DOCUMENT 5 - ARCHAEOLOGICAL ASSESSMENT

CgMs CONSULTING

DRAFT FOR COMMENT

ARCHAEOLOGICAL DESK BASED ASSESSMENT

Land at Viking Way Brentwood Essex

November 2014

Planning • Heritage

Specialist & Independent Advisors to the Property Industry

Local Planning Authority:
Brentwood Borough Council

Site centred at:
TQ5889 9502

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Report Status:
First draft for client review

Issue Date:
November 2014

CgMs Ref:
RM/18345

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EXECUTIVE SUMMARY

Land at Viking Way Brentwood Essex has been considered for its below ground archaeological potential.

The site does not lie within an area of archaeological priority as defined by Brentwood Borough Council.

The site can be considered to have a modest potential for the late prehistoric.

The site has remained undeveloped open land throughout its documented history.

The site is proposed for residential development.

Further archaeological mitigation measures are therefore anticipated in advance of construction development impacts.

1.0 INTRODUCTION AND SCOPE OF STUDY

1.1 This archaeological desk-based assessment has been researched by Sophie Hudson and prepared by Richard Meager of CgMs Consulting on behalf of Countryside Properties.

1.2 The assessment considers land east of Viking Way, Brentwood Essex. The site comprises open land to the north of the A12, and woodland to the south. The site is approximately ten hectares in extent and is bounded by residential development to the north, west and south, and by Doddinghurst Road to the east. The site is centred at National Grid Reference TQ5889 9502 (see Figures 1 and 2).

1.3 The site does not lie within an area of archaeological priority as designated by Brentwood Borough Council.

1.4 In accordance with central, regional and local government policy and guidance on archaeology and planning, and in accordance with the 'Standard and Guidance for historic environment desk based assessments' (Institute for Archaeologists August 2014), this assessment draws together the available archaeological, topographic and land-use information in order to clarify the archaeological potential of the site.

1.5 The assessment comprises an examination of evidence in the Essex Historic Environment Record (HER), considers the results of nearby archaeological investigations, incorporates published and unpublished material and charts historic land-use through a map regression exercise. A site visit was undertaken 14 November 2014.

1.6 As a result, the assessment enables relevant parties to assess the archaeological potential of the site and to consider the need for design, civil engineering, and/or archaeological solutions to the potential identified.

2.0 DEVELOPMENT PLAN FRAMEWORK

2.1 Legislation regarding archaeology, including scheduled ancient monuments, is contained in the Ancient Monuments and Archaeological Areas Act 1979, amended by the National Heritage Act 1983 and 2002.

2.2 In March 2012, the government published the National Planning Policy Framework (NPPF), which replaced previous national policy relating to heritage and archaeology (PPS5: Planning Policy Statement 5: Planning for the Historic Environment). The NPPF Planning Practice Guidance was published online 6th March 2014 (http://planningguidance.planningportal.gov.uk). The Practice Guide issued in support of PPS5 is still valid however, and English Heritage have provided documentation translating former PPS5 policy into its NPPF counterpart.

2.3 Section 12 of the NPPF, entitled *Conserving and Enhancing the Historic Environment* provides guidance for planning authorities, property owners, developers and others on the conservation and investigation of heritage assets. Overall, the objectives of Section 12 of the NPPF can be summarised as seeking the:

- Delivery of sustainable development
- Understanding the wider social, cultural, economic and environmental benefits brought by the conservation of the historic environment
- Conservation of England's heritage assets in a manner appropriate to their significance, and
- Recognition of the contribution that heritage assets make to our understanding of the past.

2.4 Section 12 of the NPPF recognises that intelligently managed change may sometimes be necessary if heritage assets are to be maintained for the long term. Paragraph 128 states that planning decisions should be based on the significance of the heritage asset, and that level of detail supplied by an applicant should be proportionate to the importance of the asset and should be *no more than sufficient* to review the potential impact of the proposal upon the significance of that asset.

2.5 *Heritage Assets* are defined in Annex 2 of the NPPF as: a building, monument, site, place, area or landscape positively identified as having a degree of significance meriting consideration in planning decisions. They include designated heritage assets (as defined in the NPPF) and assets identified by the local planning authority during the process of decision-making or through the plan-making process.

2.6 Annex 2 also defines *Archaeological Interest* as a heritage asset which holds or potentially could hold, evidence of past human activity worthy of expert investigation at some point. Heritage assets with archaeological interest are the primary source of evidence about the substance and evolution of places, and of the people and cultures that made them.

2.7 A *Designated Heritage Asset* comprises a: World Heritage Site, Scheduled Monument, Listed Building, Protected Wreck Site, Registered Park and Garden, Registered Battlefield or Conservation Area.

2.8 *Significance* is defined as: The value of a heritage asset to this and future generations because of its heritage interest. This interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset's physical presence, but also from its setting.

2.9 In short, government policy provides a framework which:

- Protects nationally important designated Heritage Assets (which include World Heritage Sites, Scheduled Ancient Monuments, Listed Buildings, Protected Wreck Sites, Registered Parks and Gardens, Registered Battlefields or Conservation Areas)
- Protects the settings of such designations
- In appropriate circumstances seeks adequate information (from desk based assessment and field evaluation where necessary) to enable informed decisions
- Provides for the excavation and investigation of sites not significant enough to merit *in-situ* preservation.

2.10 The NPPF Planning Practice Guidance was published online 6th March 2014 (http://planningguidance.planningportal.gov.uk). The Practice Guide issued in support of PPS5 is still valid however, and English Heritage have provided documentation translating former PPS5 policy into its NPPF counterpart. This guidance reiterates that the conservation of heritage assets in a manner appropriate to their significance is a core planning principle. It also states that their treatment requires a flexible and thoughtful approach. Importantly, the guidance states that if complete or partial loss of a heritage asset is justified, the aim should then be to capture and record the evidence of the asset's significance, and make the interpretation publically available. Key elements of the guidance relate to assessing harm. It states that an important consideration should be whether the proposed works adversely affect a key element of the heritage asset's special architectural or historic interest, adding that it is the degree of harm, rather than the scale of development, that is to be assessed. The level of

'substantial harm' is stated to be a high bar that may not arise in many cases. Essentially, whether a proposal causes substantial harm will be a judgment for the decision taker, having regard to the circumstances of the case and the NPPF. Importantly, it is stated that harm may arise from works to the asset or from development within its setting. A thorough assessment of the impact of proposals upon setting needs to take into account, and be proportionate to, the significance of the heritage asset and the degree to which proposed changes enhance or detract from that significance and the ability to appreciate it.

2.11 In considering any planning application for development, the planning authority will be mindful of the framework set by government policy, in this instance the NPPF and associated guidance, by current Development Plan Policy and by other material considerations.

2.12 The Brentwood Replacement Local Plan adopted 25 August 2005 supersedes the first Adopted Brentwood Local Plan (adopted March 1995, with a First Alteration adopted in July 1997). The plan provides a comprehensive statement of land use policies and proposals for the Borough. This is the Borough's current development plan until replaced by the emerging Local Development Plan.

C18 ANCIENT MONUMENTS AND ARCHAEOLOGICAL SITES

WHERE IMPORTANT ARCHAEOLOGICAL SITES AND MONUMENTS, WHETHER SCHEDULED OR NOT, AND THEIR SETTINGS ARE AFFECTED BY A PROPOSED DEVELOPMENT, THERE WILL BE A PRESUMPTION IN FAVOUR OF THEIR PRESERVATION IN SITU. IN SITUATIONS WHERE THERE ARE GROUNDS FOR BELIEVING THAT THE PROPOSED DEVELOPMENT WOULD AFFECT IMPORTANT ARCHAEOLOGICAL SITES AND MONUMENTS, DEVELOPERS WILL BE REQUIRED TO ARRANGE FOR AN ARCHAEOLOGICAL FIELD ASSESSMENT TO BE CARRIED OUT BEFORE THE APPLICATION CAN BE DETERMINED THUS ENABLING AN INFORMED AND REASONABLE PLANNING DECISION TO BE MADE. IN CIRCUMSTANCES WHERE PRESERVATION IS NOT POSSIBLE OR FEASIBLE, THEN DEVELOPMENT WILL NOT BE PERMITTED UNTIL SATISFACTORY PROVISION HAS BEEN MADE FOR A PROGRAMME OF ARCHAEOLOGICAL INVESTIGATION AND RECORDING PRIOR TO THE COMMENCEMENT OF THE DEVELOPMENT.

