ARCHAEOLOGICAL DESK-BASED ASSESSMENT ON LAND NORTH OF GAUL ROAD MARCH, CAMBRIDGESHIRE (MAGR07)

Work Undertaken For
Canon Kirk Homes

December 2007

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National Grid Reference: TL 4065 9685
Planning Application: F/YR05/0944/F
OASIS ID: archaeol1-37585

A.P.S. Report No. **146/07**

ARCHAEOLOGICAL
PROJECT
SERVICES

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1. SUMMARY

A programme of desk-based assessment was undertaken to determine the archaeological implications of proposed development on land north of Gaul Road, March, Cambridgeshire. An assessment area of 500m radius from the centre of the proposed development site was examined.

The location of the proposed development site is of topographical and archaeological significance. Geological and soil mapping of the area has suggested that during the prehistoric periods the site lay on the edge of March 'island', with a small extension of the surrounding fen protruding into the site.

Early use of the site is attested to by the presence of Mesolithic and Neolithic flint scatters in the northwestern and soutwestern corners of the site. A further scatter of flints was indentified in the southwestern part of the site during recent fieldwalking (report forthcoming). These scatters may represent the remains of small transient groups moving across the landscape rather than more permanent settlement. Several prehistoric settlement sites have been recorded on March 'island' and in the surrounding area.

There is no indication of any later activity at the site. In the northern and western parts of the site remains could be buried beneath alluvium associated with either the realignment of the River Nene or the deposition of sands and silts during phases of marine incursion during the Neolithic period.

Cartographic evidence suggests that the development site has been agriculture/pastoral land since at least 1680.

2. INTRODUCTION

2.1 Definition of Desk-Based Assessment

An archaeological desk-based assessment is defined by the Institute of Field Archaeologists (IFA) as an '*assessment of the known or potential archaeological resource within a specified area or site on land, inter-tidal zone or underwater. It consists of a collation of existing written, graphic, photographic and electronic information in order to identify the likely character, extent, quality and worth of the known or potential archaeological resource in a local, regional, national or international context as appropriate'* (IFA 1999).

2.2 Planning Background

Archaeological desk-based assessment on land north of Gaul Road, March, Cambridgeshire forms the first stage of evaluation in advance of proposed residential development of the area (Planning Application F/YR05/0944/F). Previous desk-based assessment was undertaken of the site in 2004 (Grant 2004). The purpose of the following document is to update previous work undertaken at the site with the addition of an aerial photographic survey (Appendix 1). Field evaluation in the form of fieldwalking, geophysical survey and trial trenching has also been requested by the Cambridgeshire Development Control Archaeologist as a condition of planning.

Archaeological Project Services was commissioned by Canon Kirk Homes to undertake the desk-based assessment.

This assessment has been completed in accordance with current national guidelines, as set out in the Institute of Field Archaeologists *Standards and guidance for archaeological desk-based assessment* (IFA 1999) and the

requirements as set out by the Cambridgeshire Development Control Archaeologist.

2.3 Site Location, Topography and Geology

March is located approximately 38km north of Cambridge and 23km east of Peterborough in the Fenland Administrative District of Cambridgeshire (Fig 1). The Proposed development site lays on the western edge of the town, bounded by the present course of the River Nene to the north, allotments and a depot to the east, the A141 to the west and Gaul Road to the south. This forms a roughly trapezoidal parcel of land covering an area of approximately 16.2 hectares (measuring *c*635m north-south and *c*250m east-west), centred on National Grid Reference TL 4065 9685 (Fig.2).

March occupies a former island within the fenland, lying on the northern tip of a large peninsula between two major southern embayments of the fen. The pre-Flandrian bedrock of the area is Kimmeridge Clay, overlain by interglacial gravels (Hoxnian Phase) known as 'March Gravels' (flinty gravels with shelly fauna). The proposed development is situated on the western edge of the low-lying island, which rises to *c*4m OD. The proposed development site lies between 1.1m and 2.2m AOD.

3. METHODS

In the preparation of this report a range of primary and secondary sources were consulted. The sources consulted are listed below:

- The Cambridge Historic Environment Record Office; Databases of archaeological sites and artefacts, listed buildings and scheduled ancient monuments. A search of 500m radius centred upon the site was undertaken by the Cambridge HER office, the results of which are included in this report.
- The Cambridge County Record Office was visited to consult its collection of enclosure maps, tithe awards and old editions of Ordnance Survey maps
- Heritage Trust of Lincolnshire Library; secondary sources pertaining to the archaeology and history of the area.
- Archaeology Data Service; online national database of archaeological sites and monuments including previous archaeological interventions.
- A site visit was undertaken in order to assess the present condition of the development area, to identify any areas where the potential archaeological resource may be particularly well preserved or, alternatively, disturbed by recent or previous development, to observe the landscape in its context and to identify any constraints.

A full list of the sources is contained within the bibliography.

4. RESULTS

In the following text, the term ***proposed development site*** refers to the limits of the proposed development. The ***assessment area*** represents an area of *c.*1km diameter centred on the proposed development area.

4.1 Area Background

This section provides a broad archaeological and historical background for the assessment area and the proposed development site.

The Fenland has long been recognised as an important archaeological landscape, containing evidence of settlement, ritual and agricultural sites dating from the prehistoric period onwards. March

occupies a former island within the fenland, lying on the northern tip of a large peninsula. The surrounding fen landscape underwent a series of complex changes during the prehistoric, Roman and later periods, influenced by the peninsula and the constantly changing courses of the major rivers on either side of it (Hall 1987).

The earliest evidence for occupation at March lies within the proposed development site and takes the form of Mesolithic and Neolithic flint scatters (Her refs 08455, 08455A, 05210, 05210A, 10913, 10913A; Figures 3 and 4). In the wider area Bronze Age lithics have been identified during excavations at Westry (1.5km north of the Investigation Area), 600m to the south of the site at Cherry Holt (Figure 4) and at Flaggrass (2.5km to the northeast), all in residual contexts.

A Bronze Age fine handled beaker (HER 5924) was discovered during the construction of March Railway Station in the 1860s. Such vessels are usually associated with burial contexts (Hall 1987).

Excavations at Estover, northeast of the Assessment Area, identified a group of Bronze Age Beaker pottery from a pit, whilst an adjacent pit contained Bronze Age flints (James and Potter 1996).

Excavations undertaken at Whitemoor sidings, 4kms to the northeast of the proposed development site, identified two areas of significant prehistoric remains. One was of Early Bronze Age date, characterised by shallow ditches, pits and postholes. The second, of Late Bronze Age date, featured a series of large pits, together with postholes and gullies, containing artefactual and faunal remains and indicating the likelihood of settlement nearby (Hall 2004).

Iron Age sites lie to the north of Grandford and at Flaggrass, where occupation continued throughout the Iron Age period. Located at the eastern edge of the island, near the river, the Flaggrass sites would have had a link to Stonea island where more extensive Iron Age settlement is known (Hall 1987).

There is evidence for the extensive exploitation of the fenlands during the Romano-British period. Cropmarks of Romano-British field systems have been identified to the northeast of the present town. Possible saltern sites have been noted in the vicinity (HER CB10122 and CB10123) and excavations in the 1950s at Norwood, 2.5km to the north of the proposed development area, identified evidence of occupation and salt production between the late first century and fourth centuries AD (HER CB7317).

The Fen Causeway, a Roman routeway that follows a course from Peterborough, through March and into Norfolk (HER CB15033), is thought to cross the March island east to west 2km to the north of the proposed development area, although its precise course in this area is unknown. Part of the Fen Causeway is thought to have originally been a canal, which was later metalled and/or gravelled over when the silts dried out. Excavations of the Causeway at Stonea identified earlier prehistoric features beneath the road. However, excavations over the projected course of the Fen Causeway, at Dagless Way (HER CB408) and Whitemoor, did not reveal any archaeological features (Last 2001).

Excavations at Estover, 2km northeast of the site, during the 1980s investigated the Fen Causeway where it was visible as an earthwork. The excavated sections identified a metalled surface, flanked by substantial ditches, which ran parallel to the causeway. The excavations also identified a number of Roman features

including a ditched droveway approaching the causeway at an angle from the east and several small rectilinear enclosures (James and Potter 1996).

Realignment of the River Nene to its present course, which now bounds the northern edge of the proposed development area, occurred during the late Saxon period. The realignment is believed to have been part of a local scheme of drainage of the Fens during the 10th century, allowing March to develop as an inland port.

March is first referred to in the Domesday Survey of 1086 where it was known as *Merc*, meaning boundary. It was later known as *Marchford*, a refelection of the role March played in the transport routes through the Fens.

By the 16th century March was recorded as a minor port, with eight barges transporting coal and grain. The town continued to expand throughout the post-medieval period.

4.2 Site Specific Archaeological Data (Table 1, Figure 3)

The following section relates directly to the archaeological sites identified within the Proposed Development Site and Assessment Area.

Prehistoric

Prehistoric finds have been recorded within the proposed development site. A Mesolithic flint scatter (map reference 5; HER ref 05210) is recorded towards the southwestern corner of the site (Fig. 3). The scatter of worked flints comprises 68 cores, 336 blades and retouched flakes, 3 scrapers, 3 axes, gravers, 2 mircoliths, 1 micro-burin and 18 others. A further Mesolithic scatter (map reference 7; HER ref 109913) contained cores, but fewer blades or microliths. Identified at the same location were Neolithic Transverse arrowheads (map reference 6 and 8; HER ref 05210A and 10913A, Middleton 1990)

To the north of the former scatter, in the northwestern corner of the proposed development site, a second concentration of Mesolithic and Neolithic worked flints was recorded (map reference 3 and 4; HER ref 08455 and 08445A).

The flint scatters were first observed by Mr. F.M. Walker who donated the flints to Wisbech Museum where they were subsequently recorded by Wymer (1977) in his gazetteer of lithics and were later analysed by Middleton (1990) as part of his work on the Walker Lithic collection from March/Manea.

Mapping of the area during the Fenland Survey, comprising the amalgamation of aerial photographic data, borehole data and previously recorded geological information, enabled the production of landscape reconstruction maps suggesting the extent of the March Island and the nature of its surrounding landscape during several periods. Mapping of the Neolithic landscape suggests that the proposed development site was located on the edge of the gravel 'island' with a small embayment extending into the development area from the surrounding fen. Immediately to the west of the site was an extensive system of north-south roddons (Fig. 4a; after Hall 1987).

There appears to have been little change to the surrounding landscape during the Bronze Age with the system of roddons still apparent to the west of the site, although these extended further eastwards. The small embayment observed in the Neolithic mapping appears to have been reduced drastically and shifted northwards, now extending only into the northwesternmost corner of the site, with the site more firmly established on the island's edge (Fig. 4b after Hall 1987).

The embayment once again encroached

into the proposed development site during the Iron Age, with a majority of the site interpreted as fenland.

Romano-British to Medieval
Fenland in the west of the proposed development site continued into the Romano-British period, with the only significant change being the narrowing of the embayment and the southern part of the site now forming the edge of the March island (Fig. 5b after Hall 1987). In the medieval period fenland encroached westward to cover most of the proposed development site

No findspots or sites are known within the assessment area following the prehistoric period.

Post Medieval to Recent
Immediately to the north of the proposed development area, on the northern bank of the River Nene, are Grade II listed buildings (map references 1 and 2; HER ref 401908 and 401907). The eastern of the buildings (HER 401907) is believed to date to as early as 1691 with 19th century modifications. The present red brick structure has been divided into two dwellings. Immediately to the west is the second listed building, a early 19th century house.

No further sites or findspots have been identified within the assessment area.

