

Report 2923a



nps archaeology

Updated Archaeological Desk-Based Assessment of the Former Burdett Nurseries, Eastrea Road, Whittlesey, Cambridgeshire

Prepared for
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January 2012



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<i>Issue 1</i>		

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BAU 2923a

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Location:	Former Burdett Nurseries, Eastrea Road, Whittlesey, Cambridgeshire
District:	Fenland
Planning ref:	FYR110482F
Grid Ref.:	TL 2832 9693
OASIS Ref.:	118552
Client:	ICIS Consulting Limited

Summary

This desk-based assessment considers the potential archaeological implications of development of the site of the former Burdett Nurseries at Eastrea Road, Whittlesey in Cambridgeshire.

The site has already undergone several phases of archaeological interpretation and intervention. A desk-based assessment and aerial photograph assessment in 2001 identified possible archaeological features and subsequent evaluation in 2003 confirmed their archaeological origin. Archaeological evidence in the form of Iron Age and Roman features appears to be present including enclosures and medieval ridge and furrow has also been identified in the area.

Evaluation in 2011 also recorded features and evidence of activity in similar periods as the 2001 evaluation.

1.0 INTRODUCTION

This desk-based assessment considers the archaeological potential of a proposed development on the site of the former Burdett Nurseries, Eastrea Road, Whittlesey, Cambridgeshire (TL 2832 9693) (Fig. 1) and updates the evidence presented in an earlier desk-based assessment report (Hall 2001). The site occupies a position to the east of the small town of Whittlesey, five miles east of Peterborough, within the Fenland district of Cambridgeshire.

This assessment considers the archaeological potential of the area and the likely nature, significance and condition of any archaeological remains within the site itself. The potential impacts of the proposed development on those remains are also considered.

The assessment was conducted in accordance with a brief issued by Cambridgeshire County Council Historic Environment Team (Planning Application No. FYR110482F) and a Project Design issued by NPS Archaeology (Ref. NAU/BAU2923/DW) and followed the guidelines set out in *Planning Policy Statement 5: Planning for the Historic Environment* (Department for Communities and Local Government 2010). The results will inform future planning decisions made by the Local Planning Authority.

This report was commissioned and funded by ICIS Consulting Limited.

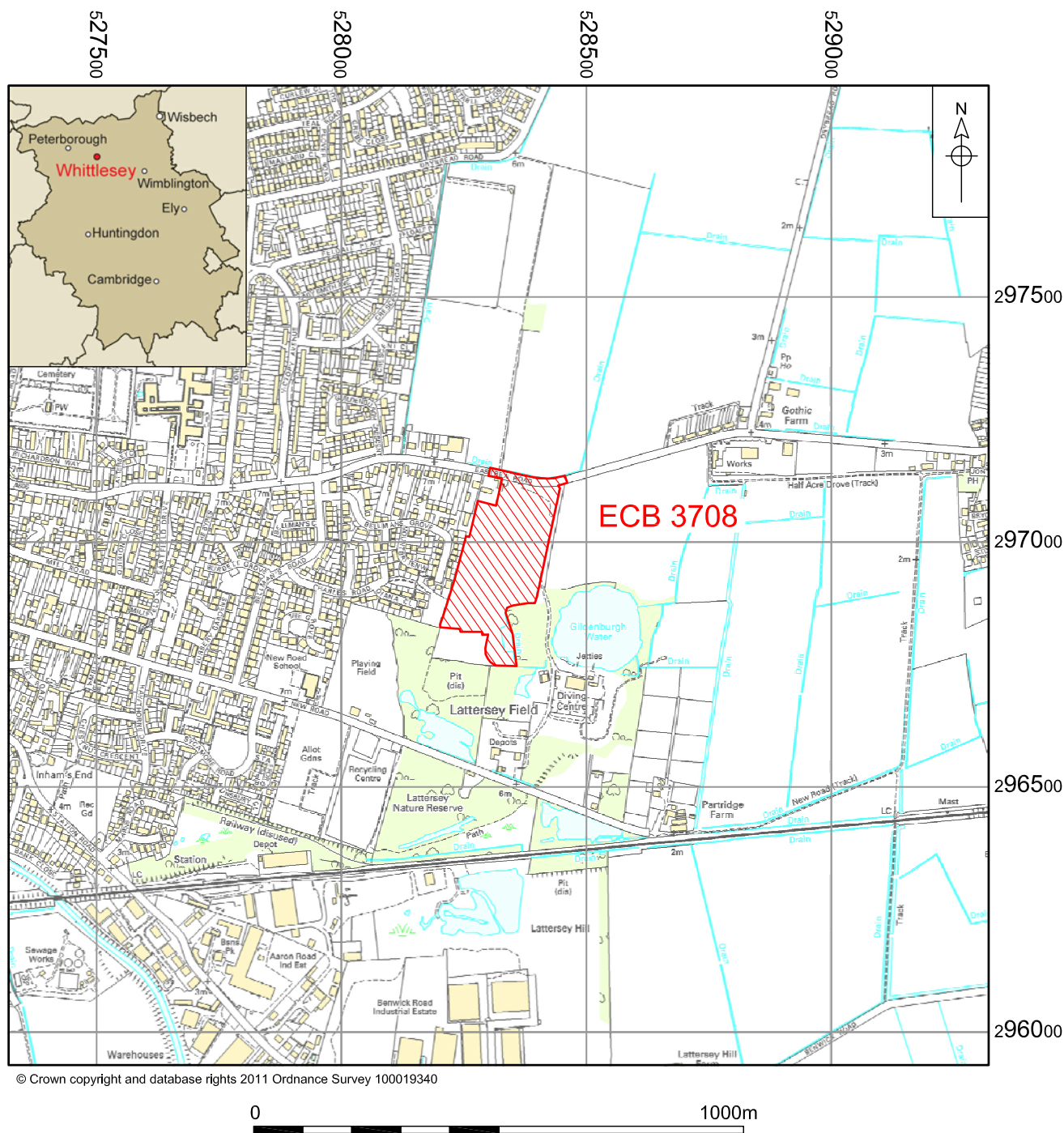


Figure 1. Site location. Scale 1:12,500

1.1 Project Background and Commission

ICIS Consulting Limited is currently proposing to build a new foodstore and associated car parking, on behalf of their client, on the site of the former Burdett Nurseries, Eastrea Road, Whittlesey.

Previous work has been undertaken on the site, including a previous Desk Based Assessment (Hall 2001) and an evaluation by trial trenching (Williams 2004). NPS Archaeology has also undertaken trial trenching in the area in 2011 (Ames forthcoming).

1.2 The regulatory and advisory framework for Cultural Heritage

The treatment of archaeological remains and the Historic Environment is regulated by *Planning Policy Statement 5: Planning for the Historic Environment* (Department for Communities and Local Government 2010).

PPS 5 provides advice on the proper treatment of archaeological remains and discoveries, through the development plan and development control systems, including the weight to be given to them in planning decisions and planning conditions. It also explains the importance of archaeology and outlines the process to be undertaken to adequately assess and protect any remains.

