

Gonville Farm

Great Shelford Cambridgeshire

An Archaeological Desk-based Assessment



By Dawn Keen BA MA (Arch)

TL 47943 54125

May 2014

Report No. AES/2014/5

Oasis Id: archaeol15-176211

Non-technical summary

This desk-based assessment was requested by Andy Dunlop of Northmore Associates Ltd to assess the likely impact of development of the 'Gonville Farm' site, located on land off Babraham Road, Cambridge (TL 47943 54125), covering an area of approximately two acres, prior to the development of the site for Arthur Rank Hospice. An evaluation of previous archaeological investigations and the historical, aerial and cartographic evidence shows the site to be situated in an area of known archaeology and high significance. Dating from the prehistoric to modern era is evident. Due to the substantial prehistoric activity within the study area and the wider environs, examples of which are the Late Neolithic to Middle Bronze age activity adjacent to the 'Gonville Farm' site, discovered prior to the building of the Babraham Road Park and Ride, an Iron Age Hill Fort at Sawston and the Scheduled Ancient Monument, Wandlebury Camp, Iron Age fort, there is a high probability of encountering further archaeological evidence within the proposed development area.

Contents

Non technical summary

1.0	Introduction	1
1.1	Layout of study area	1
1.2	Topography and geology	1
1.3	Past and current land use	1
2.0	Aims and objectives	1
2.1	Legislative framework	2
3.0	Methodology	2
4.0	Summary of archaeological results	2
4.1	Cambridgeshire historic environment records (CHER)	2
4.2	Published and unpublished archaeological reports	3
4.3	Cartographic evidence	3
4.4	Aerial photographic survey	4
4.5	Site inspection	5
4.6	Archaeological and historical assessment	5
4.6.1	Archaeological and historical background	5
4.6.2	Known and potential archaeology	5
4.7	Proposed development area: potential for archaeological presence	8
4.8	Proposed development area: potential for archaeological preservation	8
4.9	Proposed development area: impact on other heritage assets	8
5.0	Discussion	8
6.0	Conclusions	9
7.0	Assessment of impact	9
7.1	Effects during construction	10
7.2	Effects post construction	10
8.0	Mitigation measures	11
	Acknowledgments	12
	References	13

APPENDICES

- Appendix 1: Supporting illustrations
- Appendix 2: Proposed development area: site photographs
- Appendix 3: Aerial photographs
- Appendix 4: Historic Environment Record data
- Appendix 5: Planning policies

Figures

Frontispiece: North east facing view across the proposed development area

- Figure 1: Proposed development area - location maps
- Figure 2: Underlying geology
- Figure 3: Cambridgeshire historic environment record map 1/2
- Figure 4: Cambridgeshire historic environment record map 2/2
- Figure 5: 1847 Tithe map
- Figure 6: OS map 1885-1886
- Figure 7: OS map 1888-1891
- Figure 8: OS map 1902-1903
- Figure 9: OS map 1938 – 1952
- Figure 10: OS map 1960
- Figure 11: OS map 1970
- Figure 12: OS map 1985
- Figure 13: OS map 1992-3
- Figure 14: Aerial photograph assessment of Granhams area, Great Shelford, Cambridgeshire, 1997/12
- Figure 15: Aerial photograph assessment for Babraham Road park and ride, Great Shelford, Cambridgeshire, 1997/138
- Figure 16: Aerial photographic assessment for Addenbrooke's Hospital, 2002/07
- Figure 17: *West facing view of entrance to PDA*
- Figure 18: *North-west facing view of PDA with cottage and entrance road in the foreground*
- Figure 19: *North west facing view from centre of PDA*
- Figure 20: *South-east facing view of PDA with current buildings in the foreground*

Tables

- Table 1: Cartographic sources
- Table 2: Archaeological features: criteria of importance
- Table 3: Archaeological impact: significance criteria
- Table 4: Archaeological impact: magnitude
- Table 5: Classification of archaeological assets and magnitude of impact during construction.
- Table 6: Classification of archaeological assets and magnitude of impact post-construction
- Table 7: Sites and monuments within a 1km radius
- Table 8: Historic Environment Data – Fieldwork List
- Table 9: Listed Buildings within a 1km radius
- Table 10: Scheduled Ancient Monuments within a 1km radius
- Table 11: Registered Parks and Gardens

1.0 Introduction

Archaeology, Excavation and Surveys (AES) were commissioned to complete this archaeological desk based assessment (DBA) of the land at Gonville Farm, Great Shelford, by Andy Dunlop of Northmore Associates Ltd on behalf of Arthur Rank Hospice to assess the potential impact of the proposed development of the two acre site north of Babraham Road (TL 47943 54125).

1.1 Layout of the study area

The proposed development area (PDA) lies c.5.3km south of the historic centre of Cambridge. The PDA is bordered to the north by Babraham Park and Ride, to the west and south by Babraham Road, A1307 and to the east by Cherry Hinton Road. The study area lies within and up to c. 1km radius of the PDA.

1.2 Topology and geology

The PDA lies in the north of the parish of Great Shelford, on a bedrock of lower chalk with isolated areas of middle chalk (figure 2). The land slopes gently upwards from the river flowing through the parish to c 23 metres in the centre of the parish, and rising more steeply in the north and east up the slopes of the Gog Magog Hills, to c 45 metres on Whites and Clarkes Hills and c 55m on the north-eastern boundary.

1.3 Past and current land use

The site was visited on 19th April 2014 to assess the current land use. The majority of the site is at present under grass and farmed for hay, a small copse is located on the site, and trees and hedges form part of all boundaries around the site. The site was photographed to assist the presentation of assessment. No constraints restricted observation of the land.

The land has been farmland at least since the ownership of Gonville and Caius College in 1836. Prior to that date historical records place the land as being medieval open fields (Wright, 1982). The land from at least 1920, formed part of Gonville Farm, Caius Farm and Chandos Farm, part of the Cambridgeshire County Farms Estate (Malim, 1990). The estate is the largest in England and Wales currently comprising 13,400 hectares and 216 tenants. In 1990 Cambridgeshire County Council Archaeology department completed a survey of the archaeology on their estate (Malim, 1990). The County farms estate were established post world war to provide employment for returning troops and to boost food output in the wake of years of rationing.

2.0 Aims and objectives

The principal objective of this desk based assessment is to assess the presence and/or absence of known/unknown archaeological sites within the study area and immediate environs of the PDA, taking into account the wider landscape as deemed necessary, to determine previous land use and history of the PDA, and also to assess the potential for archaeological remains surviving on the PDA and the extent to which any remains could be impacted upon by the proposed development of the site. If further investigation is deemed necessary to establish the archaeological potential of the PDA, advice is provided within this report to meet these requirements.

2.1 Legislative frameworks

The importance of archaeological heritage is acknowledged in that it is covered by both local and national policy. Nationally the primary policy, which affects archaeology is the National Planning Policy Framework (NPPF; March 2012). This aims to ensure that action required as part of the planning process is appropriate and proportionate (see Appendix 5).

3.0 **Methodology**

This desk based assessment has been compiled under the guidelines of the Institute for Archaeologist's (IFA) Standard and Guidance for Archaeological Desk-based Assessments 2001, and on this basis the following methods of data collection have been used to meet the aims of the DBA.

- 3.1 To assess all known or potential archaeological and historical resources within the study area in order to characterise the likely character, extent, quality and worth of any archaeological and historical assets within a local regional, national or international context as appropriate, whether from primary or secondary data;

Sources consulted to include:

- Cambridgeshire Historic Environment Records (CHER)
- Cambridgeshire Records Office (CCRO)
- Cambridgeshire Archives Office
- published and unpublished archaeological reports
- cartographic and documentary sources,
- photographs, aerial or otherwise,
- informal site walkover (conducted 19th April 2014)

- 3.2 An assessment of archaeological and historical assets to include; a search within the study area for listed buildings, conservations areas, registered parks and gardens; an assessment of the sites urban land use since the nineteenth century using cartographic and photographic sources and a site walkover to assess any factors likely to impact on any potential archaeological remains. Digital photographs to be taken with a Canon EOS 1100D.

- 3.3 The assessment of impact to take into account the potential for and relative importance of the archaeology and the likely impact of the proposed development upon that archaeology.

4.0 **Summary of Archaeological results**

Using desk-based methodologies through consultation of primary and secondary sources as listed above the following evidence for positive and negative archaeology within and surrounding the PDA has been collated below:

4.1 Cambridgeshire Historic Environment Records (CHER)

No sites or findspots have been identified within the PDA to date. Within a 1km radius a further 62 sites and findspots have been identified, and one Scheduled Ancient Monument (SAM), DCB215. A further three Scheduled Ancient Monuments (SAMS), DCB52, DCB189 and DCB195 lie within the wider environs of the study area.

4.2 Published and unpublished archaeological reports

From a study of the published and unpublished archaeological reports commenting on the archaeological evidence found within and close to the study area surrounding the PDA, there is evidence to support multi-period activity. To the north west of the site on the proposed link road for Addenbrookes, a high level of prehistoric and early Roman activity, and minor evidence of pre-middle Bronze Age through to the Medieval period has been discovered. (Timberlake, 2007). Adjacent to the PDA excavations by the Cambridgeshire Archaeological Field Unit, on the site of the current Park and Ride, a further high level of prehistoric /Bronze age activity is summarised in unpublished work by Hinman (1997-1998). Late prehistoric/Bronze age through to late Iron age/Romano-British activity has also been discovered south of the site during an evaluation prior to a golf course development (Whitaker 2002). Several reports comment on the discovery of Roman activity close to Worts causeway and the Roman road, Worstead Street, north of the PDA (Walker, 1910, Croft 1983, Wait 1992, Bailey 2004). Some medieval activity in the area of the PDA has been discovered during archaeological investigations, namely medieval field systems and is summarised in the reports of Taylor 1973, Miller 1988, Clover 2012. Similarly for the post-medieval period, some archaeological investigative work has been completed, with formal gardens and pre enclosure boundary ditches reported in Way (1988), and Whitaker (2002). For the modern period, a WWII anti-tank defensive ditch was discovered during an evaluation and is reported on in Whitaker, 2002.

4.3 Cartographic evidence

From the cartographic evidence for the study area, the earliest to be considered is the nineteenth century tithe map of 1847, this shows the land use of the study area and the PDA to be rural (figure 5). The land within the area of the PDA is shown on the tithe map as belonging to Gonville and Caius College and divided into allotments.

The series of Ordnance Survey (OS) maps from 1885 until 2010 show the internal and external boundaries, and land use of the PDA, as not having changed significantly since 1847. The area of the PDA, adjacent buildings and land belonging to Caius College Farm, according to the Ordnance Survey map sequence from 1992 to 1960, the boundaries appear to remain the same (figures 1 and 10). A new homestead for Caius College Farm is recorded as being built in 1836 (Wright, 1982). In 1873 the farm was let and some land sold in 1900 to form part of a golf course, the rest was sold to the County Council for use as smallholdings in 1920, hence the slight change in boundaries (Wright, 1982). By 1970, Caius College Farm appears from the maps to have been split into Caius Farm, Gonville Farm, Chandos Farm and Bracken Dale (figure 11). OS survey maps of 1885-6 and 1888-1891 show little change in the building layout, again, only changing slightly by 1902-3, and by 1938 more boundaries adjacent to Babraham Road were introduced (figures 6 - 9). By 2010, the area belonging to Gonville and Caius College in 1847, was divided into Babraham Road Park and Ride, Gonville Farm, Beechwood School and Arbor Grange (figures 1 and 5). Little change however, is shown to the boundary which encompasses the latter, the boundaries of Gonville Farm itself have also seen little change from 1885 to present (figures 1, 5 -13).

Within the context of the wider archaeological landscape the OS maps of 1885 and 1985 shows the site in the lee of the Iron Age Hill Fort, Wandlebury Camp (SAM 1011717) and the Roman road, Via Devana, Worstead Street, (SAM 1003263) (figures 6, 12 and 13).