Table 1; Summary of HER entries (Figure 3)

Map Code	HER Ref.	Description	National Grid Reference
1	401908	Listed building (Grade II); early 19th century house, two storeys, three mid c19th flush frame hung sashes with moulded architraves, four panelled door with rectangular fanlight.	TL 40396 07030
2	401907	Listed building (Grade II); house, now two dwellings, 1691 (dated stone), two storeys with two dormers, rubbed yellow brick arches to two c19th flush hung sashes. The interior has been remodelled	TL 40409 97030
3	08455	Mesolithic flint finds	TL 4036 9696
4	08455A	Neolithic worked flint	TL 4036 9696
5	05210	Mesolithic flint scatter; finds worked flint comprising 68 cores, 336 blades and flakes unretouched, 3 scrapers, 3 other axes, gravers, 18 other, 2 miroliths, 1 micro-burin	TL 4049 9672
6	05210A	Neolithic transverse arrowhead	TL 4049 9672
7	10913	Mesolithic flint scatter; including cores, blade cores and backed blades most are patinated	TL 4049 9672
8	10913A	Neolithic arrowhead; transverse arrowhead	TL 4049 9672

4.3 Cartographic Data
(Figures 4-8)

The earliest map available of the area is the 1680 drawing of March, Wimblington and Doddington (Figure 6). The map shows the western part of the site as an open area extending west and south beyond the proposed development site. This open area is demarcated from the rest of the proposed development site by a north to south road/track leading to the River Nene. The eastern part of the site is divided into 15 north-south narrow strip fields aligned at right angles to the River Nene that forms the northern boundary of the site.

The 1794 Plan of the Commons within the Town or Hamlet of March (Figure 7)

shows the amalgamation of some of the narrow strip fields in the eastern part of the site, with the area divided into just ten apportionments. The western part of the site remained open to the surrounding fenland. By this time the proposed development site was bounded to the south by Gall Road, which had become known as Gaul Road by at least 1925. The north-south track on the 1680 map of the area is no longer present to the north of Gall Road, although it still survived to the south.

The 1840 Tithe Map (Figure 8) shows the eastern and central part of the development area as being divided into nine narrow strips aligned at right angles to the course of the River Nene, thus indicating further amalgamation of the fields. The westernmost end of the site comprised one much larger field and was no longer open to the surrounding fen. Examination of the apportionments accompanying the map listed the owners, tenants, and use of the land at this time. This is summarised below (the reference number referring to the map reference as recorded in Figure 8)

Field 818: Owner- Robert Hutchinson Lewin Esq; Tenant- John Todd; Field Name- Fen; Use- Fen.

Field 819: Owner- Robery Hutchinson Lewin Esq; Tenant- John Todd; Field Name- Fen; Use- Grass.

Field 820: Owner- William Laxton; Tenant- William Laxton; Field Name- Fen; Use- Arable.

Field 821: Owner- Susannah Lamb; Tenant- George Lamb; Field Name- Fen; Use- Arable.

Field 822: Owner- Lucy Barley; Tenant- Lucy Barley; Field Name- Fen; Use- Arable.

Field 823: Owner- Martha Peak; Tenant- Martha Peak; Field Name- Fen; Use- Grass.

Field 824: Owner- Joseph Green; Tenant- Joseph Green; Field Name- Fen; Use- Arable

Field 825: Owner- William Andrew; Tenant- William Andrew; Field Name- Fen; Use- Fen.

Field 826: Owner- John Edwards; Tenant- James Bano; Field Name- Fen; Use- Grass.

Field 827: Owner- Thomas Grey; Tenant- Thomas Grey; Field Name- Fen; Use- Arable.

The first edition Ordnance Survey map of 1886 (Figure 9) shows the same pattern of land division as recorded on the 1840 Tithe Map, with a larger field encompassing the westernmost end of the proposed development site with the central and eastern area divided into nine north-south aligned narrow strips, presumably used as arable and pasture. The third strip in from the eastern end of the proposed development site has been further divided with the southern end of the strip encompassing a residential property fronting Gall Road (Gaul Road) and grounds to the rear. A further residential property is present to the west (7th Strip from the eastern boundary) again fronting onto Gall Road. The northern edge of the site, immediately adjacent to the River Nene is depicted as a marshy area. The land to the north of the area remains relatively underdeveloped with properties fronting the river. To the west of the proposed development area, beyond the site boundary, a rifle range is depicted and to the south a small hospital for infectious diseases is present.

Little change is noted to the layout and land division of the proposed development area in the 1901Second Edition Ordnance Survey map (Grant 2004, fig. 6). A small structure had been added towards the

southeastern corner of the development area and the easternmost residential property had been further developed. There is the addition of a tow path along the southern side of the River Nene, suggesting that the land was now managed sufficiently to allow access through the previously marshy area.

Again little change is seen in the 1925 Ordnance Survey mapping of the area (Fig. 10). The two easternmost of the strip fields had been amalgamated by this period.

Present mapping of the area (Ordnance Survey 2007, 1:25000 edition, Figure 3) shows the site as having maintained its open field status, with the narrow strip fields located in the central and eastern area of the proposed development having been divided into just three larger fields, suggesting the amalgamation of ownership and the boundaries rendered superfluous. The structures which were previously noted fronting Gaul Road were no longer present. Neither was the rifle range to the west nor the hospital for infectious diseases to the south of the proposed development area. A significant change is the insertion of the A141 which forms the western boundary of the site, and the residential development of the lands to the north and east of the area.

4.4 Aerial Photographic Assessment

The results of the Aerial Photographic Assessment are summarised below and as Figure 11. The full version of the assessment appears as Appendix 2, to the rear of this report.

Archaeological Features

No archaeological features were identified on the photographs examined.

Non-archaeological features

The figure shows a confusing picture that has been divided into roddons and silt 'smears'. Both, however, may result from mixed deposits.

Roddons are more definite a few hundred metres west of the proposed development site and it is possible that they were never well developed this close to an island. Hall's period maps (1987, figs 20-23, 25) show the Gaul Road area to have been one of frequent change in the past and perhaps to have been the location of a small inlet whose position shifted over time. The mapped silts most probably reflect mixed soils left by those changes and they may indicate local high ground that was used by past communities as routes between March island and the lower fenland.

The Isle of Ely Way was first visible on photographs taken in 1982.

Land Use

Early photographs show a small number of pasture fields in the Study Area, but most land was in arable use from the 1970s. This means that all fields have been photographed under conditions of bare soil and have had at least the possibility of observation by airborne observers undertaking archaeological survey.

4.5 Walkover Survey

The site was visited on Friday 14th December 2007, during which time Fieldwalking of the site was undertaken, the results of which are pending and will appear as a separate report. Results of the walkover survey are committed to Figure 12.

The proposed development site is bounded along its northern edge by the present course of the River Nene, with the Nene having been re-routed sometime during the late Saxon period to cut east-west across March island. A substantial bank with scrubby vegetation aligned along the southern side of the River Nene

demarcates the northern limit of the proposed development. There were no visible traces of any earlier courses of the river.

The condition of individual fields is described below with reference to Figure 12.

Field 1
The most western of the fields, Field 1 forms a trapezoidal parcel of land bounded to the west by the Isle of Ely Way (A141). At the time of survey the field was covered by rough scrub, obscuring any surface artefacts or earthworks. The southern part of the field was obscured by modern debris from fly-tipping.

Field 2
The largest of the fields, Field 2, forms a large square area of land bounded on either side by deep drains. A young crop of wheat was present across the fields. A heavy, silty clay topsoil extended across the field containing substantial quantities of flint and stone from the underlying geology.

A c.12m wide raised bank, reminiscent of a roddon, extended east to west across the northern part of Field 1. The orientation of this bank does not appear to directly correspond with the roddons plotted as part of the aerial photographic analysis of the area. There is a slight rise in the low-lying topography of the field towards the southwestern corner, which corresponds with the location of the flint scatters as recorded in the Fenland Survey (Hall 1987) and an assemblage of Mesolithic flints identified during the recent field-walking survey, report forthcoming.

Along the southern edge of the field a small copse contained the debris of a former building and rough scrub, with CBM extending out into the surrounding area (Fig. 12). This building was depicted on earlier OS maps of the area indicating a Late 19th century date.

Field 3
Field 3, a rectangular parcel of land bounded by deep drains to the east and west comprised lighter clayier silt topsoil than that of Field 2 to the west. A young crop of wheat was present across the field.

Two narrow, low lying raised banks, again reminiscent of roddons, aligned parallel east to west were observed in the central part of the field, Figure 12. One of these almost certainly aligns with a roddon plotted during the aerial photographic survey (Fig. 11).

Very few surface finds, with the exception of modern material were apparent during the fieldwalking survey of the area.

Field 4
At the time of the survey access was not permitted to the westernmost of the fields, Field 4.

Although access was not permitted, a more peaty appearing topsoil could be observed from the adjacent fields. No earthworks were apparent from the field edge.

Overall (Fig. 12)
A mains power line extends across the southwestern corner of the site, with a pylon located in the southern part of Field 2. Extending across the northern part of the site is a further power line supported by wooden telegraph poles.

The fields are bounded by steep-sided deep drains. At the time of survey the water level within these was approximately 1.5m beneath the present ground surface.

Access to the fields is off Gaul Road, along the southern boundary of the site. Only one of the fields, Field 4, does not have continuous access from Gaul Road, with a drain bounding the southern edge of

the field with access provided either via an earthen bridge in the southern boundary or via the northeastern corner of Field 3.

5. CONSTRAINTS

5.1 Heritage Constraints

Statutory and Advisory Constraints

There are no Scheduled Ancient Monuments protected by the Ancient Monuments and Archaeological Areas Act of 1979 (HMSO) present within the area of the proposed development.

There are no Listed Buildings on this site, which would otherwise be protected under the Planning (Listed Buildings and Conservation Areas) Act of 1990. There are however two listed buildings just to the north of the proposed development site on the northern bank of the River Nene.

Evidence of prehistoric activity has been documented at the site, with Mesolithic and Neolithic flint scatters recorded in the southwestern and northwestern corners of the proposed development area (Figure 3) by the Fenland Survey and Cambridgeshire Historic Environment Record. Any archaeological remains present on the site are protected through local authority implementation of Planning Policy Guidance 16 (PPG16)

5.2 Other Constraints

Two overhead power lines extend across the site. Along the northern edge and extending into the proposed development area is a power line supported by telegraph poles. Extending across the southwestern corner of the proposed development area, in Fields 1 and 2 is a power line with a pylon located in Field 2 (Fig. 12).

Although not visible during the walkover survey, the presence of buried services cannot be ruled out.

The deep, steep sided drains may create some health and safety issues, with only Fields 3 and 4 providing access to and from each other. Access to Fields 1 and 2 is only from Gaul Road, although a reasonably wide verge is present along the southern field edges.

There is the possibility that alluvium may be present either from the Nene or from the prehistoric marine events which created the roddons. This may mask archaeological deposits in low-lying areas of the site, particularly the western end and adjacent to the River Nene.

6. ASSESSMENT OF IMPACT

The excavation of footings and other associated groundworks and infrastructure would lead to disturbance of any archaeological remains that may exist within the application area. The effect of any below-ground works will be dependant upon the extent and depth of earth moving, and the presence/absence and depth of any buried remains within the development area, which at this stage has yet to be established.

7. OVERVIEW

Topographically the location of the proposed development site is of significance. The evidence collated during the Fenland Survey (Hall 1987) defined the junctions of the Flandrian and pre-Flandrian deposits in and around the development site. Aerial plotting of the roddon systems has added further detail to Hall's work. This mapping of the prehistoric landscape suggests that the proposed development site was positioned at the edge of an island of pre-Flandrian clays and gravels set within various wetland environments from the Neolithic period onwards. These wetlands protruded into the proposed development site in an

embayment which changed position through time.

The position of the site, at the edge of the March island from the Neolithic period, may have attracted some interest from communities using the wetlands.

Mesolithic and Neolithic flint scatters are recorded in the northwestern and southwestern corners of the proposed development site. Further to this Mesolithic worked flint was identified towards the southwestern corner of Field 2 during recent fieldwalking (results forthcoming).

The development site lies in an area of wider archaeological interest with a background of prehistoric finds elsewhere on the island. This suggests the possibility of the presence of further sites of this type within the proposed development area.

