



place  
services

**The Deer Sanctuary, Theydon Bois, Epping Forest  
Conservation Statement  
2016**



# **The Deer Sanctuary, Theydon Bois, Epping Forest**

## **Conservation Statement**

Prepared for City of London

Prepared by Place Services

at Essex County Council

County Hall

Chelmsford

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## 1.0 Introduction and scope

### 1.1 Background

Historic Environment specialists within the Place Services team at Essex County Council were commissioned to prepare a Conservation Statement for the Deer Sanctuary, Theydon Bois, Epping Forest, in order to better understand the historical evolution of the site and to inform decision-making around the future management of this part of the City of London's estate, which falls within the Epping Forest 'Buffer Lands'. A key aim of the Conservation Statement was to establish whether land within the Deer Sanctuary has a history of being a designed landscape, the different phases of any past landscaping of the site, and the extent to which any original layouts and planting survive today, as well as to establish the significance and interdependence of any landscaping schemes.

### 1.2 Methodology and Scope

The required works comprised desk based research, including map regression; a field inspection of the Deer Sanctuary (Appendix 1), including an assessment of the condition of surviving historic landscape features, such as trees and earthworks, and an analysis of the heritage values associated with the site. The format of the condition report has been taken and adapted from the City of London standard template for Conservation Management Plans, and includes an overview of the regulatory framework by which it's natural and cultural heritage is protected, and the resultant constraints that will influence any future change at the site.

### 1.3 Standards

The project was undertaken in accordance with the Institute for Archaeologists (IfA) *Standard and Guidance for desk-based assessments (IfA 2008a)* and for *Stewardship of the Historic Environment (IfA 2008b)*.

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### 1.4 Assumptions and limitations

Data used to compile this report includes secondary information derived from a variety of sources, only some of which have been directly examined for the purpose of this assessment. The assumption is made that this data, as well as that derived from other secondary sources, is reasonably accurate.

This document contains a summary of the legislative and policy framework, together with associated consent regimes, that apply to the cultural and natural heritage of the Site. Legislation and policy is subject to regular review and change. It should also be noted that this document does not form a complete record of the heritage assets. For these reasons the contents of this report should not solely be relied on for the purposes of decision making and design.

The field survey of the Deer Sanctuary was unimpeded, but was limited to a rapid visual inspection of historic trees, and other surviving historic landscape features. Trees within areas of woodland were not subject to individual inspection.

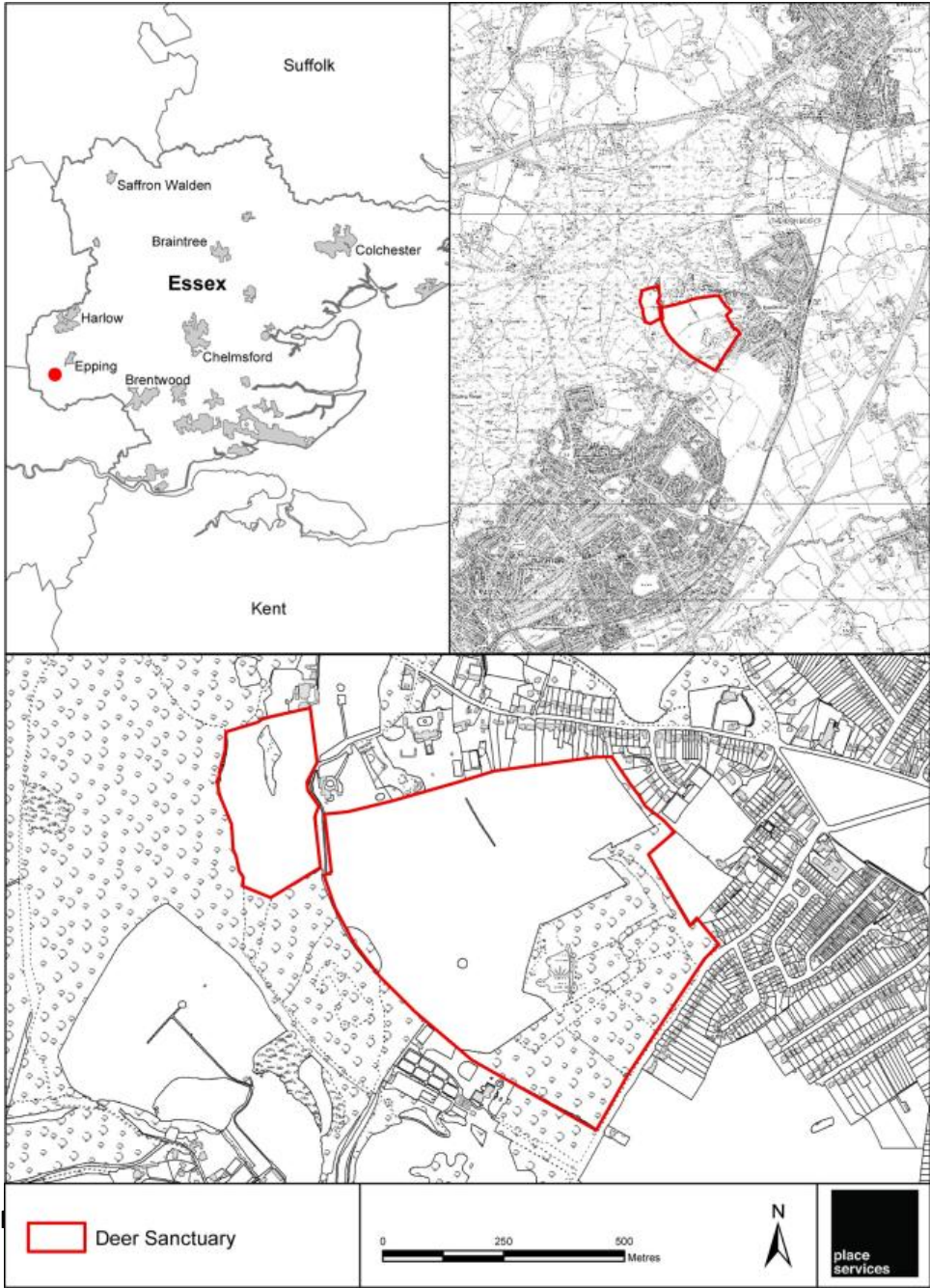


Figure 1 Location Plan of the Deer Sanctuary

Ordnance Survey©Crown Copyright 2011. All rights reserved.  
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## 2.0 Understanding the Asset

### 2.1 Brief Description of the Site

The Epping Forest Deer Sanctuary, which is home to around 160 fallow deer, is comprised of 12 acres of land located within the former estate of Birch Hall, Theydon Bois, adjacent to the northern end of Epping Forest. Deer are mentioned specifically in the Epping Forest Act as animals that need protection, and the Deer Sanctuary was established in 1959 for this purpose. The site is owned and administered by the City of London as Conservators of Epping Forest.

The Deer Sanctuary is situated on a south-eastern sloping spur of the main Epping Forest ridge. It is sited between the 100m and 48m contours OD. Within the site the land slopes gradually to the east and more steeply to the south-west. The local geology is London Clay with a small patch of overlying Stanmore gravels. A small stream, which flows in a south-easterly direction, forms part of the western boundary of the site, it is one of the tributaries of the River Roding. In places there are localised areas of wet ground, particularly in the north-east corner of the holding and in the area of a small pond. Approximately two-thirds of the area is down to pasture, containing individual trees from remnant field boundaries, with Gaunt's Wood comprising the remainder. The Site offers extensive views out across south Essex to London.

### 2.2 Summary History

Archaeological records for the Site and its immediate vicinity are detailed in Appendix 2 and a detailed history is provided in Appendix 3. The site of Birch Hall is first mentioned in 1319 when it was a tenancy of Theydon Bois Manor, which was in turn held by Waltham Abbey. An incomplete rectangular moat on the site of Birch Hall to the north of the Deer Sanctuary probably represents the site of the original medieval holding. Little can be said with certainty of the medieval layout of the Deer Sanctuary holding, except that it was farmland. The two woods, Gaunts and Redoak, that form the southern edge of the holding take their names from medieval tenants, so may well have been in existence at that date. It is also possible that the field boundaries had their origin in the medieval period, certainly those that contain flowing streams are likely to be ancient in origin. Birch Hall would have shared in the inter-commoning rights (grazing, pannage, etc.) for Epping Forest, which formed the western boundary of the estate. A drove road linked Debden Green to Epping Forest to the immediate west of the site.

In the 16<sup>th</sup> or 17<sup>th</sup> century Birch Hall was rebuilt; there are a number of earthworks within the grounds of the Hall that may relate to this phase of occupation between the present Birch hall and Birch Hall Farm. The area of the Deer Sanctuary remained as farmland. This incarnation of the Hall was demolished in the late 18<sup>th</sup> century and the site was landscaped into a series of broad grassy terraces overlooking the sloping ground to the south. The layout of the fields within the Deer Sanctuary can be established from the historic cartographic evidence for this period. In the mid-19<sup>th</sup> century the two woods were linked by the planting of additional woodland between them, and the wooded area was extended by the planting of ozers in the boggy area to the north-east of Redoak Wood.

In 1892 a substantial red brick house was erected to the north-east of the previous Birch Hall site. The two lodges and several of the cottages in Coppice Row appear to be of the same period. Between 1892 and 1897 the fields within the Deer Sanctuary to the south of the Hall were re-modelled to create what

was in effect informal parkland. This alteration included the removal of field boundaries and hedges, leaving the mature hedgerow trees in place to form individual standards, and the damming of the water course next to Gaunt’s Wood to form a small lake. A boat house was located on the western shore of the lake; its location is now marked by a shallow earthwork depression. However, there is no evidence for any formal landscaping, or parkland planting of the site as a country house landscape associated with Birch Hall. In 1959 the area of the Deer Sanctuary was conveyed to the City of London, to form part of the Forest’s ‘Buffer Lands’, when 12 acres of land were fenced off as a safe place to graze for the Forest’s deer. The major phases of known activity at the Deer Sanctuary are summarized below in Table 1 and phase summaries are presented in Section 2.3.

<b>Medieval Period (1066-1537)</b>	<b>Part of the farm associated with the moated site of Birch Hall on the edge of Epping Forest</b>
<b>1319</b>	First documentary reference to Brich Hall
<b>Post medieval Period (1538-1900)</b>	Continues as part of farm associated with Birch Hall
<b>1616</b>	Birch Hall becomes the manorial centre for Theydon Bois
<b>Late 16th -late 18th centuries</b>	Birch Hall and gardens rebuilt and landscaped with series of broad terraces overlooking the Site
<b>Late 19th century</b>	Some amalgamation of the field system to form larger land parcels, expansion of woodland area
<b>1892</b>	Birch Hall rebuilt
<b>1897-1921</b>	Creation of informal parkland by hedgerow removal retention of mature trees. Construction of the lake
<b>1959</b>	Transfer of Birch Hall to the City of London
<b>1990</b>	19th century Birch Hall demolished, current Hall built

Table 1: Major Phases of activity at the Deer Sanctuary  
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2.3 History by Phase (see also Appendix 3)

2.3.1 Medieval Period

The earliest direct reference to Birch Hall dates to 1319 when it was associated with a John *atte* Birches (Reaney 1935), at which date the landholder was Waltham Abbey. Theydon Bois was retained by the Abbey until the dissolution of the abbey in 1540. An incomplete rectangular moat on the site of the former Birch Hall may represent the location of the medieval holding, although there is some uncertainty as to how much of the surviving earthworks are medieval and how much dates to the 16/17<sup>th</sup> century landscaping of the site. Gaunts Wood and Redoak Wood, take their names from medieval tenants, whose houses may have been in the immediate neighbourhood. The field pattern as shown on the earliest maps for the area suggests some form of drove road, linking Debden Green to Epping Forest, to the immediate west of the Deer Sanctuary.

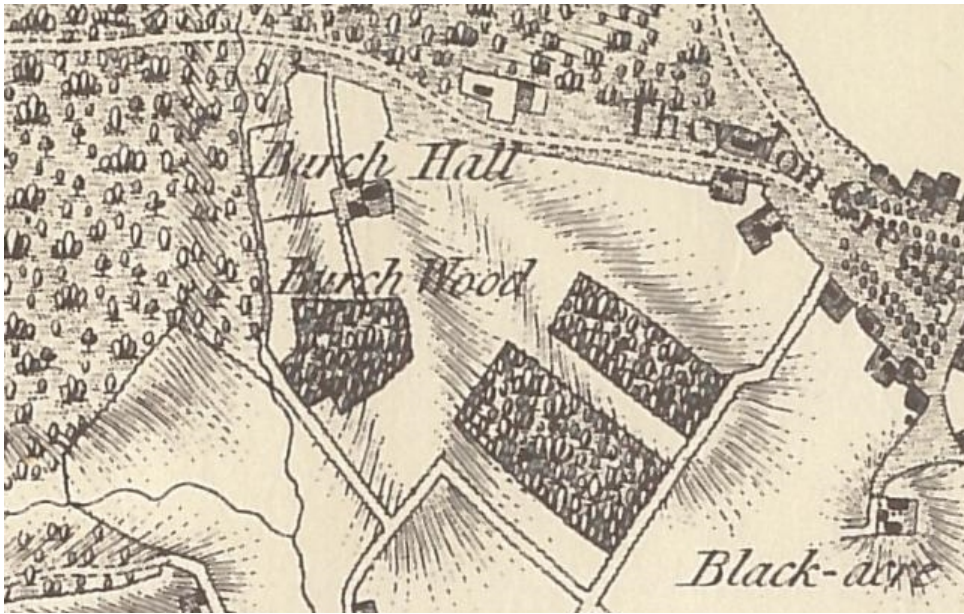


Figure 2 Excerpt from the Chapman and André map, 1777

### 2.3.2 16th-18th Centuries

Birch Hall and gardens were rebuilt and landscaped with a series of broad terraces overlooking the Site. On the Chapman and Andre map of 1777, Birch Hall is shown, on the highest point of the two projecting spurs of land that make up the holding. A track leads northwards from the Hall to join the common land adjacent to Coppice Row, with a second track heading south from the Hall linking it to Birch Wood. Two blocks of unnamed dense woodland to the south-east of this approximate to Gaunt's Wood and Redoak Wood. The rest of the Site, remained as farmland. A track or road ran along the southern edge of the landholding, linking Epping Forest and Birch Wood to Loughton Lane.