Date	Description
1847	Tithe map
1885-1886	Ordnance Survey map 1:2,500
1888-1891	Ordnance Survey map 1:10,560
1902-1903	Pre WWII Ordnance Survey map 1:2,500
1903	Pre WWII Ordnance Survey map 1:10,560
1938-1950	Pre WWII Ordnance Survey map 1:10,560
1960	Post WWII Ordnance Survey map 1:10,560
1971	Post WWII Ordnance Survey map 1:2,500
1973	Post WWII Ordnance Survey map 1:10,000
1985-1993	Post WWII Ordnance Survey map 1:10,000
1992-1993	Post WWII Ordnance Survey map 1:10,000
2010	Post WWII Ordnance Survey map 1:2,500

Table 1: Cartographic sources

4.4 Aerial photographic survey

An examination of the aerial photographic record provided by University of Cambridge's Unit for Landscape Modelling and aerial assessments revealed no archaeological evidence on the PDA itself (Palmer 1997, 1999, 2002).

However the aerial photographic assessment conducted in 1997 over 3ha revealed a number of ditched archaeological features falling within the 1km radius of the PDA. The majority of features shown on the aerial photographs fall north-west of the PDA, while the medieval headlands are shown as surrounding the PDA on all sides (figure 15). Dating of the features shown, fall in the periods of possible Neolithic (CHER4817), prehistoric (CHER8338a), bronze age (CHER8338), and medieval (CHER8338b), with medieval headlands surrounding the PDA (Palmer, 1997/138).

Archaeological features are shown on the aerial photographic assessment conducted in over 85 ha in the Granhams area of Great Shelford during 1999. Lying south-west of the PDA within the 1km radius lies a ditch defined field system of unknown date (CHER8356) and also a single ring ditch possibly of bronze age date (Palmer, 1999/12). Although other features are recorded on the aerial photographs they have not been included as they lie outside of the study area.

A further aerial photographic assessment was conducted during 2002 of Addenbrooke's Hospital and its environs (Palmer 2002/07). The survey covered land south-west of the PDA, the majority of which lies outside the study area, but provides a greater awareness of the extent of the archaeological activity in the wider environs of the PDA. Archaeological features covered by this survey have already been covered by the previous aerial photographic surveys of 1997 and 1999 (CHER nos 4317, 8338, 8356 etc)

4.5 Walkover survey

The walkover survey was conducted in dry, sunny conditions with good visibility. The proposed development area currently lies under meadow surrounded by trees and hedgerow.

The survey assisted in ensuring that an understanding was gained of the topography of the site and how it fits in with the current understanding of the archaeological landscape.

4.6 Archaeological and historical assessment

4.6.1 Archaeological and historical background

No archaeological investigations have been carried out on the archaeological potential of the proposed development area (PDA) at Gonville Farm to date.

Within a 1km radius of the site a number of archaeological investigations have been carried out, several of these taking the form of evaluations were directly adjacent to the PDA along Babraham Road. The evaluations took place during 1997 (ECB246), 1998 (ECB1285) and 2012 (ECB3721). These have indicated prehistoric, neolithic and medieval activity

Other Archaeological investigations within the study area lie within and close to the 1km perimeter. These include: evaluations during 1997 (ECB245), 2002 (ECB929) and 2004 (ECB1708); fieldwalking surveys during 1978 (ECB1776), 1995 (ECB459) and 2001 (ECB1202); a watching brief during 1991-2 (ECB1034). From the investigations, late Bronze Age, Early Iron Age, Roman, medieval and post-medieval activity have been indicated.

A few Archaeological investigations have been conducted outside the study area, but close enough to be of significance to the study. The sites investigated lying outside the study area conducted since the late 1990s include: 1999, (ECB1197), 1999 (ECB1990); 2002 (ECB999) 2002 (ECB2208) and 2012 (ECB3899), with activity dating from the Neolithic to Medieval periods. An awareness of the wider prehistoric landscape surrounding the PDA is particularly necessary as the significance of the sites contribute to the archaeological potential of the PDA, for example the Scheduled Ancient Monument, Wandlebury Camp (DCB189), a Scheduled Ancient Monument, causewayed enclosure at Little Trees Hill (DCB195) and an Iron Age Hill Fort at Sawston (Bray, 1994).

4.6.2 Known and potential archaeology

Prehistoric (up to 43AD)

Evidence for prehistoric activity surrounding the proposed development area is extensive. Significant prehistoric activity lies not only within c 500km of the PDA and the 1km study area, but in the wider landscape surrounding the PDA (Table 7).

Immediately surrounding the PDA prehistoric activity was discovered during archaeological excavations of land adjacent to Babraham Road activity of possible neolithic date (ECB246, ECB1285, CB15252), (Hinman 1997-1998), Further evidence of prehistoric and neolithic activity in the form of worked flint was found west of the PDA and close to Babraham Road (CHER numbers 04817, 08338A, 05106, 05110 and 08710)

Further evidence of prehistoric activity, close to the 1km radial perimeter of the study area, has been discovered through archaeological investigations to the north west, south east and south west of the PDA. To the north west of the PDA, archaeological investigations found evidence for prehistoric activity of Neolithic date in the form of pottery and flint (CHER numbers 04578 and CB15269). To the south east prehistoric activity was discovered during archaeological evaluation, evidence for which included a neolithic polished axe and flint (CHER00969A) with worked flint scatters on sites off Babraham road towards the Gog Magog Hills and Wandlebury Camp (CHER number 04851, 05016, 05058, CB14637 and ECB459). To the south west of the site further prehistoric activity was discovered when archaeological investigations revealed a large prehistoric ditch located on the ridge of Clark's Hill, possibly part of a large enclosure or ploughed-out barrow or ring ditch (CB15572), and also a causewayed enclosure of Neolithic/Bronze Age date, at Little Trees Hill (DCB195, table 10)

Bronze age 2500 BC to 1501 BC

Significant features including a rectilinear and subrectangular enclosures of possible Bronze age date were discovered during archaeological investigations at Gonville Farm adjacent to the PDA (CHER8338). Inhumations of early Bronze age date were discovered during archaeological investigations during 1997-1998 (CHER CB15252). Significant evidence for late Neolithic to early bronze age activity was discovered in the form of an area of ditches (CHER CB15253)

Iron age 800BC to 42AD

Evidence of Iron age activity has been discovered within the 1km study area. Pottery has been found along Wort's Causeway (CHER04578). Investigations of an anti-tank ditch in 1945 crossing Worts Causeway contained Iron Age pottery (CHER05119), during archaeological investigations, ditches, flint, pottery of bronze age – early iron age date, late iron age linear features were also discovered (CB15253) and also a shallow pit feature containing late iron age to 5th century roman pottery (CHER CB15574).

In the wider landscape surrounding the PDA, are Iron Age hill forts, at Borough Hill, Sawston Bray (1994), Belsars, Arbury and Wandlebury Camp (DCB189, table 10) forming a line from the Thames to the Fen Edge dividing East Anglia from the rest of the country (Bray, 1994).

Roman (43 to c. 450AD)

The majority of Roman activity appears from archaeological investigations to date to be evident north of the PDA, following the line of the roman road Wort's Causeway (CHER numbers 05060, 05120, 07864, 07970). Archaeological investigations at the Hutchinson site at Addenbrooke's hospital revealed a continuation of the E-W roman road running south of the line of Worts Causeway (CHER MCB17897). Further roman evidence has also been discovered in the form of ditches possibly part of a rural field system and pot (CB15269, CHER08706 and 08709),

Medieval (450 to 1539)

Within the 1km study area only a limited amount of archaeological investigation conducted to date has revealed any medieval activity (MCB19630, Clover 2012). Fieldwalking surveys have brought forward a few sherds of pottery (CHER05000A, 5016A, 5110A and 8112) and other finds such as lead weights, musket balls and tokens (CHER0069, 4540A) (CAFG, 1981, 1985). A number of medieval earthworks have also been recorded; in Great Shelford (Taylor 1973); along Babraham Road close to the PDA (Malim, 1989) and south of the PDA on the perimeter of the study

area, (Miller, 1988, CHER 04836, 08338B and 08903). Aerial photographs however have shown the presence of medieval headlands surrounding the PDA (figure 15).

Post- medieval (1540 to present)

Post medieval activity recorded to date within the study area of the PDA is represented by a variety of finds such as clay pipe, potsherds and button (CHER05000B, 05106B, 05110B, 08708, 08338C, 08112A, CAFG 1981, 1985, Malim 1989). Possible medieval gardens are recorded at Caius College Farm and Nether Hall (CHER12098 and 12271, Way 1988), pre-enclosure boundary ditches (CHER CB15573, Whitaker 2002), and an extant milestone recorded north of the PDA along Worts Causeway (MCB18041).

World War II

World War II activity within the vicinity of the PDA is relatively minor, to the south of the PDA sections of anti tank defensive ditches were discovered during archaeological investigations (CHER CB15571, Whitaker 2002). An aerial photograph also revealed another 1940 trench within the study area (Evans 2008).

Undated

The undated features within the study area include several cropmarks and a collection of pottery sherds. The CHER records for these are as follows: CHER07892 denotes cropmarks of a square enclosure showing on aerial photographs lying north of the PDA (CUCAP APs, 13/07/1957 VS 27, 28); CHER08356 records a large number of cropmarks representing a possible rectilinear enclosure or field system lying to the south-west of the PDA (CUCAP APs, 08/06/1961 ADE 78- 80, 11/06/1961 ADJ 76, 11/06/1969 AXR 44 - 47, 02/07/1982 RC8 EO38 - 40 77 - 79); CHER 11293 records ditch systems not shown on aerial photographs lying to the north of the PDA (Kemp 1993); CHER11452 records two curved double ditched cropmarks shown on aerial photographs lying north-east of the PDA close to Worstead Street Roman road (OS APs, 92-379 062) and CHER8709A records a collection of pottery sherds lying to the north-west of the PDA.

Conservation areas and listed buildings

One conservation area has been identified as within the study area, but not within the vicinity of the PDA. Three listed buildings have also been identified, but are within the wider landscape of the PDA (Table 9).

Other heritage assets within the study area

There are no registered parks and gardens on the PDA, however four are recorded in the wider landscape, placing the PDA also within a landscape of historical parks and gardens, such as the mid 18th century garden at Wandlebury (CHER05627, table 11).

4.7 Proposed development area: potential for archaeological presence

Prehistory

Due to the presence of prehistoric activity adjacent to the PDA (Hinman 1997-8) the potential for further activity on the site of the PDA is high.

Roman

Roman activity to date is recorded mainly north of the site therefore potential for activity on the PDA is likely to be classified as low/medium.

Anglo-saxon

No anglo-saxon activity has been recorded within the study area to date, given the high level of known archaeology, the possibility of Anglo-Saxon remains cannot be excluded.

Medieval

Although no evidence of medieval field systems or associated earthworks have been recorded to date, it is possible that remnants may exist.

Post-medieval

Evidence for Post-medieval activity surrounding the PDA, such as WWII anti-tank defence ditches also indicate some potential for further activity.

4.8 Proposed development area: potential for archaeological preservation

Level is likely to be good as since c1847 land use has been farmland, and in recent years, meadowland, and therefore little disturbance by deep ploughing.

4.9 Proposed development area: impact on other heritage assets

As the site is surrounded at present by trees and the buildings present are not on the heritage listings, there is little visual impact to affect the SAMS in the area or other regional and local heritage assets.

5.0 **Discussion**

No evidence exists to date on the PDA itself, due to the lack of recorded archaeological investigative work, however extensive evidence for archaeological activity, in particular prehistory exists within the study area and wider environs, (Hinman, 1997-8, table 7). The presence of the site abutting the PDA, excavated in 1997-8, suggest that it could extend further into the proposed development area, and the setting of the PDA in the presence of Iron Age hill forts in the wider environs also place the PDA within a highly significant area of prehistoric activity. The levels of prehistory, on the PDA, being masked by medieval and post medieval farmland and occupation.

