HATFIELD FOREST, ESSEX
REVISED ARCHAEOLOGICAL AND HISTORIC LANDSCAPE SURVEY

MAY 2017
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May 2017
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1 INTRODUCTION

This report is an updated assessment of the various archaeological sites and Historic Environment features located in the National Trust owned (East of England region) Hatfield Forest (Figure 1). In 1999-2000 English Heritage undertook and earthwork survey of much of Hatfield Forest. The Historic Environment Management team, Essex County Council undertook further fieldwork and analysis September 2010 and March 2011 and the results were published December 2011 (Gascoyne and Medlycott 2011). A further phase of survey and analysis, both within Hatfield Forest and in the area of Wall Wood and Woodside Green, was undertaken by Place Services, Essex County Council and Sarah Rutherford in 2016-2017. The current volume presents the results of this period of additional analysis. The report has been prepared in accordance with the Trust’s Guidelines, ‘Archaeological and Historic Landscape Survey – Guidelines for Data Collection and Compilation (1992).’

2 AIMS AND OBJECTIVES

The survey and analysis presented in this report is intended to augment the draft measured survey of the estate’s historic landscape previously undertaken by English Heritage in 1999-2000, in order to understand its archaeological and historic significance as a basis to inform the future management of the property by the National Trust.

3 SITE CONTEXT

3.1 LOCATION

Hatfield Forest (centred NGR: TL536200) It lies in Hatfield Broad Oak parish, abutting the parish boundaries of Takeley to the north and Great Hallingbury to the south. The outlying portion of Wall Wood is in Great Hallingbury parish. Stansted Airport is located just to the north of the Forest, at its closest point it is 370m from the Airport perimeter fence to the Forest perimeter fence. The forest lies very close to the border between Essex and Hertfordshire, the nearest town Bishops Stortford, Hertfordshire, is 4km to the west, Great Dunmow in Essex is 8km to the east.

3.2 SIZE

Hatfield Forest comprises approximately 424 hectares of medieval Forest, with woodland, coppice woods, pollards, scrub, grassland with trees, marsh and a lake.

3.3 GENERAL TOPOGRAPHY, HYDROLOGY, SOILS

Hatfield Forest is sited at the southern end of the Stansted Plateau, a slightly higher area of chalky boulder clay. The highest point is 91m OD. It is bisected diagonally from north-west to south-east by the Shermore Brook, a tributary of the Pincey Brook. The geology comprises glacial deposits left during the last but one Ice Age (Figure 2). The vast majority of this is chalky boulder clay, a stiff grey or yellow clay containing flint and chalk pebbles and stones, as well as the occasional boulder of rock transported by the ice from further afield. In addition there is a small area of Kesgrave sands and gravels in the valley of the Shermore Brook, these are also glacial in origin. In one area of the Shermore Brook valley
Old Woman's Weaver and Shermore Bridge) the London Clay which underlies the boulder clay comes to the surface.

Figure 2 - Geology
4 STATUTORY AND NON-STATUTORY CONSTRAINTS

Given the historic and natural environment significance of Hatfield Forest and its sensitivity as a local tourist attraction, it should be no surprise that it is covered by a host of statutory and local designations, both in terms of the natural and historic environment (Figure 3). There are two sites within the forest that have been afforded statutory protection as a Scheduled Monument under the Ancient Monuments and Archaeological Areas Act 1979. These are the prehistoric earthworks known as Portingbury Hills (SM 98) and the medieval warren in Collins Coppice (SM 24886). There are three Listed Buildings: Warren House, Shell House and Forest Lodge. The entirety of Hatfield Forest is designated a SSSI (Site of Special Scientific Interest) and a NNR (National Nature Reserve), and it lies within the North Essex SLA (Special Landscape Area). The areas of woodland are designated as Ancient Woodland.