The 1799 map of the estate of John Hopkins Dare in Theydon Bois and Loughton includes Birch Hall, at which date it appears to have been farmed by a tenant, Mary Maynard. Although there are field names and numbers marked on the map it was not possible to read these with any degree of accuracy on the Essex Record Office (ERO) copy of the map. The area of the Deer Sanctuary is subdivided into 12 separate fields and two distinct areas of woodland. One of the fields appears to occupy the eastern part of the former extent of Birch Wood as based on the 1777 map (although this is by no means certain as the Chapman and André map is not always accurate in depicting woodland extents).

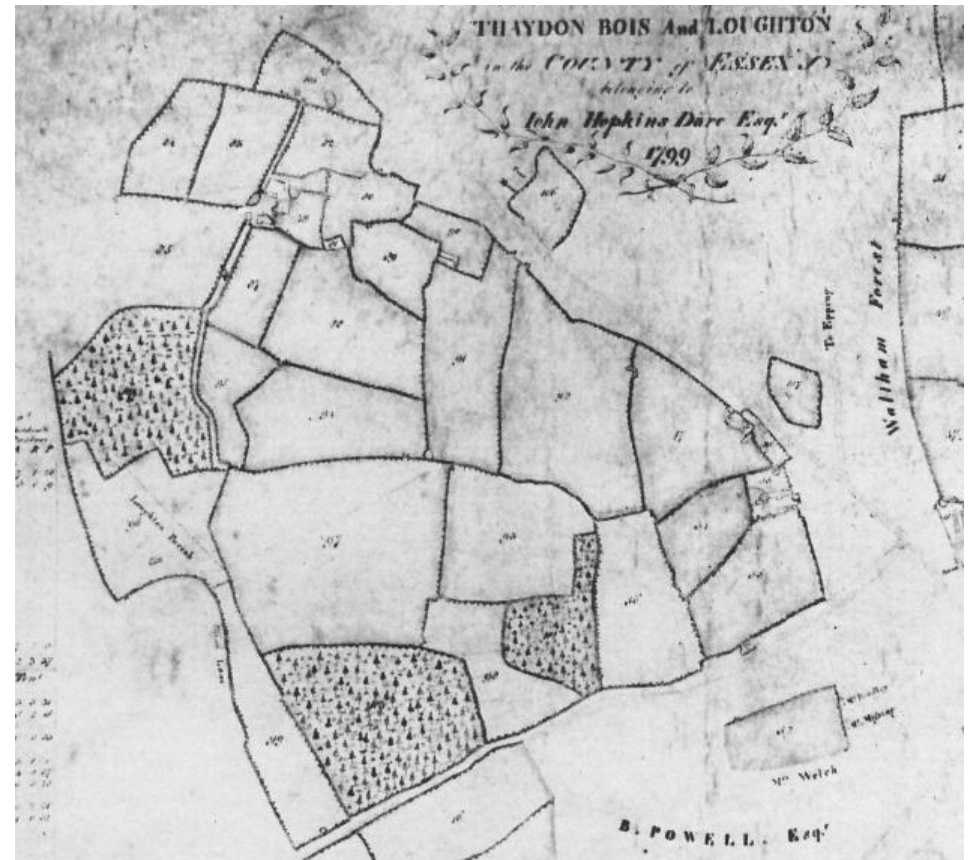


Figure 3 Excerpt from 'A survey of the Freehold Estate situated in the Parishes of Theydon Bois and Loughton in the County of Essex belonging to John Hopkins Dare, Esqr. 1799' (ERO D/DBx P1). The top of the map is orientated north-north-west.

*Table 2 Excerpt from the Tithe Award for Theydon Bois (ERO D/CT 349)*

The Theydon Bois tithe map for the Deer Sanctuary is little changed from the 1799 map. 'Birch Hall Fields' are shown as a single field. An area of oziers (willows) has been planted at the north-eastern extremity of Redoak Wood, to make use of the extremely boggy land in that area. The gap between Gaunt's Wood and Redoak Wood has been filled with trees and the northern woodland boundary straightened. Redoaks Wood was variously recorded as Reddocks and Ruddocks on the Tithe Award. It and Gaunt's Wood are identified as woodland, the remainder was down to grass.

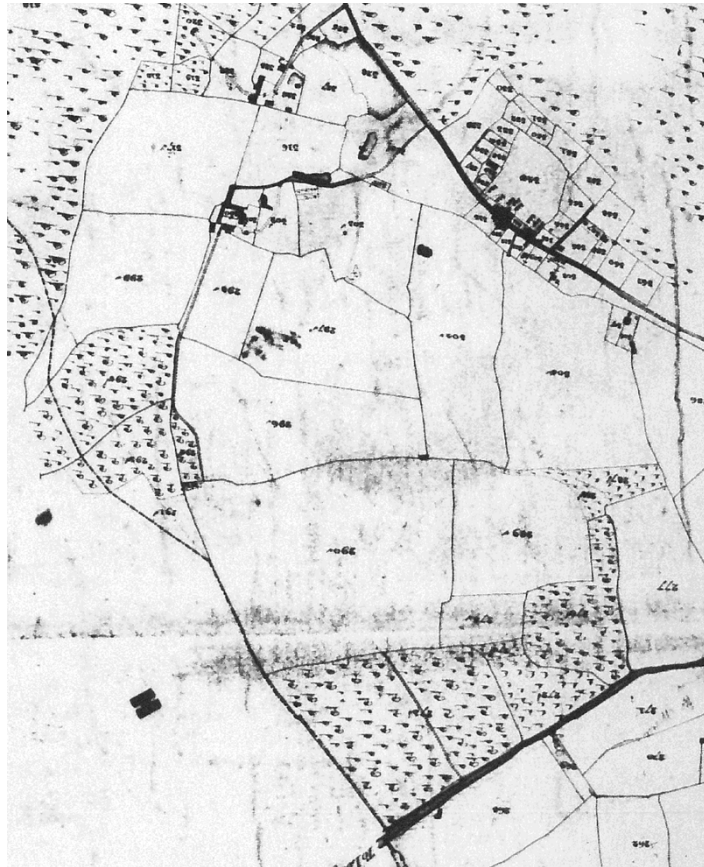


Figure 4

*Excerpt from 1848 Theydon Bois Tithe Map (ERO D/CT 349)*

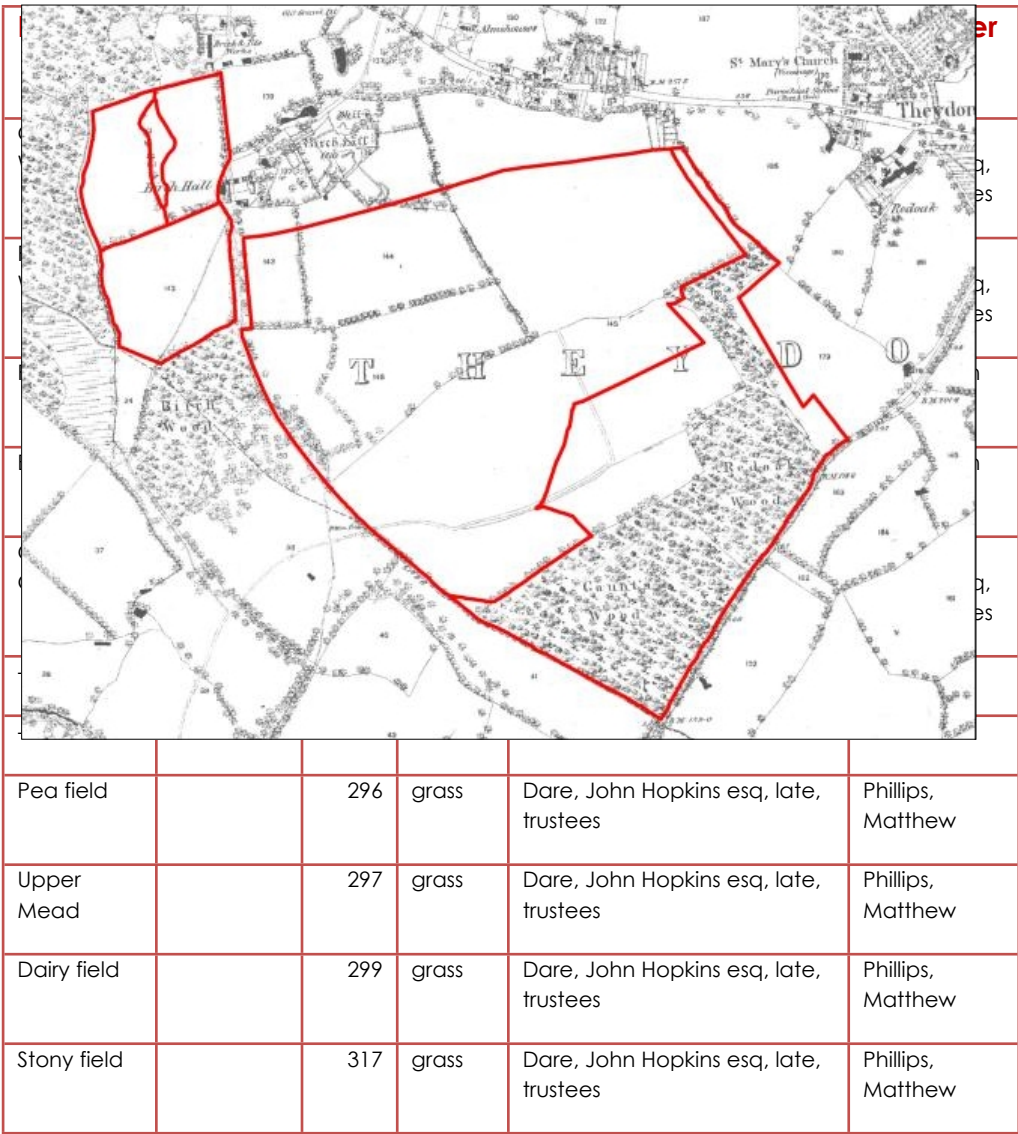


Figure 5                      Ordnance Survey 1<sup>st</sup> Edition 25" Sheet, 1881

The 1<sup>st</sup> edn. OS map shows a further degree of rationalization of the field pattern, with the amalgamation of the two fields in the north-east corner of the holding to form a single field. A new linear field, echoing the woodland boundary was created adjacent to the woodland.

2.3.3    Late 19th Century

The 1897 OS 2<sup>nd</sup> edn. map shows considerable changes from the 1881 map. In 1892 a substantial red brick house was erected to the north-east of the previous

Birch Hall site. The two lodges and several of the cottages in Coppice Row appear to be of the same period. Between 1892 and 1897 the fields within the Deer Sanctuary to the south of the Hall were re-modelled to create what was in effect informal parkland, and the layout of boundaries and trees that largely survives today. This alteration included the removal of field boundaries and hedges, leaving the mature hedgerow trees in place to form individual standards, and the damming of the water course next to Gaunt's Wood to form a small lake.

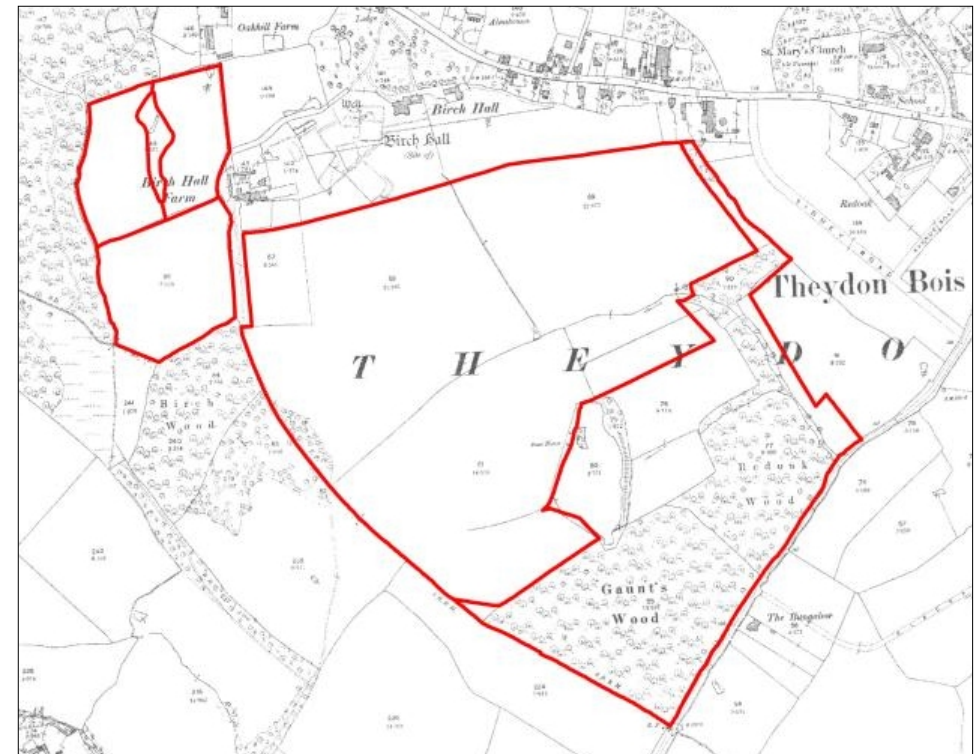


Figure 7 Excerpt from the 1921 3<sup>rd</sup> edn. OS map

Figure 6 Excerpt from the 1897 2<sup>nd</sup> edn. OS map

By the time of the 3rd edition OS map, in 1921, a small boat house had been built on the lake edge. Below Birch Hall was a square enclosure of unknown purpose. A number of paths are shown within the Gaunt's and Redoak Woods. There is no change between the 1921 3rd edition and 1938 4th edition OS maps.