2.13 In terms of designated heritage assets, as defined above and as shown on Figure 2, the site of a Scheduled Ancient Monument comprising a hillfort lies c.1.04km west of the centre of the study site. In terms of other relevant designations, no Historic Battlefields or Historic Wreck sites are known within the study site search radius. The site does not lie within an area of archaeological priority as designated by Brentwood Borough Council.

2.14 In line with existing national, strategic and local planning policy and guidance, this desk based assessment seeks to clarify the sites archaeological potential and the need or otherwise for additional mitigation measures.

3.0 GEOLOGY AND TOPOGRAPHY

3.13 Geology

3.13.1 As shown on British Geological Survey Sheet 257 (Romford: 1996) the geology underlying the study site comprises deposits of Till, defined as 'mainly chalky sandy and pebbly clay'.

3.13.2 Till and Glaciofluvial deposits are of Anglian date and relate to the first phase of major ice formation across Britain, which is thought to have reached as far south as the north Cornish coast and the Thames Valley around London (Wymer 1999: 17). Such deposits are the result of glaciers eroding the ground they pass over and depositing material at their base, and as dumped material left behind when the glaciers retreated and subsequently melted. Glaciofluvial deposits are closely related to Till as they represent meltwater which ran beneath glaciers and generally issued from their front (British Geological Survey 1996: 118).

3.13.3 No site specific geotechnical information is currently available.

3.14 Topography

3.14.1 The study site is level at c.85m AOD.

3.14.2 No naturally occurring watercourses or bodies of water are known within the study site or its immediate vicinity. Land drains are present around field boundaries within the northeastern and southeastern parts of the site.

4.0 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND, WITH ASSESSMENT OF SIGNIFICANCE

(Including Historic Map Regression Exercise)

4.1 Timescales used in this report:

Prehistoric

Palaeolithic	450,000 -	12,000 BC
Mesolithic	12,000 -	4,000 BC
Neolithic	4,000 -	1,800 BC
Bronze Age	1,800 -	600 BC
Iron Age	600 -	AD 43

Historic

Roman	AD 43 -	410
Anglo Saxon/Early Medieval	AD 410 -	1066
Medieval	AD 1066 -	1485
Post Medieval	AD 1486 -	1749
Modern	AD 1750 -	Present

4.2 Introduction

4.2.1 What follows is a consideration of findspots within a one kilometre radius, also referred to as the study area, held on the Essex Historic Environment Record (HER), together with a map regression exercise charting the history of the site from the eighteenth century until the present day.

4.2.2 In terms of designated heritage assets, as defined above in Section 2 and as shown on Figure 2, the site of a Scheduled Ancient Monument comprising a hillfort lies c.1.04km west of the study site. In terms of other relevant designations, no Historic Battlefields or Historic Wreck sites are known within the study site search radius, and the site does not lie within a designated area of archaeological potential.

4.2.3 The HER entries within the study area are characterised by the late prehistoric hillfort to the west, Medieval settlement to the west, southeast and north, together with the twentieth century Brentwood radio station to the north of the site.

4.2.4 The map sequence demonstrates that the site has remained undeveloped throughout its documented history.

4.3 Prehistoric: Palaeolithic and Mesolithic

4.3.1 No finds of Palaeolithic or Mesolithic date have been identified within the one kilometre study area search radius.

4.3.2 Geological deposits of Anglian date created as the result of glaciation (see paragraph 3.1.2 above) are only considered likely to contain palaeoliths should milder periods (known as interstadials) have occurred, or if the ice sheet took a long time to form. In each case, seasonal exploitation of the area by hunter gatherer groups is probably the highest level of human activity which can be expected, contemporary to that deposit (Wymer 1999: 17-18). The presence or absence of Palaeolithic material at the study site is therefore extremely difficult to predict, but in this instance can be categorised as generally low. Similarly a low potential can be identified for the Mesolithic at the study site itself.

4.4 Neolithic, Bronze Age and Iron Age

4.4.1 From around 4000 BC the mobile hunter-gathering economy of the Mesolithic gradually gave way to a more settled agriculture-based subsistence. The pace of woodland clearance to create arable and pasture-based agricultural land varied regionally and locally, depending on a wide variety of climatic, topographic, social and other factors. The trend was one of a slow, but gradually increasing pace of forest clearance.

4.4.2 By the 1st millennium, i.e. 1000 BC, the landscape was probably a mix of extensive tracts of open farmland, punctuated by earthwork burial and ceremonial monuments from distant generations, with settlements, ritual areas and defended locations reflecting an increasingly hierarchical society.

4.4.3 A Neolithic stone axe has been identified to the northeast of Pilgrims Hatch, north of the study site (HER ref 16260-MEX10321, TQ590 960). No finds or features of Bronze Age date have been identified within the study area, and in view of this paucity a generally low potential can be identified for both the Neolithic and the Bronze Age at the study site itself.

4.4.4 The site of a slight univallate (single rampart) hillfort lies c.1.04 kilometres west of the centre of the study site, near Calcott Hall Farm. This type of hillfort is typically dated to the Late Bronze Age – Early Iron Age; evaluation at this site in 1990 revealed pottery of First Century BC-First Century AD date, together with postholes also dated to the Late Iron Age. This circular hillfort lies at a height of c.100m AOD and comprises a defensive

bank and external ditch enclosing an area of 2.6 hectares. This feature comprises a designated Scheduled Ancient Monument of national significance (HER ref 531-MEX2124, TQ5792 9466; http://list.english-heritage.org.uk/; see Figure 2 and Appendix 1).

4.4.5 The presence of the hillfort to the west does however provide a focus of late prehistoric activity within the vicinity of the site, and as such a low/moderate potential can therefore be identified for the Iron Age within the site itself.

4.5 Roman

4.5.1 No finds of Roman date have been identified within the one kilometre study area search radius. Accordingly a generally low archaeological potential can be identified for this period within the study site itself.

4.6 Anglo Saxon & Medieval

4.6.1 Two manors are mentioned in Domesday (1086), at Calcotts to the west of the site and also at South Weald village to the southwest (HER refs 19297-MEX10327, TQ5691 9416; 19299-MEX10327, TQ5831 9456). Apart from these two manors, as of 2002 there was no evidence for Saxon settlement/activity within the South Weald area (Essex CC 2002: 4), or as of 1999, in Brentwood to the south (Essex CC 1999: 7).

4.6.2 No archaeological finds or features of Anglo-Saxon date have been identified within the one kilometre study area search radius. The potential of the study site for this period can therefore be categorised as generally low.

4.6.3 No documentary references exist to Brentwood before 1176. The town was created at a crossroads of the London to Colchester and a pilgrim route from North Essex south towards Canterbury by monks of St Osyth, primarily as a commercial venture for through traffic (ECC 1999: 11; Bettley & Pevsner 2007: 171). The historic core of Brentwood developed some distance to the southeast of the study site (Essex CC 1999). During the Medieval period, the manor of Calcott was the property of Stratford Langthorne Abbey and South Weald Manor was the property of Waltham Abbey (Essex CC 2002: 4).

4.6.4 The Essex HER entry referenced at 4.6.1 above states that 'the Chapman and Andre Map of 1777 [reproduced as Figure 3] probably gives a fairly accurate impression of the

Late Medieval settlement in the South Weald area (HER ref 19297-MEX10327, TQ5691 9416; Essex CC 2002: 4).

4.6.5 The defensive ditch at the hillfort to the west of the site was re-cut during the Medieval period, linked to its incorporation within a Deer Park; finds of pottery together with a contour survey have dated the functioning of the Deer Park from the tenth to the fourteenth centuries (HER refs 530-MEX2121, TQ579 946; 531-MEX2124, TQ5792 9466; see paragraph above).

4.6.6 The site of Bishops Hall is known to the north of the site (HER ref 46494-MEX10390, TQ5877 9520). The site of Bawd's Hall is known to the north of the site, a former moated site referenced in documents dated 1483 and since destroyed (HER ref 555-MEX2230, TQ589 959). Another homestead site is known at Sawyers Hall to the southeast of the study site, where a rectangular moat survives in part (HER ref 556-MEX2236, TQ594 950).

4.6.7 On the basis of the available information it is considered that the archaeological potential of the study site for the Medieval period can be categorised as generally low. Evidence of agricultural activity and land division is most likely to be present in the archaeological record.

4.7 **Post Medieval and Modern (including map regression exercise)**

4.7.1 Early maps show the site to lie in open land north of Brentwood and south of the Bishops Hall establishment (Fig 3: 1777 Chapman and Andre Map of Essex; Fig 4: 1799 Ordnance Survey drawing).