Some continuity for archaeological activity is evident close to the PDA, dating to the prehistory, bronze age, iron age, medieval through to modern. No evidence close to the PDA has as yet been discovered for Roman and Anglo-Saxon. However evidence of Roman activity lying close to the roman road, (Via Devana) to the north, indicates that the likelihood of activity on the PDA must be considered, and that of Anglo-Saxon not discounted

With the above in mind it is considered that there is a reasonably high probability of encountering archaeological features dating from prehistory through to at least the Iron age, with Roman and Anglo-Saxon not to be discounted (table 7, figures 3 and 4).

The medieval through to modern landscape has been characterised within the study area through archaeological investigation, aerial photographic and cartographic studies. The surveys have revealed that part of the PDA was allotted during the nineteenth century and farmland in part since then. This is likely to have had minimal impact on any archaeological features that may be encountered in this area. There is also some possibility that traces of medieval farming may be present. Buildings noted on late nineteenth century maps and the later sequence of ordnance survey maps are however likely to have had some foundational impact on any archaeological features (table 7, figures 6 -15).

6.0 Conclusions

The significance and importance of the prehistoric site abutting the PDA in its context of a wider landscape of prehistoric activity cannot be understated. When taking into consideration the potential for encountering surviving archaeological features within the PDA, the results of previous investigations within the study area need to be given sufficient consideration in view of the areas within the PDA that have not been investigated archaeologically. A large area of hard-standing and buildings may have had some impact on archaeological features encountered within the PDA. However where the land is still under meadow it is possible that archaeological features may survive *in situ*.

7.0 Assessment of impact

The assessment of impact takes into account the potential for and relative importance of the archaeology, and, the likely impact of the proposed development on that archaeology, whether visual or physically destructive. The criteria in tables 2 to 4 below will be used to determine what significance that impact has on the archaeology (Dickens, 2012).

Importance of feature	Description of feature
National	Scheduled ancient monuments: Grade I listed buildings
Regional	Sites listed in HER or identified from other sources, which comprise important examples in the context of the East Anglian area: archaeological sites.
District	Sites listed in the HER or identified from other sources which comprise important examples in the context of Cambridge and South Cambridgeshire; archaeological sites
Local	Sites listed in the HER or identified from other sources, which comprise important examples in the context of the site and its immediate surroundings; archaeological sites.

Table 2: Archaeological features: criteria of importance

Magnitude of impact	Description of impact
Severe	Site or feature entirely or largely removed/destroyed (over 75%).
Major	Site or feature substantially removed/destroyed (50-75%) or undergoing a fundamental alteration to its setting.
Moderate	Site or feature partially removed (15-50%) or with considerable alteration to its setting.
Minor	Site or feature suffering some disturbance/removal (<15%) or with a discernible alteration to its setting.

Table 3: Archaeological impact: significance criteria

Magnitude of impact	Importance of feature within study area of PDA			
	National	Regional	District	Local
Severe	Major	Major/moderate	Moderate	Moderate/minor
Major	Major/moderate	Moderate	Moderate/minor	Minor
Moderate	Moderate	Moderate/minor	Minor	Minor/insignificant
Minor	Moderate/minor	Minor	Minor/insignificant	Insignificant

Table 4: Archaeological impact: extent of magnitude

7.1 Effects during construction

The main impact upon heritage assets during construction will be caused by building demolition, the type, methodology and depth of foundations, installation of services, ground levelling/lowering, ground reinstatement, vehicle movements (including possible compaction), and provision of constructors compounds. If and where archaeological features are encountered impacts can be severe. The table below indicates the presence of archaeological activity possible to be encountered within the study area of the PDA to date and the potential impact of construction.

Importance	Magnitude	Impact
National	Major	Insignificant
Regional	Major	Severe
District	Major	Severe
Local	Major	Severe

Table 5: Classification of archaeological assets and magnitude of impact during construction.

7.2 Effects post-construction

Once construction work has been completed, any further impact upon the archaeological resource should be minimal. The only possible continuing impact will be any further unscheduled works. Unscheduled works where necessary will require a separate schedule of mitigation.

Importance	Magnitude	Impact
National	Major	Insignificant
Regional	Major	Insignificant
District	Major	Minor
Local	Major	Minor

Table 6: Classification of archaeological assets and magnitude of impact post-construction

8.0 Mitigation measures

There is at present no justification to proceed with preservation in situ of any designated heritage assets such as Scheduled Monuments or of important but non-designated heritage assets. However as the PDA has not been subject to any previous recorded systematic archaeological investigation, the actual presence, nature and state of preservation of any such archaeological deposits or features is unknown.

However, in the light of the desk-based evidence to date the PDA has a high potential for archaeological deposits or features of prehistoric date and moderate potential for deposits or features of medieval or post-medieval date of local or regional importance. The preservation of such deposits is likely to be highly variable from poor to good.

It is recommended from national and local guidance that potential archaeological sites are evaluated prior to the determination of any planning application to assess the nature and significance of any archaeological deposits or features present. The results of such investigations can then enable the Local planning authorities archaeological advisors to make informed decisions regarding heritage assets in respect of any planning application and determine the need and scope for refusal of development to provide preservation in situ of important archaeological deposits, or a requirement for excavation and preservation by record prior to or during development, which can be imposed by conditions on planning consent.

A programme of full archaeological excavation and sampling in the light of the information contained within this DBA, is to be recommended, with the aim of furthering the archaeological knowledge already established within the area and wider environs of the proposed development area, thus further identifying and assessing the extent, character, density and depth of any archaeological deposits or features present and to assess the extent of any disturbance caused by previous land use of the PDA on their preservation.

Given the high archaeological potential of the PDA the site can maybe dealt with by means of a pre-commencement condition in consultation and agreement with the LPA.

Acknowledgements

Archaeology, Excavation and Surveys would like to thank Andy Dunlop of Northmore Associates Ltd for commissioning this Desk Based Assessment. Thanks also to Sally Croft of Cambridge HER, Cambridge Archives Office for completing the search of the HER; the staff of the County Records Office for their assistance in consulting the Cartographic Maps.

For comments on the aerial photographic assessments on the site and area thanks must go to Rog Palmer (aerial photographic surveys?)

For informal comments and advice thanks to Mark Hinman of Pre-Construct Archaeology (Central).

Thanks also to Simon Bray for instigating the project and advice on the local archaeology.

References

- Bradford, L.J. 1978. 'The Cambridge Archaeological Field Group First Report' PCAS 68: xi-xiii.
- Bray, S. and Haley, G. 1993. 'Archaeological Investigations on the Thetford Aqueduct'. CCC Archaeological Field Unit Report A022
- Bray, S., (1994) 'Borough Hill, Sawston: An Archaeological Watching Brief on a Pipeline Through an Iron Age Hillfort', AFU CCC Report No. 95
- Brudenell, M. 2004. 'Land adjacent to the Bell Language School, Cambridge: An Archaeological Evaluation'. Cambridge Archaeological Unit Report 646
- Cambridge Archaeology Field Group 2001. 'Heath Farm, Stapleford. Fieldwalking 1995'.
- Clover, K. 2012. 'Babraham Road Park and Ride Extension 2012: Archaeological Evaluation report'. Oxford Archaeology East Report 1352
- Dickens, A., 'Cambridge South, An Archaeological Desktop Assessment', CAU Report No. 889, 2009
- GSB Prospection 2000. 'Arnold Land, Great Shelford', Geophysical Surveys of Bradford, Report, 2001/03
- Fox, C., 'Archaeology of the Cambridge Region', Cambridge University Press, 1923
- Hinman, M. 1999. 'Granhams Farm Golf Course Neolithic to Medieval; the Archaeological Landscape Surrounding Granhams Farm, from Nine Wells to Hinton Way, Great Shelford, Cambridgeshire. An Evaluation'. CCC Archaeological Field Unit Report 167
- Hinman, M. 1997. 'Prehistoric Enclosures and Inhumations on Land Adjacent to Babraham Road, Cambridge. Interim Statement of an Evaluation'. CCC Archaeological Field Unit Report
- Hinman, M. 1998. 'Prehistoric remains on land adjacent to Babraham Road, Cambridge. An evaluation'. CCC Archaeological Field Unit Report 147
- Hinman, M. 'Ritualistic Prehistoric Activity and inhumations on land adjacent to Babraham Road, Cambridge. Preliminary statement of evaluation and excavation 1997-1998'. TL 477/546. CCC Archaeological Field Unit Report
- Institute for Archaeologists 'Standard and Guidance for Archaeological Desk-based Assessments' 2001
- Kenney, S. 1997. 'Whitefield, Hinton Way, Great Shelford: an archaeological evaluation. CCC Archaeological Field Unit Report B012
- Malim, T., 'Archaeology on the Cambridgeshire County Farms Estate' English Heritage, CCC 1990
- National planning policy framework, 2012
- Palmer, R., 'Addenbrookes Hospital Area TL4654', Aerial Photographic Assessment, Report No 2002/07
- Palmer, R., 'Babraham Road Park and Ride, TL477546, Cambridgeshire'. Aerial Photographic Assessment Report No 1997/138
- Palmer, R., 'Granhams, Area TL4653, Great Shelford, Cambridgeshire': Aerial Photographic Assessment, Report No 1999/12
- South Cambridgeshire District Council, 'Great Shelford, Conservation Area Appraisal', SCDC 2007
- South Cambridgeshire Core Strategy, Adopted January 2007
- Timberlake, S., 'The Addenbrookes Access Road, Clay Farm, Trumpington, Cambridge: The 2007 Investigations: Site 3' CAU 2007, Report no. 803.
- Whittaker, P., Evans, C. and Gibson, D. 2002. Granham's Farm. Great Shelford, Cambridge, Cambridge Archaeological Unit Report 514
- Whittaker, P. 2002. An Archaeological Evaluation at Strangeways Laboratory, Worts Causeway, Cambridge, Cambridgeshire, Cambridge Archaeological Unit Report 487
- Wright, A. P. M., (ed.) 'Victoria County History: A History of the County of Cambridge and the Isle of Ely: Volume 8,' 1982

Internet sources

www.bgs.ac.uk/geoindex

The figure consists of three maps illustrating the location of the proposed development area:

- Top Left Map:** A regional map showing the area around Cambridge and Sawston. A red arrow points from the location of the proposed development area in the Babraham Road area towards the bottom right map.
- Top Right Map:** A more detailed map of the Babraham Road area, showing the proposed development area (indicated by a red arrow) and surrounding features like Babraham Road Park and Ride, Gonville Farm, and Chandos Farm.
- Bottom Map:** A detailed site plan of the proposed development area. A red arrow points to the 'Proposed development area' (indicated by a red box). The map shows the layout of the development, including roads, buildings, and green spaces. A north arrow and a scale bar are also present.