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#### 2.3.4 Transfer to City of London 1959

On the 12<sup>th</sup> of June 1959 the Buxtons conveyed Birch Hall to the City of London. The estate comprised 'All those several closes or pieces of land which form part

of an estate known or formally known as the Birch Hall Estate situate in the parish of Theydon Bois in the County of Essex and comprise in the whole 88.554 acres or thereabouts’.

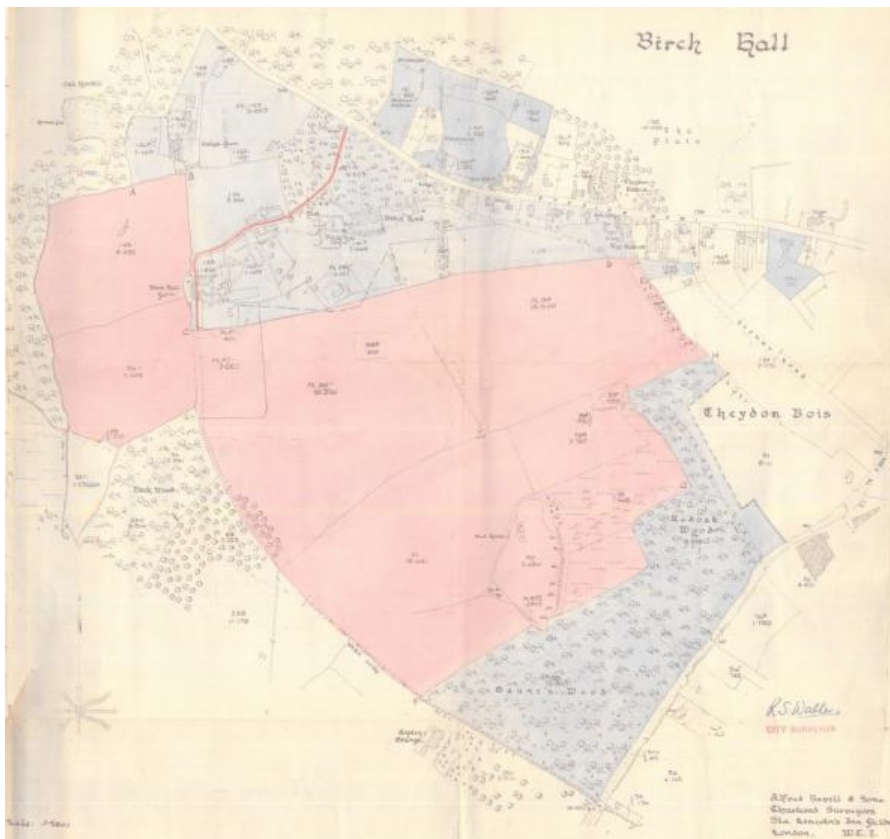


Figure 8 The map attached to the 1959 conveyancing document (the areas in pink could be repurchased by the vendor)

## 2.4 Site Uses Today

The site is currently owned by the City of London, who utilise the majority of it as a deer sanctuary, for the maintenance of a captive herd of almost black fallow-deer. The area of the deer sanctuary is largely under pasture with

individual mature trees. The remainder is under woodland to which the deer do not have access, and a small lake. The area is enclosed by deer-fencing and is not open to the public. Fields to the north-west are also under pasture. They are open to the public, via kissing-gates, and are criss-crossed by numerous desire lines leading to Epping Forest from the gates. Responsibility for the management of the Deer Sanctuary rests with COL through its Open Spaces Department. Current management on the site is largely restricted to tree work and fence maintenance. Members of staff from the City of London Open Spaces Department conduct arboricultural assessments of the trees growing on and around the Deer Sanctuary. Any trees that are identified as requiring work are dealt with by in-house arborists. The deer herd is also managed.



## 2.5 Site Condition Today

### 2.5.1 Trees

The majority of the veteran and historic trees across the Site have normal vigour and are in good or fair condition. Only three trees were found to be in poor condition, two of which were standing dead wood. See Appendix 3.

### 2.5.2 Lake

The lake is overgrown, with scrub and bank side trees obscuring views of it from the surrounding landscape to the west and north. The lake also has considerable growth of reeds. This is a priority habitat, but management is required to prevent natural succession to scrub. The lake dam is a relatively insubstantial earthwork, which is being encroached on by growth of secondary woodland to the east.

### 2.5.3 Boundary earthworks

Former field boundaries within the Site survive as 'ghost' boundaries, marked by shallow linear earthwork banks and ditches, some of which retain historic/veteran trees. The areas of ancient woodland are surrounded by

*Figure 9 Aerial view of the Site and surroundings (2010)*

## 3.0 Assessment of Significance

### 3.1 Assessing Significance

An assessment of significance explains what matters, why and to whom. It includes a description of those features that matter and an appraisal of why they are important. This provides the essential information needed to determine what management a site requires and what features of the site are most worthy of interpretation.

### 3.2 Statutory and non-statutory Designations

The Epping Forest Act 1878 lays down a legal framework for the preservation and management of Epping Forest. Section 4 of the Epping Forest Act 1878 makes all deer in the Forest the property of the Conservators and sets out their

relatively well defined bank and ditch boundary earthworks, including a short length of double bank and ditch where the south-west boundary of Gaunts Wood coincides with the parish boundary.

### 2.5.4 Woodland

The ancient woodland of Redoak Wood and Gaunt's Wood is broadleaf high forest comprising maidens and reverted coppice, which indicates the woodland's former traditional management of coppice with standards. The flora and regeneration of the woodland is poor due to browsing pressure by the deer over a sustained period. The former ride network in both woodlands has been lost

clear duties to protect the Forest's deer, which it states are 'to be preserved as objects of ornament'.

Epping Forest itself is designated as a Site of Special Scientific Interest under the Wildlife and Countryside Act, 1981 (as amended). The area of the Deer Sanctuary is it forms part of the Forest's Buffer Lands helping to protect the nationally important biodiversity of the Forest, from adjacent intensive land uses. This habitat is rare in Britain and is a priority for conservation in the UK Biodiversity Action Plan. Epping Forest is also a SAC under the Conservation (Habitats and Species) Regulations. Buffer land is not designated as SSSI or SAC so does not have as strong a degree of protection as the Forest. There are non-statutory designations within the Deer Sanctuary, comprising three separate Local Wildlife Site (LoWS) designations (EP64 Birch hall Pastures; EP72 Theydon Bois Deer Park West; EP75 Theydon Bois Deer Park East). Priority habitats within the site include areas of unimproved grassland, wood pasture and parkland, ancient woodland, lowland mixed deciduous woodland and reedbeds.

### 3.3 Summary Statement of Significance

Table 3 provides a summary of the different archaeological, landscape, ecological and amenity interests of the site. These are described in more detail in Appendix 5. The site is described in relation to its heritage values in section 3.4.

Heritage
<ul style="list-style-type: none"> <li>Contributes to setting of sites of medieval, post medieval and late Victorian Birch Hall</li> <li>Contributes to setting of Grade II 19<sup>th</sup> century Church of St Mary</li> <li>Potential for palaeo-environmental evidence in waterlogged ditches/field boundaries illustrating previous vegetation sequences in area</li> </ul>
Landscape
<ul style="list-style-type: none"> <li>Potential for palaeo-environmental evidence in waterlogged ditches/field boundaries illustrating previous vegetation sequences in area</li> <li>The site makes an important contribution to the character of the local landscape</li> </ul>
Ecology
<ul style="list-style-type: none"> <li>Locally important habitats designated as three different Local Wildlife Sites (LoWS):</li> <li>EP64 Birch Hall Pastures, comprising dry to damp, species-rich unimproved grassland on the eastern flank of Epping Forest</li> <li>EP72 Theydon Bois Deer Park West, containing a large number of veteran Pedunculate Oak (<i>Quercus robur</i>) trees, with much dead wood and fallen timber providing excellent habitat conditions for a range of invertebrates that are dependent on such wood for nesting and feeding sites</li> <li>EP75 Theydon Bois Deer Park East, comprising the mainly ancient woodland of Redoak and Gaunt's Woods, plus recent secondary woodland and a small lake.</li> <li>Potential for Protected Species e.g. Badger in Gaunt's Wood, GCN, bats etc.</li> <li>Ancient Semi Natural Woodland habitat</li> </ul>
Amenity
<ul style="list-style-type: none"> <li>Used by local people and visitors to Epping Forest for walking</li> <li>The Deer Sanctuary is frequently used for educational visits</li> </ul>

Table 3 Summary of Significance

## 3.4 Assessment by Heritage Value

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Principle 3.2 of English Heritage's 2008 *Conservation Principles* states: *"The significance of a place embraces all the diverse cultural and natural heritage values that people associate with it, or which prompt them to respond to it. These values tend to grow in strength and complexity over time, as understanding deepens and people's perceptions of a place evolve"*.

Understanding the significance of the Deer Sanctuary and the values that contribute to it, including their relative weight, are fundamental to the conservation planning process, and is vital when considering approaches to management interventions, since it may not be possible to sustain all the values equally. English Heritage's *Conservation Principles* identifies four primary categories of heritage values, each of which is described in relation to the Deer Sanctuary as follows:

### 3.4.1 Evidential Value

There is potential for palaeo-environmental evidence in the waterlogged parts of ditches, field boundaries and other wet areas within the Site to show previous vegetation sequences for this area, including the important transition of Epping Forest from lime-dominant woodland to the current tree profile of beech, birch, oak and hornbeam in the middle Saxon period.

### 3.4.2 Historical Value

The historical value of the Deer Sanctuary lies in its former role as the estate of Birch Hall, which has a long history dating back to the medieval period, and is associated with many families. The area of the estate now occupied by the deer sanctuary is illustrative of how ordinary farmed landscapes were changed into informal parkland-like landscapes at the time of the creation of the great landscaped parks. The Site contributes to the setting of the historic landscape of Epping Forest itself.

### 3.4.3 Aesthetic Value

The Deer Sanctuary forms a pleasant landscape of woods, trees and rough grassland with extensive views over Epping Forest. At the highest point, the view extends as far as London Docklands. The view across the Site from the west, below Birch Hall, gives the feel of informal parkland with individual trees and extensive grassland. The woodland at the bottom of the Site merges into the distance, creating a pleasing outlook. The lake is now largely obscured by the trees around it.

#### 3.4.4 Communal Value

There is public access to some parts of the site via footpaths which link the deer sanctuary to Epping Forest. The Deer Sanctuary is frequently used for educational visits.

## 4.0 Issues, Opportunities and Policies

In order to develop conservation policies that will serve to guide the future management of the Site, it is necessary to identify those issues which have affected the significance of the Site in the past, are currently affecting significance or which may make its significance vulnerable in the future, as well as any opportunities for future enhancements to the Site. Through the separation of these factors it is possible to clarify what needs to be managed to provide justification for the resulting conservation policies and management recommendations, and to enable resolution of any conflicting interests.

Each of the management issues and opportunities highlighted here has been identified during the process of developing an understanding of the Deer Sanctuary, documented in Section 2. Each of the management issues is addressed by one or more Conservation Policies (e.g. CP 3) that are set out in Section 4.5.

### 4.1 Management issues: the archaeological resource

- ARC 1 Any palaeo-environmental evidence and organic artefactual material preserved within water-logged deposits in the field boundaries and wet area may be drying out leading to a loss of information (CP 3; CP 5)
- ARC2 The earthworks forming the former woodland boundaries are at risk of damage from woodland management operations (CP 1)

### 4.2 Management issues: ecology and biodiversity

- ECO 1 There is a need to provide eventual replacement of mature and veteran tree habitat within the Site (CP 1; CP 3; CP 5)
- ECO 2 The understanding of the use of the site and its habitats by legally protected species e.g. badgers, bats and GCN, is incomplete and may be

required to meet legal obligations, to provide positive management and avoid negative impacts (CP 3; CP5)

4.3 Management issues: amenity

AMY 1 Physical and intellectual access to the Site is limited (CP 4; CP 5)

4.4 Management issues: landscape

LND 1 The lake is overgrown reducing its significance as an historic landscape feature (CP 1; CP 5)

LND2 There is a need to provide eventual replacement of mature and veteran trees, including pollard management, in order to retain the informal parkland landscape (CP 1; CP 3; CP5)

LND 3 Flora and regeneration of woodland within the Sites ASNW is poor due to over browsing by deer threatening the long term sustainability of the habitat (CP 1; CP2; CP5)

4.6.1 Vision and Philosophy

The Deer Sanctuary’s primary purpose is the conservation of Epping Forest’s deer population. In addition, it forms a valuable part of the ‘Buffer Lands’ that serve to safeguard and protect Epping Forest from intensive development, including modern agricultural activities, and to provide the Forest wildlife support and complementary wildlife habitats, thus facilitating the protection of the Forest’s flora and fauna. The land within the Deer Sanctuary, also contributes to the setting of designated and non-designated heritage assets, namely the Church of St Mary (Grade II Listed Building) and the medieval and post-medieval earthwork remains of Birch Hall, and represents an early 20<sup>th</sup> century informal parkland landscape of local significance.