The development site is located within the floodplain of the present course of the River Nene which was diverted to its current course during the late Saxon period, allowing March to develop as an inland port. It is possible that there may be earlier remains associated with the realignment of the river. There is also the possibility that if such remains are present they may be obscured by alluvium laid down during any incidences of flooding of the river.

Near to the course of the Nene on the east of the island, at Cedar Close, a Romano-British saltmaking site was excavated (Lane *et al* forthcoming) and there is potential that such a site could be present on the development site, although Hall (1987, fig. 19) fieldwalked all of the development site in good conditions as part of the Fenland Survey. Therefore, it is unlikely that there are any major sites that are not yet known.

The presence of roddons across the western part of the site, visible both as low 'earthworks' and during the aerial photographic survey, confirms the former marshy nature of the prehistoric landscape.

Cartographic evidence suggests the site has largely been farmland/pasture since at least 1680 (Fig. 6), with very little change or development taking place in the area until recent times. It is likely that post medieval field boundaries, as defined in earlier mapping of the area, survive below the present topsoil.

8. POTENTIAL FOR FURTHER WORK

The construction methods to be employed during the proposed development will determine the impact on any buried archaeological remains. Any degree of earth movement at the site however might have a destructive impact on such remains.

Should further investigations be required based upon the results of this report and the fieldwalking survey, both non-intrusive, in the form of geophysical survey, and intrusive in the form of test pitting and/or trial trenching would be advisable to establish the presence/absence and nature of any archaeological or environmental remains and, if present, their state of preservation, extent, character and date.

Likely further requirements comprise a staged approach of
a) Geophysical survey.
The most suitable methodolgy to locate pre-historic features, such as cut features, is detailed magnetic survey. This should be successful over the area of gravel geology. The marine sediments however, are an unknown quantity. If geophysics is required then it would be prudent first to carry out a trial over this area. The trial would be carried out using both detailed magnetic survey and resistance survey. The remaining area would then be

completed with the most successful technique, or abandoned at this stage if neither returned usable data. The success will depend on parameters such as the depth of drift, the moisture content and whether this is fresh or saline water.

b) Targeted Gridded Test Pitting:
Test pitting on a grid basis is a likely requirement for the known lithic scatters. Such sites often exist only as flints in the topsoil, with any below-ground features that were originally associated being of restricted size and frequency and consequently now ploughed out. Test pitting in the topsoil is often the only method of retrieving evidence of such sites.
c) Trial Trenching:
Trial Trenching is a usual technique for evaluating in advance of development. In this case the intensity of trenching may be reduced, given the staged approach and results from the other techniques.

Given that the westernmost part of the site may be covered by alluvium trenching could be concentrated in that area to characterise the deposits beneath the alluvium and to determine the presence/absence of buried soils and possible flint scatters therein.

9. CONCLUSIONS

An archaeological desk-based assessment of land north of Gaul Road, March, Cambridgeshire was undertaken in order to determine the archaeological implications of proposed development at the site.

Previous archaeological survey, geological and soil mapping of the area has demonstrated that since the Neolithic period March has been an 'island' in an extensive area of wetland. Initially, this wetland was of freshwater origin, which formed peat, before the onset of a marine phase, characterised by extinct saltmarsh creeks (roddons). Subsequently, the adjoining landscape reverted to domination by freshwater with further peat formation through to the end of the medieval period. During this time the various silts and peats extended into the proposed development site on its western edge.

Mesolithic and Neolithic flint scatters are known in the northwestern and southwestern corners of the site. Given the date of these scatters they are clearly above the extent of the roddons, although these latter features are situated close by (Fig. 11). It is possible that further flint sites lie beneath alluvial deposits.

There is no indication of any sites of post-Neolithic date in the proposed development area.

Cartographic evidence suggests that the development site comprised agriculture/pastoral land since at least 1680.

Based on the information known, the archaeological potential of the site is considered **moderate to high** for the presence of prehistoric archaeology but **low** for sites of later periods.

Any archaeological remains encountered are likely to be of **local or regional significance** only.

10. ACKNOWLEDGEMENTS

Archaeological Project Services would like to acknowledge the assistance of Canon Kirk Homes who commissioned this report. The work was coordinated by Dale Trimble who along with Tom Lane edited this report. Historic Environment Record information was kindly provided by Sarah Poppy. Thanks are also due to the staff of the county archives at Cambridge.

11. BIBLIOGRAPHY

All of the following references were consulted in the research. However, as some of them duplicated evidence given in others, not all of them have been specifically referred to in the text.

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Internet sources

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british-history.ac.uk

old-maps.co.uk

11. ABBREVIATIONS

APS	Archaeological Project Services
BGS	British Geological Survey

CRO	Cambridge Records Office
HER	Historic Environment Record
HMSO	Her Majesty's Stationery Office
IFA	Institute of Field Archaeologists
OD	Ordnance Datum (height above sea level)
OS	Ordnance Survey

Figure 1 General Location Plan

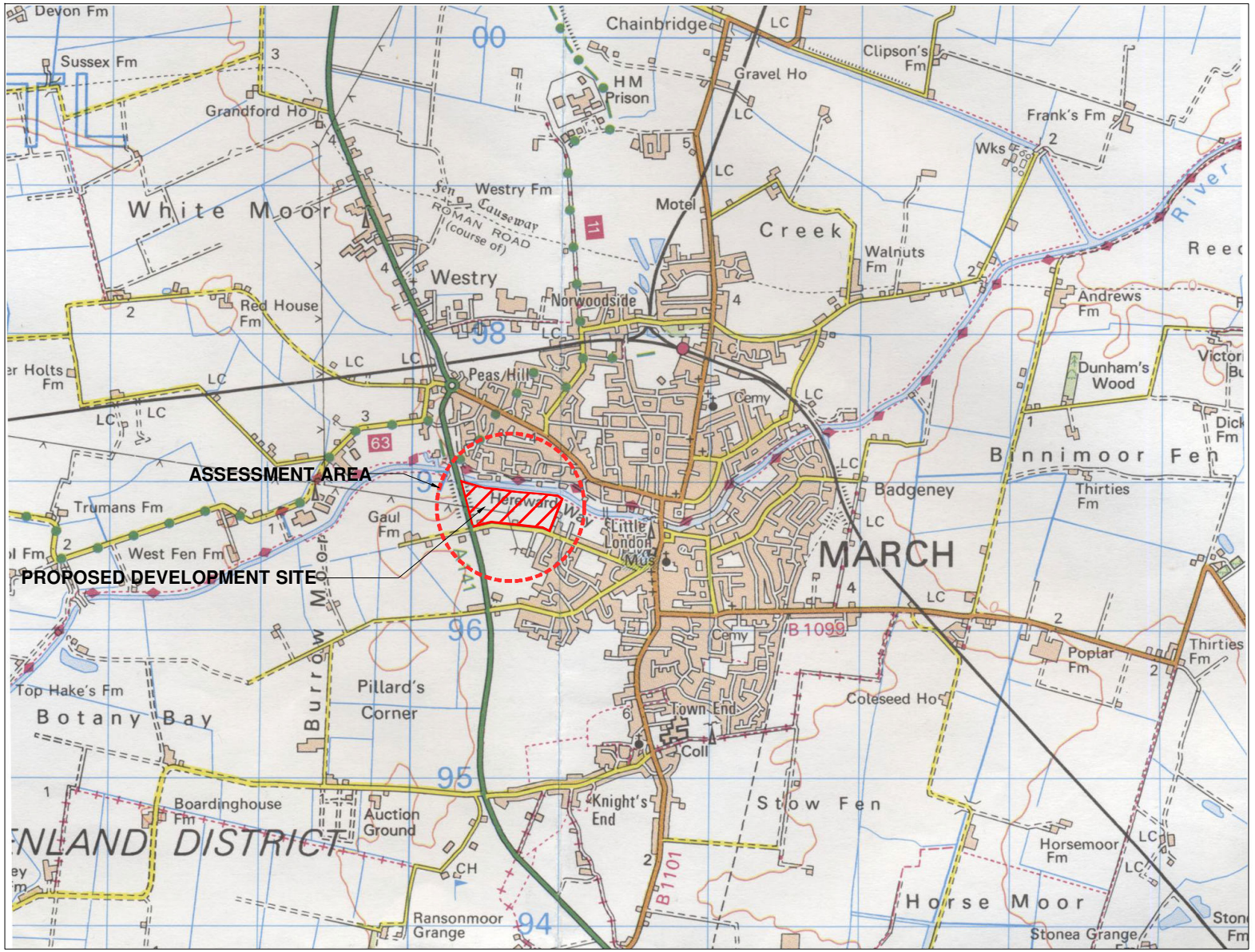
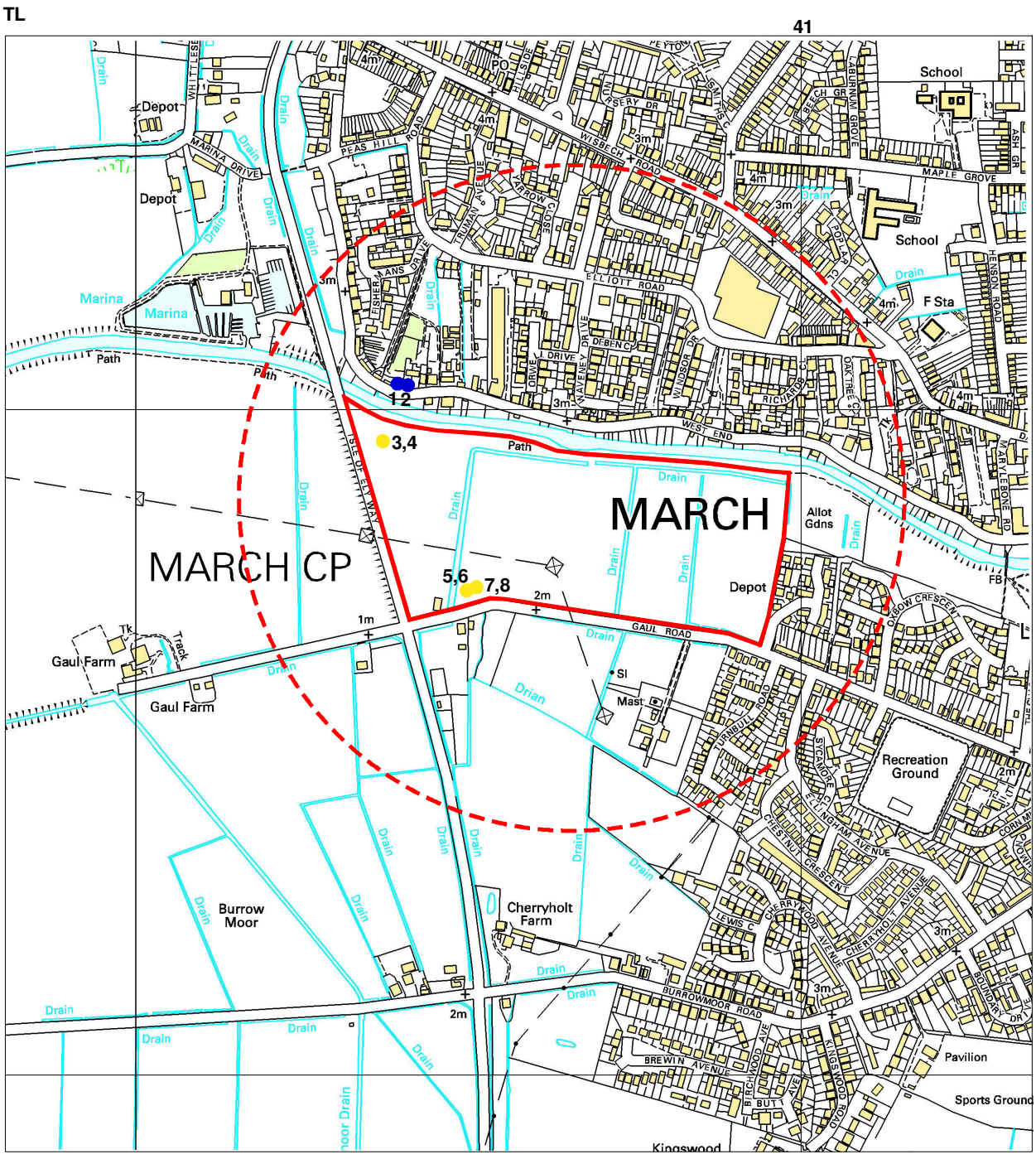


