor Features* below.

TL490554 SMR 2763

Photographs consulted

CUCAP

Obliques:

HE 35
UJ 63-66
BEX 80-81
BFE 76

3 June 1952
14 April 1957
27 March 1971
30 April 1971

Verticals: RC8-B 122-123

25 June 1967

Best Illustration: BFE 76

Digitally rectified photo: BEX 80

Comment

Two ring ditches:

TL49045539 - The outer edge of the ring ditch is spread by ploughing, but the inner edge is well defined.

TL49035440 - A well defined ring ditch.

The ring ditches are overlain by ploughed out ridge and furrow which shows as crop marks on the CUCAP verticals RC8-B 122-123. The features lie within the survey area but are not on the potential route.

A headland also shows in this field, running N-S to the East of the ring ditches. Both the ridge and furrow and headland are discussed separately under *Minor Features* below.

TL491559 SMR 8880*Photographs consulted*

CUCAP

Obliques: BFC 62-64 22 April 1971

Verticals: RC8-B 121-123 25 September 1967

OS

Verticals: 91-020:93-95 6 April 1991

Best illustration: BFC 63

Digitally rectified photographs: BFC 63-64

Comment

Three ring ditches: TL49125598, TL49155600 and TL49165597.

A small curvilinear cut feature also shows at TL49175600, but is much less well defined in appearance and wider than the three certain ring ditches and therefore is probably non archaeological. The ring ditches lie within the survey area but will not be cut by the potential route. The area immediately to the north of the ring ditches contains patches of deeper soil, which lie outside the assessment area.

Linear features to the south of the ring ditches are of probable geological origin.

Straight linear features diagonally crossing the field are probably the result of modern agriculture and are not mapped.

MINOR FEATURES

TL444537

Photographs consulted

CUCAP

Verticals: RC8-JQ 56-58

21 August 1987

Comment

Subsoil features giving the appearance of headlands but more likely to be geological as their pattern presents a more irregular plan than would be expected of headlands. Nothing mapped for this assessment

TL448540

Photographs consulted

OS

Verticals: 91-020: 76-79

6 April 1991

Comment

Slight indications of sub-surface disturbance which is not recorded on any other photograph covering the area. It is more likely to show the result of seasonal agricultural disturbance than to be of archaeological origin. Nothing mapped for this assessment.

TL461554 SMR 9591

Photographs consulted

CUCAP

Obliques: EW 5-6

3 June 1950

Comment

Not reinterpreted for this assessment.

TL478548

Photographs consulted

OS

Verticals: 91-020: 90-92

6 April 1991

Comment

An ovate mound at TL478548 was seen during stereoscopic examination of the OS verticals, and may be of natural origin.

TL4754 - TL4755*Photographs consulted*

OS

Verticals: 91-020: 90-92

6 April 1991

Comment

Headlands were identified at TL476548, TL477545, and TL479550. They are crossed by the proposed route at TL475548 and TL479549.

TL484556 SMR 4830*Photographs consulted*

CUCAP

Obliques: RO 33

23 July 1955

Verticals: RC8-B 122-123
RC8-EO 2

25 September 1967

2 July 1982

OS

Verticals: 91-020: 92-94

6 April 1991

Comment

Ephemeral marks, best seen on the OS cover, show in the vicinity of TL485553 but form no identifiable features. The potential route will cross this area and the possibility of these marks being cut archaeological features, perhaps related to the War Ditches, must be considered. Nothing mapped for this assessment.

TL486555*Photographs consulted*

CUCAP

Verticals: RC8-B 122-123

25 September 1967

Comment

Ploughed out banks following the same alignment as the medieval fields.

TL4955

Photographs consulted

CUCAP

Verticals: RC8-B 122-123

25 September 1967

Comment

Medieval fields show as differing alignments of ploughed out ridge and furrow and vestigial headlands. The headlands run N-S and E-W, with a junction at TL486555.

TL4955

Photographs consulted

OS

Verticals: 91-020: 94-95

6 April 1991

Comment

Two gently curving headlands running N-S. The western headland is crossed by the proposed route at TL491557, and the eastern headland lies just within the survey area.

Glossary of Archaeological Terms

Artefact: Any object made by people. Generally this word is used for finds such as pottery, stone tools, or metal objects, but it can be used in a much wider context in that the landscape we have today is a product of human activity and is thus an artifact itself. Artefact scatters (finds scatters) are collections of artifacts found together at one location.