The recommended long term vision for the Site is to retain the informal parkland landscape and habitat of Ancient Semi Natural Woodland, whilst maintaining its purpose as a deer sanctuary for the Forests fallow deer, and increasing public awareness of its function.

Each of the coded Conservation policies contained in Table 4 e.g. CON 1 has been identified during the process of developing an understanding of the Deer Sanctuary documented in Section 2 and the Appendices. The Conservation Policies are designed to guide the future conservation management of the Deer Sanctuary in order to conserve and sustain the heritage values and wider significance of the Site.

4.6 Conservation Policies

Policy Code	Policy Description
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Conservation Statement: The Deer Sanctuary, Theydon Bois, Epping Forest, Essex

CP 1	Sustain the ecological, landscape significance and heritage values of the Site
CP 2	Seek to restore the ASNW of Gaunt's Wood and Read oak Wood
CP 3	Support the understanding and conservation of the significance of the Site through appropriate survey, monitoring, and maintenance and by achieving required consents
CP 4	Seek to increase public awareness, understanding and enjoyment of the Site and its significance where this can be achieved without harm to the significance of the Site, or its primary purpose as a deer sanctuary
CP 5	Ensure the sustainable levels of resources are available to support conservation of the Site's significance

Table 4 Conservation Policies for the Deer Sanctuary

## 5.0 References

Baker, C.A., Moxey, P.A. and Oxford, P.M	1978	'Woodland Continuity and Change in Epping Forest' in <i>Field Studies</i> 4, 645-669
Chris Blandford Associates	2003	<i>Essex Landscape Character Assessment</i> , Chris Blandford Associates
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Countryside Agency	1999	Countryside Character, Volume 6: East of England
English Heritage	1991	<i>Conservation Plans in Action: Proceedings of the Oxford Conference</i> , English Heritage
English Heritage	2008	Conservation Principles, Policies and Guidance for the Sustainable Management of the Historic Environment
Essex County Council	1991	<i>Ancient Landscapes: Supplementary Planning Guidance</i> , ECC
Heritage Lottery Fund	2008	<i>Conservation Management Planning</i> , Heritage Lottery Fund
Hunter, J.	1999	<i>The Essex Landscape</i> , Essex Record Office: Chelmsford
Powell, W.R.	1956	<i>A History of the County of Essex: Volume 4, Ongar Hundred</i> , Victoria County History, London
Reaney, P.H.	1935	<i>The Place-names of Essex</i> , Cambridge University Press
Rumble, A. (ed.)	1983	<i>Domesday Book: Essex</i> , Phillimore, Chichester

## **6.0 Authorship/genesis of the CS**

The report was researched and compiled by Maria Medlycott, Alison Bennett, Sally Gale and Mike Bunker, who also undertook the field assessment of the Site.

## **7.0 Acknowledgement**

Thanks are due to Maya Polenz of the City of London's City Surveyor's Department, Sally Gadson, Nick Baker and Mick Collins of the City of London's Open Spaces Department.

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## Appendix 1 Site Visit

The site was visited on 18/11/15 when conditions were dry but cloudy and windy (Parcels 59/1 – 59/4), 24/11/15 when the conditions were cloudy, dull and raining on and off (Parcel 59/6) and on 1/12/15 when conditions were dry with occasional sunshine (Parcels 59/5 and 59/6). The walkover survey for the arboricultural assessment was carried out on the 3<sup>rd</sup> and 8<sup>th</sup> of November and 1<sup>st</sup> of December 2015. This was undertaken for the recording of historic and veteran features of the trees contained within the fenced area of the park, as well as to identify gross tree defects. The results of the tree survey are given in Appendix 4.

### ***Birch Hall Meadows - Parcel 59/1***

The field is rough grassland and from the east, the land slopes steeply down to the western side of the field. Along the western side is a stream flowing north to south. Beyond this is Birch Wood. The field is fenced on the east, south and west boundaries. The northern boundary consists of a ditch with mature trees along its line. There is a very damp area of land in the south-west corner and along the western edge near the stream.

### ***Birch Hall Meadows - Parcel 59/2***

This field lies to the north of Parcel 59/1 and is also bordered by the stream along its western edge. It also has rough grass, and slopes down steeply from east to west. This field is fenced to west, north and east boundaries, with a ditch and trees forming the boundary to the south.

### ***Birch Hall Meadows - Parcel 59/3***

This field lies to the south of Oak Hill Farm and west of the track by Birch Hall Farm. It is rough grassland and rises to the top of a ridge with a spectacular view southwards over the forest. The boundaries are fenced to the west, north and east, and to the south is the ditch and trees boundary.



*Fig. 10 Parcel 59/1 looking across to Epping Forest*



*Fig. 11 Parcel 59/3, looking south with Canary Wharf in the far distance*

***Birch Hall Meadows - Parcel 59/4***

This patch of land is in places steep or more level and damp. It has scrubby vegetation and mature trees. The remnant of a pond is situated towards the north of this area. It lies entirely between Parcels 59/2 and 59/3.

***Red Oak and Gaunt's Wood - Parcel 59/5***

This parcel comprises Redoak Wood, Gaunt's Wood, the modern lake and an area of secondary regrowth of woodland on former fields to the east of the lake, along the eastern edge of the deer sanctuary and between the original extents of Redoak Wood and Gaunts Wood.

The original woodland extents as depicted on the Tithe Award map of 1848 are defined on the ground by wood banks and/or ditches. These ditches are mostly dry, but the south-west boundary of Gaunts Wood coincides with the parish boundary and has a short stretch of double bank with ditch in between, and a stream flowing down it as far as the road. There are a number of mature trees, which have been coppiced in the past, and many young trees, including a stand of birch trees. There is a wild service tree near the road in Gaunts Wood, an indicator species for ancient woodland. The original boundary of Redoak Wood to the east was the stream that flows out to the road. The Deer Sanctuary now extends across the stream to the modern boundary along the north-east boundary of the sanctuary.

The lake has both open water and reed beds. It is surrounded by young trees and has a natural look. The dam is situated to the eastern side of the lake and woodland now lies east of this.



*Fig. 12 Parcel 59/5, looking towards the lake*

***The Deer Sanctuary - Parcel 59/6***

This large area consists of up to seven former fields shown on the 1st edition OS map. Looking across the area, it has the appearance of gently undulating open landscape with occasional mature trees giving a very parkland-like landscape (Fig. 17). In fact, all the individual trees line up on the former field boundaries, several of which retain a bank or a slight depression, representing a former ditch, or active ditches flowing north to south and west to east.



*Fig. 13 Parcel 59/6, general overview of the site, showing the parkland aspect, Gaunt's Wood formed the backdrop*

The land gently slopes towards the east, with three former valleys reflecting the original drainage pattern and giving the gently undulating character to the landscape. The streams are now either channeled along the former field boundaries or have been buried into land drains which discharge into the lake. The main west to east stream winds across the former fields in quite a deep ditch (Fig. 18). This stream is joined by another stream from the east and flows on into Redoak Wood to the south-east. There is what appears to be the remains of a former pond just before this confluence, and a couple of willow trees, which were originally planted for Osiers. There is a mixture of rough grassland and mowed or grazed grassland across the fields. A small area of mature trees is situated along the south-western boundary.



*Fig. 14 Parcel 59/6 Stream in ditch*

A modern copse plantation is situated towards the southern part of the parcel, on a small rise. Other modern elements consist of two watch towers and two ladder chairs associated with deer management. There are also lumps of concrete and old metal fence posts, gates and fences, possibly associated with earlier stock management, both lying down or standing along the south-western edge of this parcel. A modern earthwork structure is situated just south of the main west to east boundary at its western end and is used as a hide for deer management.



*Fig. 15 Parcel 59/6, Looking northwards from the west side of the lake towards the new Birch Hall*

Appendix 2 Archaeological Evidence

There are no archaeological sites or find-spots recorded on the Essex Historic Environment Record (EHER), within the Deer Sanctuary. There are nine EHER sites within a 250m radius of the Deer Sanctuary (Fig. 10). These include Epping Forest itself and Birch Hall (see table 5).

Figure. 16 Listed Buildings and Essex Historic Environment Record (EHER) sites

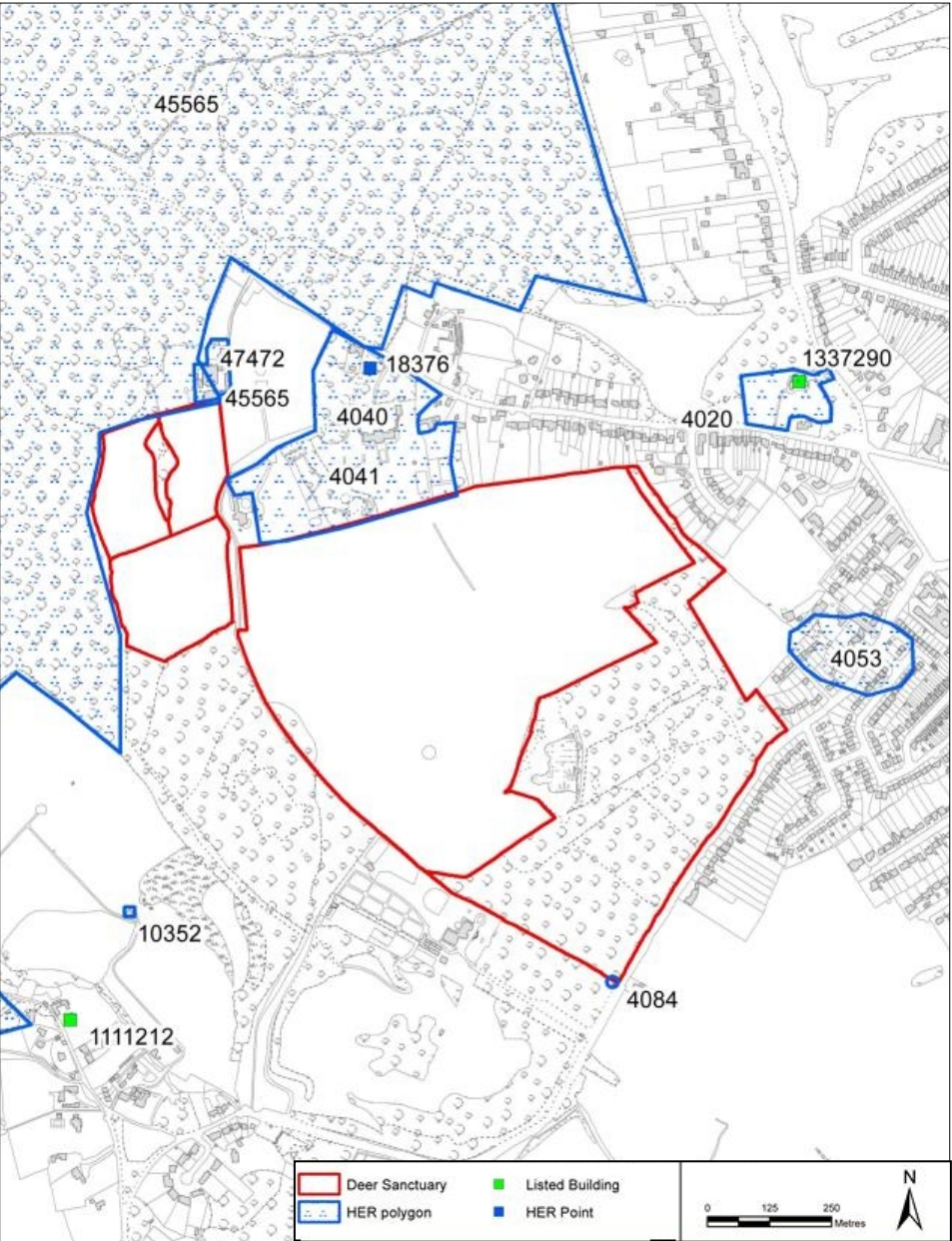


Table 5: Essex Historic Environment Record (EHER) sites within 250m of the Deer Sanctuary