PPS5 (policy HE6.1) outlines the requirements for planning applications, and states that:

'Local planning authorities should require an applicant to provide a description of the significance of the heritage assets affected and the contribution of their setting to that significance...As a minimum the relevant historic environment record should have been assessed using appropriate expertise where necessary...local planning authorities should require developers to submit an appropriate desk-based assessment and, where desk-based research is insufficient to properly assess the interest, a field evaluation'

PPS5 goes on to state (policy HE6.2):

'This information together with an assessment of the impact of the proposal should be set out in the application (within the design and access statement when this is required)...It should detail the sources that have been considered and the expertise that has been consulted'

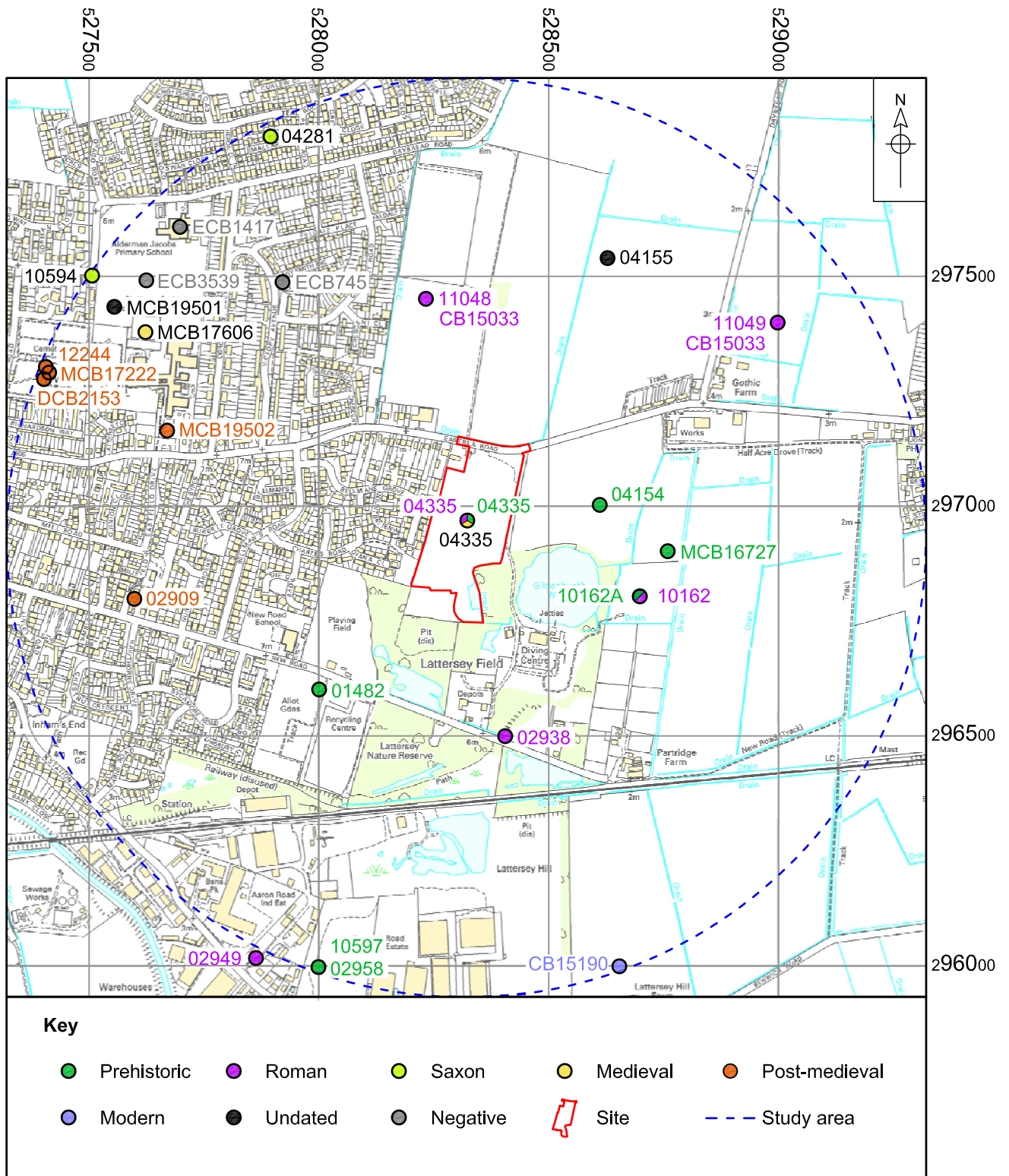
Finally, *PPS5* states that (policy HE6.3):

'Local planning authorities should not validate applications where the extent of the impact of the proposal on the significance of heritage assets affected cannot be adequately understood from the application and supporting documents'.

1.3 Aims of the assessment and assessment methodology

This assessment has a range of aims, but key among them is to provide information to support proposals for the redevelopment of the site. It will seek to provide that information in a way that allows an appropriate evaluation of the likely archaeological implications of the proposals and, where appropriate, to devise a programme of further evaluation and mitigation to manage and protect the heritage assets during the subsequent development.

Other aims of this assessment are a mix of general and more specific issues, such as identifying, if possible, areas of high, medium and low archaeological potential, identifying targets for further archaeological investigation and providing an



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Figure 2. CHER records within the search area. Scale 1:12,500

overview of the historical development of the site in its local context and its broader position within the wider area.

In order to achieve the assessment aims a wide range of source material was examined. The material included unpublished reports on previous archaeological work, maps, published material and information held in the Cambridgeshire Historic Environment Record (CHER).

1.4 Abbreviations used in the text

Previously known archaeological sites are identified by their Cambridgeshire Historic Environment Record (CHER) reference number and located, where appropriate, by their National Grid Reference (NGR).

Aerial photographs are referred to by their unique reference number.

References to previous archaeological reports and published works will be given in brackets throughout the text, with full bibliographic details listed in the sources.

2.0 SITE LOCATION, GEOLOGY AND TOPOGRAPHY

The area considered by this assessment is located to the south of Eastrea Road in the village of Whittlesey (Fig. 1). The site is bounded to the west by housing development, with playing fields to the south and the former Gildenburgh Brick Works and associated quarry pit to the east (now known as Gildenburgh Water).

The site is located in the Fenland district of Cambridgeshire an area which has been subject to changing water levels over many thousands of years. The site is between Whittlesey Dike to the south and the River Nene to the north, with other dikes (dykes) to the east and west. The March to Peterborough railway line runs to the south of the site, with Whittlesey Station just to the south-west of the development area.

The bedrock geology of the development area is Oxford Clay with a superficial geology of March gravels of the Whittlesey Island¹.

3.0 SOURCES USED IN THE ASSESSMENT

3.1 CHER records

The primary source for archaeological evidence in Cambridgeshire is the Cambridgeshire Historic Environment Record (CHER), which details archaeological discoveries and sites of historical interest. In order to characterise the likely archaeological potential of the site data was collated from all CHER records that fell within a 1km radius of the route (Fig. 2).

3.2 Cartographic Sources

Historic and modern maps were examined in order to establish the nature of more recent land-use within the proposed development area.

¹ <http://www.bgs.ac.uk/opengeoscience/>

Most maps were consulted online at: <http://www.old-maps.co.uk/maps.html>. Not all of the maps considered are reproduced within this report. The maps examined in detail are:

- Ordnance Survey Old Series map 1830
- Ordnance Survey, 1st edition 1886
- OS, 2nd edition 1903
- OS, 3rd edition 1924
- Later OS mapping

3.3 Aerial Photographs

A survey of the aerial photography for the area of the site has already been undertaken (Palmer in Hall 2001). The survey was tasked with assessing the aerial photography of an area of 6.2ha centred on the proposed development site, and to map any features seen during the survey.

3.4 Previous Archaeological Work

A number of interventions have taken place on the proposed development site, over a period or around ten years. In 2001 a desk-based assessment was undertaken of the area (Hall 2001), and this report is an updating of the previous one. As part of the DBA an aerial photograph assessment was undertaken. An evaluation by trial trenching was undertaken in 2003 by Cambridge Archaeological Unit (Williams 2004) on areas which were not under the then upstanding nursery buildings. At the end of 2011 NPS Archaeology also undertook evaluation by trial trenching on the site, on the cleared area which was previously under the nursery buildings (Ames 2012).