4.7.2 The South Weald Tithe Map (Fig 5: 1838) together with the associated Award shows the site to lie in open fields under arable cultivation.

4.7.3 The First Edition Ordnance Survey (Fig 6: 1872) shows no change from the Tithe Map. A watercourse is shown running along the eastern most north-south field boundary within the site.

4.7.4 No change is shown on the Second Edition Ordnance Survey (Fig 7: 1896), nor on subsequent surveys. The study area is developed from the 1920 Ordnance Survey (Fig 8), with development to the west in progress by 1937 (Fig 9). Bishops Hall to the north has been replaced by a housing development by the 1961 Ordnance Survey (Fig 10).

4.7.5 The 2007 Ordnance Survey (Fig 11) and the 2013 aerial photograph (Plate 1) shows the site in its current form, with the area south of the A12 overgrown, and the area north of the A12 comprising open fields.

4.7.6 The archaeological potential of the study site for the Post Medieval and Modern periods can be identified as low.

4.8 **Assessment of Significance**

4.8.1 Existing national policy guidance for archaeology (the NPPF as referenced in section 2) enshrines the concept of the 'significance' of heritage assets. Significance as defined in the NPPF centres on the value of an archaeological or historic asset for its 'heritage interest' to this or future generations.

4.8.2 No designated heritage assets as defined in the NPPF are recorded on or in close proximity to the study site.

4.8.3 While it is possible that previously unknown archaeological remains may be present within the study site boundary, the balance of probability is that these will be of purely local significance.

5.0 SITE CONDITIONS AND THE PROPOSED DEVELOPMENT

(Likely Impact upon Heritage Assets)

5.1 Site Conditions

5.1.1 The study site currently comprises open land to the north of the A12, together with overgrown woodland to the south. The eastern and southern parts of the site were inaccessible at the time of preparing this report (Fig 11 and Plates 1-4).

5.1.2 Agricultural and/or horticultural use of the study site can be considered likely to have had a moderate, widespread negative archaeological impact.

5.2 The Proposed Development

5.2.1 Detailed proposals are currently unavailable but it is understood that the site is proposed for residential development (Fig 12).

5.3 Review of potential development upon Heritage Assets

5.3.1 As set out in Section 4 above, the available evidence suggests a relatively modest archaeological potential for the study site, and if hitherto unknown remains were to be present, they are considered likely to be of local significance.

5.3.2 A visit undertaken 14 November 2014 established that the Scheduled hillfort c.1.04km to the west of the centre of the site is not visible from within the site itself. The houses around Viking Way and Hurstwood Avenue on the western boundary form an effective screen (see Plates 3-4).

5.3.3 However, as the bulk of the site has remained largely unaffected by previous development throughout its documented history, it is to be anticipated that the Essex County Council archaeological curators will require additional archaeological mitigation measures in advance of development.

6.0 SUMMARY AND CONCLUSIONS

6.1 Land at Viking Way Brentwood Essex has been reviewed for its below ground archaeological potential.

6.2 In accordance with central, regional and local government planning policy and guidance, a desk based assessment has been undertaken to clarify the archaeological potential of the study area.

6.3 The site does not lie within an area of archaeological priority as designated by Brentwood Borough Council.

6.4 The study site can be considered to have a modest potential for the later prehistoric.

6.5 The site has remained undeveloped land throughout its documented history.

6.6 Proposals are understood to include the residential development of the site.

6.7 On the basis of the available information we anticipate that the Essex County Council archaeological advisors will request additional archaeological mitigation measures, initially in the form of geophysical survey. Further fieldwork measures may then be necessary dependant upon the results of this survey.

SOURCES CONSULTED

1. General

British Library

Essex Historic Environment Record

Essex Record Office

2. Internet

http://www.british-history.ac.uk/

http://list.english-heritage.org.uk/

http://planningguidance.planningportal.gov.uk

3. Bibliographic

Bettley & Pevsner *The Buildings of England Essex* 2007

Bridgland Quaternary River terrace deposits as a framework for the Lower Palaeolithic record in Gamble & Lawson (eds.) The *English Palaeolithic Reviewed* 1996

British Geological Survey British Regional Geology *London and the Thames Valley* Fourth Edition 1996

Department of Communities and Local Government *National Planning Policy Framework* 2012

Department of Communities and Local Government/Department of Culture Media and Sport/English Heritage *PPS5 Planning for the Historic Environment: Historic Environment Planning Practice Guide* 2010

English Heritage *Comparison of PPS5 Policies with Historic Environment-Related Policies in the NPPF – Part 1* 5 April 2012 unpublished document

English Heritage *Comparison of PPS5 Policies with Historic Environment-Related Policies in the NPPF – Part 2* 5 April 2012 unpublished document

Essex County Council *Historic Settlement Assessment South Weald* September 2002

Essex County Council/English Heritage *Historic Towns in Essex Brentwood Historic Towns Assessment Report* 1999

Hunter *The Essex Landscape* 1999

Institute for Archaeologists *Standard and Guidance for historic environment desk-based assessment* 19 August 2014 unpublished document