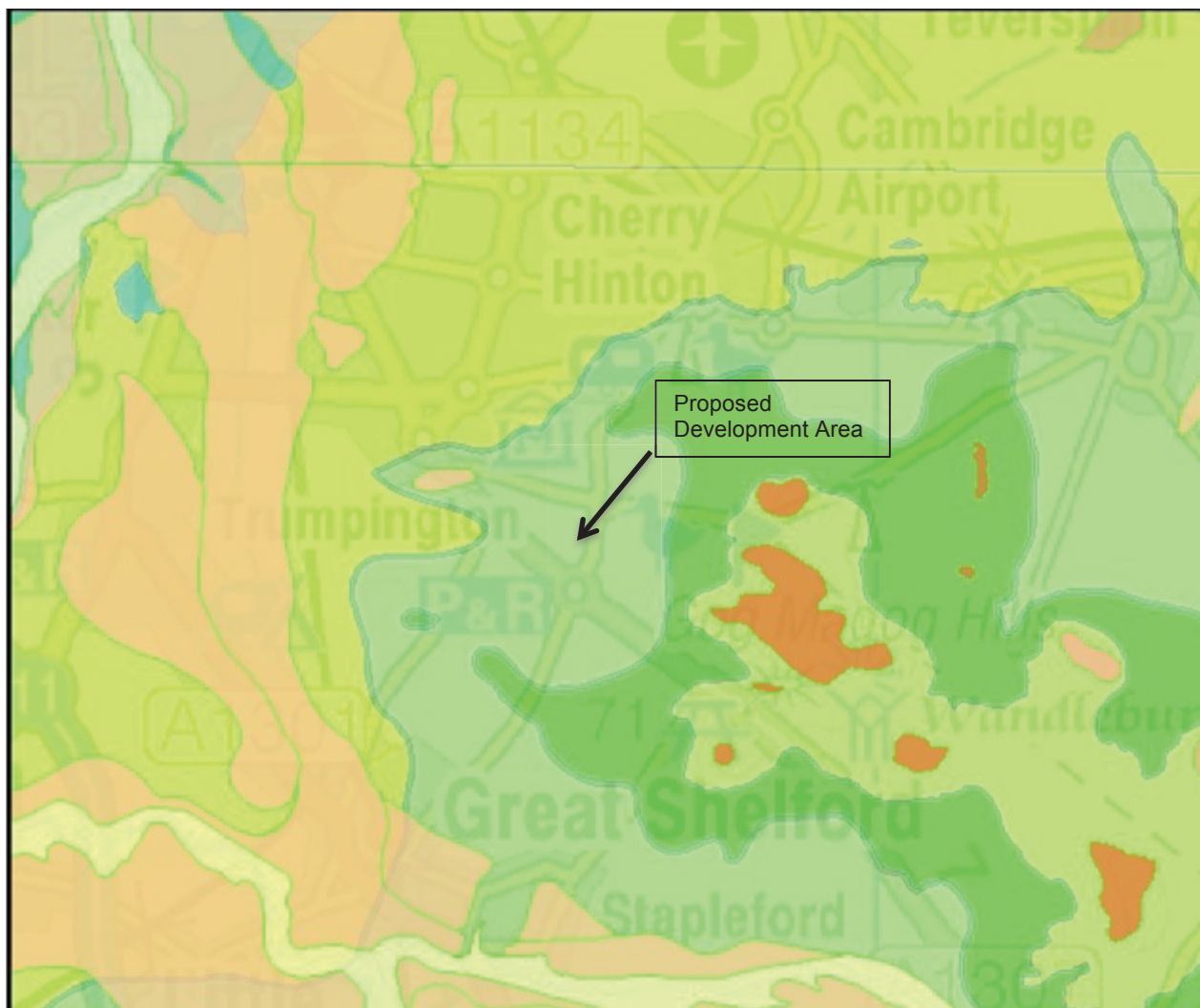


Figure 2: Underlying geology

Key



Bedrock geology: Zig zag chalk formation

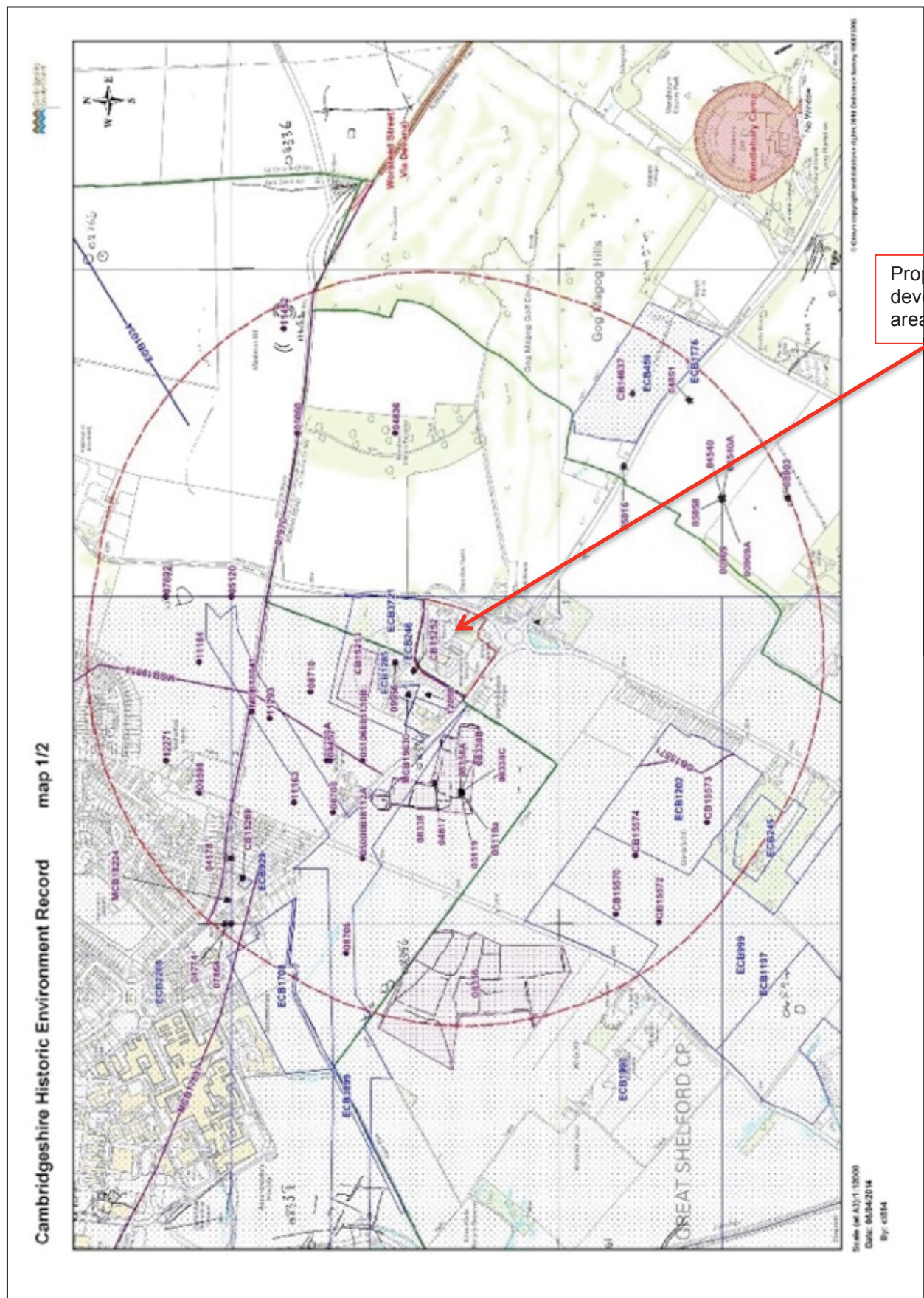


Figure 3: Cambridgeshire historic environment record map 1/2

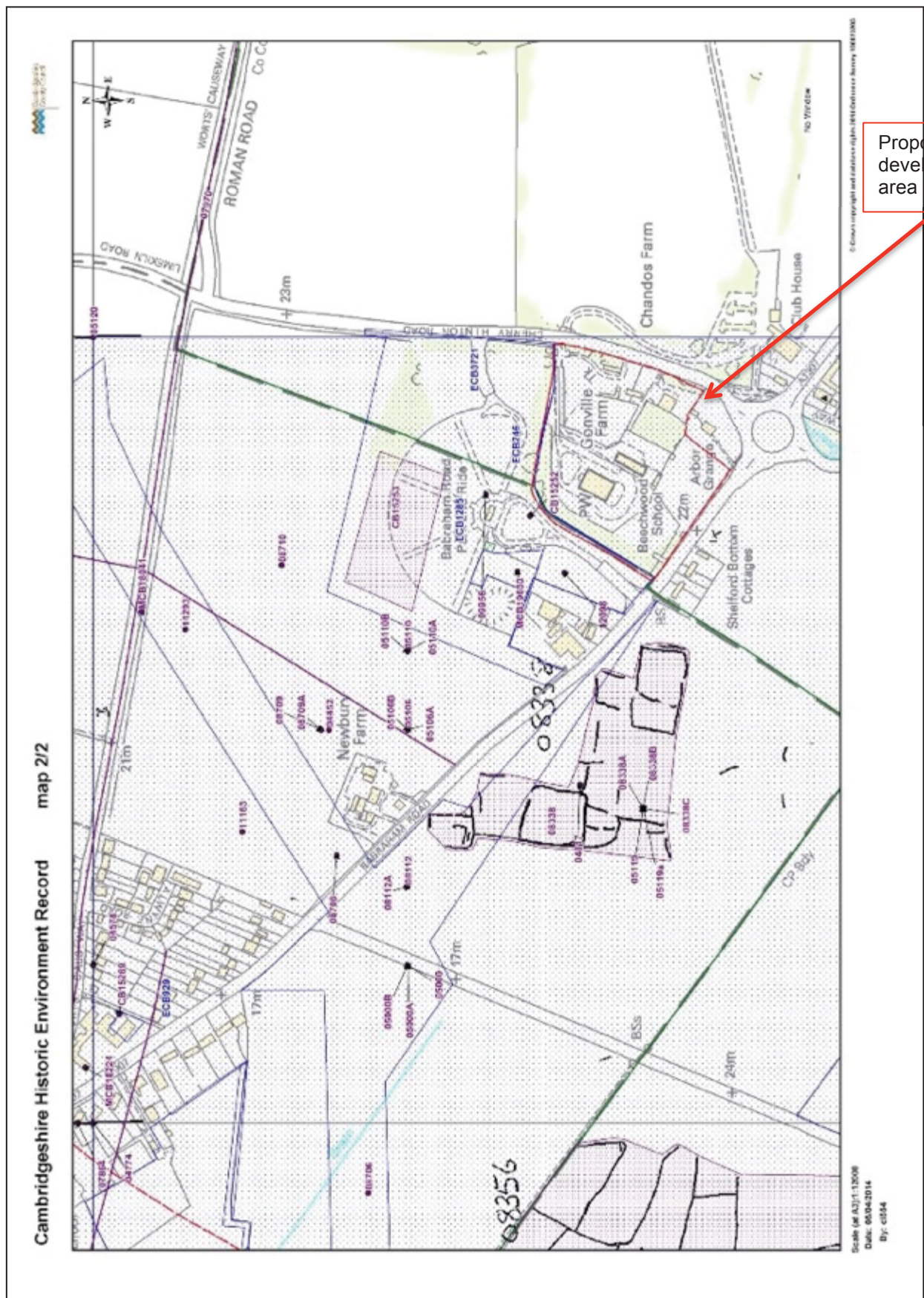


Figure 4: Cambridgeshire historic environment record map 2/2



Figure 5: 1847 Tithe map



Figure 6: OS map 1885-1886



Figure 7: OS map 1888-1891



Figure 8: OS map 1902-1903



Figure 9: OS map 1938 - 1952

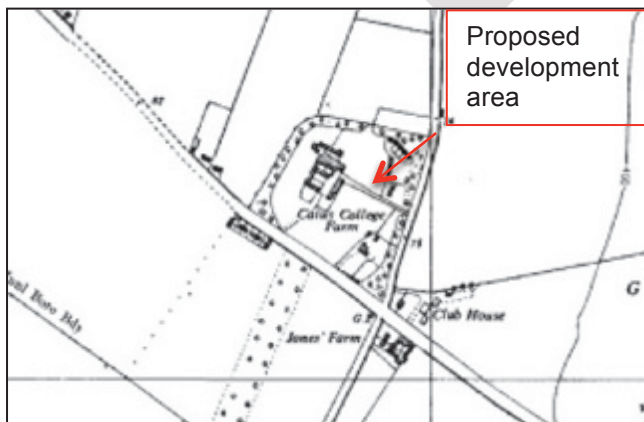


Figure 10: OS map 1960



Figure 11: OS map 1970