4.0 ARCHAEOLOGICAL AND HISTORICAL EVIDENCE

4.1 Archaeological Evidence

(Figure 2)

4.1.1 Evidence for prehistoric activity

Several sites of prehistoric date have been recorded within 1km of the proposed development site, some are tentative, such as the cropmark sites, which are technically undatable, but are presumed to be prehistoric from the form they take.

The development site lies over an area of recorded cropmarks (04335) which includes two possible enclosures and other linear features. Evaluation in 2003 revealed that the enclosures relate to the Iron Age period (c.1st-century BC to c.1st-century AD). (Later activity was also recorded on the site and was of Roman and medieval date.) Further cropmarks are recorded in the neighbouring field to the east (04154), and include linear features and a ring ditch. These cropmarks are undated, as they have not been investigated, although given the nature of the excavated cropmarks within the development area it seems likely that these are of Iron Age or possibly Roman date also.

An apparently complete skeleton was found in a gravel pit in 1944 (01482), although now only a skull survives in six pieces. The skeleton is thought to be Bronze Age, and of an adult aged around 30 years. Also found in a gravel pit was a Palaeolithic flint hand-axe (02958), of Middle of possibly even Early Acheulian type. Several further flints appear to be recorded from this site, although they are only listed as 'Palaeolithic flints' (10597).

Four flints were found in the field to the east of Gildenburgh Water during the Fenland Survey (10162A). Also to the east of Gildenburgh Water a ground stone axe of Bronze Age date was recovered (MCB16727).

CHER No.	Description
01482	Human remains – found in a gravel pit in 1944, possibly Bronze Age
02958	Palaeolithic flint implements found in gravel pit
04154	Linear feature and ring ditch visible as cropmarks
04335	Cropmarks – linear features, some geological, possible enclosures; evaluation revealed Iron Age and Roman activity, and some medieval ridge and furrow
10162a	Flint implements
10597	Palaeolithic flints found in gravel quarry
MCB16727	Bronze Age stone axe found near Gildenburgh Water

Table 1 Prehistoric CHER records within the search area

4.1.2 Evidence for Roman activity

The main Roman feature of the area is the Fen Causeway (main number CB15033), a Roman road which links Norfolk to the Midlands. Two segments are recognised within the study area, to the north and north-east of the development site, consisting of cropmarks (11048) and (11049). Within the development site itself Roman activity has been identified during evaluation in 2003 (04335). The features uncovered included an enclosure and a midden area, dating to the 2nd- to 4th-century AD.

The various finds ploughed up on the Benwick Road, to the very south of the search area, have led to the theory that this is also a Roman settlement site (02949). Just to the east of Gildenburgh Water another possible Roman settlement site is recorded (10162), although this is only known from debris recovered from the area, including bones, pottery, tile and quernstones.

CHER No.	Description
02938	Late Roman coins found in Lattersey Field
02949	Possible Roman settlement site
04335	Cropmarks – linear features, some geological, possible enclosures; evaluation revealed Iron Age and Roman activity, and some medieval ridge and furrow
10162	Roman occupation debris

CHER No.	Description
11048	Fen Causeway
11049	Fen Causeway
CB15033	The Fen Causeway

Table 2. Roman CHER records within the search area

Just to the south of the site, in Lattersey Field, some late Roman coins were recovered (02938).

4.1.3 Evidence for Saxon activity

Only two sites within the search area are attributed to the Saxon period, and include an inhumation cemetery recorded in 1828 (10594). The site is located to the very north-western edge of the search area, and recorded seven skeletons orientated east-west, each with a pot by the skull.

A possible Saxon settlement site is also recorded in this vicinity (04281), consisting of ring ditches probably representing house sites, and part of an enclosure. These features were recorded from aerial photographs, and have since been destroyed by housing development.

CHER No.	Description
04281	Sunken huts, settlement site
10594	Inhumation cemetery

Table 3. Saxon CHER records within the search area

4.1.4 Evidence for medieval activity

Two sites dating to the medieval period were recorded in the CHER, including one which lies within the development area, a multi-period cropmark site, which has also undergone archaeological evaluation (04335). The evaluation found evidence for medieval ridge and furrow agriculture, probably of 15th- to 16th-century date.

Further medieval ridge and furrow was uncovered during excavations at the Sir Harry Smith Community College (MCB17606).

CHER No.	Description
04335	Cropmarks – linear features, some geological, possible enclosures; evaluation revealed Iron Age and Roman activity, and some medieval ridge and furrow
MCB17606	Medieval furrows, Sir Harry Smith Community College

Table 4. Medieval CHER records within the search area

4.1.5 Evidence for post-medieval activity

Most of the post-medieval evidence relates to the cemetery and the last resting place of a famous person who was originally from Whittlesey, Sir Harry Smith. Smith was a soldier and veteran of the Napoleonic Wars born in 1787 in Whittlesey. He held several posts of importance in both South Africa and India,

and married Juana, ‘Lady Smith’, whom Ladysmith in South Africa is named after. Harry Smith himself gave his name to the less well known Harrismith also in South Africa. Smith died in 1860 and was buried in Whittlesey, where the cemetery (12244) contains a chapel and mortuary (MCB17222) which was restored in Smith’s will and is dedicated to him. His tomb of granite and limestone with decorative cast iron railings (DCB2153) is located here. His wife was also buried here in 1872.

CHER No.	Description
02909	Disused windmill
12244	Cemetery
DCB2153	Tomb of Sir Harry Smith NE of cemetery chapel, chest tomb, c.1860
MCB17222	Cemetery Chapel and mortuary of c.1860
MCB19502	19th-century workhouse, Sir Harry Smith Community College

Table 5. Post-medieval CHER records within the search area

Further post-medieval evidence was recorded during an archaeological evaluation at the Sir Harry Smith Community College, which recorded 19th-century building foundations associated with a workhouse known to have stood on the site (MCB19502). The workhouse was founded sometime between 1834 and 1878, although bricks were found during the evaluation which dated to the late 18th to early 19th-century, suggesting an earlier build for the workhouse.

A disused windmill is also recorded within the area (02909), lying to the west of the site.

4.1.6 Modern Evidence

An important piece of 20th-century history runs through the search area - part of the Second World War defences - the GHQ line (CB15190). This line of defensive structures is present throughout many parts of Britain, and this stretch runs between the River Welland and Floods Ferry.

CHER No.	Description
CB15190	River Welland to Floods Ferry GHQ Line

Table 6. Modern CHER records within the search area

4.1.7 Undated Evidence

Two sites described in the CHER are undated.

One is a cropmark site (04155) which lies to the north of the development area, and consists of various linear elements, many of which are likely to be modern and some perhaps of geological origin.

The other records the results of trial trench evaluation at Sir Harry Smith Community College (MCB19501) which revealed undated pits and ditches.

CHER No.	Description
04155	Undated cropmarks, some probably modern, some possibly geology

CHER No.	Description
MCB19501	Undated pits, ditches and trackway, Sir Harry Smith Community College

Table 7. Undated CHER records within the search area

4.1.8 Negative Evidence

Three archaeological interventions in the area have not recovered any archaeological evidence at all. They comprise an evaluation at 58-60 Victory Avenue (ECB745), another evaluation at Alderman Jacobs Primary School (ECB1417) and test pitting at Sir Harry Smith Community College.

CHER No.	Description
ECB745	Evaluation at 58-60 Victory Avenue – no archaeological evidence
ECB1417	Evaluation at Alderman Jacobs Primary School – no archaeological evidence
ECB3539	Test pitting at Sir Harry Smith Community College failed to identify any archaeological features

Table 8. Negative CHER records within the search area

4.2 Historical Evidence

Whittlesey started life as an island; hence the end of the name, which derives from the Old English for island, 'ea', probably combined with a personal name, giving Whittle's Island. Whittlesea and Eastrea were two islands in the fens lying close to each other, with Eastrea to the east of Whittlesea. The Fen Causeway probably island hopped its way across the Fens during the Roman period, utilising both of these islands on its east-west course and at Thorney it turns north along the land bridge.