Victoria County History *Essex Volume 8* 1983

Wymer *The Lower Palaeolithic Occupation of Britain* 2 volumes 1999

4. Cartographic

1777 Chapman & Andre Map of Essex

1799 Ordnance Survey Drawing

1838 South Weald Tithe Map

1872 Ordnance Survey

1896 Ordnance Survey

1920 Ordnance Survey

1932 Ordnance Survey

1937 Ordnance Survey

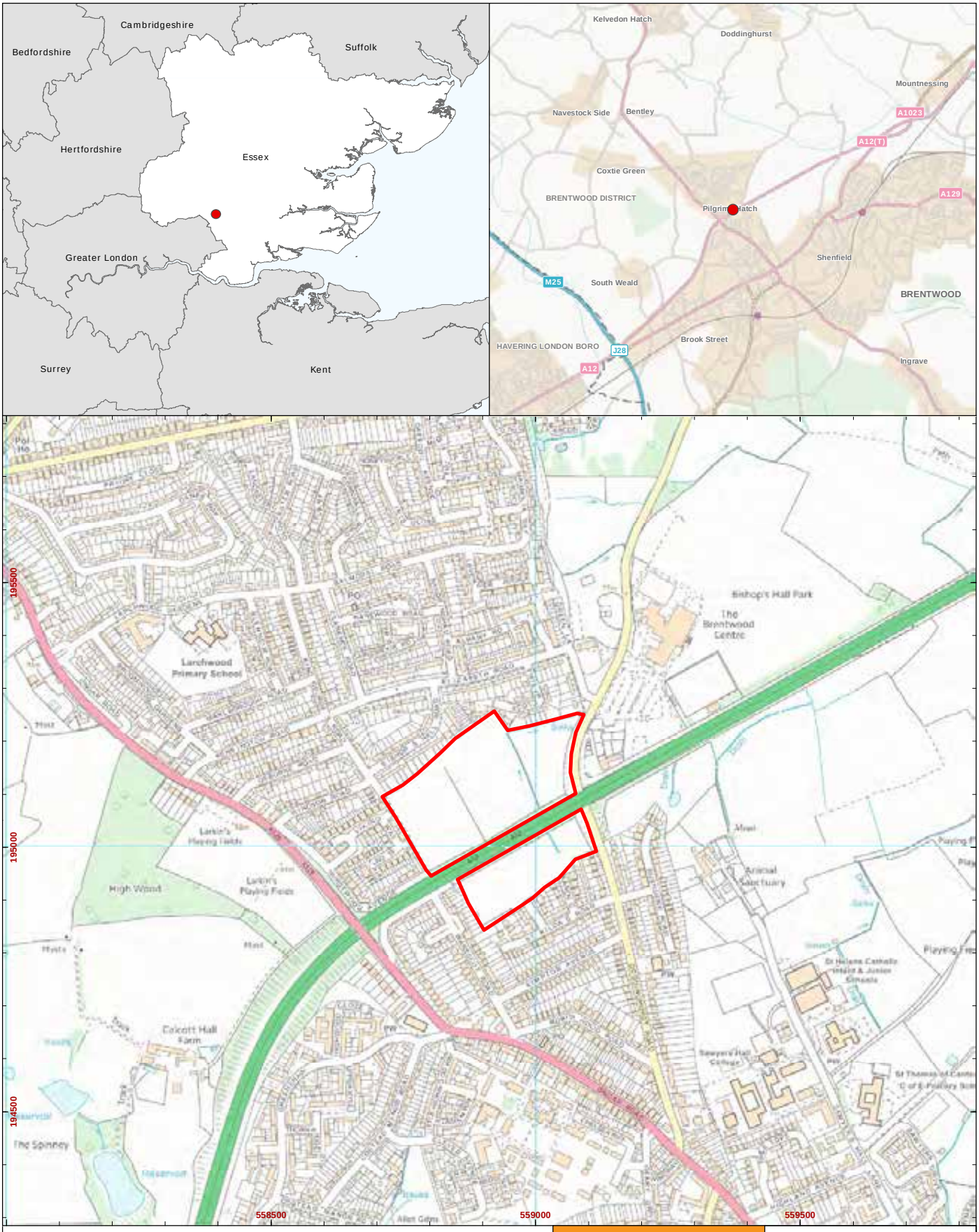
1961 Ordnance Survey

1996 British Geological Survey Sheet 257 Romford

2007 Ordnance Survey

5. **Air Photographs**

2013 aerial photograph



Site Boundary

N

Scale at A4: 1:10,000

0 250 m

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Figure 1:
Site Location

16260
EEX52644
EEX54284
555
20233
20567
20566
EEX53568
15144
20237
20236
20234
20235
46494
556
15234
19297
1013833 SM
19299
530
531
15388
Highwood Hospital
20245
20244
Pilgrims' Hatch
Shenfield
196000
195500
195000
194500
194000
558000
558500
559000
559500
560000

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Site Boundary
Search Radius 1km

Designated Heritage Assets:
Conservation Area
Scheduled Monument

Non-Designated Heritage Assets:
HER Record (Point)
Building
Find Spot
Industrial
Monument
HER Record (Polygon)
Building
Find Spot
Industrial
Monument

Previous Archaeological Work:
Event Record (Point)

N

Scale at A3: 1:8,000
0 250 m

Figure 2:
Summary of cultural heritage designations (data from Essex HER)

Site Location

N

Not to Scale:
Illustrative Only

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Figure 3:
1777 Chapman & Andre
Map of Essex

Site Location

N

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Not to Scale:
Illustrative Only

Figure 4:
1799 Ordnance Survey Drawing

Site Boundary

N

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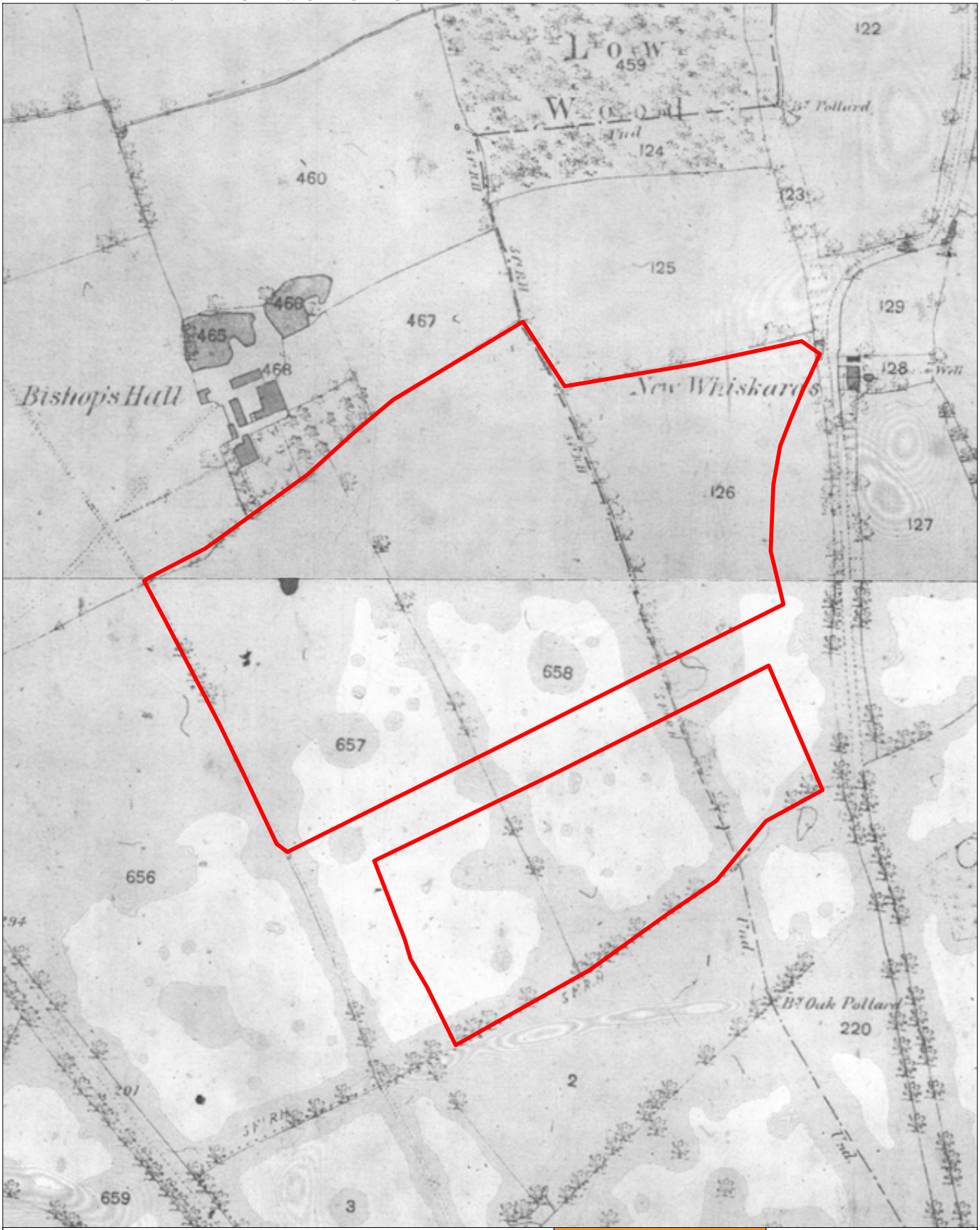
Not to Scale:
Illustrative Only

Figure 5:
1838 South Weald
Tithe Map



Site Boundary

N

Not to Scale:
Illustrative Only

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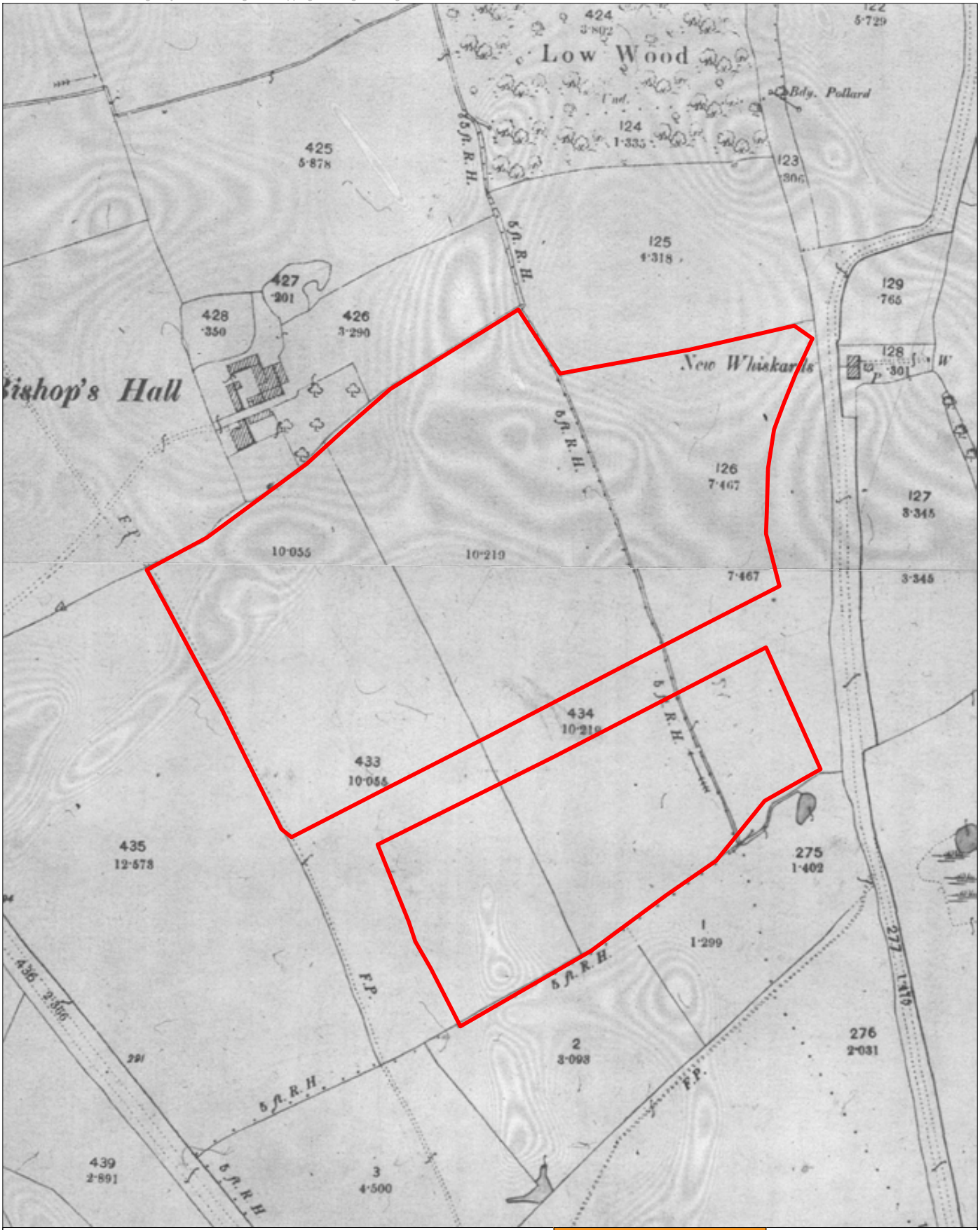
Figure 6:
1872 Ordnance Survey