Figure 2 Proposed Development Site and Assessment Area



Archaeological Project Services	
Project Name: Gaul Road, March (MAGR07)	
Scale 1:10000	Report No:146/07

Figure 3 Plan Showing Proposed Development Location, Assessment Area with HER Data

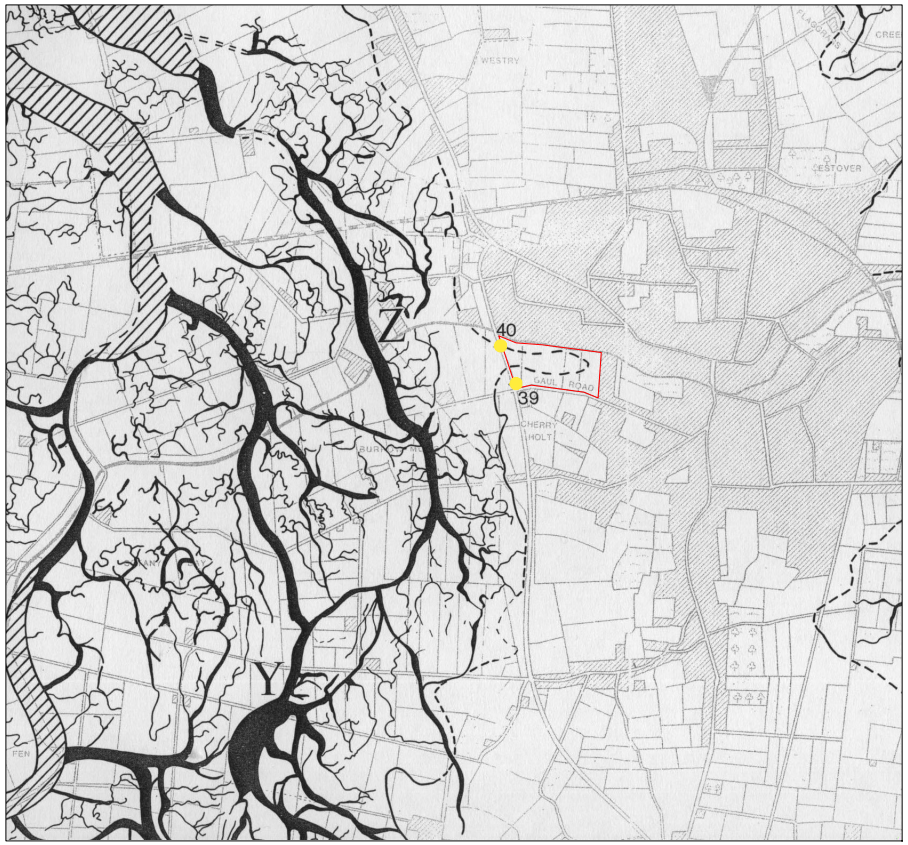


Figure 4a Neolithic Landscape (after the fenland survey)

0 2Km

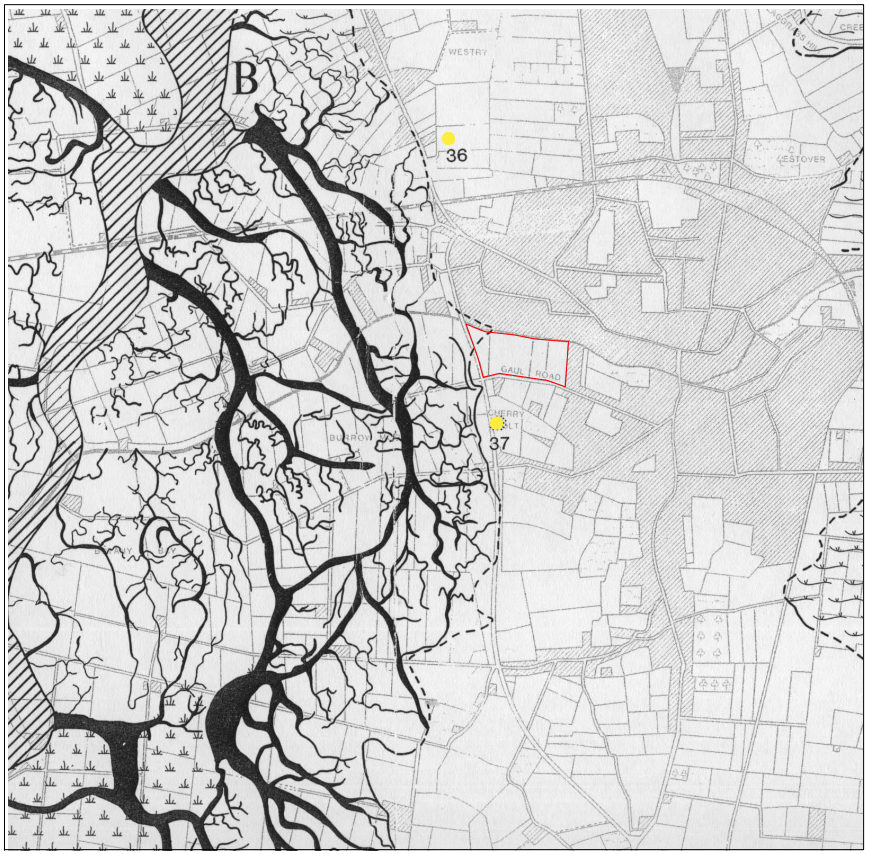


Figure 4b Bronze Age Landscape (after the fenland survey)

0 2Km

● LOCATION OF FLINT SCATTERS AS RECORDED BY WYMER, 1977

Roddons

Fen

Edge of March Island

N

Archaeological Project Services

Project Name: Gaul Road, March (MAGR07)

Scale 1:NTS | Report No:146/07

Figure 4 Neolithic and Bronze Age Landscape; Mapped by the Fenland Survey

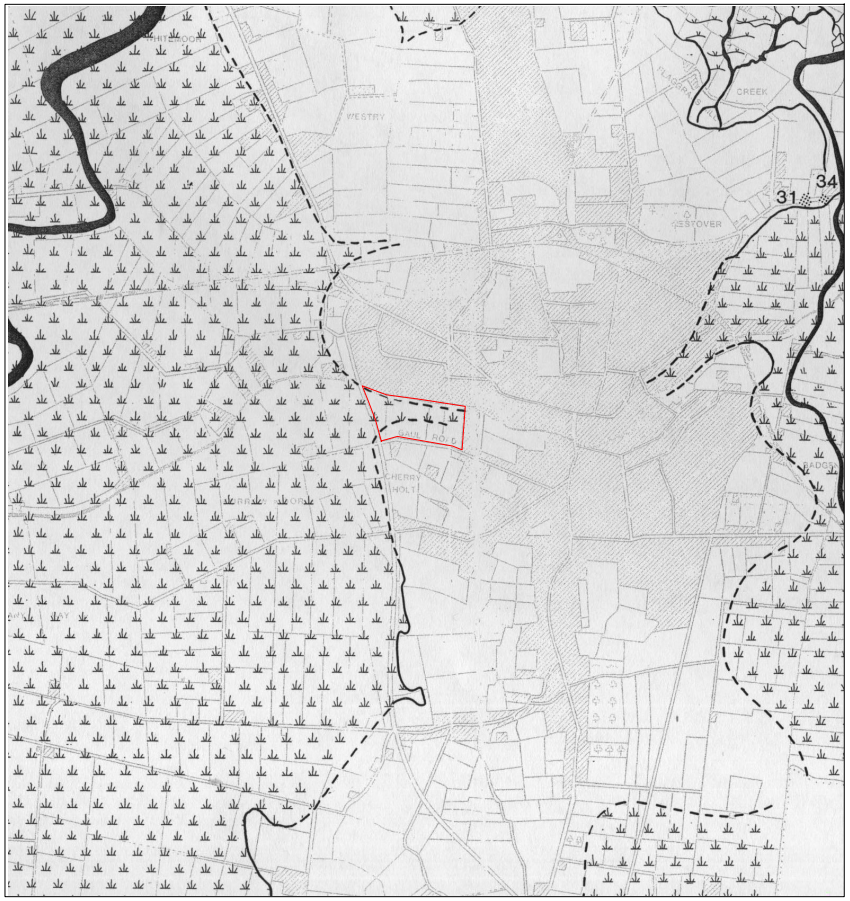


Figure 5a Iron Age Landscape (after the fenland survey)

Figure 5b Romano-British Landscape (after the fenland survey)

0 2Km

0 2Km

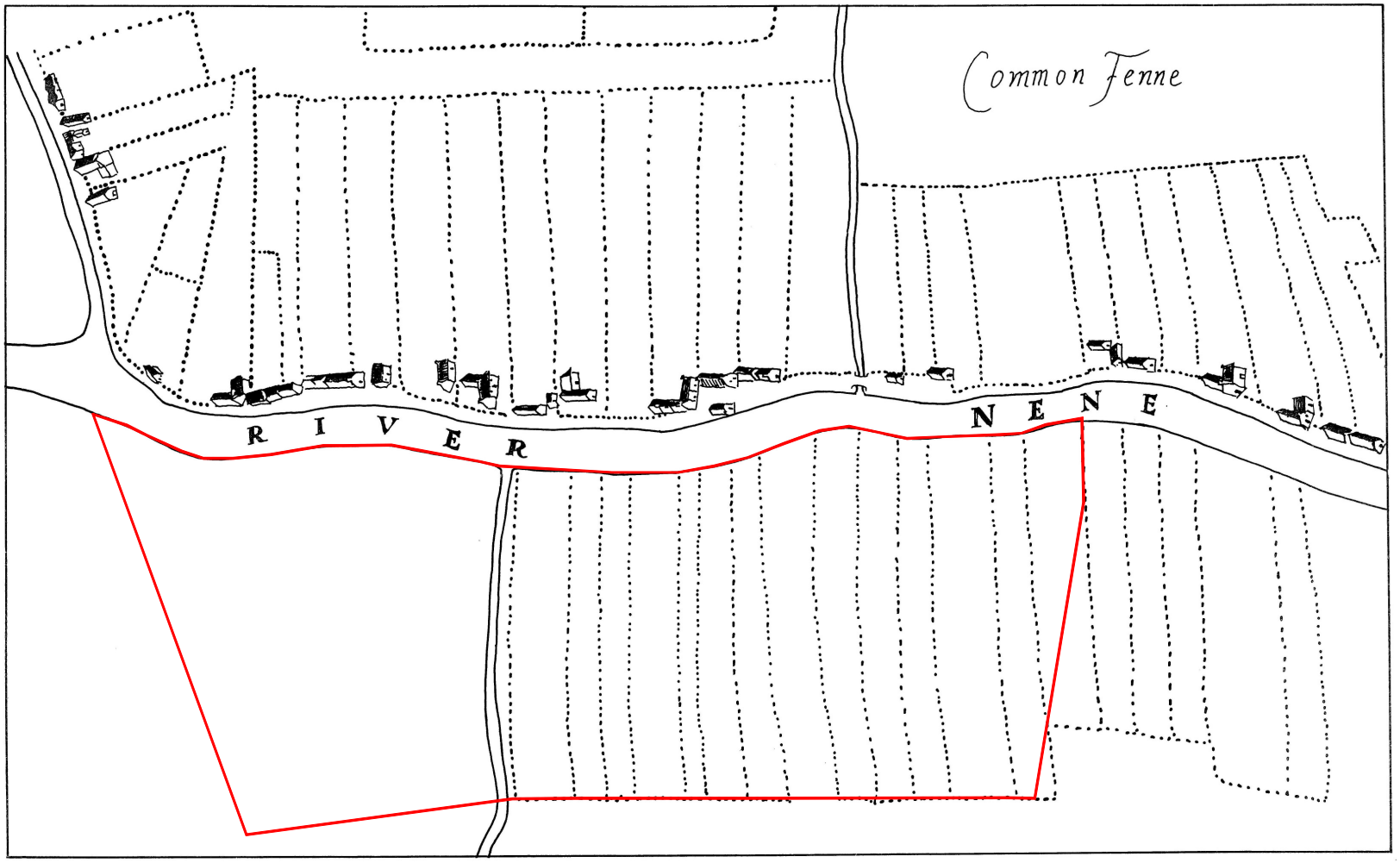
Fen

Edge of March Island

N

Archaeological Project Services	
Project Name: Gaul Road, March (MAGR07)	
Scale 1:NTS	Report No:146/07