Whittlesey was shared by the two Saxon monasteries of Thorney and Ely (Hall 1987, 55), with the Ely manor lying principally to the west of the island, and was an intrusion into land mainly owned by Thorney Abbey. Originally the island was administered as two parishes, there being two churches, St Andrew's and St Mary's; the parishes were united in 1850. According to Hall both manors of Whittlesey were prosperous; Whittlesey had a population of 1,500 in 1563 and was the second largest town in the Isle of Ely from the mid 16th century into the 17th century. The population then began to decline and fell behind those of Wisbech and March in the 19th century.

Brick making became a major industry in the late 19th century, with the processes leaving their mark on the town - many quarries and tall chimneys remain.

4.3 Cartographic Evidence

The earliest map consulted (not reproduced here) was the 1830 Old Series Ordnance Survey map, which depicts the development area situated in a large open area, named as 'Whittlesea Field'. The next Ordnance Survey map, in 1886 (Fig. 3) shows the late 19th-century origin for much of the field boundaries in the area, with a small pumping station present in the north-west corner of the development site, adjacent to the Eastrea Road).

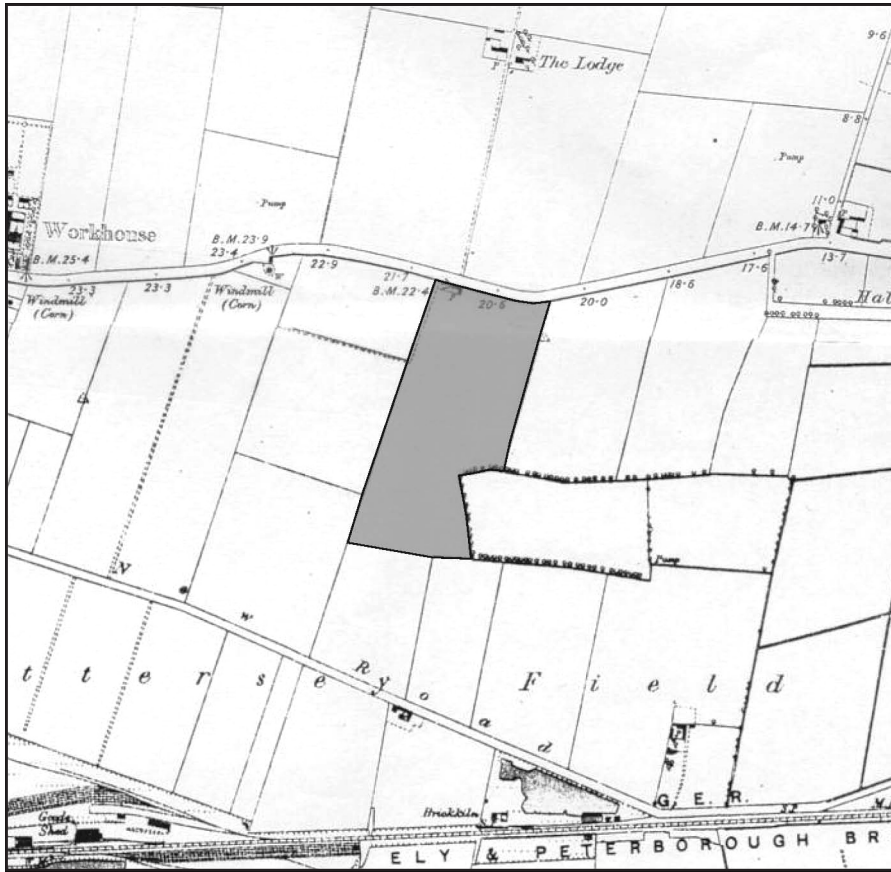


Figure 3. Ordnance Survey map of 1886 (from figure 3 Hall, 2001)

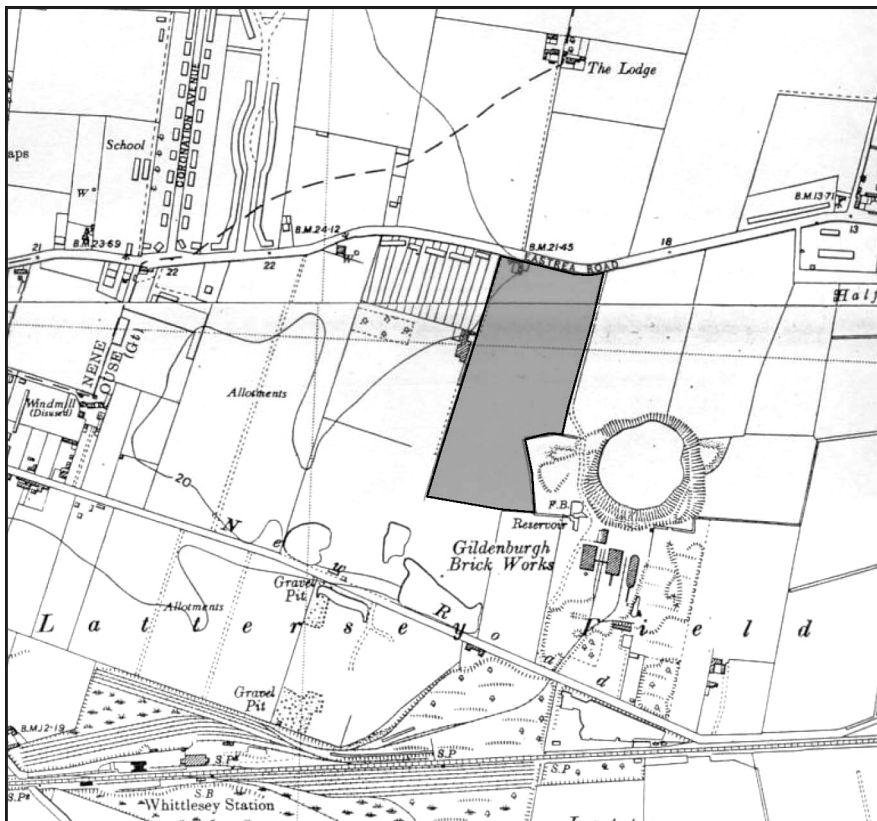


Figure 4. Ordnance Survey map of 1924 (from figure 4 Hall, 2001)

The 1901 OS map (also not reproduced here) shows the Gildenburgh Brick Works as one or two buildings in the neighbouring field to the development area. It is not until 1924 (Fig. 4) that the large area now known as Gildenburgh Water was depicted, in its original form as a quarry for the brickworks, which has clearly expanded and enlarged in the twenty years since its first depiction in 1901. The area in which this and the development area lie is clearly marked as 'Lattersey Field'. The brickworks went out of use in the later 1970s, and the quarry pit has been re-used as a diving centre. The nurseries, including large greenhouses appear in the early 1980s.

4.4 Aerial Photographs

An assessment of the aerial photographs has been carried out by Cambridge University Collection of Aerial Photographs (CUCAP) (Palmer in Hall 2001), and recorded a number of possible archaeological features. A number of ditched features, possibly forming part of a rectangular enclosure, were recorded, along with possible pits and ridge and furrow evidence. For more detailed study of the photographs, please see the complete report.

5.0 DISCUSSION

5.1 Site Potential

There is evidence of the presence of all periods in the area, however previous excavation works within the site itself have helped to place the cropmarks recorded in the area into their specific time period. The most likely archaeological eras to be encountered within the site are Iron Age, Roman and medieval. The Iron Age and Roman periods are likely to be seen in settlement activity, such as enclosures and possibly buildings, and the medieval in agricultural activity, which is what the area appears to have been utilised as at this time.