Site Boundary

N

Not to Scale:
Illustrative Only

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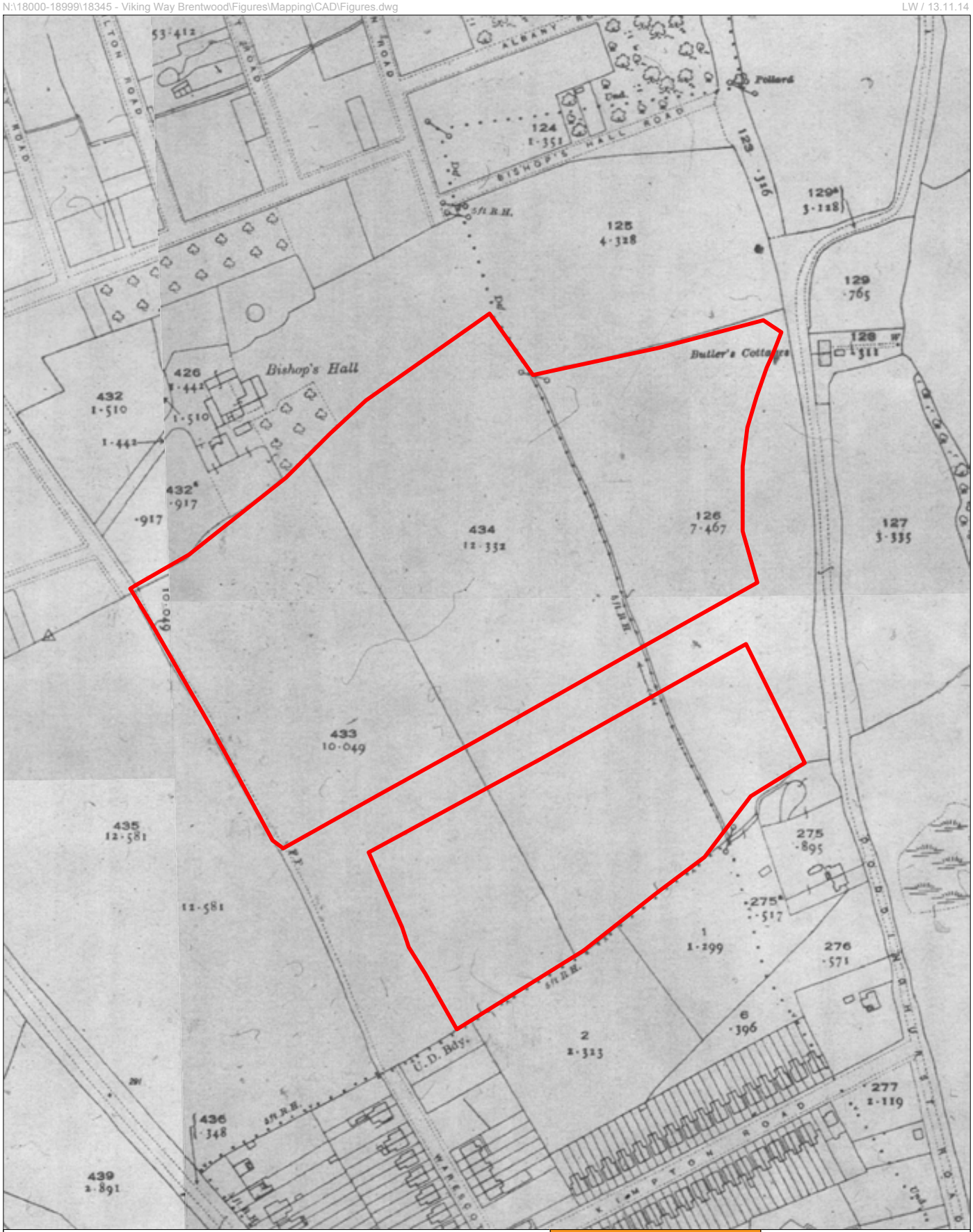
Figure 7:
1896 Ordnance Survey



Site Boundary

N

Not to Scale:
Illustrative Only

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Figure 8:
1920 Ordnance Survey

Site Boundary

N

Not to Scale:
Illustrative Only

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Figure 9:
1937 Ordnance Survey

Site Boundary

N

Not to Scale:
Illustrative Only

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Figure 10:
1961 Ordnance Survey

Site Boundary

N

Not to Scale:
Illustrative Only

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Figure 11:
2007 Ordnance Survey

Plate 1: 2013 Aerial Photograph

Plate 2: 2014 view southwards across the centre of the northern part of the site

Plate 3: 2014 view across the western side of the northern part of the site

Plate 4: 2014 view across the western side of the northern part of the site

Appendix 1

Scheduled Monument Description:

Slight Univallate Hillfort 300m west of Calcott Hall Farm

List Entry Summary

This monument is scheduled under the Ancient Monuments and Archaeological Areas Act 1979 as amended as it appears to the Secretary of State to be of national importance. This entry is a copy, the original is held by the Department for Culture, Media and Sport.

Name: Slight univallate hillfort 300m west of Calcott Hall Farm

List Entry Number: 1013833

Location

The monument may lie within the boundary of more than one authority.

County: Essex
District: Brentwood
District Type: District Authority
Parish:

National Park: Not applicable to this List entry.

Grade: Not applicable to this List entry.

Date first scheduled: 31-Jan-1955

Date of most recent amendment: 08-Dec-1995

Legacy System Information

The contents of this record have been generated from a legacy data system.

Legacy System: RSM

UID: 24882

Asset Groupings

This List entry does not comprise part of an Asset Grouping. Asset Groupings are not part of the official record but are added later for information.

List Entry Description

Summary of Monument

Legacy Record - This information may be included in the List Entry Details.

Reasons for Designation

Slight univallate hillforts are defined as enclosures of various shapes, generally between 1ha and 10ha in size, situated on or close to hilltops and defined by a single line of earthworks, the scale of which is

relatively small. They date to between the Late Bronze Age and Early Iron Age (eighth - fifth centuries BC), the majority being used for 150 to 200 years prior to their abandonment or reconstruction. Slight univallate hillforts have generally been interpreted as stock enclosures, redistribution centres, places of refuge and permanent settlements. The earthworks generally include a rampart, narrow level berm, external ditch and counterscarp bank, while access to the interior is usually provided by two entrances comprising either simple gaps in the earthwork or an inturned rampart. Postholes revealed by excavation indicate the occasional presence of portal gateways while more elaborate features like overlapping ramparts and outworks are limited to only a few examples. Internal features included timber or stone round houses; large storage pits and hearths; scattered postholes, stakeholes and gullies; and square or rectangular buildings supported by four to six posts, often represented by postholes, and interpreted as raised granaries. Slight univallate hillforts are rare with around 150 examples recorded nationally. Although on a national scale the number is low, in Devon they comprise one of the major classes of hillfort. In other areas where the distribution is relatively dense, for example, Wessex, Sussex, the Cotswolds and the Chilterns, hillforts belonging to a number of different classes occur within the same region. Examples are also recorded in eastern England, the Welsh Marches, central and southern England. In view of the rarity of slight univallate hillforts and their importance in understanding the transition between Bronze Age and Iron Age communities, all examples which survive comparatively well and have potential for the recovery of further archaeological remains are believed to be of national importance.