EHER	GRID-REF	NAME	DESCRIPTION	STATUS
4020	TQ 4482 9925	St Mary's Church, Theydon Bois	The present church was erected 1850-1 and contains some fittings from the old church (EHER 4018, 4019). A small brick church with an unconventional south west tower with a spire.	LB II
4040	TQ 441 991	Birch Hall	In the grounds of Birch Hall, under the lawn, is a brick wall, supposed to be Roman. Fragments of undoubted Roman brick with pink mortar attached have been picked up on the site (information from Miller Christy). According to OS 1975 though genuine Roman brick has been found on the site, the OS consider this to be the remains of the previous house on the site	
4041	TQ 441 991	Birch Hall	Birch Hall - moat, possible DMV. The house (?) of John ate Birches in 1319. Birch Hall is also mentioned in 1542 and 1777. Incomplete, rectangular, manorial moat. The hillside on which Birch Hall stands 'has six or more broad terraces, ancient and modern, on one of which the house now stands. Another, below the old well, seems to be the site of the 'former manor'. Below it, the ground falls away to a broad curved dingle, part of which is boggy and at one point drainage is collected in an artificial pond. This dingle which encircles the old site to the north and east is the only feature which might be considered a moat. It has (except for the pond) a natural appearance and it is, moreover, some 50m wide'. A watching brief in 1990 on demolition of Birch Hall and construction of new dwelling did not reveal any evidence of medieval occupation prior to 1578 (earliest known reference to the hall). The earthworks around the Hall are interpreted as landscape gardening features, probably C18 in date; the interpretation of any earthworks representing a DMV is seen as untenable given the steepness of some slopes and the boggy patches.	
4053	TQ 449 989	Near Theydon Bois	Palaeolithic hand-axe	
4084	TQ 445 983	City of London Coal Duty Post, Debden Lane, Loughton	London Coal Duty Boundary mark. A cast iron post, on the north side of Loughton Lane, opposite the house called 'The Boundary'.	
10352	TQ 4384 9848	Pillbox (destroyed), Debden Green Caravan Site	An aerial photograph taken by the RAF in 1947 shows the clear shape of an FW3/27A pillbox. The marks of the anti-tank ditch, which passed from the woods at TQ 437 984 to the Debden Green junction at TQ 440 982, can be seen, the pillbox faces NE across it. An aerial photograph taken in 1960 shows it to have been demolished by that date.	
18376	TQ 441 991	Birch Hall	The present Birch Hall stands on a large artificial terrace cut into the south facing slope. Immediately to the west in a series of other	

			earthwork terraces with further earthworks beyond to the west and south. There have been suggestions that these earthworks represent a Deserted Medieval Village. It is more likely however, that they are the remains of a house and garden that stood on the site in the 16th-17th Centuries. The earliest reference so far to a house at Birch Hall dates to 1578. In 1616 this becomes the seat of the Manor of Theydon Bois. In the Hearth Tax returns for 1662 the Manor is recorded as having 14 hearths. This house survived until the late 18th century when it was demolished. The site reverted to grassland until the present house was built in 1892. Planning applications to demolish the late 19th Century Hall to construct a new building, and to carry out some alterations to the earthworks were monitored by the ECC archaeology section. There was no evidence for Medieval occupation in the vicinity of the late 19 <sup>th</sup> century house from the watching brief and there were no finds earlier than the 17th- 18th Century	
45565	TQ 4150 9784	Epping Forest	Epping Forest was a huge wood-pasture that was being intercommoned by tenants of neighbouring manors during the medieval period. The north portion is known to have been under cultivation from early in the 13 <sup>th</sup> century. Assarts from the forest were numerous in the 13th and 14th century, although rarely of more than an acre in extent. The controversy concerning the inclosure of Epping forest had been occurring since at least 1666 when Sir Henry Wroth, the lord of the manor of Chigwell had applied to the Crown to inclose the forest. At this time he was refused. It was when the Rev. Maitland was Lord of the Manor of Loughton that the issue of enclosure came to a head. The Epping Forest Act of ca.1870 set up a Royal Commission to investigate the whole problem of the forest and at the same time the City of London started legal proceedings in defence of common rights throughout the forest. In 1875 it was concluded that the inclosures had been illegal and the lopping rights of the inhabitants was recognised. By 1878 the Epping Forest Act had appointed the Corporation of the City of London to be Conservators of the Forest, with the duty of keeping the forest as an open space for public recreation. A survey of the historic boundary on the north-eastern edge of Epping Forest known as the Purlieu Bank was carried out in February and March 2011	

### Appendix 3      Detailed      Historic Phasing

Appendix 1 provides a detailed phased history of the Site within the wider context of the area.

#### **Palaeolithic, Mesolithic, Neolithic and Bronze Age periods (700,000-700 BC)**

The only evidence for human activity for the Palaeolithic period from the study area is the record of a Palaeolithic hand-axe from 'near Theydon Bois'. However there is insufficient evidence regarding the precise location and circumstances of this find to extrapolate any further interpretation bar that it is an indicator of activity in the general vicinity of the study area. There is no evidence for Mesolithic or Neolithic activity from the Deer Sanctuary itself, however a Mesolithic settlement site has been partially excavated at High Beach, some 3.5 km to the southwest. There is some evidence for Bronze Age activity in the vicinity of Ambresbury Banks, approximately a kilometer to the north of the Deer Sanctuary.

#### **Iron Age (700 BC-43 AD)**

Ambresbury Banks and Loughton Camp form part of a chain of Iron Age hill-forts strung out along this boundary. Ambresbury Banks is approximately 1km to the north of the Deer Sanctuary and Loughton Camps is approximately 2.6km to the south-west. A scattered hoard of Iron Age gold coins found by metal detector in 1971-2 near Ambresbury Banks (EHER 3744). It is evident therefore that the area of the Deer Sanctuary would have formed part of the immediate hinterland of the two hillforts and of the tribal boundary that they marked.

#### **The Roman Period (43 AD – 410 AD)**

There are reports of 'Roman' bricks having been recovered from the site of the medieval Birch Hall, but it is not clear whether these had their origin on the site or whether they were brought in as building material for the medieval house. Their presence does however raise the possibility of Roman activity in the immediate vicinity of the Deer Sanctuary.

#### **Saxon Period (410-1066 AD)**

The pollen record shows that lime woodland predominated in Epping Forest in the Early Saxon period, by the middle Saxon period (600-850 AD)

the pollen record shows a dramatic decline in lime and the establishment of a wood-pasture system. The current tree profiles of Epping Forest, beech, birch, oak and hornbeam originate in this period.

At the end of the Saxon period the Domesday book (Rumble 1983, 36.11) records that the manor of Theydon Bois was held by Hakon, and there were a total of 15 households. Within the manor was the woodland for 400 pigs, 16 acres of meadow and a mill. In addition to the main manorial holding 7 free men held a further 2 hides and 1½ virgates, and associated with these were a further 3 households, 6 ploughs and the woodland of 140 pigs and 20 acres of meadow. A separate holding was held by Wulfwin, which comprised 2 households, the woodland of 100 pigs and 7 acres of meadow. Which of these elements comprised the area that would become Birch Hall is uncertain, but it is probable that the area of the Deer Sanctuary was either being farmed during this period or formed part of the woodland being used as pannage for pigs.

#### **Medieval Period (1066 – 1537 AD)**

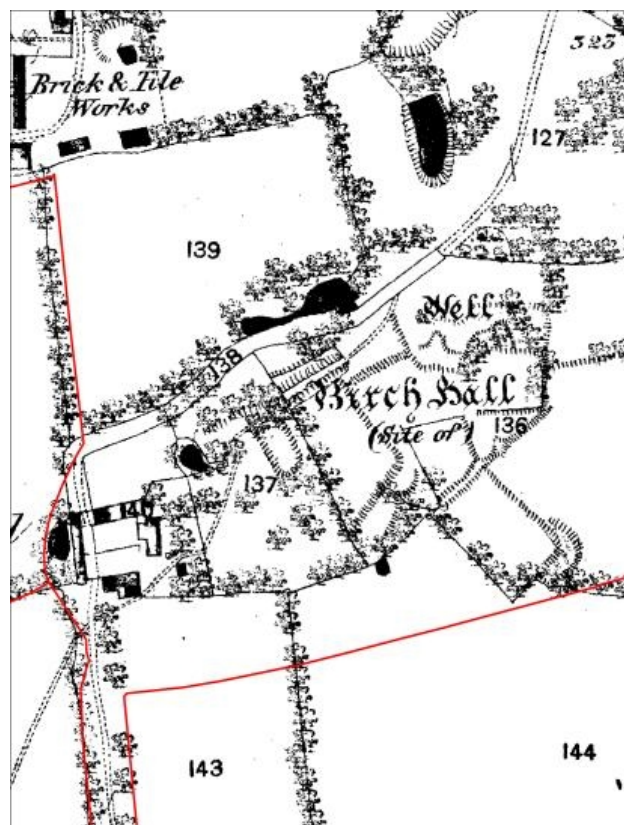
It is only in the medieval period that it is possible to speak with any certainty about the Birch Hall area. The Victoria County History for Ongar Hundred (Powell 1956) presents a more detailed history of Theydon Bois, and only a brief summary is presented here. In the medieval period Theydon Bois was a thinly populated rural parish. In 1420 it was exempted from taxation because it contained less than 10 households. Theydon Hall, which is on the site of the ancient manor house lies on the Abridge road. Beside it is the site of the old parish church, demolished in 1843. The earliest direct reference to Birch Hall dates to 1319 when it was associated with a John *atte* Birches (Reaney 1935), at which date the landholder was Waltham Abbey. Theydon Bois was retained by the Abbey until the dissolution of the abbey in 1540. An incomplete rectangular moat on the site may represent the location of the medieval holding, although there is some uncertainty as to how much of the surviving earthworks are medieval and how much dates to the 16/17<sup>th</sup> century landscaping of the site. Gaunts Wood and Redoak Wood, take their names from medieval tenants, whose houses may have been in the immediate neighbourhood. The field pattern as shown on the earlier maps for the area suggests some form of drove road, linking Debden Green to

Epping Forest, to the immediate west of the Deer Sanctuary.

Epping Forest (EHER 45565) forms the western boundary of Birch Hall, and was held by the Canons of Waltham Abbey. However, the inter-commoning regime for the Forest was such that no one land-owner held absolute rights over the Forest, with the tenants of many neighbouring manors (including Theydon Bois) having varying rights to graze their animals, lop timber, etc.).

#### **Post Medieval period (1538-1900 AD)**

With the Dissolution of the Waltham Abbey in 1540 Theydon Bois manor passed to the Crown, and held by a succession of tenants (Powell 1956). In 1616 the manor was held by Edward Elrington. The Elrington family was settled at Birch Hall in Theydon Bois before they acquired the manor in 1616, and from that date Birch Hall was the manor house. The post-medieval (16/17<sup>th</sup> – late 18<sup>th</sup> century) manor house of Birch Hall lay between Birch Hall Farm and the present mansion. There is little information on what this structure looked like, though the 1662 Hearth Tax records that it had 14 hearths, suggesting a reasonably substantial structure. By the end of the 18<sup>th</sup> century it had been demolished and in 1848 the site was known as 'Old House Ground'. There appears to have been extensive landscaping associated with this building, taking the form of a series of broad terraces overlooking the sloping ground to the south. The layout of the fields associated with Birch Hall that now form the Deer Sanctuary as demonstrated by the historic cartographic evidence are described Section 2. They all are certainly present in the post-medieval period, and maybe indeed be medieval in origin.



*Fig. 17 The earthworks relating to the medieval and post-medieval Birch Halls c.1876*

By 1789 the manor had passed into the hands of the Dare family, these became the Hall-Dares in 1836, and it is known that they held Birch Hall. In 1850-1 the Hall Dare estate included 781 acres in Theydon Bois and 47 acres in Loughton. In 1901 Robert Westley Hall Dare sold Theydon Bois and Birch Hall to Gerald Buxton. Buxton was succeeded on his death in 1928 by his son Lt.-Col. Edward North Buxton. The site of the post-medieval Birch Hall had reverted to grassland, until 1892 when a substantial red brick house was erected. The two lodges and several of the cottages in Coppice Row appear to be of the same period. The 1897 OS 2<sup>nd</sup> edition map shows considerable changes from the 1881 map, which are most probably linked to the construction of the new Birch Hall. These included the creation of a lake by the damming of the water course next to Gaunt's Wood and the rationalization of the field system to form the present layout. Many of the mature trees that had formed part of the original field boundaries were retained, giving a parkland effect, particularly in the west of the Sanctuary.

To the north and west Epping Forest remained under an inter-commoning regime, with some assarting and enclosure, particularly around the edges. In the 1860s the Reverend Maitland, then Lord of the Manor of Loughton, began the large scale inclosure of the Forest. There was opposition to these enclosures from the inhabitants of Loughton who had an ancient right of lopping wood from the Forest. The Epping Forest Act of c.1871 set up a Royal Commission to investigate the whole problem of the Forest and at the same time the City of London started legal proceedings in defence of common rights throughout the Forest. By 1878 the Epping Forest Act had appointed the Corporation of the City of London to be Conservators of the Forest, with the duty of "at all times keep Epping Forest unenclosed and unbuilt on as an open space for the recreation and enjoyment of the people".

On the south-eastern boundary of the Deer Sanctuary, next to Loughton Lane there is a cast iron City of London Coal Duty post (EHER 4084). This has inscriptions on the north face showing the City of London arms with St George's cross and sword, below the collar is inscribed '4 and 25 VIC, CAP 42'.

### **Modern period**

Between 1939-1941 a FW3/27A pillbox (EHER 10352) was constructed to the west of the Deer Sanctuary at Debden Green. The marks of an anti-tank ditch, which passed from the woods at TQ 437 984 to the Debden Green junction at TQ 440 982, can be seen on a 1947 photograph. An aerial photograph taken in 1960 shows it to have been demolished by that date.

On the 12<sup>th</sup> of June 1959 the Buxtons conveyed Birch Hall to the City of London. The estate comprised 'All those several closes or pieces of land which form part of an estate known or formally known as the Birch Hall Estate situate in the parish of Theydon Bois in the County of Essex and comprise in the whole 88.554 acres or thereabouts'

## Appendix 4 Tree Survey

### Tree Survey Methodology

The trees were inspected from ground level only and were not climbed. The inspection was based on visual tree assessment (VTA) techniques using simple acoustic tests with a mallet to sound any suspected areas of decay and metal probes to assess the extent of any decayed areas as far as reasonably practicable. Only the parts of the trees accessible from ground level were subject to sounding or probing.

The risk assessment of each tree defect was based on the severity of the hazard and the likelihood of it causing injury or harm. A systematic approach was used in accordance with industry best practice, the rooting area, stem and crown/branch structure were inspected for each individual tree, provided below are keys for the survey tabular form and for the works priority (based upon the severity of the defect).