5.1.1 Valuing the Archaeological Resource

The categories used to assign a value to the archaeological resource are based on those outlined in DMRB (2007):

Value	Criteria
Very High	World Heritage Sites (including nominated sites). Assets of acknowledged international importance. Assets that can contribute significantly to acknowledged international research objectives.
High	Scheduled Monuments (including proposed sites). Undesignated assets of schedulable quality and importance. Assets that can contribute significantly to acknowledged national research objectives. Listed Buildings (including proposed buildings).
Medium	Designated or undesignated assets that contribute to regional research objectives.
Low	Designated and undesignated assets of local importance. Assets compromised by poor preservation and/or poor survival of contextual associations. Assets of limited value, but with potential to contribute to local research objectives.
Negligible	Assets with very little or no surviving archaeological interest.

Table 9. Criteria for assigning a value to the archaeological resource

5.1.2 Likely condition of archaeological remains

It is important to consider the condition and stability of any archaeological remains that may be present within the development area.

The site lies within land which has been previously used as a nursery, and includes areas of hard standing, which may have involved some previous disturbance of sub-surface deposits. Prior to the construction of the nursery buildings it is likely that the area was under arable cultivation, and as such may have suffered plough damage.

5.1.3 Development Impacts

The extent of any likely impacts is set out in the table below. It is worth noting that the impacts can be either negative or beneficial and direct or indirect. The criteria for the impacts are taken from DMRB (2007).

Impact	Description
Major	Change to most or all key archaeological materials, such that the resource is totally altered. Comprehensive changes to setting
Moderate	Changes to many key archaeological materials, such that the resource is clearly modified. Considerable changes to setting that affect the character of the asset
Minor	Changes to key archaeological materials, such that the asset is slightly altered. Slight changes to setting
Negligible	Very minor changes to archaeological materials, or setting
No Change	No change

Table 10. Criteria for assessing the magnitude of the impacts of the proposed regeneration scheme

Any below ground disturbance associated with development of the site will have a direct affect on archaeological remains in the area, and although, inevitably, the extent of the archaeological resource is currently unknown, it is likely that the development would have a negligible impact on remains (should they be present).

It is considered that any adverse impact that may be caused by the development on sub-surface remains could be mitigated by a programme of archaeological work approved by Cambridgeshire County Council (CCC).

5.1.4 Development Effects

An assessment of the significance of the effects of the development on the archaeological resource can be reached by combining the assessments of value (Table 9) and development impact (Table 10) using a matrix similar to that in DMRB (2007, 5/6) (Table 11, below).

The value of the archaeological resource is on balance considered to be **low** and the impact to be **moderate** resulting in a **slight** effect.

Value	Very High	Neutral	Slight	Moderate/ Large	Large/ Very Large	Very Large
	High	Neutral	Slight	Moderate/ Slight	Moderate/ Large	Large/ Very Large
	Medium	Neutral	Neutral/ Slight	Slight	Moderate	Moderate/ Large
	Low	Neutral	Neutral/ Slight	Neutral/ Slight	Slight	Slight/ Moderate

			Slight	Slight		Moderate
	Negligible	Neutral	Neutral	Neutral/ Slight	Neutral/ Slight	Slight
		No change	Negligible	Minor	Moderate	Major
Magnitude of Impact						

Table 11. Significance of Effects Matrix

6.0 CONCLUSIONS

This site in Whittlesey has undergone several phases of archaeological intervention and interpretation. The desk-based assessment and aerial photograph assessment in 2001 identified possible archaeological features, and a subsequent evaluation confirmed their archaeological origin; evidence of Iron Age and Roman features, including enclosures and other activity were present. Medieval ridge and furrow agriculture was also identified in the area. The most recent activity at the site is further trial trench evaluation, which also recorded similar periods and features as the previous evaluation.

The site lies on the eastern edge of Whittlesea Island, one of several 'islands' in the Fens, which were the property of either Thorney or Ely monastic enclaves. The area was probably an island for some time before this with the Roman Fen Causeway also crossing from island to island through the Fen wilderness, making them more accessible to the outside world. Prehistoric activity is also well known in the area, with some important recent discoveries of Bronze Age dug-out boats in the parish (outside the study area).

Acknowledgements

NPS Archaeology would like to thank Cambridgeshire Historic Environment Record for providing the CHER information presented within this report.

The figures and report were produced by David Dobson and the report was edited by Jayne Bown.

Sources

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Hall, D.	1987	<i>The Fenland Project, Number 2: Fenland Landscapes and Settlement between Peterborough and March.</i> East Anglian Archaeology No. 35
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Online sources:

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Geology: http://www.bgs.ac.uk/opengeoscience/	Accessed 09.01.12

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OASIS ID: norfolka1-118552

Project details

Project name	Burdett Nurseries
Short description of the project	This desk-based assessment considers the potential archaeological implications of development of the site of the former Burdett Nurseries at Eastrea Road, Whittlesey in Cambridgeshire. The site has already undergone several phases of archaeological interpretation and intervention. A desk-based assessment and aerial photograph assessment in 2001 identified possible archaeological features and subsequent evaluation in 2003 confirmed their archaeological origin. Archaeological evidence in the form of Iron Age and Roman features appears to be present including enclosures and medieval ridge and furrow has also been identified in the area. Evaluation in 2011 also recorded features and evidence of activity in similar periods as the 2001 evaluation.
Project dates	Start: 01-12-2011 End: 31-01-2012
Previous/future work	Yes / Not known
Any associated project reference codes	04435 - Sitecode
Type of project	Desk based assessment
Site status	None
Current Land use	Cultivated Land 3 - Operations to a depth more than 0.25m
Monument type	NONE None
Significant Finds	NONE None
Development type	Rural commercial
Prompt	Direction from Local Planning Authority - PPS

Project location

Country	England
Site location	CAMBRIDGESHIRE FENLAND WHITTLESEY Former Burdett Nurseries, Eastrea Road
Study area	6.20 Hectares
Site coordinates	TL 2832 9693 52.5546865182 -0.107068607787 52 33 16 N 000 06 25 W Point

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Type of project	Desk based assessment
Site status	None
Current Land use	Cultivated Land 3 - Operations to a depth more than 0.25m
Monument type	NONE None
Significant Finds	NONE None
Development type	Rural commercial
Prompt	Direction from Local Planning Authority - PPS

Project location

Country	England
Site location	CAMBRIDGESHIRE FENLAND WHITTLESEY Former Burdett Nurseries, Eastrea Road
Study area	6.20 Hectares
Site coordinates	TL 2832 9693 52.5546865182 -0.107068607787 52 33 16 N 000 06 25 W Point

Appendix 2: Archaeological Specification

BRIEF FOR ARCHAEOLOGICAL PRE-DETERMINATION EVALUATION
Historic Environment Team

Site:	Former Nursery Site, Eastrea Road, Whittlesey
Planning Application:	FYR110482F
Company:	ICIS Consulting
Location:	NGR TL 2830 9690

This design brief is only valid for six months after the date of issue. After this period the Historic Environment Team (HET) should be contacted. Any specifications resulting from this brief will only be considered for the same period. Please note that this document is written for archaeological project managers to facilitate the production of an archaeological specification of work; the term project manager is used to denote the archaeological project manager only.

The project manager is strongly advised to visit the site before completing their specification, as there may be implications for accurately costing the project. The project manager must consult the Cambridgeshire Historic Environment Record (CHER) as part of the evaluation. Any response to this brief should follow IfA Standard and Guidance for Archaeological Field Evaluations, 2008.