Figure 5 Iron Age and Romano-British Landscape; Mapped by the Fenland Survey



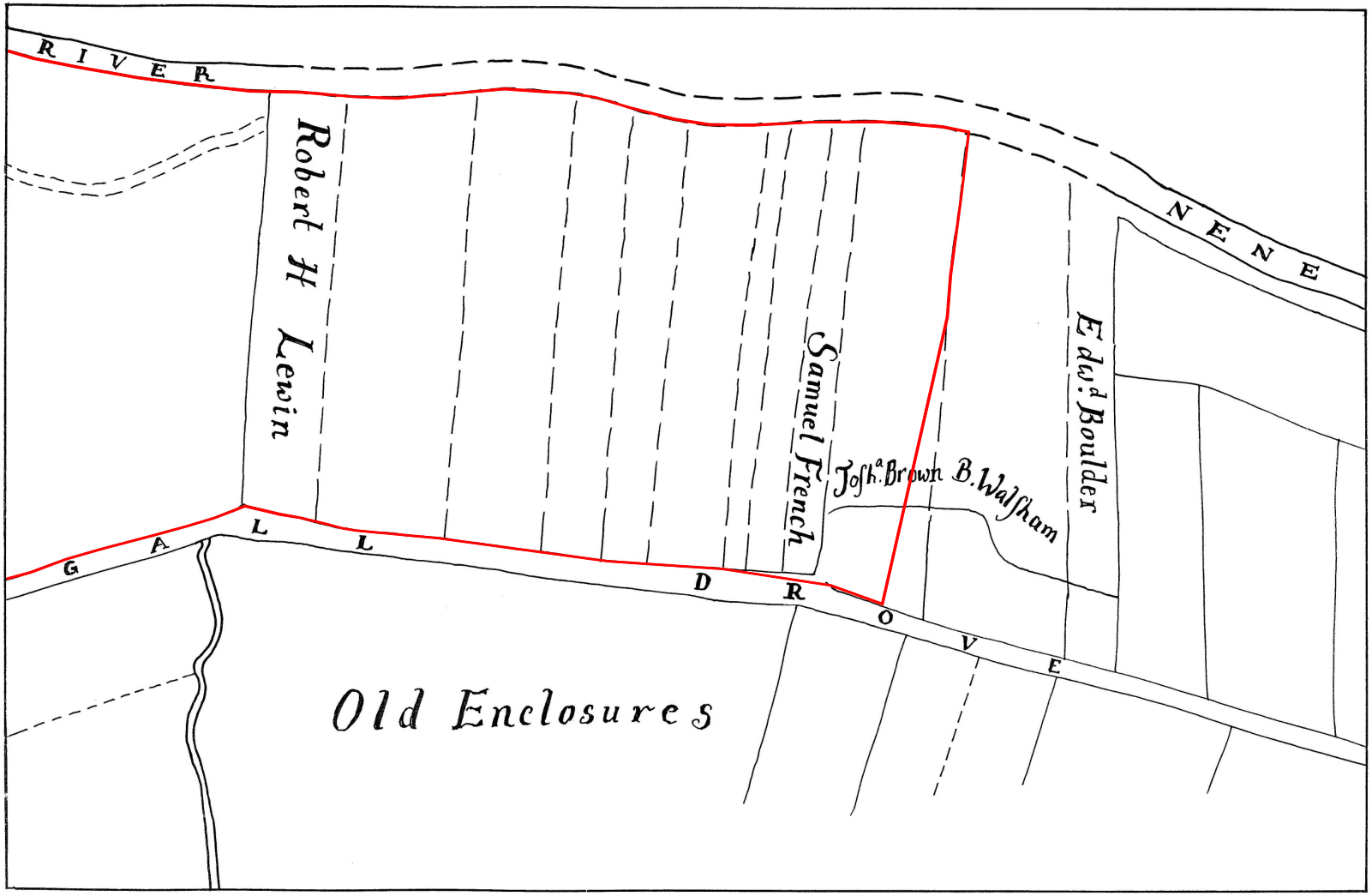
N

Archaeological Project Services

Project Name: Gaul Road, March (MAGR07)

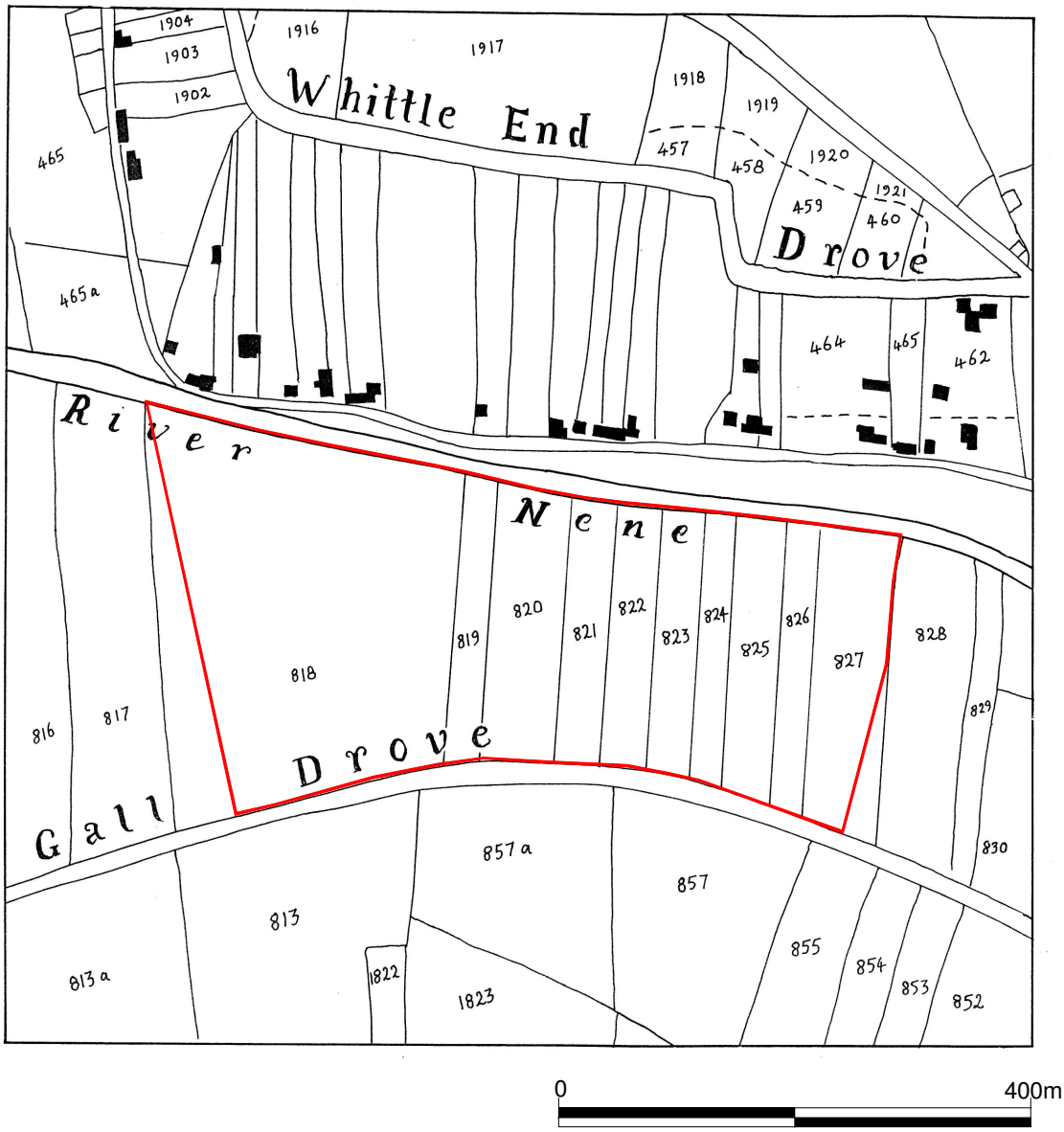
Scale 1:NTS | Report No:146/07

Figure 6 Extract from the 1680 Map of March, Wimblington and Doddington



Archaeological Project Services	
Project Name: Gaul Road, March (MAGR07)	
Scale 1:NTS	Report No:146/07

Figure 7 Extract from 'A Plan of the Commons within the Town or Hamlet of March in the Monor and Parish of Doddington in the Isle of Ely and County of Cambridgeshire, 1974'



N

Archaeological Project Services

Project Name: Gaul Road, March (MAGR07)

Scale: aprox 1:7500 | Report No:146/07

Figure 8 Extract from 'March Tithe Rural Area; Part 1 Township of March in the Rectory and the Parish of Diddington, Isle of Ely, Cambridge, 1840'