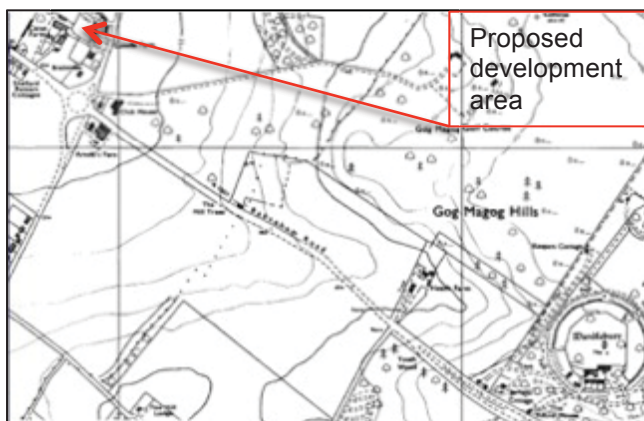


Figure 12: OS map 1985



Figure 13: OS map 1992-3

Appendix 2: Aerial photographs

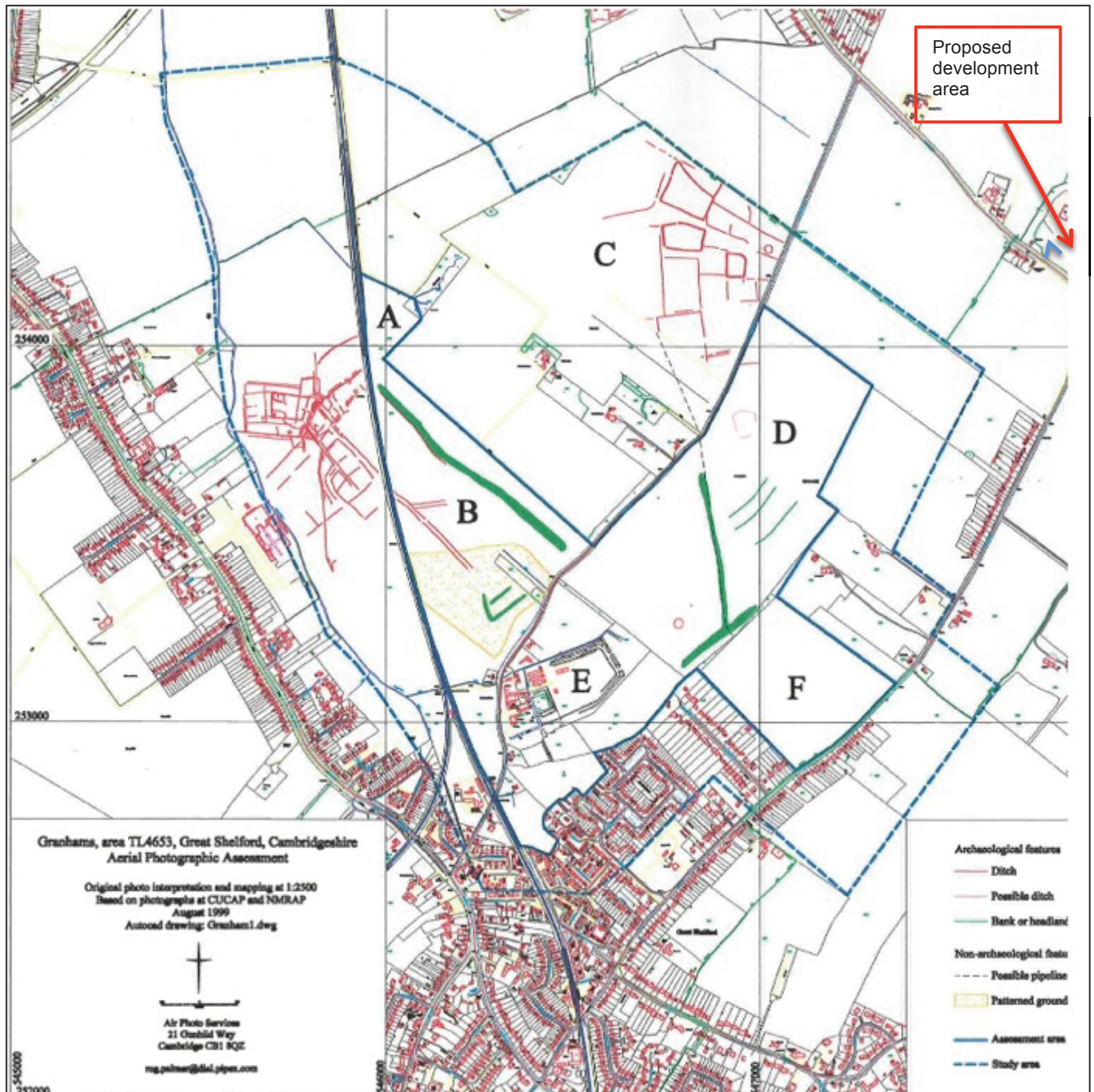


Figure 14: Aerial photograph assessment of Granhams area, Great Shelford, Cambridgeshire, Palmer, 1997/12

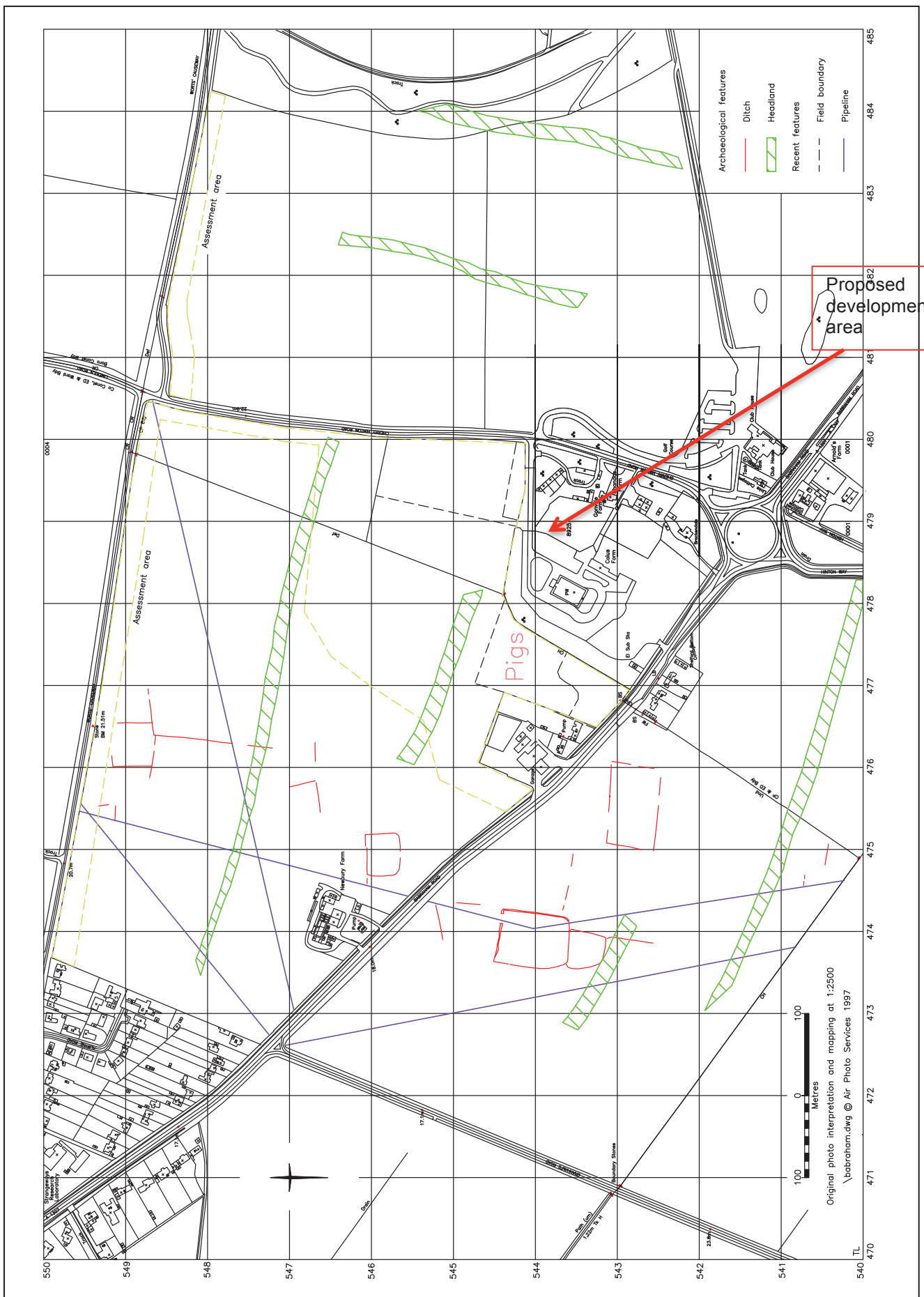


Figure 15: Aerial photograph assessment for Babraham Road park and ride, Great Shelford, Cambridgeshire, Palmer, 1997/138

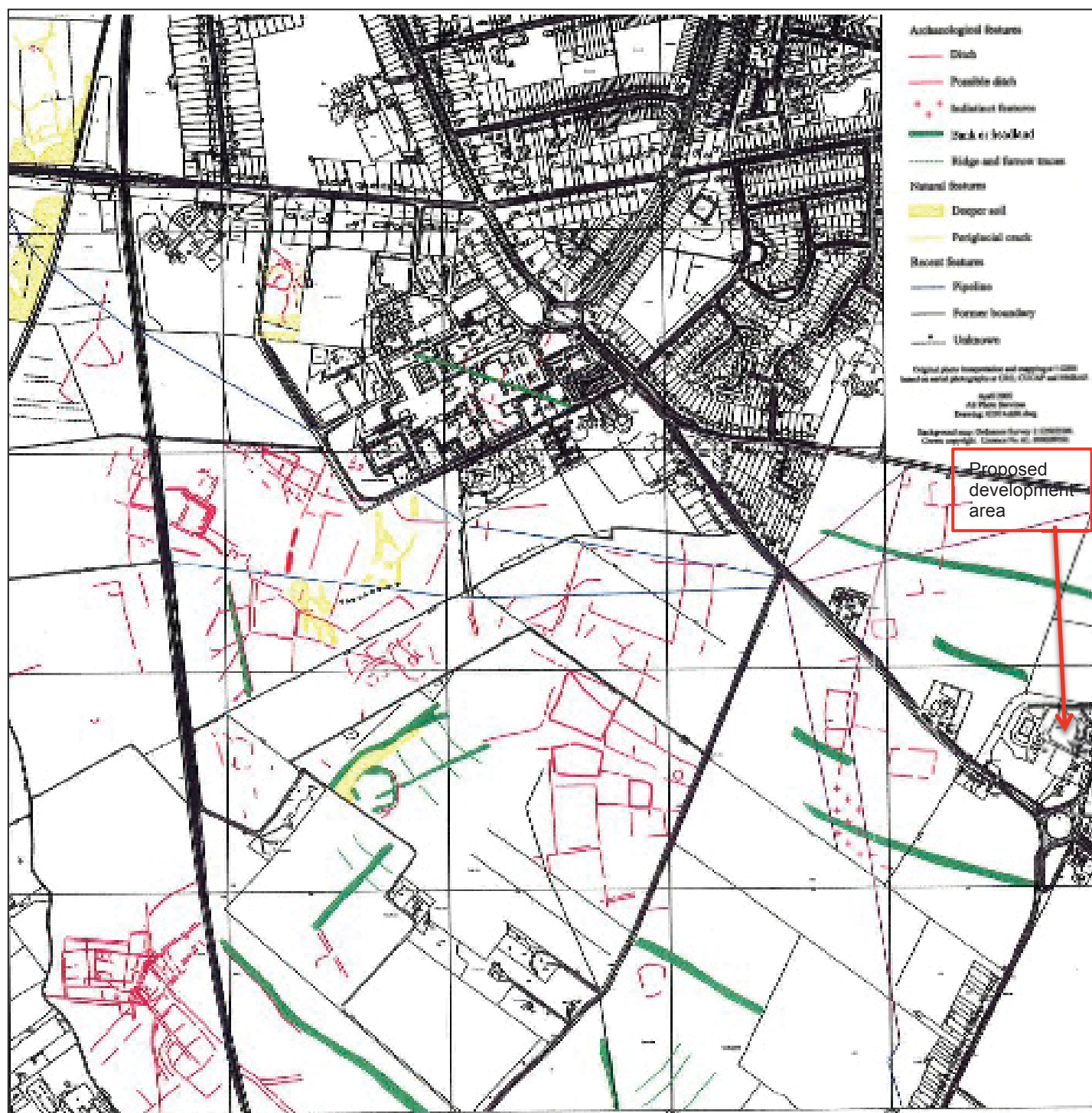


Figure 16: Aerial photographic assessment for Addenbrooke's Hospital, Palmer, 2002/07