NO FIELDWORK MAY COMMENCE UNTIL WRITTEN APPROVAL OF A SPECIFICATION HAS BEEN ISSUED BY THE HISTORIC ENVIRONMENT TEAM

1.0 Site Description

- 1.1 This site is located at the eastern edge of the former fen island of Whittlesey, Cambridgeshire. Situated on March Gravels, the site rests at an average of c. 6.0m aOD.
- 1.2 The site rests within an area of extensive archaeology. Known areas of Bronze Age, Iron Age and Roman settlement (HER No.s MCB15033, MCB12042, MCB1897 and MCB12045 for example) extend within the proposal area, and the Fen Causeway (an important early Roman road) is located some 200m to the site's north. Partial evaluation of the proposal area occurred in 2004, covering available areas of the site whilst the glasshouses of a former garden nursery were still standing (see site plan below). This preliminary evaluation revealed significant Iron Age and Romano-British settlement and use of the area, although the extent, full character, nature, date and condition of the newly found archaeological evidence remain unknown.

2.0 The nature of the development and archaeological requirements

- 2.1 The proposed development is for the construction of a superstore, car parking, access roads and landscaping and a balancing pond.
- 2.2 Due to the high archaeological potential of the site HET has requested that the applicant provide information concerning the potential impact of the proposal on archaeological remains. In order to provide this information the completion of the archaeological evaluation of the proposal area is necessary due to the constraints of the original 2004 evaluation. This design brief sets out the requirements for the adequate archaeological evaluation of the site.
- 2.3 The evaluation should include a suitable level of documentary research, including consultation with CHER, to set the results in their geographical, topographical, archaeological and historical context.

- 2.4 This brief deals solely with the remaining area to be developed in this current application bounds that was not covered by the original 2004 evaluation (see diagram at the end of this document for the 2004 evaluation trench locations). The evaluation should comprise:

Phase 1: Desk-top assessment: This research should consist of the following:

1. A reassessment of aerial photographic evidence for the application area and adjacent areas and, where relevant, a replotting of appropriate archaeological and geomorphological information by a suitably qualified specialist at a scale of 1:2500 (**note: this survey has already been conducted**).
2. Collation and critical assessment of any relevant information held in the county CHER:
 - to identify scheduled, listed or other important sites (to include scheduled ancient monuments, listed buildings, listed or important parks and gardens, battlefields *etc*);
 - to assess the potential of *known* sites.
3. Assessment of the potential of historic documentation where appropriate, including that held, for example, in the County Record Office, Diocesan Offices or University Library. Map regression should be undertaken to identify the origins of a reinforced concrete pad that occurs in the western part of the proposal area that seems to be from a separate use of the site to that of the nursery.
4. Collation and assessment of all cartographic information relevant to the area:
 - to identify historic landuse – settlement *vs* agrarian or industrial landscapes;
 - to examine the siting of old boundaries and trackways;
 - to identify any early buildings.
5. Assessment of available geotechnical data (e.g. bore holes, test pits contamination studies, site investigation reports): relevant logs must be included as appendices:
 - to assess the condition, nature and status of buried deposits (Deposit Model);
 - to identify local geological and hydrological conditions.
6. Assessment of the topography and landuse of the area through maps and site visits:
 - to assess the archaeological potential of areas not identified through the HER.
7. Site visit, to determine:
 - Any constraints to archaeological site survival;
 - Any constraints for conducting fieldwork (for example: areas of contaminated land; wildlife issues (including protected wildlife habitats), TPOs, buried services, buried ordnance);
8. Devise and conduct a programme of fieldwalking and metal detection* (*please contact this office for details of any local groups) to enable artefact populations of the field surface to be modelled. Analysed results should be supported by distribution maps.
9. Impact modelling. Tables should be presented to show:
 - Existing impacts of the application area;
 - The anticipated impacts of the proposed development;
 - The significance of identified elements of the historic environment.
10. Discussion of the evidence and ensuing conclusions, to:
 - Provide a detailed assessment of areas of archaeological potential and survival based on the above research;
 - Concord with research questions held in: *Research Archaeology Revisited: a revised framework for the East of England* (EAA Occ. Paper No 24, 2011);
 - Anticipated archaeological character and significance.

We acknowledge that some of the above has already been produced for the site, including HER data collation and AP assessment undertaken as part of the Part 1 evaluation process in 2004. However the results of the evaluation of the remainder of the proposed development area covered by this brief **must**

be integrated with the 2004 results, and revision to the desktop is required to update it. Particular attention is drawn to the impact modelling section outlined above.

Phase 2: Field evaluation.

The evaluation scheme should include a programme of linear trial trenching, or equivalent, to adequately sample the threatened available areas and will excavate sufficient archaeological features to conform to section 3.0 below. The field evaluation sample will be based on the quality of information of the non-intrusive surveys but a recommended sample of c.5% of the development area not evaluated in 2004 should be subject to trial trenching. There are currently reinforced concrete pads within the site which are excluded from evaluation. Trenches must be placed at the perimeter to model their depths and the truncating effects upon the potential archaeological resource. All features and deposits must be investigated and recorded unless otherwise agreed with HET. Investigation slots through all linear features must be at least 1m in width. Discrete features must be half-sectioned or excavated in quadrants. The use of metal detectors on site to aid the recovery of artefacts is encouraged.

The combined results of the desk-based assessment and field evaluation (including the results of the 2004 evaluation) will be used to inform the planning process in determining whether the application can proceed on archaeological grounds or not. If archaeological remains of national importance have been discovered, the application for development will be recommended for refusal. Alternatively, if the application is considered appropriate to proceed, the results will be used to determine the need and character of mitigation works.

The integrated evaluation report should take into consideration the existing impacts on the archaeological resource (in particular the truncation which has occurred in the north-eastern area of the site) as well as those for the proposed development as part of the deposit model for the site as a whole.

Mitigation of buried remains.

Where required, the mitigation scheme will require the production of a further Design Brief and will be produced following discussions with the applicant/developer.

The mitigation scheme will be dependant on the results of the evaluation and construction detail and may comprise, **either** the archaeological excavation of remains threatened by the proposed groundworks, **or** a monitored, engineered/designed scheme to enable the preservation in situ of important archaeological remains, **or** a combined scheme of preservation in situ supported by selected area excavation for areas where impacts will be unavoidable.

3.0 Objectives

- 3.1 The evaluation should aim to determine, the location, extent, date, character, condition, significance and quality of any surviving archaeological remains liable to be threatened by the proposed development. An adequate representative sample of all areas where archaeological remains are potentially threatened should be studied.
- 3.2 This office will be particularly concerned with the amount of truncation to buried deposits, the presence or absence of a palaeosol or 'B' horizon, the preservation of deposits within negative features, site formation processes generally. To these ends buried soils and associated deposits should be inspected on site by a suitably qualified soil scientist and his/her advice sought on the whether soil micromorphological study or other analytical techniques will enhance understanding of the site. If so, appropriate samples should be extracted from relevant contexts and assessed by the specialist. The appropriate use of auger surveys is encouraged.

- 3.3 The project manager must arrange, through a suitably qualified specialist, the reassessment and re-plotting of available aerial photographic evidence at a scale of 1:2500. This reassessment should also involve the study of cropmarks lying outside the development, where a clear relationship exists. **A digital copy of the air photograph evidence should be supplied with the report for inclusion in the CHER.**
- 3.4 The assessment of the environmental potential of the site through examination of suitable deposits must also be arranged with a suitably qualified specialist. Attention should be paid:
- to the retrieval of charred plant macrofossils and land molluscs from former dry-land palaeosols and cut features, and to soil pollen analysis;
 - to the retrieval of plant macrofossils, insect, molluscs and pollen from waterlogged deposits located.
 - provision for the absolute dating of critical contacts should be made: *eg* the basal contacts of peats over former dryland surfaces; distinct landuse or landmark change in urban contexts

The assessment of environmental potential should consider the guidelines set out in the following documents:

- English Heritage, 2011, *Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (second edition)*.
- Association for Environmental Archaeology, 1995, *Environmental archaeology and archaeological evaluations. Recommendations concerning the environmental archaeology component of archaeological evaluations in England*. Working Papers of the Association for Environmental Archaeology 2, 8 ff. York: Association for Environmental Archaeology;
- Dobney, K., Hall, A., Kenward, H. and Milles, A., 1992, *A working classification of sample types for environmental archaeology*. Circaea 9.1 (1992 for 1991), pg. 24-26;
- Murphy, P.L. and Wiltshire, P.E.J., 1994, *A guide to sampling archaeological deposits for environmental analysis*.