### Tree Survey Results

The trees growing within the deer park have a wide age range from young to over mature and veteran specimens, two mature dead oak trees were also recorded. The majority of the open ground oaks are mature to over mature and given their age are generally in a healthy condition. A number of the open grown oaks have suffered from past storms events and storm damage debris has been retained. Many of the trees have veteran features and provide excellent wildlife habitat features (cracks, loose bark, cavities) and deadwood of varying diameters is abundant and to be expected with trees of their age. Some trees have dead and dying branches in their lower and inner crowns. This is natural dieback caused by shading from upper crowns and is typical of the species and age of the trees. Dead branches can persist for years and provide good wildlife habitat. Removal of dead branches has only been recommended where there is a high risk of such branches falling and causing injury or harm.

Acute oak decline has appeared in recent years and can cause crown dieback and possibly tree death. There appears to be no symptoms of the condition on the site presently but given the large number of oak within the site, it would be prudent to monitor for its presence and undertake works, if and when

necessary. For further information, see the Forest Research website [Forest Research - Acute oak decline](#).

There are a few mature ash trees on site and a large number of ash trees have been planted in the woodland area of Gaunt's Wood. They have good vitality with no visible major defects and at the time of the site visits no ash dieback disease (ADD) (*Chalara fraxinea*) was observed.

### Key to table 6

Tree ref. T1, T2, T3 etc. (cross referenced on location plans, see below)

Species common and botanical names given

Height Tree heights are given in broad bands (< 5 less than 5; 5-10; 10-15; 15-20 and 20+) and recorded in metres and estimated unless otherwise stated

Age Y: young (first third of life)  
EM: early mature (middle third of life)  
M: mature (final third of life)  
OM: over mature (beyond ordinary lifespan)  
V: veteran (a tree older than typical for the species and of great ecological, cultural or aesthetic value)

Condition: physiological health:

NV: normal vigour;

LV: low vigour

Structural condition:

Good: tree free from significant defects;

Fair: tree with defects or disorders which can be

remediated or likely to recover from and Poor: tree with significant defects which cannot be

remediated or unlikely to recover

Tree Survey Results:

Tree condition survey: Nov & 01 Dec2015				Epping Deer Sanctuary, Theydon Bois			Date: 03/18	
No	Species	Height	Age	Condition		Remarks	Recommendation	
				Physiological / Structural				
T1	Pedunculate oak <i>(Quercus robur)</i>	15-20	Mature	NV	F-G	Small to moderate size deadwood noted overhanging Public Right of W (PRoW)  Heavy, overextended limb over footpath poorly attached at branch union (old crack) noted.	Remove deadwood over 30millimetres (mm) back to sound wood or branch collar, larger deadwood reduce in length or pull test to assess stability throughout section of the crown overhanging the footpath (PRoW).  Reduce length / weight of limb over PRoW by up to 30%, pruning back to suitable growth points.  Works should be carried out within three months	
T2	Pedunculate oak	15-20	Mature	NV	G	Small to moderate size deadwood noted overhanging public right of way (PRoW).	Remove deadwood over 30millimetres (mm) back to sound wood or branch collar, larger deadwood reduce in length or pull test to assess stability throughout section of the crown overhanging the footpath (PRoW).  Works should be carried out within three months	
T3	Pedunculate oak	15-20	Mature	NV	G	As T2 above	As T2 above	
T4	Pedunculate oak	5-10	Young	NV	G	No significant defects noted	No action required (NAR)	
T5	Pedunculate oak	5-10	Young	NV	G	No significant defects noted	NAR	
T6	Pedunculate oak	15-20	Mature	NV	G	As T2 above	As T2 above	
T7	Pedunculate oak	15-20	Mature	NV	G	As T2 above	As T2 above	
T8	Pedunculate oak	<5	Young	NV	G	No significant defects noted	NAR	

T9	Pedunculate oak	15-20	Mature	NV	G	As T2 above	As T2 above
T10	Pedunculate oak	15-20	Mature	NV	G	As T2 above	As T2 above
T11	Pedunculate oak	15-20	Mature	NV	G	As T2 above	As T2 above
T12 - T16	Pedunculate oak	15-20	Mature-over mature	NV	L-G	No significant defects noted	NAR
T17	common ash ( <i>Fraxinus excelsior</i> )	15-20	Over mature	NV	L	Previously storm damaged tree with overextended limbs	NAR
T11 8- T19	Pedunculate oak	15-20				No significant defects noted	NAR
T20	Pedunculate oak	15-20	Mature	NV	G	Open grown tree	NAR
T21 - T28	Pedunculate oak	15-20	Mature	NV	G	No significant defects noted	NAR
T28	Silver birch growing within oak stump	5-10		NV	G	Birch appears stable within old decaying stump	NAR
T29	Pedunculate oak	10-15	Mature	D	P	Dead tree	Retain tree, reduce dead limbs by 25% (in length)  Works should be carried out within three months
T31 -35	Pedunculate oak	15-20	Mature	NV	G	Group of five trees	NAR
T36 - T37	Pedunculate oak	15-20	Mature	NV	G	Group of two trees	NAR
G1	Mixed species	5-10	Mature	LV	F	Small group of hawthorn ( <i>Crataegus monogyna</i> ) and hornbeam ( <i>Carpinus betulus</i> )	NAR
T38	Pedunculate oak		Mature	NV	G	No significant defects noted	NAR
T39	Apple ( <i>Malus</i> sp.)	5-10	Mature	NV	P	Small tree with hollow stem	NAR
T40	Pedunculate oak	15-20	Mature	NV	G	Tree previously shed are large limb. Tree has since been reduced to reduce wind sail area	NAR
T41	Pedunculate oak	15-20	Mature	NV	G	Large diameter deadwood in lower crown	Tree previously shed are large limb. Tree has since been reduced to reduce wind sail area
T42	Pedunculate oak	15-20	Mature	NV	G	No significant defects noted	NAR
H1	Common hawthorn	5-10	Over mature	LV	F	Thorn hedge with x3 coppiced ash and x2 standard oak trees	NAR

T43 -T4	Pedunculate oak	15-20	Mature	NV	G	No significant defects noted	NAR
T49	Hornbeam	10-15	Mature	NV	G	No significant defects noted	NAR
T50 - T51	Pedunculate oak	15-20	Mature	NV	g	No significant defects noted	NAR
T52	Pedunculate oak	15-20	Mature	NV	F	Die-back of east side of stem, tree is in falling distance of the PRoW	NAR
T53 - T55	Pedunculate oak	15-20	Mature	NV		No significant defects noted	NAR
<b>T56</b>	Pedunculate oak	15-20	Mature	NV	F	Decayed storm damaged stem	Make fallen debris safe. Monolith to a height of storm damaged crown  Works should be carried out within three months
<b>T57</b> - <b>T62</b>	Pedunculate oak	15-20	Mature	NV	G	No significant defects noted	NAR. Make safe fallen debris between <b>T61</b> & <b>T62</b> . T61 has an historic lean and is stable Works should be carried out within three months
T63	Common ash	15-20	Mature	NVNV		No significant defects noted	NAR
T64 - T65	Pedunculate oak		Mature	NV	G	No significant defects noted	NAR
<b>T67</b>	Pedunculate oak	15-20	Mature	NV	G	Offsite tree. Deadwood above ladder and stalking seat	Remove deadwood above ladder and seat, pruning back to sound wood / branch collar Works should be carried out within three months
<b>T68</b>	Pedunculate oak	10-15	Mature	D	P	Dead tree	Retain tree, reduce dead limbs by 25% (in length). Remove stalking seat and relocate to adjacent tre  Works should be carried out within three months
<b>T69</b>	Hybrid poplar ( <i>Populus</i> hybrid)	15-2-	Mature	NV	F	Storm damaged twin stem tree, one stem remaining. Remaining stem liable to storm damage	Reduce remaining stem to a finished height of 5metres
<b>T70</b>	Goat willow ( <i>Salix caprea</i> )	<5	Mature	NV	F	Fallen tree blocking path	Coppice stem to a finished height of .5metres

							Works should be carried out within three months
<b>T71</b>	Pedunculate oak	10-15	Mature	NV	G	Small to moderate size deadwood noted	Remove deadwood over 30mm in diameter, pruning back to sound wood / branch collar  Works should be carried out within three months
T72	Common ash	15-20	Mature	NV	F-G	Storm damaged tree. Storm damaged crown supported and resting on ground	NAR
T73	Pedunculate oak	15-20	Mature	NV	G	Old pollard specimen (4.45metre girth at 1.5metre)	NAR