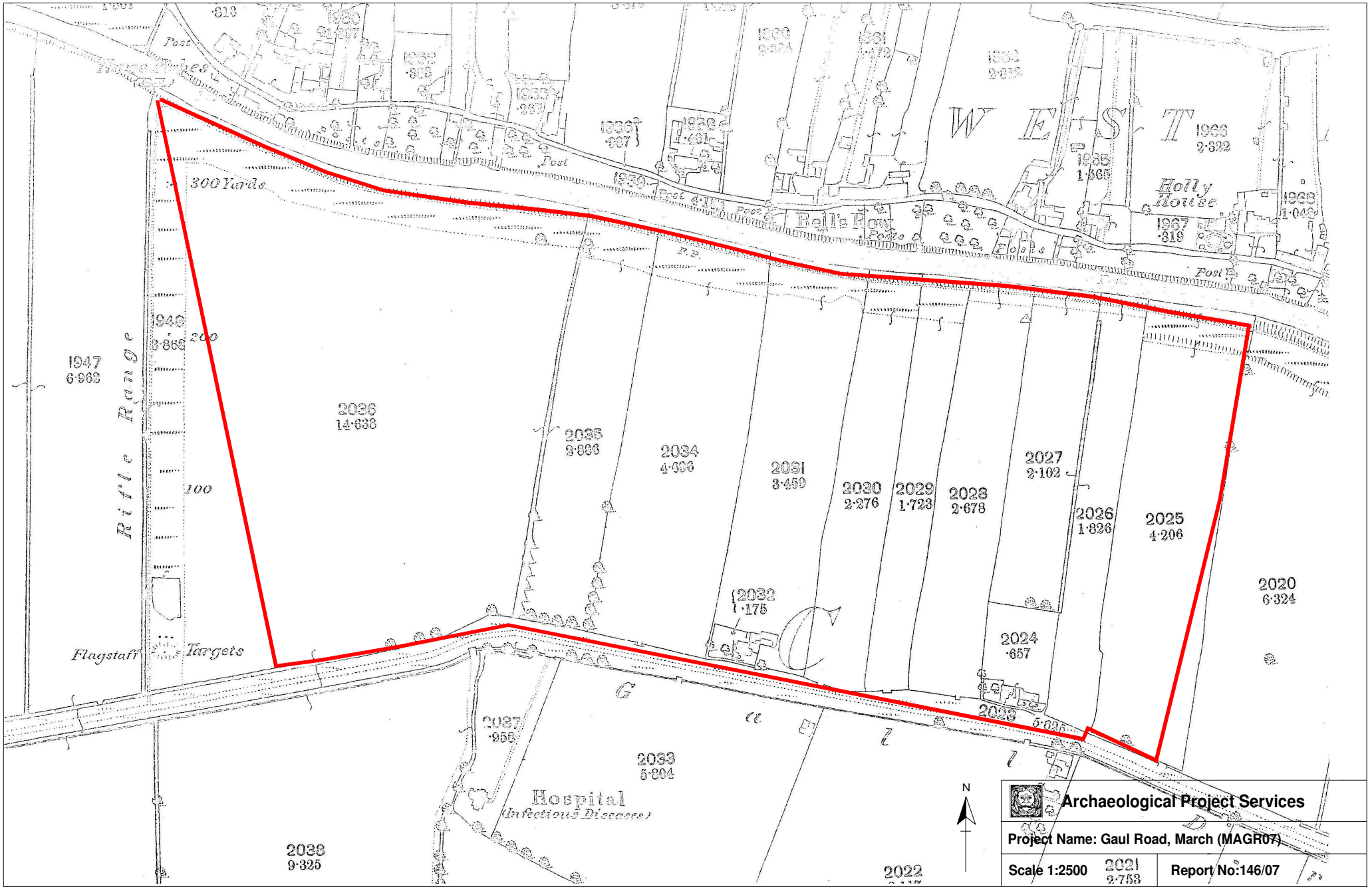
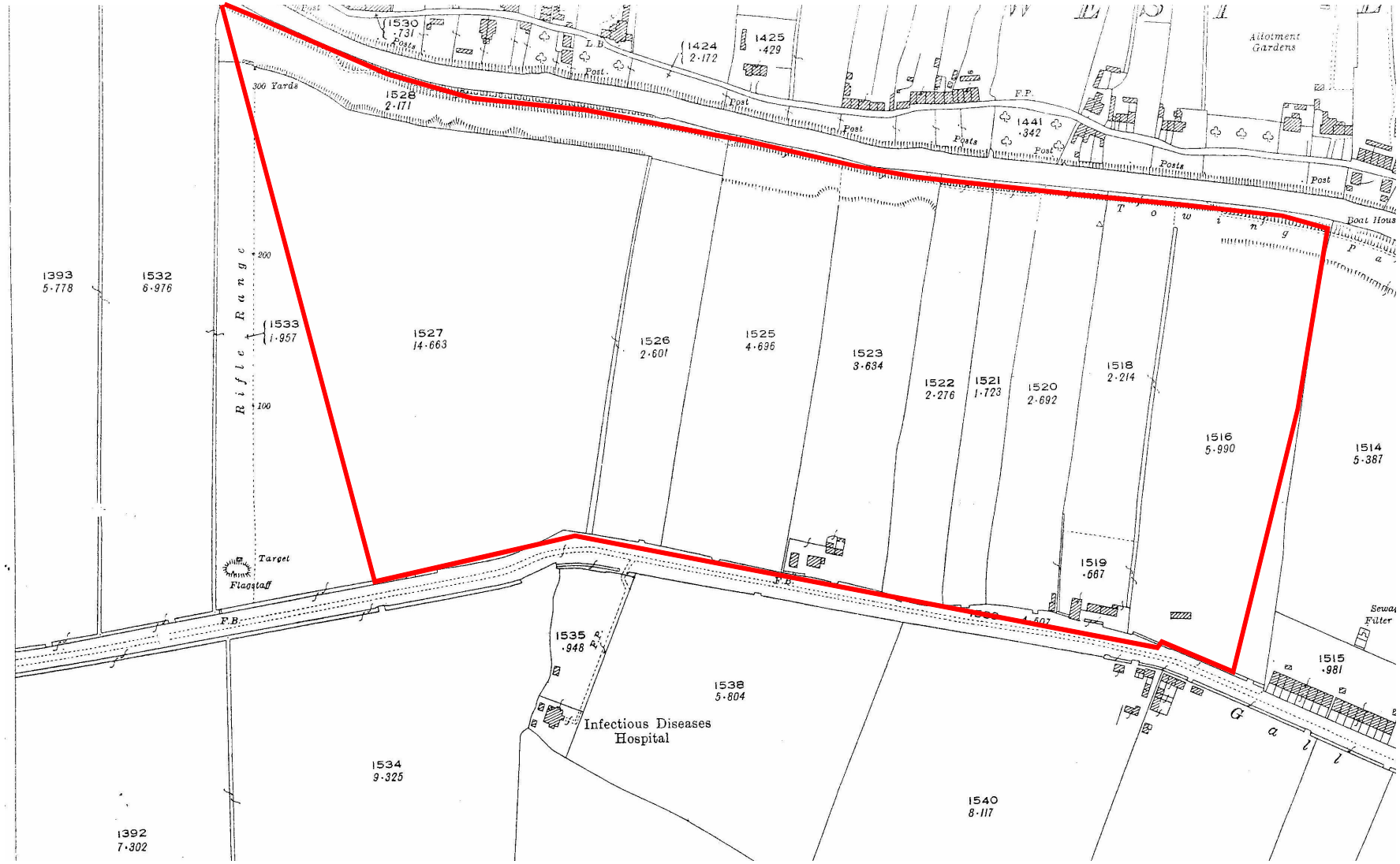


Figure 9 Extract from the 1886 Ordanance Survey First Edition Map



Archaeological Project Services

Project Name: Gaul Road, March (MAGR07)