5 NATURE OF THE EVIDENCE

The evidence on which this archaeological and historic landscape assessment is based comes from a number of sources. Firstly there is the extensive and complicated written documentary which is dominated by law-suits and the records of the manorial courts, a reflection of the fraught and complicated history of land-ownership. This evidence has been summarized by Rackham in The Last Forest (1989). In addition, there is cartographic evidence dating from the first half of the 17th century through to the present day modern Ordnance Survey mapping, which is listed in Appendix 1. The next type of evidence is archaeological, and includes the results of past archaeological investigations on the property, ranging from the excavations on Portingbury Rings by the West Essex Archaeological Group in 1964-5 (Wilkinson, 1978) to the results of more recent archaeological monitoring in relation to the construction of new infrastructure (see also Appendix 1). Most extensive is the physical evidence on the ground, in the form of extant monuments and landscape features, that were identified by the RCHME in 1993 and during the more extensive English Heritage earthwork survey (1999-2000), and which were all then examined during a walkover survey in 2010/2011. These features have been given individual National Trust Sites and Monuments Record (NTSMR) numbers and added to the HBSMR database. Further fieldwork, targeting the areas that were not covered by the English Heritage survey, was undertaken in 2016-17, this has been incorporated into this volume and the NTHBSMR.
Figure 3 - Statutory and non-statutory designations
6 SUMMARY HISTORY OF THE ENVIRONS OF HATFIELD FOREST

6.1 PALAEOLITHIC PERIOD (700,000-10,000 BC)

For most of the Palaeolithic period Britain was joined to Continental Europe. The whole period is characterised by fluctuating temperatures, with successive Ice Ages succeeded by periods of warmth. Originally the Thames followed a more northerly course through East Anglia, discharging into the North Sea. The Kesgrave sands and gravels, of which the gravels in the Gravel-pit area of Hatfield Forest form a small portion mark the former line of the river. The pudding-stone boulders by the Shell-house were excavated from the gravels during the construction of the lake, they originate from the Radlett area of Hertfordshire and were carried downstream to their current site (Gerald Lucy pers. comm.). In about 450,000 BC, during the period of maximum glaciation the Thames was gradually forced southwards by the advancing ice-sheet, eventually reaching its present course. The boulder clay which covers most of Hatfield Forest derives from the residue of the great Anglian glaciation (450,000-400,000 BC). The earliest humans in Britain date to around 500,000 BC, with the earliest biologically modern humans, Homo sapiens, arriving in Britain around 40,000 BC. These people were wandering hunters and foragers, living in conditions that varied from the sub-arctic to the pleasantly warm. When conditions became too cold, they and their prey, which included the mammoth, retreated back to continental Europe, returning when the ice sheets receded again. The last Ice Age lasted from 26,000-13,000 BC, at which point Britain began to warm up and sea-levels to rise.

Figure 4 - Computer generated image of the southern edge of the Anglian ice sheet in Essex
The evidence for human activity during the inter-glacial periods is demonstrated by the recovery of Palaeolithic artifacts (largely flint hand axes) from across Uttlesford District. In most cases these are recorded as chance finds or as residual finds on sites of a later date. Many of the recorded find-spots lie in the river valleys, which appear to have been favoured location at this period. However this apparent distribution may be skewed due to the fact that it is within the valleys that the sands and gravels containing Palaeolithic finds are more likely to be exposed. The presence of two hand axes at Stansted Airport immediately to the north of Hatfield Forest does however demonstrate that Palaeolithic people were venturing onto the boulder clay plateau into what is thought to have been densely forested areas.