Table 6 Tree Condition Survey

Fig. 18 Tree location plan 1: T1-T41

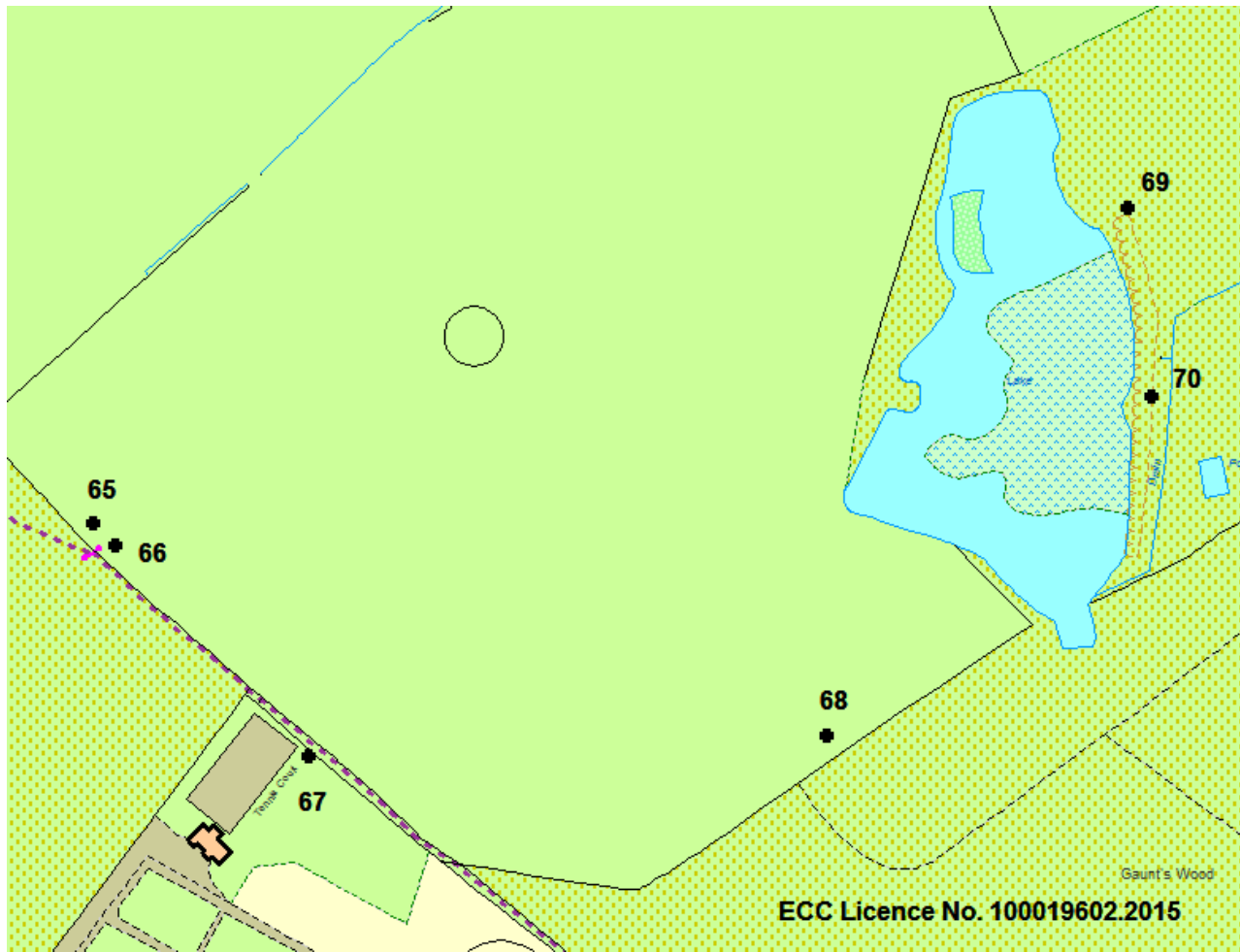


Fig. 19 Tree location plan 2: T42-T64

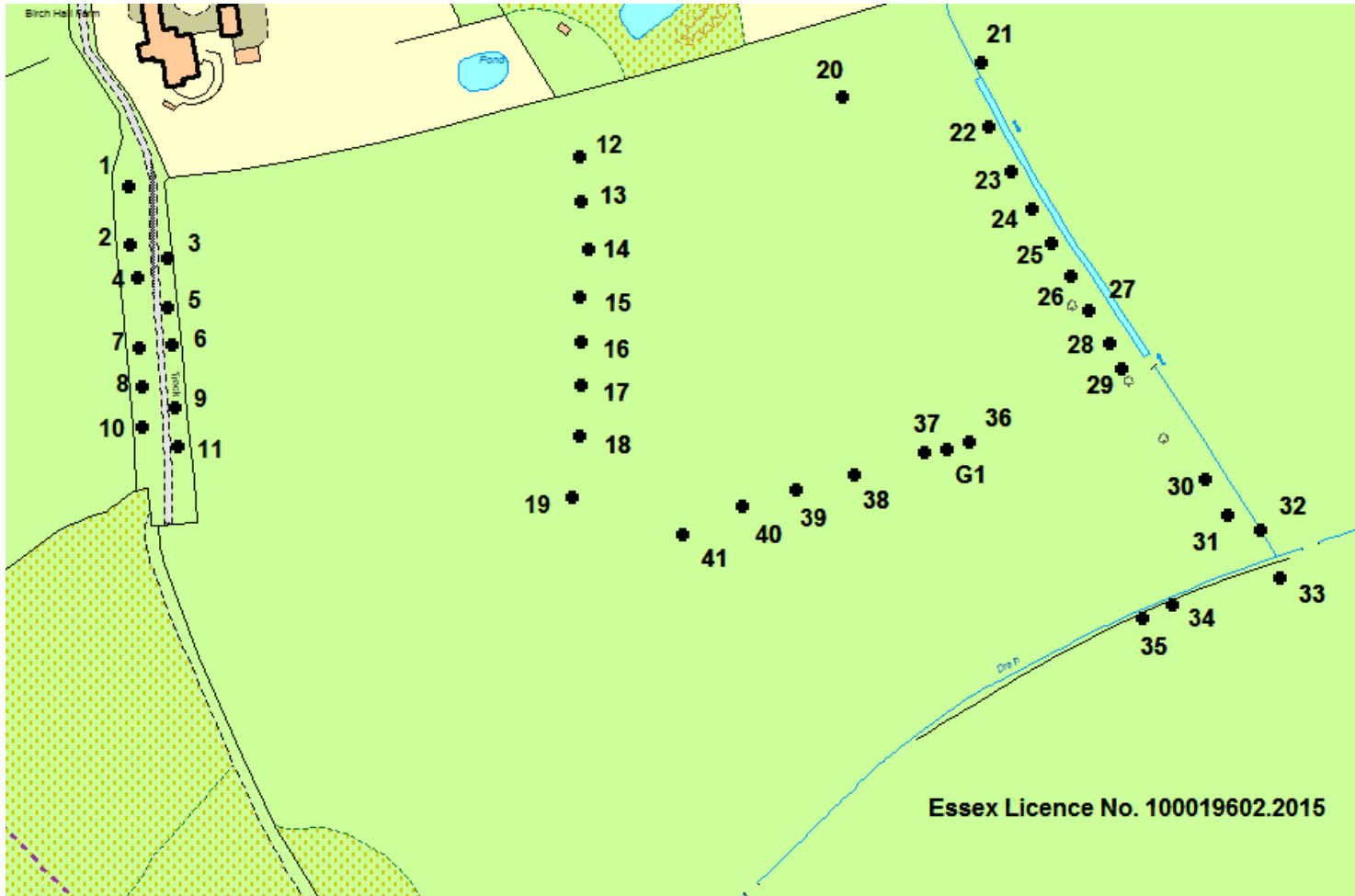


Fig. 20 Tree location plan 3: T65-T70

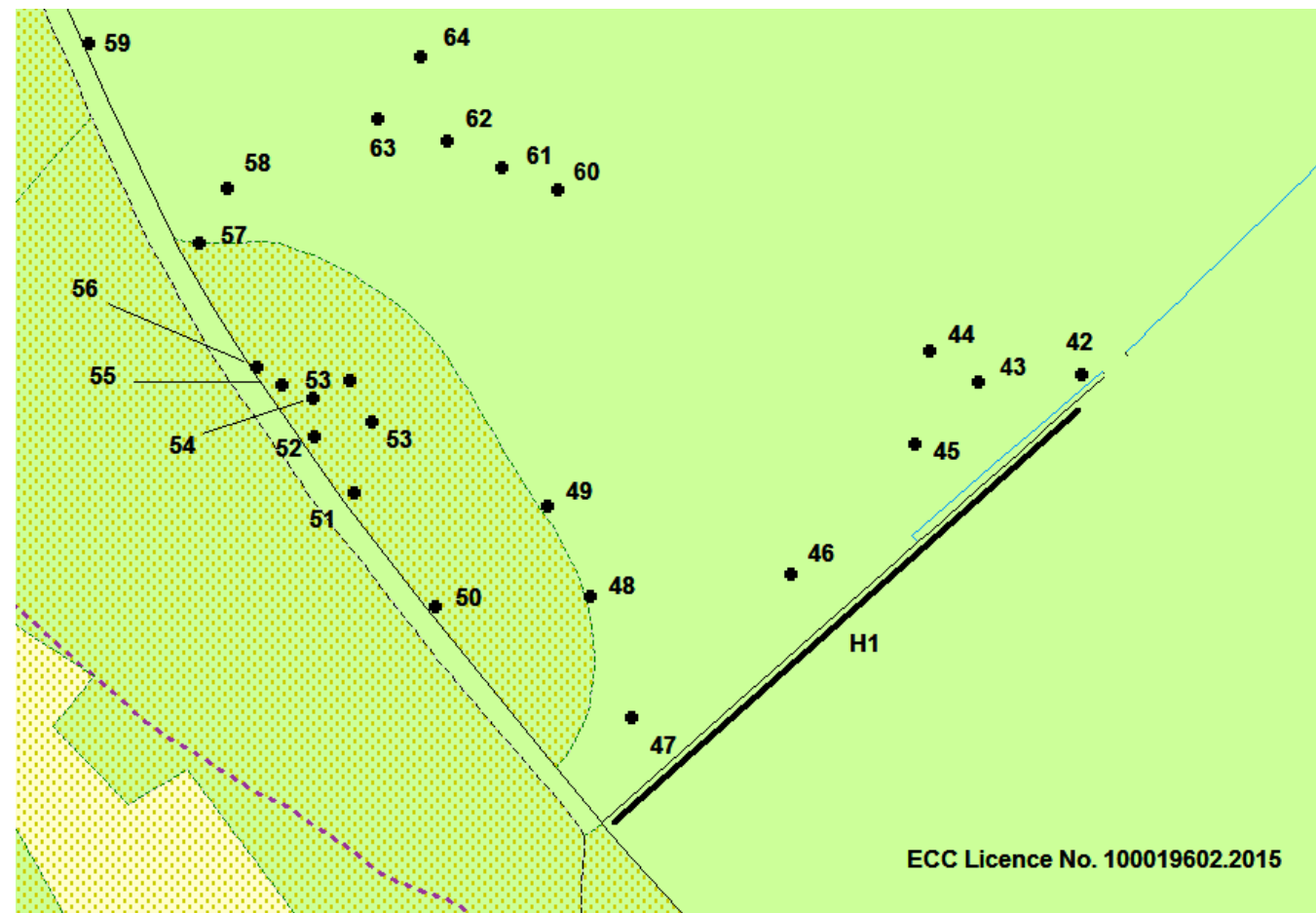
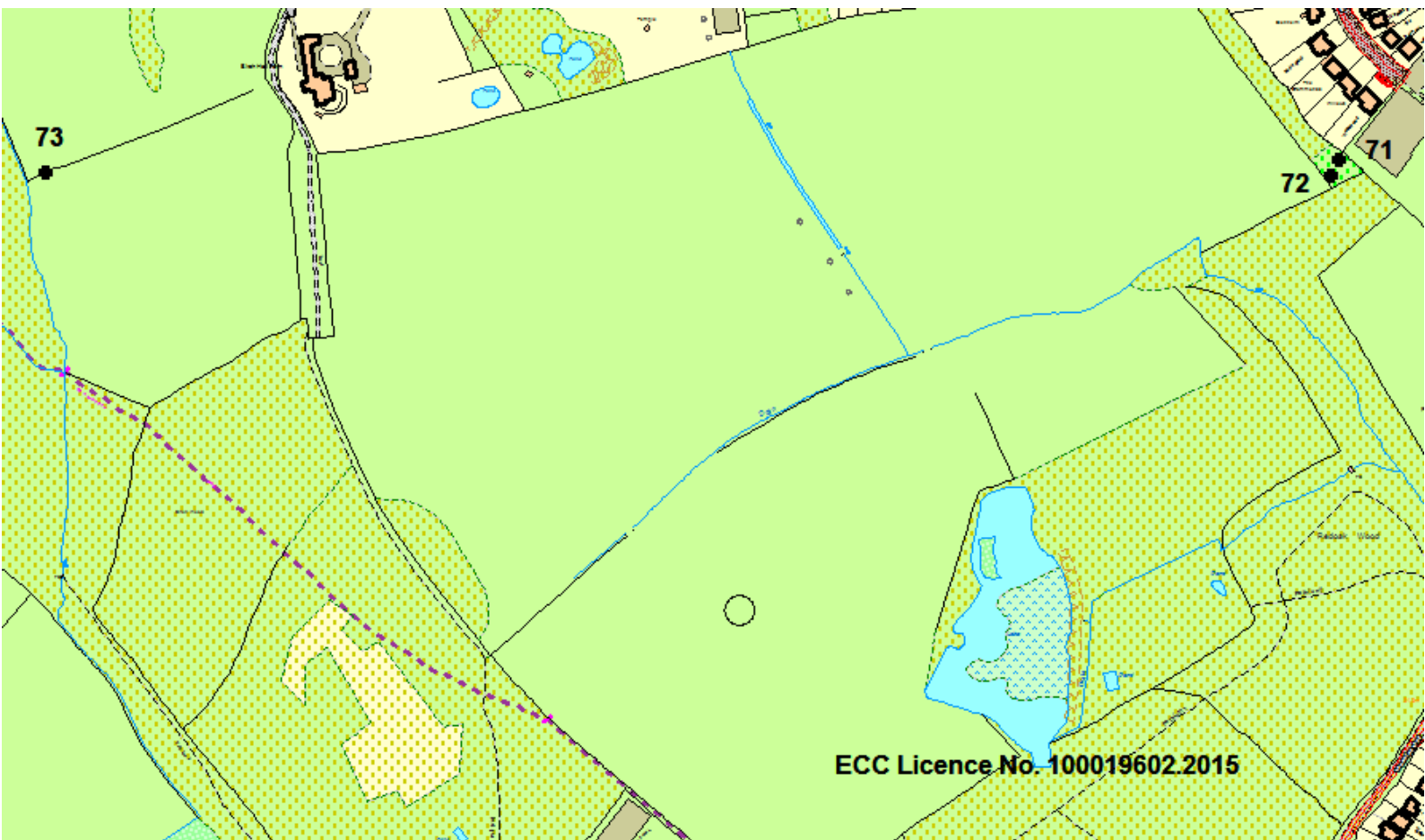


Fig. 21 Tree location plan 4: T71-T73



## Appendix 5 Site Significance, statutory and non statutory designations by interest

### Significance: Archaeology

The earthworks within the Deer Sanctuary survive as an archaeological resource of local significance. They date to the medieval and post-medieval period and represent the changing use of the site from agricultural purposes to informal parkland in the late 19<sup>th</sup> century to its present role as a deer sanctuary. A number of the wood banks and historic field boundaries survive as earthworks, whilst it can be presumed that the historic field boundaries that are no longer visible are still present as below-ground remains. The silts around the waterlogged field boundaries have the potential to preserve environmental evidence which could greatly add to our understanding of the landscape of the study area through time. Previous pollen analysis of the deposits of a shallow valley bog in Epping Forest (Baker, Moxey and Oxford 1978) has established the general sequence of vegetation in the Forest itself for the last 4,000 years and it is possible that similar deposits survive within the damper areas of the study area to provide a comparison study for the Forest edge.

#### Summary

- Archaeological resource of local importance
- Potential to contribute to understanding of the landscape history of Epping Forest and its environs

### Significance: Landscape

The landscape setting of the Deer Sanctuary has been characterised at a number of scales, ranging from the National (The Countryside Agency, 1999), through to a District level assessment (Chris Blandford Associates, 2010). The site and its immediate surroundings demonstrate key characteristics from all of the relevant character areas within these assessments as follows:

#### *National Landscape Character (source: Countryside Agency, 1999)*

The Deer Sanctuary lies within the Essex Wooded Hills and Ridges sub-character area of the Northern Thames Basin National Character Area (NCA No. 111), as defined on the Character of England Map. The key characteristics of this area demonstrated within and immediately around Deer Sanctuary include:

- Well wooded and prominent hills and ridges
- Wooded commons with ancient and some secondary woodland.
- Notable medieval and later historic homes and their parks (Copt Hall)

#### *Essex Landscape Character (source: CBA, 2003)*

The Deer Sanctuary lies within the Epping Forest and Ridges Landscape Character Area (D1), part of the Wooded Hills and Ridges Landscapes types in Essex. The characteristics of this area demonstrated within and immediately around the Deer Sanctuary include:

- Landscape of heavily wooded ridgelines
- Large areas of ancient beech and oak-hornbeam woodland (traditional wood-pasture and pollards now mostly unmanaged), together with pockets of acid grassland/heath
- Many ancient formerly pollarded trees
- Major SW-NE aligned broad ridge with a gently undulating ridgetop and moderate to steep sides.
- Small narrow steep stream valleys in the ridge sides.
- Iron Age hillforts of Amesbury Banks and Loughton Camp within Epping Forest.
- Historic parklands
- Very straight roads through the centre of Epping Forest.

#### *Epping Landscape Character (source: CBA, 2010)*

The Deer Sanctuary lies within the Epping Forest Ridge (D2) Landscape Character Area, part of the Wooded Ridges (D) Epping Forest Landscape Types.

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The characteristics of this area demonstrated within and around the Deer Sanctuary include:

- Distinctive, broad ridge landform
- Large area of ancient and semi-natural woodland provides a strong sense of enclosure and limits views across the area

### Deer Sanctuary landscape assessment

The Deer Sanctuary is sited on sloping ground abutting the eastern edge of Epping Forest. It comprises agricultural land and woodland, which formed part of the farm associated with the manorial settlement of Birch Hall, Theydon Bois. The removal of many of the field boundaries in the late 19<sup>th</sup> – early 20<sup>th</sup> century, coupled with the retention of many of the mature hedgerow trees and the creation of a lake adjacent to the woodland, created the appearance of a parkland on the slope below the house. There are extensive views from the area of the Hall, both across the Deer Sanctuary and further afield over the London Basin. To the north and east there is housing.