Scale 1:2500 | **Report No:146/07**

Figure 10 Extract from the 1925 Ordanance Survey Map

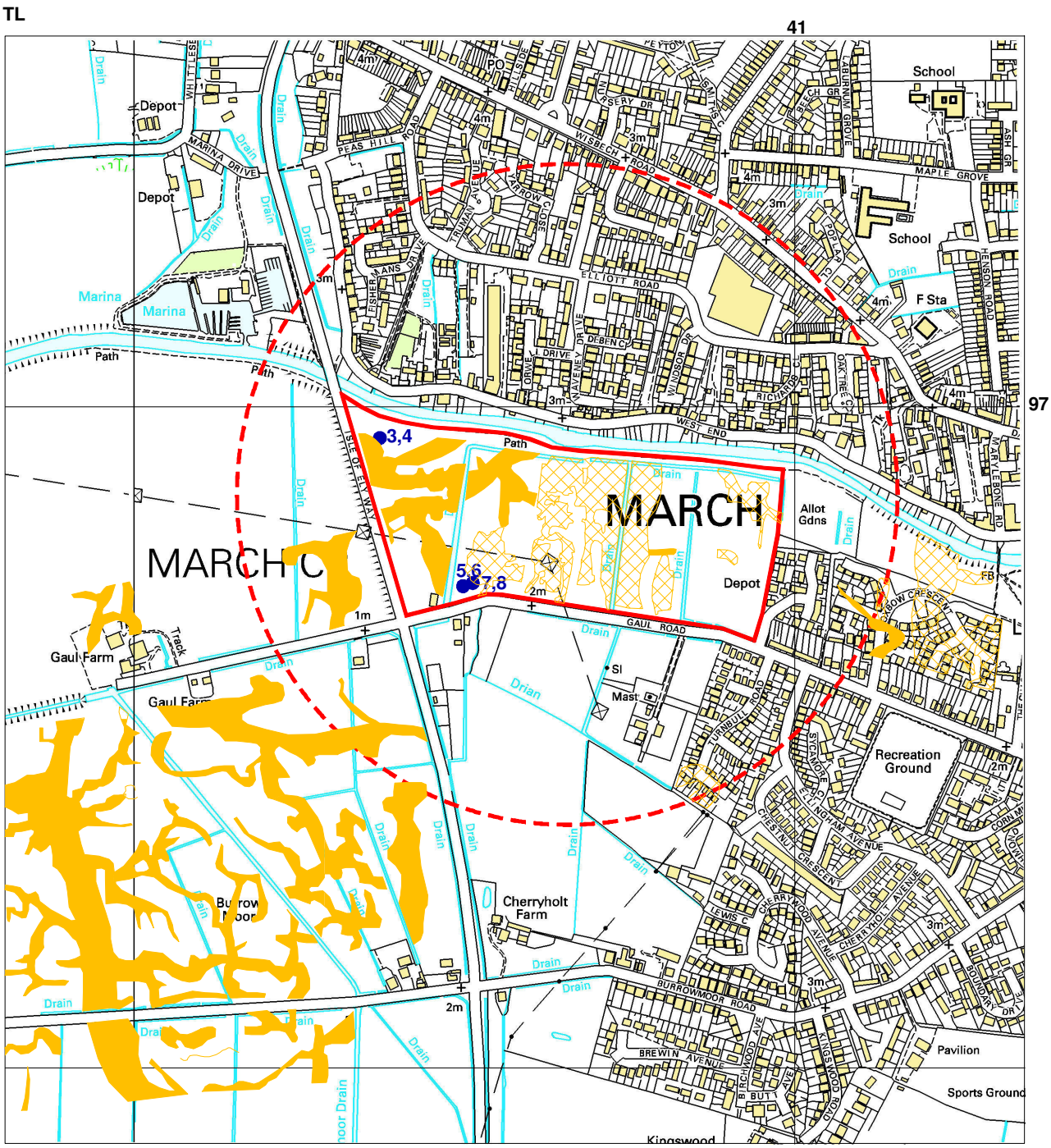


Figure 11 Plan showing Aerial Mapping of Area

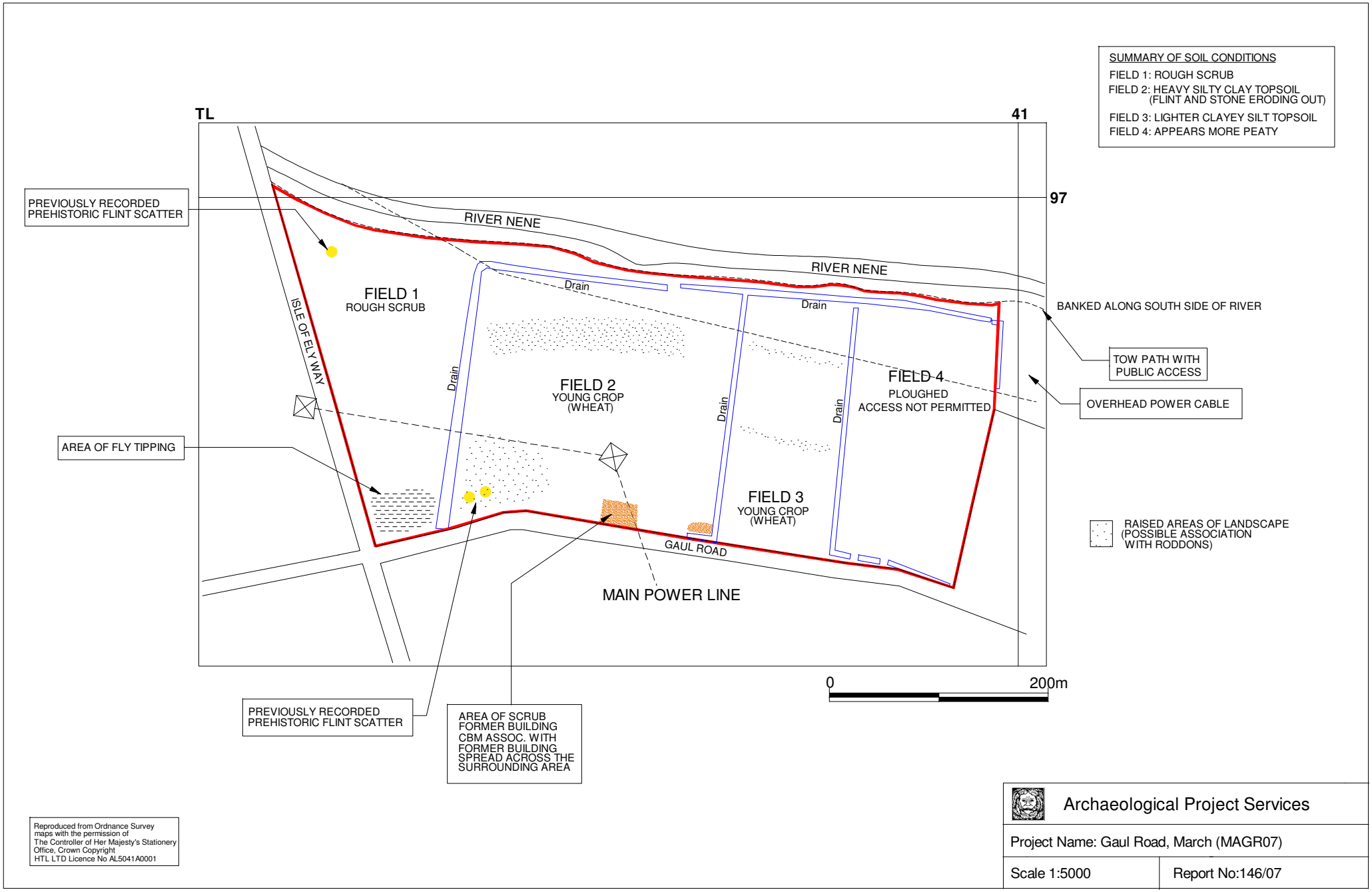


Figure 12 Results of Site Walkover Survey

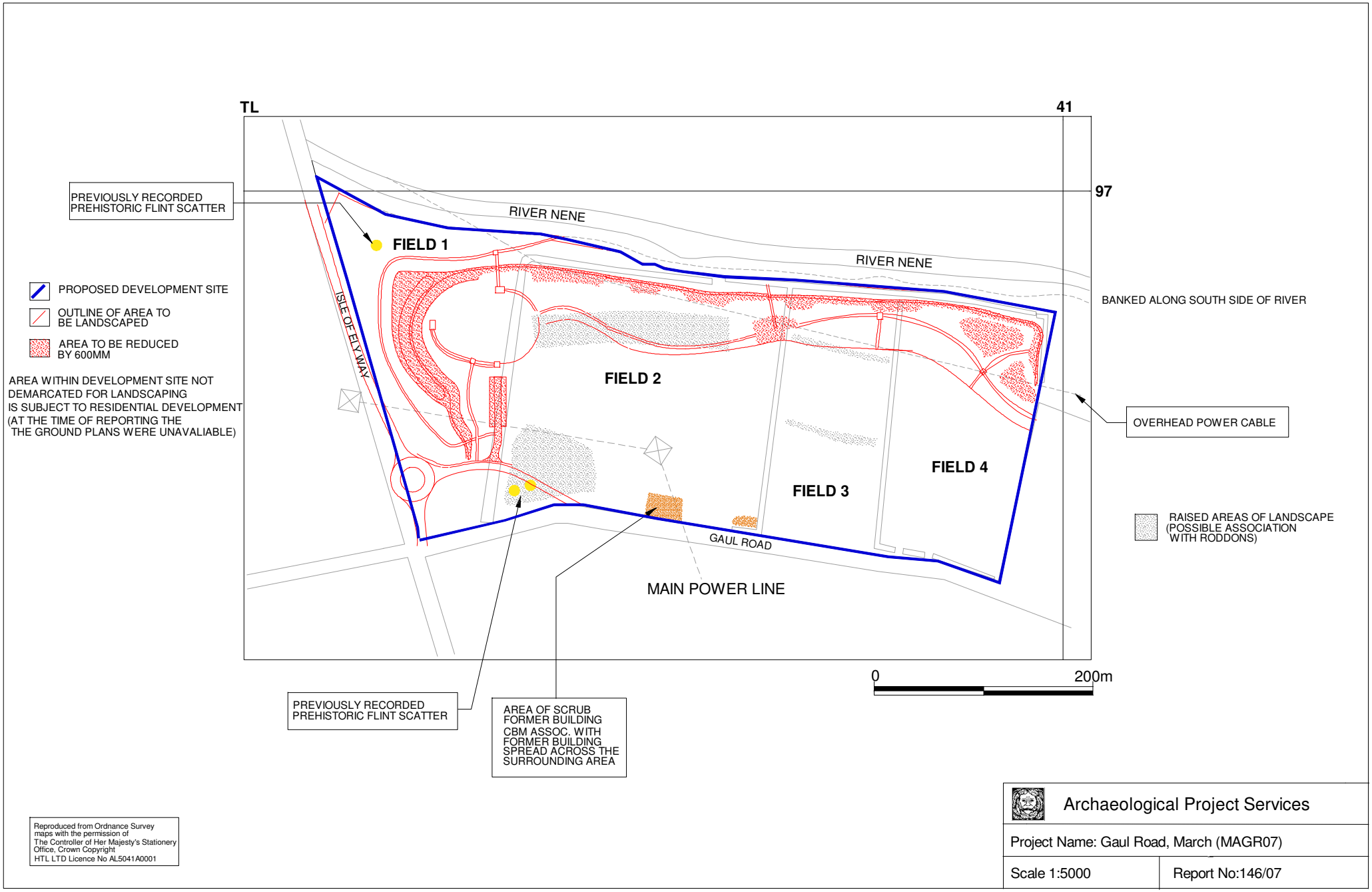


Figure 13 Development Plan and Impact Assessment

Plate 1 Field 1, rough scrub obscuring the surface, looking north.

Plate 2 Field 2, young wheat crop-low, lying bank (rodden) just visible in the northern part of the field, looking south.

Plate 3 Field 2, southern part of the site with CBM spread extending out from the demolished later 19th century building, looking north.

Plate 4 Field 3, young wheat crop with northernmost of the narrow low-lying banks just visible, looking southwest.

Plate 5 Field 4, indicating peatier topsoil- access not permitted to field, looking east.

APPENDIX 1

AERIAL PHOTOGRAPHIC ASSESSMENT

AIR PHOTO SERVICES
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GAUL ROAD, AREA CENTRED TL 406969, MARCH, CAMBRIDGESHIRE:

AERIAL PHOTOGRAPHIC ASSESSMENT

REPORT No: 2007/21

DECEMBER 2007

Commissioned by:
Archaeological Project Services
The Old School
Cameron Street
Heckington
Sleaford
Lincs NG34 9RW

AIR PHOTO SERVICES, CAMBRIDGE: ROG PALMER MA MIFA
Archaeological consultant for aerial photographic interpretation and accurate mapping

GAUL ROAD, AREA CENTRED TL 406969, MARCH,

CAMBRIDGESHIRE:

AERIAL PHOTOGRAPHIC ASSESSMENT

SUMMARY

This assessment of aerial photographs examined an area of about 0.8 hectares (centred TL406969) in order to identify and accurately map archaeological, recent and natural features.

No archaeological features were identified.

Silts have been mapped that may represent roddons or remain from shifting positions of what may have been a small inlet. The silts indicate slightly higher ground that may have had relevance in the past.

Original photo interpretation and mapping was at 1:2500 level.

GAUL ROAD, AREA CENTRED TL 406969, MARCH, CAMBRIDGESHIRE: AERIAL PHOTOGRAPHIC ASSESSMENT

Rog Palmer MA MIFA

INTRODUCTION

This assessment of aerial photographs was commissioned to examine an area of about 0.8 hectares (a 500m radius centred on TL406969) in order to identify and accurately map archaeological, recent and natural features and thus provide a guide for field evaluation. The level of interpretation and mapping was to be at 1:2500.

ARCHAEOLOGICAL AND NATURAL FEATURES FROM AERIAL PHOTOGRAPHS

In suitable cultivated soils, sub-surface features – including archaeological ditches, banks, pits, walls or foundations – may be recorded from the air in different ways in different seasons. In spring and summer these may show through their effect on crops growing above them. Such indications tend to be at their most visible in ripening cereal crops, in June or July in this part of Britain, although their appearance cannot accurately be predicted and their absence cannot be taken to imply evidence of archaeological absence. In winter months, when the soil is bare or crop cover is thin (when viewed from above), features may show by virtue of their different soils. Upstanding remains, which may survive in unploughed grassland, are also best recorded in winter months when vegetation is sparse and the low angle of the sun helps pick out slight differences of height and slope.

Such effects are not confined only to archaeological features. In the Fenland, the courses of former watercourses – roddons – and the edges of 'islands' can be seen clearly on some winter photographs and these may be relevant to the present Assessment. Other disturbance of soil and bedrock can produce its own range of shadow, crop and soil differences and it is hoped that a photo interpreter, especially one familiar with local soils, is able to distinguish archaeological from other features. There may, however, remain some features of unknown origin that cannot be classified without specialist knowledge or input from field investigation.

PHOTO INTERPRETATION AND MAPPING

Photographs examined

The most immediately informative aerial photographs of archaeological subjects tend to be those resulting from observer-directed flights. This activity is usually undertaken by an experienced archaeological observer who will fly at seasons and times of day when optimum results are expected. Oblique photographs, taken using a hand-held camera, are the usual products of such investigation. Although oblique photographs are able to provide a very

detailed view, they are biased in providing a record that is mainly of features noticed by the observer, understood, and thought to be of archaeological relevance. To be able to map accurately from these photographs it is necessary that they have been taken from a sufficient height to include surrounding control information.

Vertical photographs cover the whole of Britain and can provide scenes on a series of dates between (usually) 1946-7 and the present. Many of these vertical surveys were not flown at times of year that are best to record the archaeological features sought for this Assessment and may have been taken at inappropriate dates to record crop and soil responses that may be seen above sub-surface features. Vertical photographs are taken by a camera fixed inside an aircraft and with its exposures timed to take a series of overlapping views that can be examined stereoscopically. They are often of relatively small scale and their interpretation requires higher perceptive powers and a more cautious approach than that necessary for examination of obliques. Use of these small-scale images can also lead to errors of location and size when they are rectified or re-scaled to match a larger map scale.

Cover searches were obtained from the Cambridge University Collection of Aerial Photographs (CUCAP) and the National Monuments Record: Air Photographs (NMRAP), Swindon. All photographs identified in the searches were from routine vertical surveys.

Photographs consulted are listed in the Appendix to this report.

Base maps

A base map at a scale of 1:10560 was made by joining parts of two quarter sheets (TL39NE and TL40NW). This was necessary to use when working with older photographs. A site-centred map at 1:10000 was provided by the client and has been used as the background for the figure in this report.

Study area

Photographs were examined in detail for an area with a radius of 500m centred at TL406969.

Photo interpretation and mapping

All photographs were examined by eye and under slight (2x) magnification, viewing them as stereoscopic pairs when possible. Digital copies of the most informative were transformed to match the digital data using the specialist program AirPhoto (Scollar 2002). All digital photographs were enhanced using the default setting in AirPhoto before being examined on screen. Transformed files were set as background layers in AutoCAD Map, where features were overdrawn, making reference to the original prints, using standard conventions. Layers from this final drawing have been used to prepare the figure in this report and have been supplied to the client in digital form.

Accuracy

AirPhoto computes values for mismatches of control points on the photograph and map. In all transformations prepared for this assessment the mean mismatches were less than ±2.00m. These mismatches can be less than the survey accuracy of the base maps themselves and users should be aware of the published figures for the accuracy of large scale maps and thus the need to relate these mismatches to the Expected Accuracy of the Ordnance Survey maps from which control information was taken (OS 2007). Mapping originally undertaken at 1:10000/10560 does not have the inherent accuracy to be used to locate features on the ground with precision.

COMMENTARY

Soils

The Soil Survey of England and Wales (SSEW 1983) shows the area to be on or abutting marine alluvium and fen peat (soil association 851a: DOWNHOLLAND 1) with a small area of Jurassic and Cretaceous clays (soil association 872a: PEACOCK) that extends from the south to just north of Gaul Road. The latter is most likely to be part of the island of March. The local soils have been explained in more detail by David Hall (1987) to provide background information for his archaeological survey of the Fenland.