Part excavation of the slight univallate hillfort 300m west of Calcott Hall Farm has confirmed the date of the monument and shown that the surrounding ditch survives well as a buried feature. The interior also survives in good condition and is believed to contain features and deposits relating to the construction and occupation of the monument as well as the landscape in which it was built.

History

Legacy Record - This information may be included in the List Entry Details.

Details

The monument includes a slight univallate hillfort situated on the crest of a ridge of sands and gravels at c.100m OD. The site is almost circular and includes a defensive bank and external ditch enclosing an area of approximately 2.8ha. The bank is visible on the west side of the monument as a slight earthwork. The modified scarp slope between the bank and ditch on this side is up to 3m deep. On the remaining sides the surrounding ditch, which has become partly infilled over the years, survives as a buried feature where it is no longer visible from ground level and the bank has been levelled so that it shows only as a slight break in slope. Two trial trenches excavated in 1990 revealed that the buried ditch is up to 1.4m deep and 3.4m wide with a symmetrical and steepsided profile and a flat bottom c.1.5m wide. Pottery sherds recovered from just above the ditch floor were dated to about the first century BC/first century AD. Excluded from the scheduling are the tarmac road surface, cricket pavilion, all other modern structures, fences and fence posts, although the ground beneath all of these features is included.

MAP EXTRACT The site of the monument is shown on the attached map extract.

Selected Sources

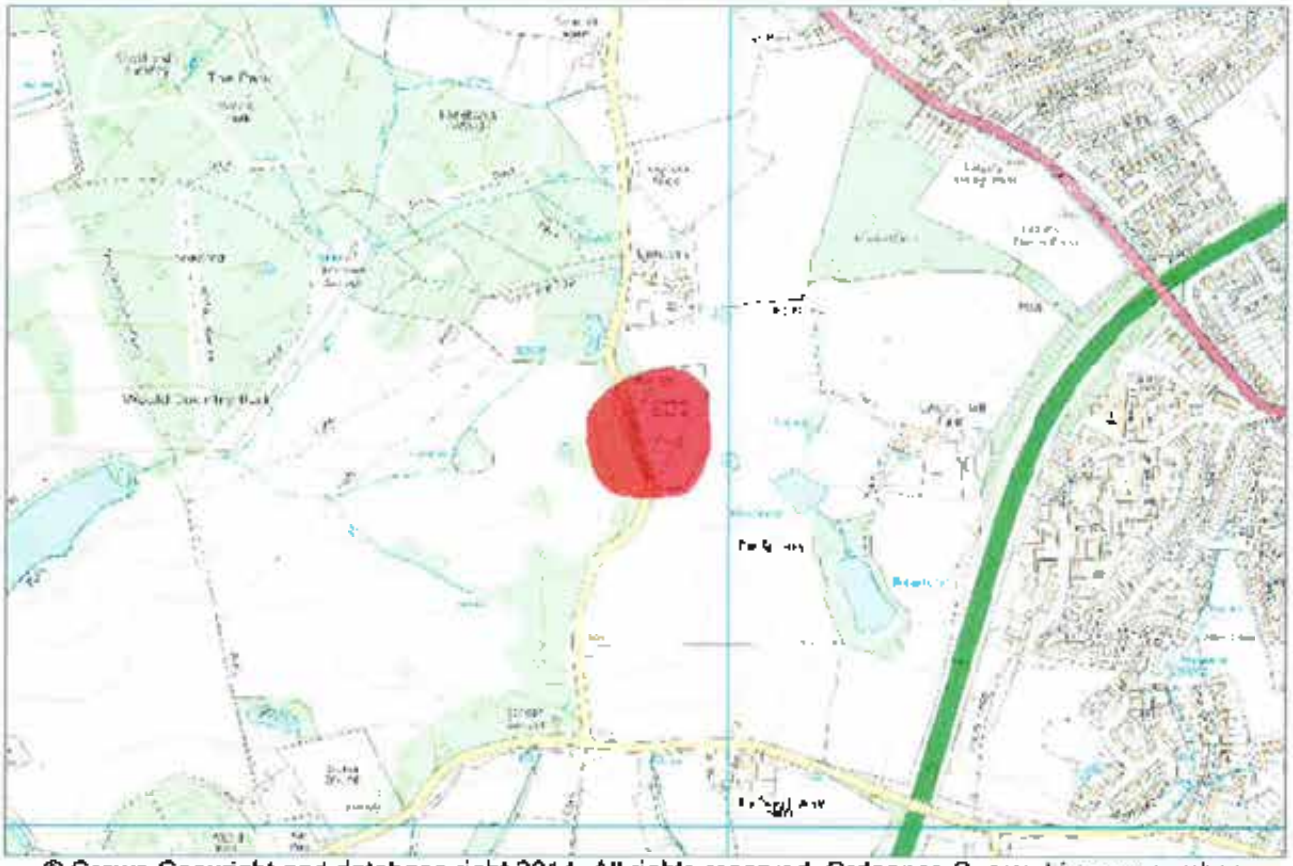
Books and journals

The Victoria History of the County, (1903), 283
Bedwin, O, Godbold, S, 'Essex Archaeology and History' in South Weald, (1991), 157

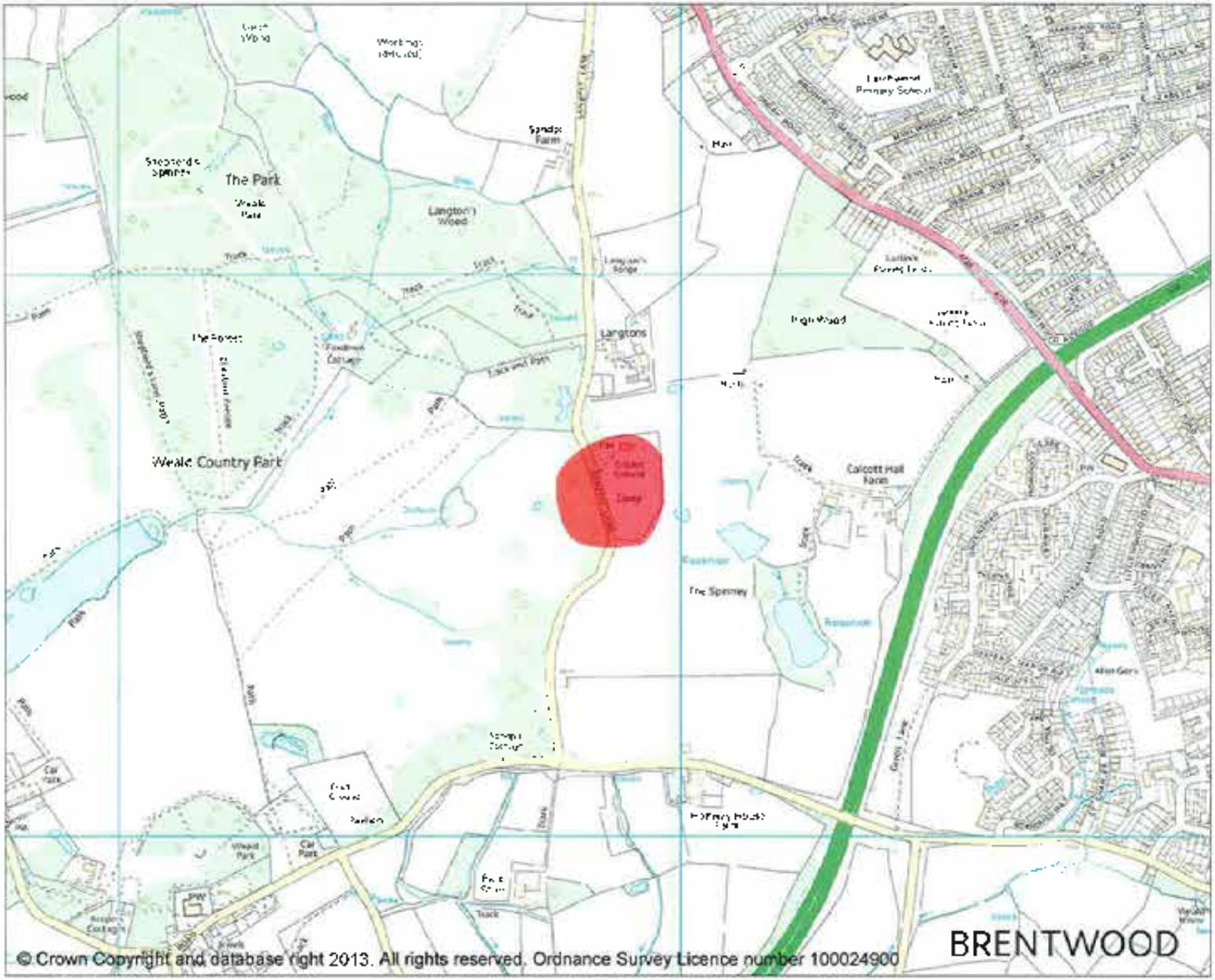
Map

National Grid Reference: TQ 57873 94613

The below map is for quick reference purposes only and may not be to scale. For a copy of the full scale map, please see the attached PDF - 1013833.pdf - Please be aware that it may take a few minutes for the download to complete.