The project manager must ensure that the results of palaeoenvironmental investigation or industrial residue analysis are included in a full report and sent to the English Heritage Regional Science Advisor.

- 3.6 The evaluation should also carefully consider any artefact or economic information, in particular the survival of faunal evidence, and provide an assessment of the viability for further study of such information. It will be particularly important to provide an indication of the relative importance of such material for any subsequent decision-making regarding mitigation strategies. Advice is to be sought from a suitably qualified specialist in Faunal Remains on the potential of sites for producing bones of fish and small mammals. If there is potential, a sieving programme is to be undertaken. Faunal remains collected by hand and sieving are to be assessed and analysed if appropriate.
- 3.7 The evaluation should include a comprehensive, illustrated assessment of the regional context within which the archaeological evidence rests and should aim to highlight any relevant research issues within a national and regional research framework.
- 3.8 The evaluation should provide a predictive model of surviving archaeological remains detailing zones of relative importance against known development proposals. An impact assessment should also be provided.
- 3.9 If any of these areas of analysis are not considered appropriate the report will detail justification for their exclusion.

4.0 Requirements

- 4.1 The evaluation must be undertaken by an archaeological team of recognised competence, fully experienced in work of this character and formally acknowledged by the HET officers, advisors to the Local Planning Authority (LPA). Inclusion in The Institute for

Archaeologists' Register of Archaeological Organisations is recommended. Details, including the name, qualifications and experience, of the site director and all other key project personnel (including specialist staff) will be communicated to HET as part of a specification of works to be submitted by the archaeological contractor undertaking the programme. The specification must confirm with the guidelines contained in English Heritage's MoRPHE publication (Management of Research Projects in the Historic Environment. The MoRPHE Project Manager's Guide. EH 2006). This specification must:

1. be supported by a research design which sets out the site specific objectives of the archaeological works.
 2. detail the proposed works as precisely as is reasonably possible, indicating clearly on plan their location and extent.
 3. provide a timetable for the proposed works including a "safety" margin in the event of bad weather or any other unforeseen circumstances that may effect this timetabling.
- 4.2 Care must be taken in the siting of offices and other support structures in order to minimise impact on the environment. Extreme care must also be taken in the structure and maintenance of spoil heaps for the same reasons and to facilitate a high quality reinstatement. This is particularly important in relation to pastureland.
- 4.3 The archaeological project manager must satisfy themselves that all constraints to groundworks have been identified, including the siting of live services, Tree Preservation Orders and public footpaths. The HET officers bear no responsibility for the inclusion or exclusion of such information within this brief.
- 4.4 Care must be taken in dealing with human remains and the appropriate Ministry of Justice and environmental health regulations followed. HET and the local Coroner must be informed immediately upon discovery of human remains. If found during an evaluation, the human remains must be left *in situ*, covered and protected when discovered. No further investigation should normally be permitted beyond that necessary to establish the date, condition and character of the burial. If removal is essential an exhumation licence should be requested from the MoJ.
- 4.5 All aspects of the evaluation shall be conducted in accordance with the Institute for Archaeologists' *Code of Conduct*, the *Standard and Guidance for Archaeological Field Evaluations* (2008), and *Standards for Field Archaeology in the East of England* (EAA Occasional Paper 14). Reference should also be made to *Research and Archaeology Revisited: a revised framework for the East of England* (EAA Occ. Paper No 24, 2011).
- 4.6 **Before commencing work the project manager must carry out a risk assessment and liaise with the site owner, client and HET in ensuring that all potential risks are minimised. A copy of this must be given to HET before the commencement of works.**
- 4.7 Project Managers are reminded of the need to comply with the requirements of the Treasure Act 1996 (with subsequent amendments). Advice and guidance on compliance with Treasure Act issues can be obtained from the Cambridgeshire Historic Environment Record (CHER) office, and project managers are recommended to report any finds that could be considered treasure under the terms of the Act made during the process of fieldwork to CHER within 14 days of discovery.
- 4.8 The site archive specification should conform to the guidelines in MoRPHE (EH 2006), eg section 2.5.3 and be deposited within the County Archaeology Store on completion of site analysis and any ensuing publication.
- 4.9 To assist with the curation of the project's archive, the Project Manager must contact the CHER office to obtain an **event number**. CHER will use this number as a unique identifier linking all physical and digital components of the archive. **The unique event number must**

be clearly indicated on any specification received for this project and on any ensuing reports.

- 4.10 Arrangements for the long term storage and deposition of all artefacts must be agreed with the landowner and CHER **before** the commencement of fieldwork. The Project Manager should consult document ref HER 2004/1 (available from our website¹) regarding the requirements for the deposition of the archive, which must be deposited in the County Store on completion of post-excavation analysis and publication.
- 4.11 HET supports the national programme: Online Access to the Index of Archaeological Investigations (OASIS III) project and requires archaeological contractors working in Cambridgeshire to support this initiative. In order that a record is made of all archaeological events within the county occurring through the planning system, the archaeological contractor is required to input details of this project online at the ADS internet site²: The OASIS reference ID and infilled and downloaded Data Collection Form should be clearly presented in the relevant report. **Any report that does not contain this information will be returned.**
- 4.12 An unbound hard copy of the report, clearly marked **DRAFT**, should be prepared and presented to HET within four weeks of the completion of site works (unless there are reasonable grounds for more time). This report must conform to the format contained within the document **HET Eval rev 06** dealing with the production of archaeological evaluation reports. Copies can be obtained from the address below. If a *Standard and Guidance for Archaeological Field Evaluation* (2008) Annex 2, Report Contents, should be used. Following acceptance, **one copy** of the approved report of the results should be submitted to HET, **one hard and digital copy** to the CHER. The approved report should also be uploaded to the OASIS database.
- 4.13 Where the pre-determination works are to inform an Environmental Impact Assessment in support of an Environmental Statement (ES), we acknowledge that the applicant reserves the right to withhold the evidence base prior to its release to the planning authority. We strongly recommend, however, that proposals for mitigation strategies are discussed with this office prior to their inclusion within the ES.
- 4.14 HET officers are responsible for monitoring all archaeological work within Cambridgeshire and will need to inspect site works at an appropriate time during the fieldwork, and review the progress of excavation reports and/or archive preparation. Further trenching or deposit testing may be a requirement of the site monitoring visit if unclear archaeological remains or geomorphological features present difficulties of interpretation, or to assist with the formulation of a mitigation strategy. Appropriate provision should be made for this eventuality. The project manager must inform HET in writing **at least one week in advance** of the proposed start date for the project.
- 4.15 Any changes to the specifications that the project manager may wish to make after approval by this office should be communicated directly to HET for approval.
- 4.16 HET should be kept regularly informed about developments both during the site works and subsequent post-excavation work.
- 4.17 The involvement of HET should be acknowledged in any report or publication generated by this project.