Appendix 3: Proposed development area: site photographs



Figure 17: West facing view of entrance to PDA



Figure 18: North-west facing view of PDA with cottage and entrance road in the foreground



Figure 19: North west facing view from centre of PDA



Figure 20: South-east facing view of PDA with current buildings in the foreground

Appendix 4: Historic Environment Record Data

Table 7: Sites and monuments within a 1km radius

Prehistoric

CHER No	Period	Description	Grid Ref	Refs
00969A	Neolithic	3 flint scrapers and a polished flint counter, Stapleford	TL 483 535	
04452	Neolithic	Pit containing late Neolithic grooved ware. Ditch containing late Neolithic grooved ware Stapleford	TL 475 547	Collins 1945 Phillips 1947
04578	Late Prehistoric - 4000 BC to 42 AD	Prehistoric pottery, stone object. Baked clay	TL 472 550	CBA 1970
04817		A pit containing late Neolithic grooved ware was discovered during cutting of an anti-tank ditch. The pit was about 3ft across and 2ft deep and the major part had been removed before investigation. Finds included a quantity of flint flakes, mollusc shells, and a few pieces of bone as well as the grooved ware. The site is dated to about 1900 BC. Crop marks visible on CUCAP APs reveal a subrectangular enclosure with a subrectangular annexe to the S. The photograph also shws the wartime ditch traversing the E side of the larger enclosure.	TL 4743 5438	Frere 1943
04851	Prehistoric - 500000 BC to 42 AD Neolithic 4000 BC to 2201 BC -	Part of a Neolithic polished axe and a scatter of worked flints found	TL 486 536	Bradford 1978
05000	(Lower Palaeolithic to Late Neolithic - 500000 BC? to 2201 BC?)	Flint flakes, Cambridge	TL 472 546	
05016	Prehistoric - 500000 BC to 42 AD	Concentrated scatter of flints. Mostly waste flakes, some retouched, some taken from prepared cores. Stapleford, Cambridge	TL 484 538	
05058	4000 BC to 2201 BC	Neolithic flint flakes, Stapleford	TL 483 535	CAFG 1981
05106	Prehistoric - 500000 BC to 42 AD	3 flint flakes.	TL 475 546	CAU Rep No 33
05110	Lower Palaeolithic to Late Neolithic - 500000 BC? to FLINT 2201 BC?	7 flint flakes found during field walking	TL 476 546	CAFG 1981

05119a	Prehistoric - 500000 BC to 42 AD	The flints came mostly from the top of the filling and were thought to ante date the ditch having been worked in from the adjoining land surface.	TL 474 543	Collins, 1949
08338A	Prehistoric - 500000 BC to 42 AD	Fieldwalking produced 2 struck flints and 1 fire-cracked flint	TL 4740 5430	
08710	Prehistoric - 500000 BC to 42 AD	Found during the laying of a gas pipe line to the W of Cambridge, summer 1985:- 1 small worked flint 27mm by 11mm by 3,5mm, platform one end, other end broken in antiquity, parallel sided with 3 facets one side 1 the other, no cortex, complete patination except at recent damage.	TL 4771 5476	CAFG 1985
09956		Series of square ditch enclosures N of Caius College Farm. Sketched on 6in SMR map.	TL 478 545	Unpublished report: Hinman, M. 1998. CCC Report 147
CB14637	Prehistoric - 500000 BC to 42 AD	Fieldwalking revealed an indistinct scatter of flint flakes, together with a large amount of modern pottery. Similar distributions are reported to have been found in fields to the south.	TL 488 536	CAFG 1995
CB15252	Neolithic - 4000 BC? to 2201 BC?	During the evaluation a single tightly flexed inhumation was revealed. No datable evidence was recovered, although burial in the foetal position is known from the Neolithic through to the Iron Age. Elsewhere on the site a tightly flexed calf burial was found, suggesting some form of ritualistic prehistoric activity. 3. Open area excavation revealed further animal and human remains, adding weight to the ritualistic interpretation of the site. However C14 dating demonstrated the calf found during evaluation was 19th/20th century. A decapitated and partially articulated adult male skeleton was found in a pit, and the partial and mutilated remains of an infant were found in a burial adjacent to the adult.	TL 47772 54444	Hinman, M. 1997. Hinman, M. 1998. Hinman, M. 1997-1998.
CB15269	Neolithic - 4000 BC to 2201 BC	An evaluation was carried out in advance of laboratory extensions. Two parallel ditches of possible Roman date, aligned southeast- northwest were recorded, suggested as belonging to a rural field system. A single sherd of Roman pottery was recovered from the fill of one of the ditches. A single fragment of probable Neolithic pottery and two pieces of worked flint were also recovered.	TL 47138 54966	Whitaker, 2002 CAU Rep 487
CB15572	Late Prehistoric - 4000 BC to 42 AD	A second phase of archaeological evaluation was carried out over a 52 hectare site prior to the proposed development of a golf course and hotel. Trial trenching revealed a large prehistoric ditch located on the ridge of Clark's Hill, possibly part of a large enclosure or ploughed-out barrow or ring ditch.	TL 47004 53695	Whitaker, 2002 CAU Rep 514

Bronze age

CHER No	Period	Description	Grid Ref	Refs
08338		Enclosure & linear features, Gonville Farm. Cluster complex, rectilinear enclosure, linear features part cut by pipeline. Sub-rectangular enclosures identified as cropmarks on aerial photographs, of probable Bronze Age date. Cut by a WWII anti-tank ditch.	TL 473 544	CAU Rep 33 Aerial Photograph: CUCAP APs, 16/05/1961 ACZ 1 -2, 08/06/1961 ADE 75 - 77 81 - 84, 30/06/1961 ADM 76, 11/07/1961 ADR64 – 65 NMR APs, 19/06/1952 TL4754/3 - 5, 11/07/1976TL 4754/2/327, 328
CB15252	Early Bronze Age - 2500 BC to 1501 BC	During the evaluation a single flexed male inhumation and a flexed calf burial were revealed. The burials are suggested to represent some form of ritualistic activity. Further burials were found during open area excavation.	TL 47772 54444	Hinman, 1997-1998
CB15253	Early Bronze Age to Middle Bronze Age - 2500 BC to 1001 BC Late Neolithic to Early Bronze Age - 3000 BC to 1501 BC	Open area excavation followed to investigate the area of the ditches (Area 1). A 5m entranceway and no north-south return to the ditches were revealed, refuting the defensive interpretation for the function of the enclosure. A series of beamslots within the entrance indicate the presence of wooden structures, restricting access through the entranceway. A series of square-ended linear features were also identified. At least four distinct zones of activity were identified, interpreted as evidence of the compartmentalising of the landscape. A series of pits and pit clusters were identified, some artefactually sterile, others containing collections of worked flint and animal bone.	TL 4775 5461	Hinman 1997-1998
		Three phases of activity are evident at the site. Firstly a series of pits and shafts, containing animal bones, fragments of Grooved ware and flint artefacts, together with the burials dating to the late Neolithic/early Bronze Age. Secondly a pair of steep-sided ditches, either side of a 5m entrance within which beam slots indicate the presence of a wooden structure. Three fills of the ditch were recorded, the latest dated to 1755-1415 cal BC. Finally the delineation of the whole area with a series of square ended linear features in the late Iron Age.	TL 4775 5461	Hinman 1997-1998
CB15570	Late Bronze Age to Early Iron Age - 1000 BC to 401 BC	Late Bronze Age/Early Iron Age postholes, Granhams Farm A second phase of archaeological evaluation was carried out over a 52 hectare site prior to the proposed development of a golf course and hotel. Trial trenching revealed a cluster of eight postholes, of which four might be part of a four post structure, including two containing Late Bronze Age/ Early Iron Age pottery.	TL 47028 53826	Whitaker, 2002 CAU Rep 514

Iron age

CHER No	Period	Description	Grid Ref	Refs
04578		Iron Age pottery, Wort's Causeway, Cambridge	TL 472 550	
05119	Iron Age - 800 BC to 42 AD	The investigation of an anti-tank ditch in 1945, crossing Hills Road and Worts Causeway, showed traces of a series of filled-in pits and ditches. The infilling of a ditch 16ft wide at the top and 6ft 6in deep was examined. Some 30 fragments of hand-made pottery were recovered, three sherds having the characteristic flattened rim of Iron Age 'A' ware. The finds included a bronze razor, animal bones and teeth, and pot-boilers. Typology and date of razor discussed - conclusion reached that it probably agrees with the Iron Age 'A' pottery.	TL 474 543	Collins 1949 Fell et al 1949 Browne, 1974
CB15253	Iron Age - 800 BC to 42 AD	Babraham Road Park and Ride. the delineation of the whole area with a series of square ended linear features in the late Iron Age.	TL 4775 5461	Hinman, 1997-1998
CB15253	Bronze Age-Early Iron Age	Evaluation of the site revealed a pair of large steeply sided ditches. The size and form of the ditches suggests they served in part a defensive function. Butchered short horned cattle bones were recovered from the secondary ditch fills, and the flint work and pottery suggests a Bronze Age-Early Iron Age date. It is suggested the ditches formed part of a fortified enclosure, utilising a natural rise on the valley floor, and this forms part of a series of enclosures and field systems visible from aerial photography.	TL 4775 5461	Hinman, 1997-1998
CB15574	Late Iron Age to 5th century Roman - 100 BC to 409	A second phase of archaeological evaluation was carried out over a 52 hectare site prior to the proposed development of a golf course and hotel. Trial trenching revealed a isolated shallow pit feature, containing LIA/Romano-British pottery and some charred wheat and barley remains.	TL 47208 53766	Whitaker, 2002 CAU Rep 514