This copy shows the entry on 11-Nov-2014 at 12:42:54.



This is an A4 sized map and should be printed full size at A4 with no page scaling set.

Name: Slight univallate hillfort 300m west of Calcott Hall Farm

Heritage Category: Scheduling

List Entry No : 1013833

County: Essex

District: Brentwood

Parish: Non Civil Parish

Each official record of a scheduled monument contains a map. New entries on the schedule from 1988 onwards include a digitally created map which forms part of the official record. For entries created in the years up to and including 1987 a hand-drawn map forms part of the official record. The map here has been translated from the official map and that process may have introduced inaccuracies. Copies of maps that form part of the official record can be obtained from English Heritage.

This map was delivered electronically and when printed may not be to scale and may be subject to distortions. All maps and grid references are for identification purposes only and must be read in conjunction with other information in the record.

List Entry NGR: TQ 57873 94613

Map Scale: 1:10000

Print Date: 11 November 2014

ENGLISH HERITAGE

1 Waterhouse Square, 138–142 Holborn, EC1N 2ST
Tel: 020 7973 3000 www.english-heritage.org.uk

CgMs

www.cgms.co.uk

DOCUMENT 6 - DRAINAGE

Background

The development Site comprises 8.2ha of land located either side of the A12, Brentwood.

The intention is to develop up to 200 new dwellings at the Site, served by a new access from Doggingshurst Road for Parcel A and Warescot Road for Parcel B.

A topographical survey was undertaken in October 2014, which shows that the Site generally falls from southwest to the north and northeast, from 86.9mAOD to 79.1mAOD (gradient 1:50) and 85.8mAOD to 83.0mAOD (gradient 1: 85) for Parcel A and B, respectively.

A Concept Drainage Strategy Plan (T842-02) has been developed and should be read in conjunction with this report.

Geology

British Geological Survey (BGS) mapping indicates that the two sites are predominately underlain by Lowestoft Formation apart from the northeastern corner of Parcel A where no superficial deposit were recorded. The bedrock geology for both Sites are made up of claygate member (clay, silt and sand). The composition of the geology based on BGS records indicates that infiltration at the Site may be possible, this will need to be confirmed with a BRE 365 compliant Soakage Test. The conceptual drainage strategy has been developed based on the worst case scenario and assumes that no infiltration is possible at the Site at this stage.

Flooding

A review of the Environment Agency (EA) Flood Risk Maps shows that the site is entirely within Flood Zone 1. The site is not shown as being at risk from reservoirs, however an area of surface water flood risk is shown, corresponding with the low point along the northern boundary of Parcel A. The southern boundary of Parcel B is also shown to be affected by surface water flooding.

The Site is not located within the EA Groundwater Source Protection Zone.

Anglian Water Sewers

Anglian Water record plans show that there is a 1350mm diameter foul sewer crossing the southeast corner of Parcel A, continues in a south westerly direction, crossing A12 and through Parcel B. It continues under the residential dwelling no. 62 fronting Warescot Road in a southwest direction.

There is also a 300mm diameter surface water sewer located within Parcel B. The sewer appears to drain runoff from the road and properties fronting Kimpton Avenue and Warescot Road. The sewer flows from south to north and then west under dwelling no. 54 in Warescot Road. The sewer runs within the garden of dwelling no. 54 and enters Parcel B in the southwest corner.

Surface Water Drainage

Surface water within the Site is currently believed to discharge into the surrounding shallow ditches through overland flows.

The greenfield runoff rates have been calculated for the overall Site and shown in Table 1. The proposed discharge rates from the Site will need to be limited to the existing greenfield discharge rates for the corresponding return periods.

Table 1: Greenfield Runoff Rates

Return Period	l/s	l/s/ha
1	19.8	2.4
30	52.8	6.4
100	74.3	9.1

The proposed storage volume requirement is calculated assuming that the proposed development will result in 60% of the existing area becoming impermeable, the volume required is shown in Table 2. At this stage, a 10% allowance for urban creep has been not been included, however it is anticipated that there is sufficient volume in the proposed piped network to accommodate the additional volume.

In addition, the Long Term Storage (LTS) has been calculated. This is the additional volume of water that is generated as a result of the additional impermeable area. The LTS is 837m^3 based on the assumption that 4.92ha (60%) of the existing Sites will become impermeable, this includes roof areas and roads.

Table 2: Proposed Storage Volume Requirements

Return Period	Limiting Discharge Rate l/s	Storage Volume (m^3)
1	19.8	654
30	52.8	1,410
100	74.3	1,867
100 + 30%	74.3	2,466

Based on the calculations above, a total storage volume of 3,303m^3 (for the 1 in 100 year plus climate change plus LTS) is required as a result of the proposed development during the 1 in 100 year plus 30% allowance for climate change storm events.

The Site will be divided into three hydraulic catchments. They will be drained independently from each other with their own outfall. The proposed discharge rates and volume requirement for each catchment are shown in Table 3 below.

Table 3: Limiting Flows and Storage Requirements for each catchment

Catchment	Area (ha)	Restricted Discharge Rate	Storage Volume Required (m^3) for 1:100yr + 30% CC	Long Term Storage Estimate Requirement (m^3)	Total Storage Requirement (m^3)
Catchment 1	0.46	1:1yr – 1.2 l/s 1:30yr – 3.0 l/s 1:100yr – 4.2 l/s	140	47	187
Catchment 2	2.04	1:1yr – 4.8 l/s 1:30yr – 13.1 l/s	612	208	820

		1:100yr – 18.5 l/s			
Catchment 3	5.70	1:1yr – 13.8 l/s 1:30yr – 36.7 l/s 1:100yr – 51.6 l/s	1714	582	2296
Total	8.20		2466	837	3303

Catchment 1

Catchment 1 is located to the south east corner of Parcel B.

Attenuation features in the form of a basin, infiltration trenches and permeable paving will be provided to store and convey flows.

Catchment 2

This catchment forms the majority of the western part of Parcel B, the proposal is to discharge surface water from here into the existing culvert at greenfield runoff rates.

Attenuation within this area will be provided by swales, infiltration trenches, permeable paving and an offline basin. As the Site has a flat gradient, a swale or infiltration trench will be incorporated as part of the drainage system to fall within the drainage network from the Site into the existing headwall.

Catchment 3

Catchment 3 encompasses all of Parcel A. The proposal for this catchment is to drain surface water within this area from west to east following the existing site topography. Two basins are proposed within the Site to provide attenuation, these are connected in series and convey surface water via infiltration trenches to a pond located at the north east corner of the Site. Permeable paving is also implemented for attenuation purposes. Surface water conveyed to the pond will discharge into the existing ditch at greenfield runoff rates.

Treatment Level

The use of infiltration trenches to convey flows between basins and the pond will provide a minimum of two levels of treatment for the surface water runoff from catchment 3. Whilst the combination of infiltration trenches, swales and basins within catchment 1 will provide a minimum of two levels of treatment. For catchment 2 treatment will be provided in the proposed swale and infiltration trenches prior to discharge into the existing ditch.

Adoption

It is assumed that the sewers and estate roads will be offered for adoption, on this basis the piped network has been designed to provide free discharge into basins, swales or ponds. Permeable paving has been limited to private estate roads, driveways and parking courts. It is intended that the basins, pond, swales and infiltration trenches will be offered to a management company.

Summary

The Site consists of two parcels, split by the A12 and predominately underlain by Lowestoft Formation and Claygate Member. Existing foul and surface water sewers navigate the Site, together with a number of watercourses which will continue to serve the Site post development. The site is entirely within Flood Zone 1 and is therefore suitable for a residential development.