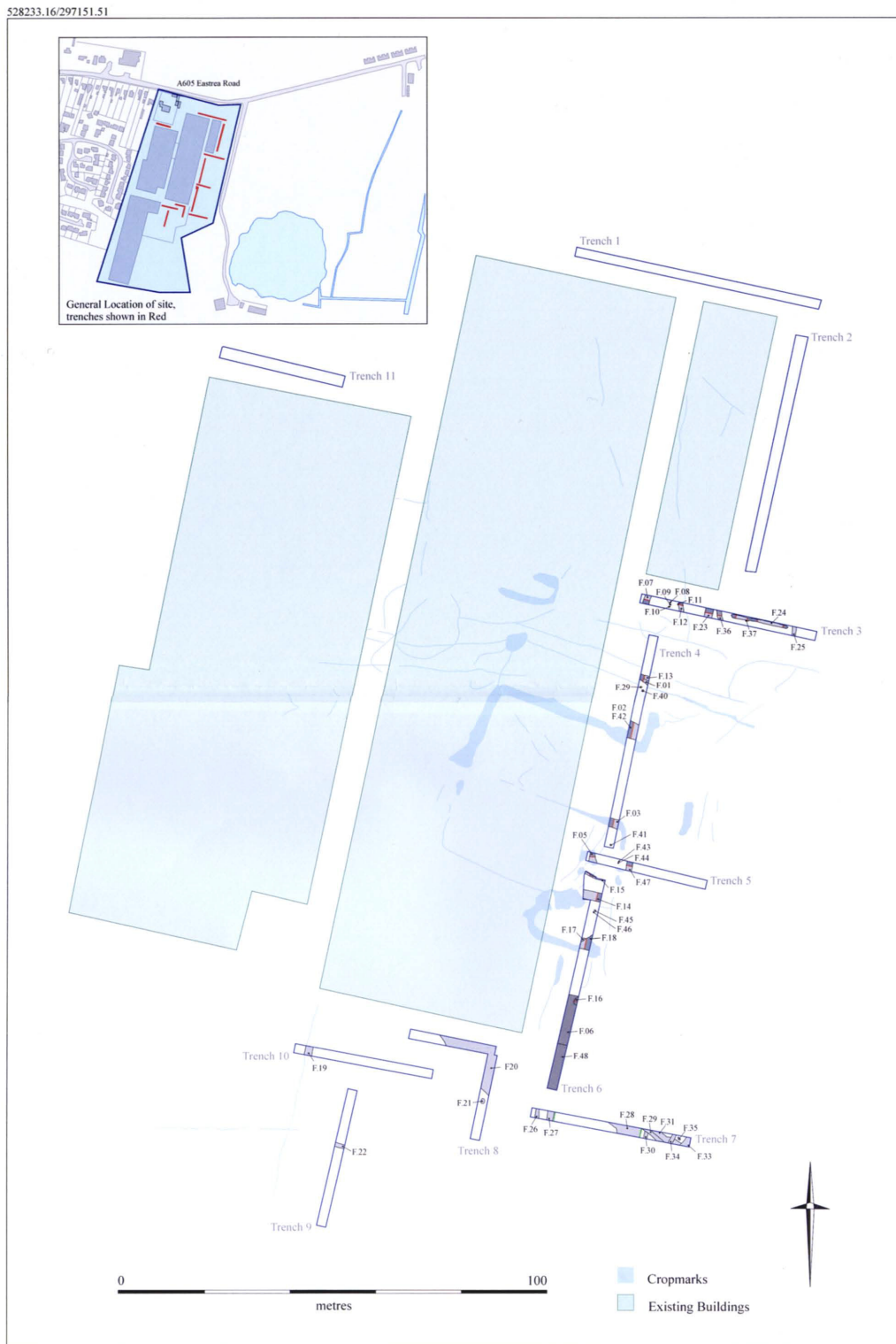
As part of our desire to provide a quality service to all our clients we would welcome any comments you may have on the content or presentation of this design brief. Please address them to the author at the address below.

¹ <http://www.cambridgeshire.gov.uk/leisure/archaeology/historic/archives/herstore.htm>

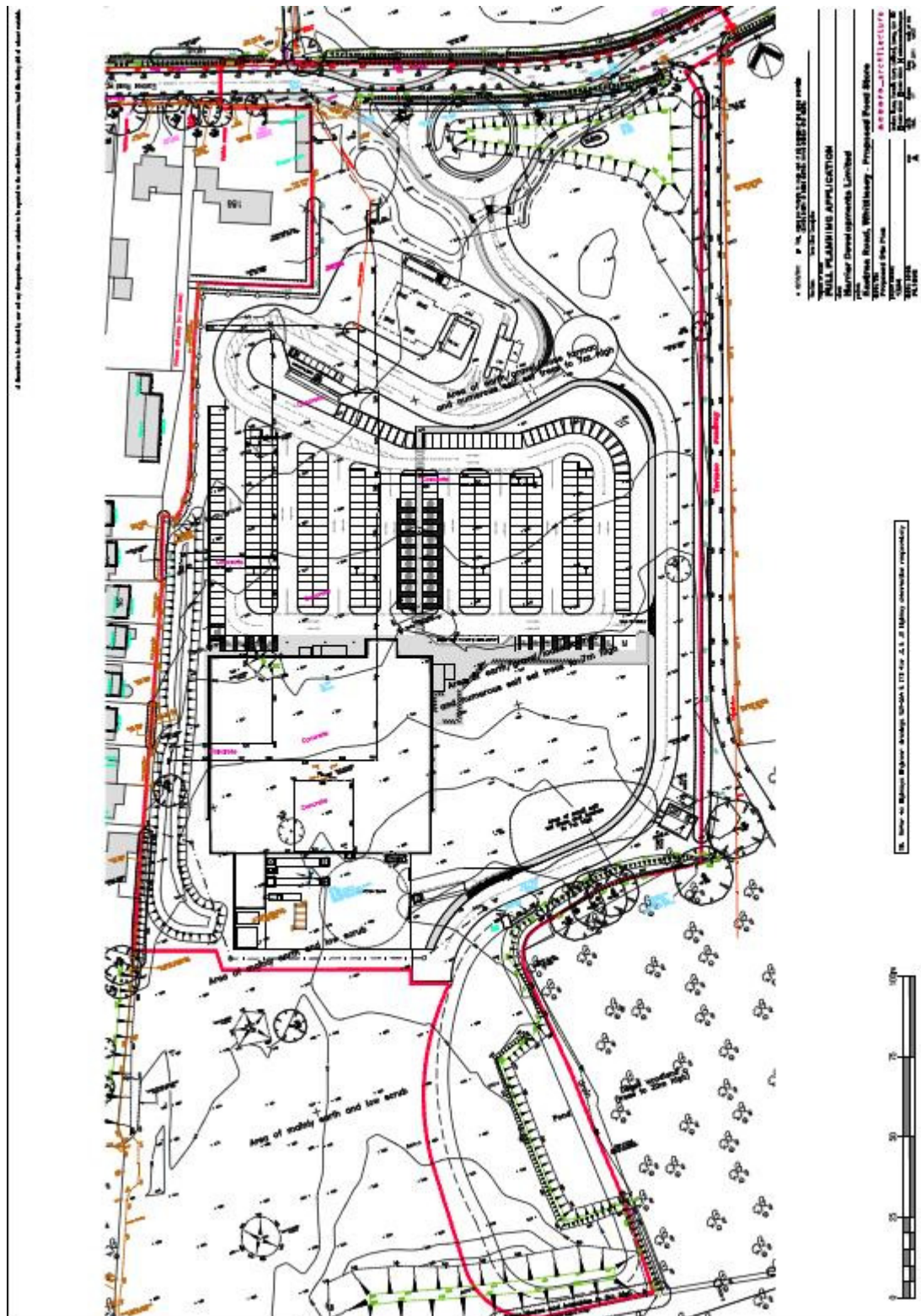
² <http://ads.ahds.ac.uk/project/oasis>

Dan McConnell

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Plan of the 2004 CAU archaeological evaluation showing limits of trenching due to extant glass houses.



Plan showing the current proposed development area.