On a more immediate scale the proximity of Epping Forest is the dominant landscape element. Epping Forest is a well preserved historic landscape of relict wood pasture, with considerable coherence and time-depth, that has been noted as being worthy of designation as an 'Ancient Landscape' at the county level (Essex County Council, 1991).

The characteristics of the Deer Sanctuary are:

- Appearance of informal parkland in field 59/6 formed by the removal of boundaries and the retention of mature trees, undulating landform
- Fields 59/1, 59/2 and 59/3 are unimproved pasture, sloping landform
- Area of mostly ancient woodland comprising Gaunt's Wood and Redoak Wood (part of field 59/5)
- Area of recent woodland plantation and artificial lake (part of field 59/5)
- Extensive views from 59/6 out across Epping Forest district to the City of London

- Enclosing views of Epping Forest from fields 59/1, 59/2 and 59/3

### Significance: Ecology

The following section describes the land designations, priority habitats, flora and fauna on and surrounding the Deer Sanctuary (hereafter referred to as 'the site' - as depicted in Fig. 9) as it is currently understood. This information should inform any future management on the site.

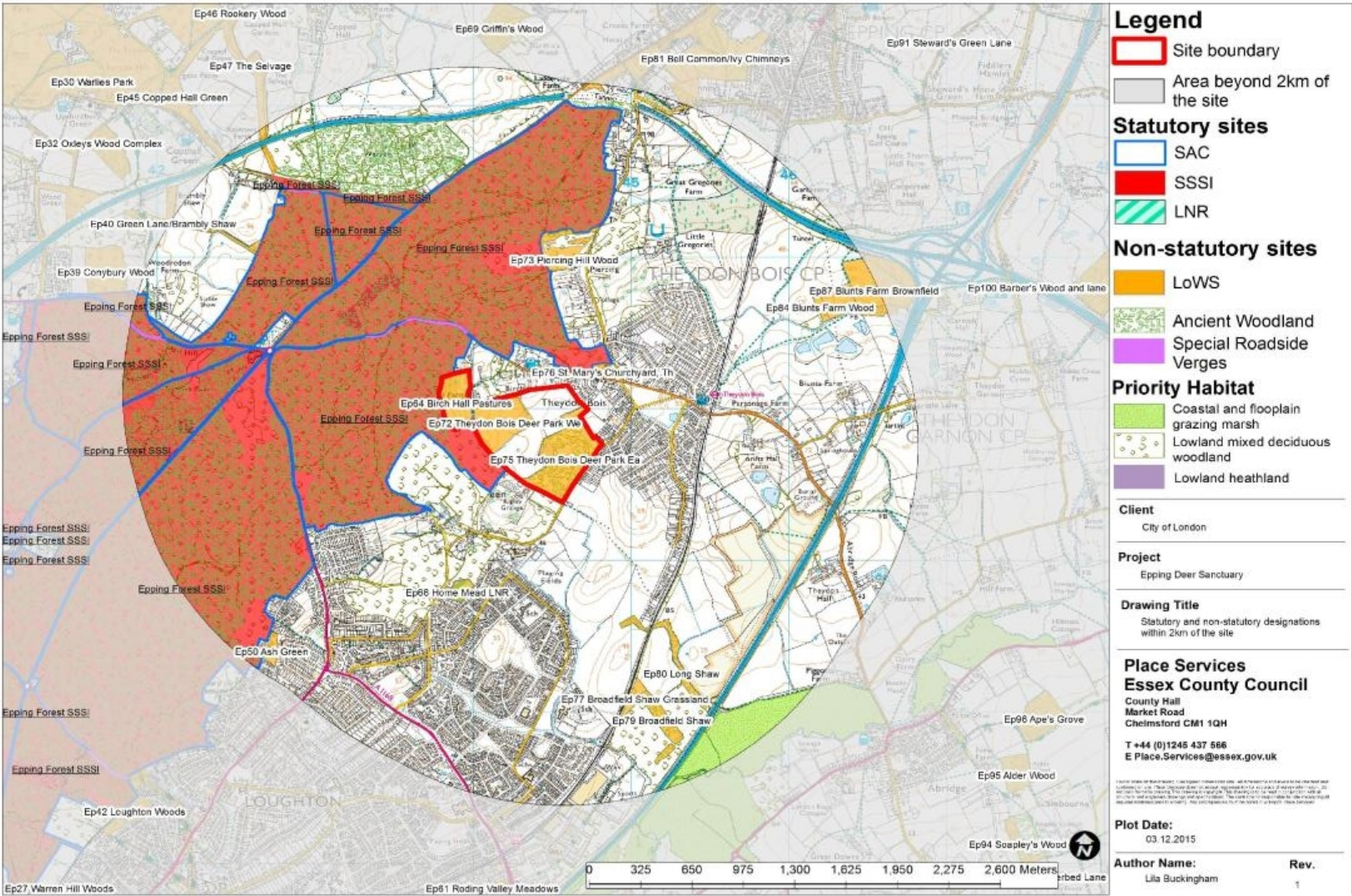
#### • Land designations

A high-level assessment of biodiversity assets on and surrounding the site was undertaken. This was informed by the following:

- Place Services Biodiversity Alert Map – for statutory / non-statutory sites and priority habitat within 2km of the site
- Information from Essex Wildlife Trust – for Local Wildlife Site citations

A map illustrating statutory / non-statutory sites and priority habitats within 2km of the site is provided as Fig. 22. Flora and fauna are discussed in more detail below.

Fig. 22 Environmental constraints map illustrating statutory / non-statutory sites and priority habitats within 2km of the site



- **Statutory designations**

The site is not the subject of any statutory conservation designations, but its south-western boundary meets Epping Forest. The majority of Epping Forest is designated as an SSSI for its ancient semi-natural woodland characterised with over-mature pollards, a nationally outstanding assemblage of invertebrates and an outstanding bryophyte flora. The SAC designation within Epping Forest is primarily for beech woodlands, specifically Atlantic acidophilous beech forests with *Ilex* and sometimes also *Taxus* in the shrub layer (*Quercion roburi petraeae* or *Illici-Fagenion*). These designations are situated immediately beyond the site's south-western boundary. Statutory sites are offered protection under both national and European law.

- **Non-statutory designations – Local Wildlife Sites**

The site contains three separate Local Wildlife Site (LoWS) designations: Ep64 Birch Hall Pastures, Ep72 Theydon Bois Deer Park West and Ep75 Theydon Bois Deer Park East. Ep75 also contains ancient woodland. This information has been taken from the relevant LoWS citations, which may not reflect current circumstances. It should be noted that although LoWS are not afforded legal protection, they are protected through the planning system, and there is a general presumption against development on them.

Each LoWS is described below.

**Ep64 Birch Hall Pastures (6.2 ha) TQ438990**

These two pastures comprise dry to damp, species-rich unimproved grassland on the eastern flank of Epping Forest. The diverse grass sward comprises abundant Common Bent (*Agrostis capillaris*), with lesser amounts of Sweet Vernal-grass (*Anthoxanthum odoratum*), Crested Dog's-tail (*Cynosurus cristatus*), Cock'sfoot (*Dactylis glomerata*), Tufted Hair-grass (*Deschampsia cespitosa*), Meadow Fescue (*Festuca pratensis*), Red Fescue (*Festuca rubra*), Yorkshire-fog (*Holcus lanatus*) and Timothy (*Phleum pratense* agg.). The equally diverse herb layer includes Cuckooflower (*Cardamine pratensis*), Marsh Thistle (*Cirsium palustre*), Meadow Vetchling (*Lathyrus pratensis*), Common Bird's-foot-trefoil

(*Lotus corniculatus*), Greater Bird's-foot-trefoil (*L. pedunculatus*), Creeping Jenny (*Lysimachia nummularia*), Meadow Buttercup (*Ranunculus acris*), Common Sorrel (*Rumex acetosa*) and clovers (*Trifolium* spp.). Large Pedunculate Oak (*Quercus robur*) in the bounding hedgerows support populations of the Nationally Scarce ant *Lasius brunneus* and the invertebrate value of the whole site is likely to be high, with butterfly populations also significant.

**Ep72 Theydon Bois Deer Park West (9.5 ha) TQ442988**

This part of the Deer Sanctuary has been selected on account of the large number of veteran Pedunculate Oak (*Quercus robur*) trees, with much dead wood and fallen timber providing excellent habitat conditions for a range of invertebrates that are dependent on such wood for nesting and feeding sites. The trees are known to support populations of the Nationally Scarce ant *Lasius brunneus* and also the Essex Red Data List digger wasp *Crossocerus cetratus*. Some of the trees were also assessed as having high potential to support bat roosts, with excellent bat foraging habitat provided by the park in general, the adjacent Birch Hall Pastures.

**Ep75 Theydon Bois Deer Park East (14.5 ha) TQ445986**

This site comprises the mainly ancient woodland of Redoak and Gaunt's Woods, plus recent secondary woodland and a small lake. The two ancient woods are heavily fenced in order to prevent access by the deer herd in the open park and, as such, are now both densely overgrown with Bramble (*Rubus fruticosus* agg.) scrub. They comprise canopies of overgrown Hornbeam (*Carpinus betulus*) coppice with standards of Hornbeam, Pedunculate Oak (*Quercus robur*) and Ash (*Fraxinus excelsior*). More recent woodland within the park is subjected to deer browsing and comprises a mix of these standard trees with some Hawthorn (*Crataegus monogyna*) scrub over a grassy ground cover. The adjacent lake supports a small stand of Common Reed (*Phragmites australis*) and, as well as providing a watering place for the deer, adds to the overall habitat diversity.

- **Priority habitats**

Under Section 40 of the Natural Environment and Communities Act (NERC), 2006, public bodies have a duty to conserve 'habitats and species of principal

importance for the conservation of biodiversity in England' (commonly referred to as '**Priority Habitats or Species**'). Section 41 (S41) of the Act requires the Secretary of State – in consultation with Natural England - to publish a list of Priority Habitats and Species.

The EWT citations indicate the sites to contain areas of unimproved grassland, wood pasture and parkland, ancient woodland, lowland mixed deciduous woodland and reedbeds; all priority habitats.

- **Fauna**

**Protected species**

The site has clear potential for invertebrates, as well as the following legally protected species:

- **Bats (roosting)**

The LoWS citations give references to ancient woodland and broadleaved veterans. These trees are likely to provide an abundance of roosting opportunities for a variety of bat species.

- **Bats (foraging and commuting)**

A recent (2014) aerial view of the site shows the site to be bordered on almost all boundaries by lines of trees, with the wider Epping Forest extending to the north-west. A lake also exists within the site boundary. It is expected that high numbers of bats will use Birch Hall Pastures and water bodies to forage around and the woodland edges to commute along.

- **Great crested newts (GCN)**

The suitability of the water bodies on site for GCN is not known, however, the terrestrial habitat appears suitable, with a mosaic of habitats suitable for foraging, shelter and hibernation.

- **Reptiles**

The unimproved grassland found in Birch Hall Pastures, combined with the edge habitat formed by the boundary trees and the good connectivity to surrounding natural habitats and deadwood are likely to provide favourable conditions for reptiles.

- **Badgers**

Badgers are likely to be found within the woodland; which is ideal habitat for sett creation and foraging activities.

- **Nesting birds**

The site is relatively undisturbed and provides a plethora of nesting and foraging opportunities for birds.

**Significance: ecology**

In light of the evidence collected during the desktop exercise, the site is considered to be of **moderate significance** for ecology, offering good connectivity for wildlife to Epping Forest, being relatively undisturbed and containing a mosaic of natural habitats, as well as containing three LoWS, a number of priority habitats and potentially good populations of protected species.

**Summary of potential constraints:**

- Proximity to Epping Forest SSSI / SAC
- LoWS designations – requirement to liaise / agree management prescriptions with Essex Wildlife Trust
- Priority habitats
- Ancient woodland
- Significant assemblages of invertebrates
- Potentially significant populations of protected species; bats, reptiles, badgers and nesting birds.

**Significance: Trees**

The onsite trees may be conveniently divided between individual trees, and trees growing within small groups within in the parkland landscape, and those trees, of fairly recent planting, growing within the fenced area which extends to the parks southern boundary adjacent to Loughton Lane.

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The species composition of the open grown parkland trees consists mainly of pedunculated oak (*Quercus robur*) and the occasional common ash (*Fraxinus excelsior*) (T16) and hornbeam (*Carpinus betulus*) (T47), the trees appear to follow the original field boundaries, and to be of a time when the land was previously cultivated, though this is not clearly apparent at first. In and around the round the disused boating lake there are a number of mature, exotic tree species consisting of both evergreen conifers and broad-leaved deciduous tree species, many of the trees in this location are over mature and storm damaged.

The fenced area of woodland appears to have been planted on the ancient woodland sites of Gaunt's and Redoak Woods), and have been replanted with species including beech (*Fagus sylvatica*), hornbeam, wild cherry (*Prunus avium*), ash and oak. However, more mature oak and beech can be found growing on the eastern side of the Redoak Wood. Within the Gaunt Wood there is a fine mature wild service tree (*Sorbus torminalis*), wild service is a classic ancient woodland indicator species, and a number of old tree stumps also still remain.

Along the southern edge of the Gaunt's / Redoak Wood there are a number of old hornbeam coppice stools growing on a bank/ ditch line which forms the boundary between the deer park and the public highway of Loughton Lane. It was apparent at the time of the visit that vegetation adjacent to the public carriageway is cut back on regularly basis so as to maintain 5.1metre clearance above the highway.