A Concept Drainage Strategy has been produced which uses a range of SuDS to convey, store and provide treatment of run-off prior to discharge at greenfield run-off rates. The SuDS proposed include Swales, Infiltration Trenches, Permeable Paving, Basins and a Pond and will be complimented by a network of adoptable surface water sewers. The surface water drainage strategy has been designed to accommodate the peak 1 in 100 year storm event, with an additional allowance of 30% for future climate change. The strategy considers future adoption and includes suitable treatment stages and allowances for long term storage and can accommodate a 10% increase in impermeable area to account for urbanisation.

It has been established that the Site is suitable for development and the Concept Drainage Strategy demonstrates the SuDS measures employed to mitigate against any increased flood risk from the site post development. Subject to further investigation and detail design, it is considered that a Flood Risk Assessment and Detailed Drainage Strategy can be prepared to support a successful planning application for the development.

DOCUMENT CONTROL SHEET

REV	ISSUE PURPOSE	AUTHOR	CHECKED	APPROVED	DATE
-	Draft	KC	BB	-	10/03/2016
A	FINAL with minor changes	OF	OF	BB	23/03/2016

DOCUMENT 7 - NOISE

ARDENT CONSULTING ENGINEERS

COUNTRYSIDE PROPERTIES (UK) LTD

PROPOSED RESIDENTIAL DEVELOPMENT: LAND OFF VIKING WAY AND DODDINGHURST ROAD, BRENTWOOD, ESSEX

DESKTOP NOISE ASSESSMENT

REPORT REF. NO T842-02
PROJECT NO. T842
MARCH 2016

PROPOSED RESIDENTIAL DEVELOPMENT:
LAND OFF VIKING WAY AND DODDINGHURST ROAD
BRENTWOOD, ESSEX

DESKTOP NOISE ASSESSMENT

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REPORT REFERENCE NO T842-02
PROJECT NO. T842
MARCH 2016

CONTENTS

DOCUMENT CONTROL SHEET

REV	ISSUE PURPOSE	AUTHOR	CHECKED	APPROVED	DATE
-	Draft	MNR	MNR	DRAFT ONLY	11/03/16
-	Final	MNR	MNR	SJB	23/03/16

1.0 INTRODUCTION

1.1 Ardent Consulting Engineers (ACE) has been appointed by Countryside Properties (UK) Ltd to advise on the impact of noise on the proposed development of land off Viking Way and Doddinghurst Road, Brentwood, Essex, to provide residential dwellings.

1.2 This desktop-based Indicative Noise Assessment has been prepared to give an indication of the likely noise climate affecting the site and the anticipated noise mitigation measures that may be required. The assessment is based upon noise measurements and calculations for the A12.

1.3 Further assessment works including comprehensive measurements at the development should be undertaken to validate and refine the findings of this report, prior to submission of the planning application.

Site Location

1.4 The development site comprises two parcels of land, the land to the north of A12 is Parcel A and the land to the south of A12 is Parcel B. The site area is 5.7ha and 2.5ha for Parcel A and B, respectively. The combined area for both Sites is 8.2ha. The location of the site is shown at **Plate 1.**

Plate 1: Site location extract

Development Proposals

1.5 The intention is to develop up to 200 new dwellings at the site, served by a new access from Dogginghurst Road for Parcel A and Warescot Road for Parcel B. The Housing mix is unknown at the time of writing this report. Indicative development proposals are shown at **Plate 2** on the following page.

Plate 2: Indicative development proposals (Extract)

2.0 POLICY AND GUIDANCE

2.1 In forming the conclusions of this report the latest *National Planning Policy Framework* and Planning Practice Guidance has been referred to. Relevant standards and guidance to which the development would need to adhere include:

- National Planning Policy Framework (NPPF) – March 2012
- Noise Policy Statement for England (NPSE) - 2010
- BS 5228 Part 1: Code of practice for noise and vibration control on construction and open sites – 2009
- Control of Pollution Act 1974
- World Health Organisation – Guidance on Community Noise
- BS8233:2014 – Guidance on Sound Insulation and Noise Reduction for Buildings

2.2 The main reference document stating desirable noise levels, relevant for the residential development is BS 8233.

3.0 MEASUREMENTS, PREDICTIONS AND CALCULATIONS

3.1 A preliminary noise survey was undertaken at Parcel A with monitoring positions shown at **Plate 3** below:

Plate 3: Noise monitoring positions

3.2 Manually observed noise monitoring was undertaken at points RT 1 and RT 2 on 18th June 2014 to give an indication of noise exposure. Consideration is given to these measurements when specifying indicative noise mitigation in equivalent areas.

3.3 It was noted that background noise at the monitoring positions and across the site were most significantly contributed to by road noise from the A12. Calculations for basic noise levels emitted by the A12

were undertaken using DfT traffic count data, in accordance with Calculation of Road Traffic Noise (CRTN). These calculations were validated using the measurements undertaken in 2014.

3.4 Measurements and calculations indicate that noise levels adjacent to the A12 will be in the region of 67.8dB LAeq(16hour) (daytime hours). This is however, prior to the implementation of any mitigation.

3.5 Areas shielded from the A12 will have a more modest noise exposure and relative mitigation.

4.0 NOISE MITIGATION

Internal Noise Criteria

4.1 *BS8233:2014 "Sound insulation and noise reduction for buildings"* describes recommended acceptable internal noise levels for residential spaces during daytime and night-time hours. These levels are shown in **Table 4.1**:

Activity	Location	Design range $L_{Aeq,T}$ (dB)	
		Daytime (07:00-23:00)	Night-time (23:00-07:00)
Resting	Living Room	35	-
Dining	Dining Room/Area	40	-
Sleeping	Bedroom	35	30

Table 4.1: BS8233 recommended internal background noise levels

4.2 Preliminary calculations indicate that these noise levels can be achieved with modest mitigation at the worst affected properties close to the A12. Outline mitigation is indicated in the following paragraphs.

Buffer Distance

4.3 The proposed building line should fall a minimum distance of 25m from the nearside channel of the A12 to ensure reasonable mitigation measures at the façade. This is equivalent to existing properties adjacent to the site.

Glazing

4.4 Sound reduction performance calculations have been undertaken in order to specify the minimum performance required from glazed elements in order to achieve recommended internal noise levels shown in **Table 4.1**.

4.5 Calculations have been based on bedrooms with relatively high ratios of glazing to masonry. This specification therefore presents the most robust worst case assessment, applying *BS8233:2014* criteria for internal noise levels in a bedroom at all affected facades.

4.6 A suitable glazing unit for sensitive rooms on the façades facing and adjacent to the A12 will require a sound reduction index of **41dB (R_w) / 34dB (R_w+C_{tr})**. This can be achieved using a glazing unit of 8.8mm thick acoustic laminated glass, a 16mm cavity and 6mm thick glass.

4.7 Consideration should be given to the internal layout of properties adjacent to the railway line to avoid sensitive rooms on this façade.

4.8 A suitable glazing unit for the remaining sensitive rooms on facades shielded from railway noise, will require a sound reduction index of **35dB (R_w) / 29dB (R_w+C_{tr})**. This can be achieved using a glazing unit of 8mm thick glass, a 6-16mm cavity and 6mm thick glass.

4.9 Glazing to non-sensitive rooms could most likely be standard thermal double glazing and achieve a “desirable” internal ambient noise levels defined within BS 8233.

Ventilation

4.10 With windows open in habitable rooms facing and adjacent to the A12, desirable internal ambient noise levels will be exceeded. In order to achieve desirable internal ambient noise levels and maintain a suitable level of cooling and ventilation with the windows closed, acoustically attenuated passive ventilation (acoustic air bricks or similar) or mechanical ventilation will be required.

4.11 Trickle ventilation or other natural ventilation will be sufficient for remaining areas of the proposed development such as non-sensitive rooms.

External Areas

4.12 Rear garden areas and shared sensitive amenity space should be shielded from the A12 by buildings to ensure external noise criteria can be met. Garden fences may need to be of any uprated specification such as double lapped close board where they are more exposed to road traffic noise.

4.13 All mitigation measures presented within this report are subject to a detailed noise impact assessment based upon the final layout.

5.0 CONCLUSIONS

5.1 Subject to appropriate mitigation measures such as those outlined in **Chapter 4**, proposed internal and external areas of the proposed development could be demonstrated to be within desirable noise levels, subject to a detailed assessment.

5.2 Ambient vibration levels may be of a concern this close to A12 and will need to be addressed during the detailed assessment works.