Roman

CHER No	MonUID	Period	Description	Grid Ref	Refs
05060		Roman - 43 AD to 409 AD	Roman finds, Wort's Causeway, Cambridge Roman pot, quern, bronze object etc. Found in fields adjacent to Wort's Causeway by surface collection - date of collection unknown	TL 485 548.	Walker, 1910
05120		Roman - 43 AD to 409	Bronze locket with flat covers, incised with a cruciform, dotted line design,	TL 48 55	
07864		Roman - 43 AD? to 409 AD?	Decapitated skeleton found during house extension. It is probably Roman because the find spot lies near the Roman road , 2 pieces of colour coated ware found and other decapitated bodies found at Roman cemetery at Camden Morden (this should probably be Guilden Morden). Near Worts Causeway, Cambridge	TL 4700 5502	Croft 1983
07970	1003263	Roman - 43 AD to 409 AD	Worsted Street (Via Devana) Roman road. A trench was cut across the road on 18/02/1921 to determine whether the road is aligned on the partially leveled vellum of a pre - Roman dyke or not. The point selected for section was 5yds SE of BM 191,8 on OS 6in Sheet Cambs XLVIIIE. The trench was cut from the S edge of the crest down to the undisturbed chalk, thence southward and outward for 36ft. There was no ditch on the S side. The chalk rock was reached at a depth of 1 - 1 1/2 ft. Trial holes at three points on the same alignment showed similar results. The ramp was mainly constructed of earth; had it been material from a fosse it must have been composed of chalk rubble. The evidence is therefore conclusive that at this point the road is not on the line of a pre-Ro dyke. Several interesting features illustrating Roman methods of road making were noted during the digging of the section. The vertical section on the S side of the crest is typical. It showed from top to bottom: (a) 1 ft 2in of solid gravel, unmixed with surface soil; (b) 6in of chalk rammed hard; (c) 1ft 4in of earth with an occasional chalk nodule; (d) 4in of chalk and earth intimately mixed and rammed, and (e) chalk rock: The road bearing surface was thus 3ft 4in above the undisturbed chalk. The definite limits of the floor layer (d) (was 3?) suggested we had data for determining the exact width of the Roman lay out. A second section was cut on 20 - 21/02/1921 at a point 130yds SE of BM 156 on OS 6in Sheet Cambs XLVIIIE. The construction was identical with the former section; here the width of the floor layer was 36ft.	TL 549 512	Walker, 1910 Fox, 1923 Wait, 1992. – CAU Report No 44 Bailey, 2004, CAU Report
08706			Found during laying of a gas pipe line to the W of Cambridge, 1985:- 1 small potsherd, fine, light red	TL 4691 5465	
08709		Roman - 43 AD to 409 AD	Found during the laying of a gas pipe line to the W of Cambridge, summer 1985:- 1 sherd probably from an open bowl, hard dense fabric, light grey, internal rilling with horizontal buff painted lines.	TL 4750 5471	CAFG 1985
CB1526 9		Roman - 43 AD? to 409 AD?	An evaluation was carried out in advance of laboratory extensions. Two parallel ditches of possible Roman date, aligned southeast-northwest were recorded, suggested as belonging to a rural field system. A single sherd of Roman pottery was recovered from the fill of one of the ditches. A single fragment of probable Neolithic pottery and two pieces of worked flint were also recovered.	TL 47138 54966	Whitaker, 2002 CAU Rep 487
MCB178 97			Excavations at the Hutchison site recovered the line of the E-W Roman Road running across Addenbrooke's. The road was exposed for 95m across the site, flanked by a pair of ditches 13m apart, although no trace of metalling was present. The route generally matches its location as postulated by the RCHM(E), although appears to run further north-over-west. Projected eastwards, the road would appear to run 200m south of the putative Wort's Causeway line. Projected westwards, the road would cross the Cam between Grantchester and Newnham. The excavations also provided negative evidence for the postulated northward length of the Via Devana. Field survey in 1993 recorded a 'metalled' bank, lying to the S of Wort's Causeway, which probably represents the continuation eastwards of the Roman road.		Evans, 2004 CAU Rep 609

Medieval

CHER No	Period	Description	Grid Ref	Refs
0069	Medieval to 19 th century	Finds found in Arnolds Field Stapleford include 1 lead weight, 2 lead seals, 6 lead musket balls, 7 lead tokens, 3 jettons, 3 Cambridge tokens, 1 Charles I penny, 3 bronze rings, 1 bronze thimble, 1 buckle, and bronze buttons and assorted copper/bronze coins	TL 483 535	CAFG 1985
04540A	Medieval to 19 th century	Found during fieldwalking: 4 hammered silver coins, 1 bronze Charles I penny, 2 lead seals, 4 bronze rings, 3 bronze jettons, 7 lead tokens, 3 Cambridge tokens	TL 483 535	
04774	Medieval to 1539	'Red Cross' (site of), Cambridge	TL 470 550	Map: 1806. Inclosure map
04836	Medieval to 1539	Lynchets earthworks in Beechwood, Great Shelford	TL 485 545	Taylor 1973
05000A	Medieval - 1066 AD to 1539 AD	Medieval pottery, Cambridge	TL 472 546	
05106A	Medieval - 1066 AD to 1539 AD	2 Medieval unglazed sherds	TL 475 546	CAFG 1981
	Medieval - 1066 AD to 1539 AD	Found during field walking 1 unglazed sherd.	TL 476 546	CAFG 1981
08112	Medieval - 1066 AD to 1539 AD	potsherds, unglazed - 1 (rim), glaze	TL 473 546	CAFG 1981
08338B	Medieval - 1066 AD? to 1539 AD?	Some low SE - NW ridges could just be seen - possible ridge and furrow.	TL 474 543	Malim, 1989
08903		Banks, probably 'furlong boundaries' - part of Medieval field system.	TL 483 533	Miller, 1988
MCB19630	Medieval to 19th century - 1066 AD to 1900 AD	Four evaluation trenches revealed one isolated posthole dating to the medieval period. Several other pits and ditches were also uncovered but did not contain any finds.	TL 4770 5446	Clover 2012 OAE Rep 1352

Post Medieval

CHER No	Period	Description	Grid Ref	Refs
05000B	Post Medieval - 1540 AD to 1900 AD	5 pieces clay pipe, bone knife, iron sheet, copper alloy button, iron knife blade, 9 unglazed sherds, 15 glazed sherds	TL 472 546	CAFG 1981
05106B	Post Medieval - 1540 AD to 1900 AD	31 Post Medieval sherds - 4 unglazed, 3 salt glazed stoneware, 1 salt glazed, 2 recent black glazed, 5 recent blue and white glazed, 1 blue and grey stoneware, 16 recent. 2 clay pipe stems, C17.	TL 475 546	CAFG 1981
05110B	Post Medieval - 1540 AD to 1900 AD	Clay pipe	TL 476 546	CAFG 1981
08112A	Post Medieval - 1540 AD to 1900 AD	Clay pipe stem – 2 (C17 or C18)	TL 473 546	CAFG 1981
08338C	Post Medieval - 1540 AD to 1900 AD	Fieldwalking produced Post Medieval pottery and oyster shel	TL 474 543	Malim, 1989
08708	Post Medieval - 1540 AD to 1900 AD	Found during the laying of a gas pipe line to the W of Cambridge, summer 1985:- 1 sherd from the rim of a bowl, fabric very dense, hard, off white, external horizontal rilling decoration, not glazed but surface smoothed externally.	TL 4734 5469	CAFG, 1985
12098	Post Medieval - 1540 AD to 1900 AD	Caius College Farm. ? garden, tree belts. Lawns and trees mainly	TL 477 544	Way, 1998
12271	Post Medieval - 1540 AD to 1900 AD	Nether Hall - possible gardens? Trees and lawns - near farm.	TL 475 552	Way, 1998
CB15573	Post Medieval - 1540 AD to 1900 AD	A second phase of archaeological evaluation was carried out over a 52 hectare site prior to the proposed development of a golf course and hotel. Trial trenching revealed evidence of pre-Enclosure boundary ditches, seen also as cropmarks, which pre-date the Enclosure Act of 1835.	TL 47157 53545	Whitaker, 2002, CAU Rep 514
MCB18041	18th century - 1701 AD to 1800 AD	Extant milestone on verge. Legend unreadable. Benchmark on front face	TL 4765 5493	The Milestone Society 2000-2004. Field Record Sheet.

Modern

CHER No	Period	Description	Grid Ref	Refs
11163	Modern - 1901 AD to 2050 AD	Cropmark of water main, 24in pipe, laid in the 1950s.	TL 4737 5481	
CB15571	World War II - 1939 AD to 1945 AD	A second phase of archaeological evaluation was carried out over a 52 hectare site prior to the proposed development of a golf course and hotel. Trial trenching revealed sections of a WWII anti-tank defensive ditch, part of the Cambridge GHQ defensive line excavated in 1940	TL 47459 53565	Whitaker, 2002, CAU rep 514
MCB18224	20th century - 1901 AD to 2000 AD	Former research hospital for rheumatoid arthritis built in 1911 to designs by H W Maguire. An operating theatre was added in 1914 and the building became a hospital for wounded officers. It was a research laboratory c1918, enlarged 1933-7.	TL 4707 5501	
MCB19858	20th century - 1901 AD to 2000 AD	. An aerial photograph of the GHQ line indicated. The trench was rapidly constructed from June 1940, being completed around the southern Cambridge by the end of August 1940 when it was photographed by a Luftwaffe reconnaissance sortie.	TL 4774 5517	Evans, 2008

CHER No	Description	Grid Ref	Refs
07892	Cropmarks.	TL 480 552	CAU Report No 33 CUCAP APs, 13/07/19 57 VS 27, 28
08356	Rectilinear enclosure ? part of field system ??	TL 467 542	CUCAP APs, 08/06/19 61 ADE 78- 80, 11/06/19 61 ADJ 76, 11/06/19 69 AXR 44 - 47, 02/07/19 82 RC8 EO38 - 40 77 - 79
08709A	Found during the laying of a gas pipe line to the W of Cambridge, summer 1985:- 1 small sherd hard grey fabric with fine grits, one surface slightly soot blackened 1 small sherd rather coarse dark grey fabric with fine grits 1 small sherd, half grey half red / brown, red / brown surface has raised ridge and incised line decoration 1 small sherd, buff with red / buff outer layer	TL 4750 5471	
09598	.? Enclosure	TL 474 551	
11293	Investigation of land to the S and NE of Newbury Farm, Babraham Road and E of New Addenbrookes Hospital revealed ditch systems which were not visible on APs. No dating evidence was recovered.	TL 476 548	Kemp, 1993, CCC Rep, 085
11452	Two curved double ditched marks with E one an almost complete oval. W mark a mirror image of the E side of E enclosure. Sketch plotted on to 1:10,000 overlay.	TL 4882 5484	OS APs, 92-379 062

Table 8: Historic Environment Data – Fieldwork List

CHER No	Period	Description	Grid Ref	Refs
ECB0245		Evaluation at Whitefield, Hinton Way, Great Shelford . An evaluation found no pre-C19th archaeology, and all features appear to relate to landscaping associated with the construction of Whitefield and Uplands.	TL 47273 53390	Kenney, 1997
ECB0246	Prehistoric	Evaluation of land adjacent to Babraham Road, Great Shelford . An evaluation revealed the entrance of an enclosure with a defensive element, a tightly flexed human burial of possible Neolithic date, and a tightly flexed calf burial of unknown but presumed prehistoric date. A small undiagnostic range of flint and pottery was recovered.	TL 47784 54494	Hinman, 1998
ECB0459		Fieldwalking revealed a scatter of flint flakes and a large amount of 19th & 20th C pottery.	TL 48682 53731	CAFG 2001
ECB0761	Roman and Medieval	Archaeological assessment, Cambridge Southern Relief Road 1993. Evaluation of trenches positioned based on crop marks revealed no occupation areas. A concentration of Roman pottery was found at Site 3, but these appeared to be residual in Roman and Medieval drainage & boundary ditches found. The area producing these finds is suggested to be related to the cropmarks seen on the lower slopes of White Hill . Most features identified appear to relate to the maintenance or development of agricultural systems, especially drainage, during the Roman & Medieval periods.	TL 45624 54522	Kemp, 1993
ECB0929	Roman	Evaluation at Strangeways Laboratory . Two parallel ditches of probable Roman date were found.	TL 47123 54957	Whitaker, 2002
ECB0999	Prehistoric/Iron Age	An evaluation was carried out over a 52 hectare site, in advance of a proposed golf course and hotel development. Transect field walking led to the definition of five lithic scatter sites. Evaluation trenching found early Bronze Age usage of natural hollows in two areas. A Middle/Late Bronze Age round house was revealed with associated pits and additional post holes. A possible Late Bronze Age/Early Iron Age building was also revealed. A large pre-historic ditch was exposed. A single, (isolated) Late Iron Age/Romano-British feature was exposed. 17th century pits and enclosure ditches pre-dating the Enclosure act of 1835. An anti-tank trench dug in 1940, which is part of the GHQ line, was also located.	TL 46902 53449	Whitaker. 2002
ECB1034	Iron Age, Bronze Age, WWII	Watching brief along Thetford aqueduct , 1991-2 An archaeological watching brief was carried out along the course of the Cherry Hinton to Euston water pipeline. The pipeline was positioned adjacent to three sites of national importance: An Iron Age settlement at Caudle Corner Farm, Fulbourn (SAM Camb 95); War Ditches, Cherry Hinton (SMR4693), and Howe Hill (SAM Camb 54), a Bronze Age tumulus. The pipeline also crossed the Anglo-Saxon Devil's Dyke. Apart from the Excavations at Devil's Dyke few other archaeologically sensitive deposits were recorded. The only features identified were two Post-Medieval gullies and an inhumation of uncertain date.	TL 55763 60027	Bray, 1993
ECB1197	Neolithic - Medieval	Evaluation was undertaken as part of an environmental impact statement, in advance of the proposed construction of a golf course. Ninety eight trial trenches were excavated, revealing the presence of archaeological remains of all periods.	TL 46858 53435	Hinman, 1999
ECB1201		Geophysical survey at Arnold Land, Great Shelford , 2000. Magnetic scanning and details survey failed to identify any clearly defined anomalies indicative of buried remains. Two possible ditch features were observed, but these were poorly defined.	TL 47382 53635	GSB Prospecti on, 2000
ECB1202		Fieldwalking survey at Arnold Land . The site was walked along 20m transects, with finds collected 1m from either side of each transect line, representing a 10% sample of the site. The majority of finds were post medieval, but a single sherd of medieval pottery and two worked flints were also found. No discrete scatters were found to suggest the presence of significant archaeological remains.	TL 47382 53635	GSB Prospecti on 2000
ECB1285	Prehistoric	Open area excavation was undertaken to ensure preservation by record. Given the relative paucity of artefactual material obtained during the evaluation, an intensive bulk sampling strategy was selected in an attempt to resolve the problems of absolute dating by	TL 47784 54494	Hinman, 1997- 1998