Barrow: Burial mound. Barrows can be long, round, or even square, and were generally surrounded by at least one ditch. Barrows are further subdivided by form into various types belonging to these general categories. As a means for burying selected individuals they were used in Prehistoric, Roman and Saxon periods.

Beaker: Prehistoric period c.2000-1500 BC covering the transition from the Neolithic to the Bronze Age, when a type of highly decorated pottery called beakers became evident.

Bronze Age: Prehistoric period c.2000-700 BC when bronze was used for many types of tool and weapon.

Cropmarks: Archaeological features below the ploughsoil can affect the growth of sensitive crops through moisture retention or loss. For example the growth of cereal crops over buried ditches and pits will encourage rapid growth leading to tall, dark coloured plants, whereas walls and roads will lead to stunting and faster yellowing of the crop. These discrepancies in crop growth can be detected easily from the air, and by taking photographs the cropmark patterns can be plotted onto maps and given provisional interpretation.

Earthworks: Archaeological features that are still extant above ground as banks and ditches, platforms, roads, ponds, canals, etc. They were either constructed of soil or became covered by it at a later date, leaving the archaeology showing in relief.

Enclosures: An area defined by a continuous surrounding ditch. These may be enclosures around human settlement, fields, or paddocks for stock. Rectilinear enclosures are ones with straight sides and corners, whilst curvilinear enclosures are ones with rounded sides.

Field system: An area with ditches or banks that show a systematic pattern of enclosures, trackways, and features that can be seen to run parallel to one another, or lead off from one another to form an intelligible pattern.

Fieldwalking: Technique of archaeological survey. Walking over ploughed and weathered soil an experienced observer can collect many ancient artifacts, and by plotting the distribution of such find spots on maps an idea of the occupation and use of the landscape can be built up for each period of the past.

Finds scatter: Finds are artefacts, or other objects associated with human activity, for example bones or fire-cracked flint. A finds scatter is a localised collection of such objects.

Flints: Flint is a type of stone that can be worked by chipping to make fine and sharp tools, such as arrowheads, blades for knives or sickles, scraping tools, or even axes. It can be polished to make a smooth finish, and good quality flint could be brought in to an area from far away. Worked flint can often be found in the fields, showing human activity. Sometimes these are tools, but often they are just the by-products of flint working.

Headland: see "Ridge and furrow".

Iron Age: Prehistoric period c.700 BC - 43 AD when iron was used extensively for tools and weapons. The period traditionally ends with the Roman invasions of 43 AD but in fact there was a considerable time of adjustment after this date when the Iron Age way of life continued with little change from Roman influence.

Mediaeval: Historic period that begins with William the Conqueror's invasion in 1066. Post-Medieval is generally considered to date from 1500.

Mesolithic: Prehistoric period c.7500-3500 BC with a predominantly hunter-gatherer economy leading on to herding and farming, spanning the period between the last Ice Age and more settled farming communities of the Neolithic.

Neolithic: Prehistoric period c.3500-2000 BC when farming and pottery were introduced. Stone tools of fine workmanship were produced and exchanged over long distances, whilst metal was not used.

Palaeolithic: Prehistoric period before c.7500 BC spanning the early development of mankind from hominid species through to modern humans. Stone and bone tools were made and a hunting-gathering lifestyle was followed.

Ridge & furrow: Mediaeval cultivation techniques led to a phenomenon of corrugated fields. Strips of land were allotted to individuals and a furrow was left between one person's strip and the next, leading to the corrugated ridge & furrow effect. An area of land with all these strips running parallel was called a furlong. These strips usually followed a slightly sinuous course, an elongated reversed S shape to help in turning the plough at the end. Where the strips ended and the ploughs turned soil would be deposited and a "head" would be created. After a time these may form a boundary in their own right and are called headland boundaries. Ridge and furrow shows up as cropmarks on air photographs, and more rarely as earthworks in pasture fields.

Ring ditch: A continuous circular ditch which is all that remains of a ploughed out round barrow, or the drainage ditch (eavesdrip gully) that surrounded a round-house.

Roman: Historic period 43-410 AD when most of Britain was part of the Roman empire. The term Romano-British is now widely used to describe the people of this period as few were Roman themselves, but they were a provincial manifestation of the empire developing in a unique way. 410 AD was the date the legions were withdrawn, but Romano-British culture continued for some time into the 5th century in tandem with Anglo-Saxon migration.

Soilmarks: Archaeological remains often show in ploughed fields by reason of the different soil of which they consist. They can be visible at ground level but like cropmarks they are most clearly seen and interpreted from the air.



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