Archaeological features

No archaeological features were identified on the photographs examined.

Non-archaeological features

The figure shows a confusing picture that has been divided into roddons and silt 'smears'. Both, however, may result from mixed deposits.

Roddons are more definite a few hundred metres west of the Study Area and it is possible that they were never well developed this close to an island. Hall's period maps (1987, figs 20-23, 25) show the Gaul Road area to have been one of frequent change in the past and perhaps to have been the location of a small inlet whose position shifted over time. The mapped silts most probably reflect mixed soils left by those changes and they may indicate local high ground that was used by past communities as routes between March island and the lower fenland.

The Isle of Ely Way was first visible on photographs taken in 1982.

Land use

Early photographs show a small number of pasture fields in the Study Area, but most land was in arable use from the 1970s. This means that all fields have been photographed under conditions of bare soil and have had the possibility of observation by airborne observers undertaking archaeological survey.

REFERENCES

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OS, 2007. http://www.ordnancesurvey.gov.uk/productpages/landline/positional-background.htm

Scollar, I., 2002. Making things look vertical, in Bewley, R.H. and Rączkowski, W., (ed). *Aerial archaeology: developing future practice*. NATO Science Series, Vol **337**, 166-172.

SSEW, 1983. *Soils of England and Wales: sheet 4: Eastern England (1:250,000)*. Soil Survey of England and Wales, Harpenden.

APPENDIX

Aerial photographs examined

Source: Cambridge University Collection of Aerial Photographs

Vertical photographs

RC8-AB 60-61	29 March 1972	1:14480
RC8-ED 229-230	24 March 1982	1:10000
RC8-knBI 108-109	13 June 1988	1:10000

Source: National Monuments Record: Air Photographs

Specialist collection

TL4096/2	undated 1930s vertical
TL4096/4	undated 1930s vertical
TL4097/3	undated 1930s vertical

[these prints provide a stereo run over the area at an early date]

Vertical collection

Sortie Number	*Library Number*	*Camera Position*	*Start Frame*	*End Frame*	*NGR Start*	*NGR End*	*Date*	*Scale 1:*
RAF/106G/UK/1634	416	FP	1236	1237	TL414962	TL407962	09-Jul-1946	10000
RAF/106G/UK/1634	416	FP	1284	1284	TL406972	TL406972	09-Jul-1946	10000
RAF/58/1337	1505	F22	215	216	TL407962	TL401961	11-Jan-1954	10000
RAF/540/1778	1715	F21	162	163	TL403964	TL410964	16-Jan-1956	9999
RAF/540/1778	1715	F22	182	183	TL404970	TL411970	16-Jan-1956	9999
RAF/58/2062	1757	F21	134	135	TL404964	TL411962	22-Nov-1956	10000
RAF/543/2409	2180	1F22	54	55	TL404963	TL403972	16-Sep-1963	10000
RAF/82/1476	3934	F22	14	16	TL415971	TL403972	30-Aug-1956	10000
RAF/CPE/UK/2045	4990	RP	3002	3003	TL409958	TL403958	29-Apr-1947	9840
RAF/CPE/UK/2045	4990	RS	4001	4002	TL414974	TL408975	29-Apr-1947	9840
MAL/68019	5254	V	84	85	TL404972	TL412971	08-Apr-1968	10500
MAL/68019	5254	V	96	97	TL414957	TL406957	08-Apr-1968	10500
MAL/69058	5421	V	194	194	TL405965	TL405965	10-Jun-1969	10500
MAL/71056	5859	V	142	142	TL409971	TL409971	18-May-1971	3000
MAL/71056	5859	V	144	144	TL408966	TL408966	18-May-1971	3000
MAL/71056	5859	V	156	156	TL404968	TL404968	18-May-1971	3000
MAL/71056	5859	V	170	170	TL409971	TL409971	18-May-1971	3000
OS/75237	9785	V	229	230	TL410968	TL403969	11-Jun-1975	7500
OS/68029	11703	V	3	4	TL401975	TL408976	08-Apr-1968	7500
OS/68029	11703	V	30	31	TL400961	TL407961	08-Apr-1968	7500

OS/68148	11704	V	6	6	TL406970	TL406970	02-Jun-1968	7500
OS/68148	11704	V	18	18	TL407969	TL407969	02-Jun-1968	7500
OS/90154	13720	V	9	10	TL409962	TL408968	13-Jul-1990	7500
OS/90154	13720	V	71	71	TL404968	TL404968	13-Jul-1990	7500
OS/93375	14481	V	27	27	TL400969	TL400969	06-Aug-1993	7500
OS/93379	14484	V	83	84	TL411963	TL411969	13-Aug-1993	7700
OS/96589	15174	V	206	206	TL400975	TL400975	04-Jun-1996	7800
OS/96590	15175	V	82	82	TL399965	TL399965	04-Jun-1996	7800

Total 19 Sorties 50 Prints

Most informative photographs

RC8-AB 61
RC8-ED 229
RAF540/1778/F22: 182
OS/68029: 30
OS/75237: 229
OS90154: 71

TERMS AND CONDITIONS

Air Photo Services have produced this assessment for their clients, Archaeological Project Services, subject to the following conditions:

Air Photo Services will be answerable only for those transcriptions, plans, documentary records and written reports that it submits to the clients, and not for the accuracy of any edited or re-drawn versions of that material that may subsequently be produced by the clients or any other of their agents.

That transcriptions, documentation, and textual reports presented within this assessment report shall be explicitly identified as the work of Air Photo Services.

Air Photo Services has consulted only those aerial photographs specified. It cannot guarantee that further aerial photographs of archaeological significance do not exist in collections that were not examined.

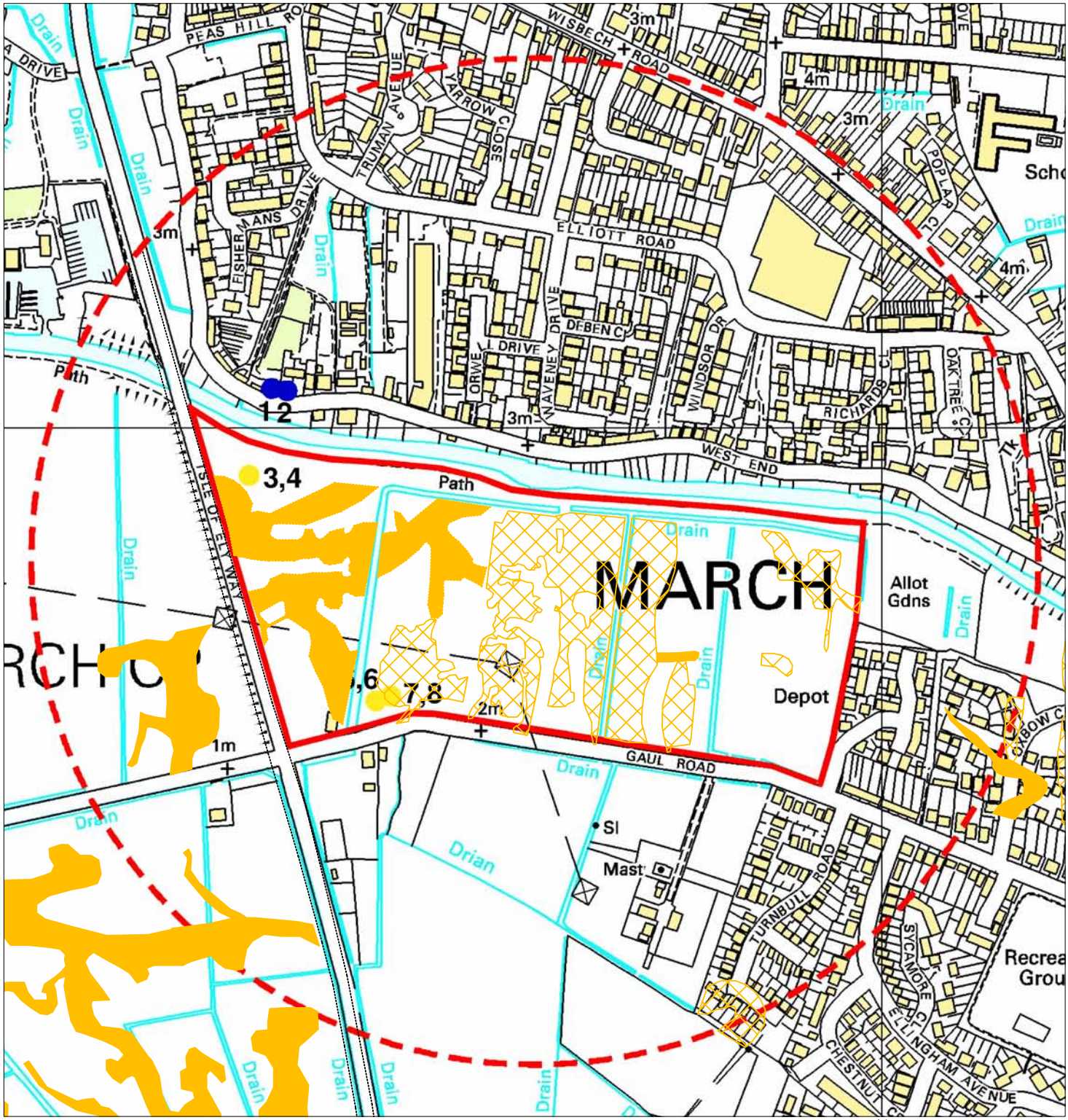
Due to the nature of aerial photographic evidence, Air Photo Services cannot guarantee that there may not be further archaeological features found during ground survey which are not visible on aerial photographs or that apparently 'blank' areas will not contain masked archaeological evidence.

We suggest that if a period of 6 months or more elapses between compilation of this report and field evaluation new searches are made in appropriate photo libraries. Examination of any newly acquired photographs is recommended.

That the original working documents (being interpretation overlays, control information, and digital data files) will remain the property of Air Photo Services and be securely retained by it for a period of three years from the completion date of this assessment after which only the digital files may be retained.

It is requested that a copy of this report be lodged with the relevant Sites and Monuments Record within six months of the completion of the archaeological evaluation.

Gaul Road, March, Cambridgeshire:
Features mapped from aerial photographs



Roddon
Silt 'smear'

Original photo interpretation and mapping at 1:2500 level
based on photographs at CUCAP/ULM and NMRC.

Air Photo Services Cambridge
December 2007
Drawing: 0721GaulRd.dwg

Appendix 2

GLOSSARY

Alluvium	Deposits laid down by water. Marine alluvium is deposited by the sea, and fresh water alluvium is laid down by rivers and in lakes.
Bronze Age	A period characterised by the introduction of bronze into the country for tools, between 2250 and 800 BC.
Cropmark	A mark that is produced by the effect of underlying archaeological or geological features influencing the growth of a particular crop.
Geophysical Survey	Essentially non-invasive methods of examining below the ground surface by measuring deviations in the physical properties and characteristics of the earth. Techniques include magnetometry and resistivity survey.
Iron Age	A period characterised by the introduction of Iron into the country for tools, between 800 BC and AD 50.
Medieval	The Middle Ages, dating from approximately AD 1066-1500.
Mesolithic	The 'Middle Stone Age' period, part of the prehistoric era, dating from approximately 11000 - 4500 BC.
Neolithic	The 'New Stone Age' period, part of the prehistoric era, dating from approximately 4500 - 2250 BC.
Palaeolithic	The 'Old Stone Age' period, part of the prehistoric era, dating from approximately 500000 - 11000 BC in Britain.
Post-medieval	The period following the Middle Ages, dating from approximately AD 1500-1800.
Prehistoric	The period of human history prior to the introduction of writing. In Britain the prehistoric period lasts from the first evidence of human occupation about 500,000 BC, until the Roman invasion in the middle of the 1st century AD.
Romano-British	Pertaining to the period dating from AD 43-410 when the Romans occupied Britain.