		maximising artefactual retrieval. The results of the excavation do not appear to indicate domestic settlement in this area. Distinct areas of activity can be detected across the site as a whole, and the types of activity appear to be distinctly non-functional suggesting an area of symbolic or ritual activity.		
ECB1708	Late Bronze Age – Early Iron Age	Evaluation adjacent to the Bell Language School . 34 evaluation trenches were machine excavated over a 7.3 ha area of land adjacent to the bell Language School. The evaluation revealed features relating to a Late Bronze Age-Early Iron Age open settlement, together with a fence line which set the orientation for Iron Age boundaries following its course, and a series of Romano-British coaxial field ditches. Later Medieval and Post-Medieval activity comprised agricultural features, including a series of remnant furrows.	TL 46815 54850	Brudenell, 2004
ECB1776		CAFG fieldwalking survey, Stapleford , 1978	TL 486 536	
ECB1990		Aerial photograph assessment, Granhams Farm , Great Shelford, 1999	TL 46500 53500	Palmer, 1999
ECB2208		Aerial photographic assessment was undertaken to identify and map archaeological and natural features in the vicinity of Addenbrooke's , and to chart the development of the hospital. The earliest activity in the area visible on aerial photographs is two ring ditches, which may indicate Bronze Age burial sites. Later features include a spread of ditches features, including several enclosures and areas of probably field systems. The features tend to follow a similar alignment, although there is no obvious cohesive system to them, and they may represent a series of separate systems or a spread of activity over time. Headlands and slight traces of ridge and furrow were also recorded.	TL 46750 54750	Palmer, 2002
ECB3721	Medieval	Four evaluation trenches revealed one isolated posthole dating to the medieval period	TL 4770 5447	Clover, 2012

Table 9: Listed Buildings within a 1 km radius

NHLE ID	Legacy ID	DesigU ID	Name	Date	Grade	Grid ref
1331068	51473		Dovecote at Granhams Farm./ Former dovecote converted to dwelling house. On a former moated site.	Early 19 th century	II	TL4635 4 53107
1331933	133193 3	DCB 7658	Old milestone 650 yards from Red Cross	1709	II	TL 47650 54939
		DCB 5966	Thatched cottage	1800 to 1832	II	TL 47925 54070

Table 10: Scheduled Ancient Monuments within a 1km radius

NHLE ID	Legacy ID	DesigUI D	Name	Date	Grade	Grid ref
1011717	24422	DCB19 5	Causewayed enclosure and bowl barrow at Little Trees Hill situated on a prominent chalk knoll to the south of the junction between the Babraham Road (A1307) and Haverhill Road, some 500m to the south west of the Iron Age hillfort known as Wandlebury Camp	Neolithic and Bronze Age		TL 4888 5296
1009395	24406	DCB18 9	Wandlebury Camp: a multivallate hillfort, earlier univallate hillfort, Iron Age cemetery, and 17th century formal garden remains	Iron Age and 17 th Century		TL 4940 5342
1006904	Cambs 12	DCB52	Wormwood Hill tumulus			TL 4970 5289
1003263	Cambs 26	DCB21 5	Worstead Street (Via Devana) near Cambridge	Roman		TL 5252 5230

Table 11: Registered Parks and Gardens

PGDP ID	Name	Date	Grid ref
5625	Middlefield, Stapleford. It seems likely that Lutyens indicated the layout of radiating allees on the garden front. The main vista has double herbaceous borders backed by hedges. The whole garden has been extensively restored and elaborated during the 1990s.	Early 20 th century	TL 480 529
5627	<p>Wandlebury, Stapleford. In the mid-18th century Lord Godolphin landscaped the grounds within a high wall establishing a circular drive amongst newly planted trees, with a kitchen garden and orchard to the west. By 1800, after some years of neglect, the estate was being cared for again. More trees were planted, and a large forcing machine worked by horses raised water from the well, 210 feet deep. This well supplied water for domestic use and also fed a fish pond near the centre of the Ring.</p> <p>The Godolphins, now Duke and Duchess of Leeds, left Wandlebury in 1893 and the sale particulars record the grounds with shady lawns, box hedges, rose arches, a sculptured stone pump and a grand old yew hedge. There were rose gardens with an old mulberry tree in the centre, and a sundial on a stone pedestal. Two entrance lodges, Keeper's Lodge, Gardener's Cottage, kennels, stabling and a fitted fruit store are also listed.</p> <p>Only the circular entrance-lodges and stable block remain and within the archway is the grave of the Duke's horse, The Godolphin Arab, which died in 1753, aged 29. Traces of the garden layout can be seen from the terrace lawn on which stands the sundial with its engraving of a dolphin and a ducal crown.</p>	Mid 18 th century	TL 494 534
5621	Great Shelford. Nine Wells House gardens held the renowned iris collection of Sir Michael Foster.	Mid 19 th century	TL 466538
5622	The channel can still be traced, from Long Road to Trumpington Road. Until 1856 the channel terminated in Market Place at an hexagonal stone fountain called 'Hobson's conduit'. This structure now stands at the junction of Lensfield Road and Trumpington Road in Cambridge. At Nine Wells, an obelisk is situated on a high point in the south-east corner of the wooded area which together with the land surrounding the chalk springs is scheduled as a Site of Scientific Interest. The obelisk is enclosed by iron railings.	Early 17 th century	TL 462542

Appendix 5: Planning Policies

National Legislation and Policy

National Planning Policy Framework, March 2012

The heritage section of the NPPF incorporates – and streamlines - the existing policies contained in PPS5. It does not alter those policies or create new ones. One policy - HE5 (Monitoring Indicators) - from PPS5 has not been incorporated as a specific policy within the Framework. All other PPS5 policies have been condensed and are included within the heritage section or incorporated elsewhere within the NPPF. Transitional arrangements are provided within the NPPF to ensure that existing plans and submissions are not unduly delayed and reflect previous planning policy and guidelines, even where earlier guidance comes into potential conflict with the NPPF.

While the NPPF is to be read as a whole in the context of archaeology the NPPF states at Section 17 that the Government's objective is 'to conserve heritage assets in a manner appropriate to their significance, so that they can be enjoyed for their contribution to the quality of life of this and future generations'.

To achieve this paragraph 126 states:

Local planning authorities should set out in their Local Plan a positive strategy for the conservation and enjoyment of the historic environment, including heritage assets most at risk through neglect, decay or other threats. In doing so, they should recognise that heritage assets are an irreplaceable resource and conserve them in a manner appropriate to their significance. In developing this strategy, local planning authorities should take into account:

- the desirability of sustaining and enhancing the significance of heritage assets and putting them to viable uses consistent with their conservation;
- the wider social, cultural, economic and environmental benefits that conservation of the historic environment can bring;
- the desirability of new development making a positive contribution to local character and distinctiveness; and
- opportunities to draw on the contribution.

Paragraph 128 states that in determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic environment record should have been consulted and the heritage assets assessed using appropriate expertise where necessary. Where an application site includes or has the potential to include heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation.

In weighing applications that affect directly or indirectly non designated heritage assets, a balanced judgement will be required having regard to the presumption in favour of sustainable development, the scale of any harm or loss and the significance of the heritage asset.

Paragraph 141 notes states that Local planning authorities should make information about the significance of the historic environment gathered as part of plan-making or development management publicly accessible. They should also require developers to record and advance understanding of the significance of any heritage assets to be lost (wholly or in part) in a manner proportionate to their importance and the impact, and to make this evidence (and any archive generated) publicly accessible.

However, the ability to record, evidence of our past should not be a factor in deciding whether such loss should be permitted”.

Local Policy

South Cambridgeshire Core Strategy, Adopted January 2007

OBJECTIVES

ST/j To ensure that the district's built and natural heritage is protected and that new development protects and enhances cherished townscape assets of local urban design, cultural, and conservation importance, and character of the landscape.

South Cambridgeshire Development Control Policies DPD, Adopted July 2007

HISTORIC LANDSCAPES

POLICY CH/1 Historic Landscapes

Planning permission will not be granted for development, which would adversely affect or lead to the loss of important areas and features of the historic landscape whether or not they are statutorily protected.

8.1 The landscape is the product of human action on the natural landscape over many thousands of years. This is most obvious in the parklands, waterways, trackways, hedges, field patterns, woodlands and wetlands of the District. Some of these are individual features (such as Wandlebury Hill Fort, Wholeway, Car Dyke, Fleam Dyke and the Roman Road) while others cover wide tracts of countryside (such as Wimpole Hall Park).

8.2 Historic landscapes are particularly valuable in South Cambridgeshire where they add interest and variety to an intensively farmed countryside. Some historic landscapes and features are protected by other policies or legislation, for instance if they are a Site of Special Scientific Interest (SSSI) or a Scheduled Ancient Monument. However, the complexity of the historic landscape means that there are many sites and features, which do not have such a designation but nevertheless they should be retained because of their contribution to the wider landscape and our ability to read our heritage. The Cambridgeshire Historic Landscape Database, developed by the County Council, provides a valuable tool in defining the evolution of landscape and in identifying historic landscapes. Regard will be had to the database in determining whether proposals would have an adverse impact on historic landscapes.

ARCHAEOLOGY POLICY CH/2 Archaeological Sites

Archaeological sites will be protected in accordance with national policy.

8.4 The Cambridgeshire Historic Environment Record, held by Cambridgeshire County Council, gives information on archaeological sites and monuments. However, given the wealth of the past in South Cambridgeshire, this record can never be complete and new areas will be added as new information comes forward. Prospective developers should contact the County Council's Archaeological Officer for information to establish whether there is potential archaeological interest and establish the need for investigation and evaluation at an early stage. Where it is deemed that there is archaeological potential, the developer will be required to commission an archaeological evaluation to define the character and condition of any remains. This will include the character and depth of remains together with the impact of development upon the remains together with any mitigation measures to avoid unnecessary damage.