6.2 THE MESOLITHIC PERIOD (10,000 – 4,000 BC)

The Mesolithic period begins at the end of the last Ice Age and is marked by rapid climatic change. A steppe/tundra environment was replaced by pine and birch forest and the larger animals (such as the mammoth) were replaced by more familiar types such as the reindeer and horse. Rising sea-levels derived from the melting glaciers submerged the low-lying land that had linked Britain to the continent, forming the English Channel. By around 7,500 BC the Hatfield Forest area was probably covered by a mixed deciduous forest, largely of oak, lime and elm. This was inhabited by mobile groups of hunters and foragers, hunting red deer, elk and wild cattle (aurochs) in the woods and fish and birds in the marshes as well as gathering fruit, roots and nuts. There is scattered evidence for Mesolithic occupation, largely limited to finds of stone/flint artifacts, across Uttlesford District, with a distinct preference for the valleys of the Stort and Cam rivers. However the excavations at Stansted Airport and the A120 have recovered a widespread scatter of Mesolithic flint tools, often incorporated by accident into much more recent features, indicating the boulder clay landscapes were also being exploited.
Figure 5 - Mesolithic activity in and around Hatfield Forest
6.3 NEOLITHIC PERIOD (4,000 – 2,200 BC)

The Neolithic period marks the change from a hunting and foraging life-style to a more settled farming economy. This was accompanied by the introduction of new animal and plant species (domestic cattle and sheep, wheat and barley), pottery and new types of tools, including the polished flint axe. The introduction of farming led to the clearance of some areas of mixed woodland to make fields and meadows.

Evidence of Neolithic occupation is more common than for the Mesolithic period in the environs around Hatfield Forest; however, there still remains little evidence for settlement sites and most of the finds are residual. As can be seen from Fig. 6 there is a decided preference for river valley slopes in the distribution pattern for Neolithic

Figure 6 - Neolithic activity in the Hatfield Forest area
sites, a distribution which largely coincides with the lighter and more easily worked soils in the area. Tree-throw holes (either trees blown down with their root balls attached or deliberately removed with the root balls partially attached) containing Neolithic artifacts have been identified at Stansted Airport; although the exact nature of this activity is unknown, pottery and flint tools, including arrowheads and axes, have been recovered. Excavations on the A120 at Great Dunmow found evidence of flint-knapping (flint tool making) on two separate sites and trial-trenching immediately adjacent to the M11 identified Neolithic occupation with pottery and flint work present. A large glacial erratic at the northern end of Newport has been interpreted as a standing stone and the excavations at Stansted uncovered a sizeable sarsen stone which had been ceremonially placed in a Middle Bronze Age feature (Fig. ; the erection of standing stones is largely a late Neolithic and Early Bronze Age phenomenon and the placing of such a stone within a Middle Bronze Age context shows the importance that the stone still held.

Figure 7 - Large stone potentially used as a Neolithic standing stone but found in a Bronze Age pit at Stansted Airport and now located at the crossroads in Takeley

6.4 THE BRONZE AGE (2,200 – 700 BC)

The Bronze Age is characterised by the use of first copper and then bronze tools and weapons and of gold for jewellery. It was a period of great change, for both people and the environment. By the Late Bronze Age the original woodlands had been quite extensively cleared for farming, with large-scale field-systems marking a major re-organisation of the landscape. Large scale trading exchange networks with mainland Europe brought the materials for bronze working into the south and east of England and south Essex has a particularly large concentration of metalwork finds. The climate was becoming increasingly cooler and wetter, encouraging peat formation.
Evidence from pollen analysis to the east of Stansted Mountfitchet has established that during the Early Bronze Age the area was still well wooded. However, there is evidence that there was Late Neolithic/Early Bronze Age activity in the form of henges, round barrows and ring ditches, whilst the discovery of barbed and tanged arrowheads and associated flintwork at Stansted attests to the presence of hunting parties. A landscape of woods with clearings for settlement and monuments can therefore be envisaged for this date in the area of Hatfield Forest. The northern bias of the distribution of Bronze Age sites and finds apparent in Fig. 22 is largely a product of the distribution of archaeological fieldwork (particularly that of Stansted Airport and A120), it is probable that a simple density of activity awaits discovery to the south of the Forest.
By the Middle Bronze Age (c. 1600 BC) pollen analysis suggests that the clearance of woodland and the extent of agricultural exploitation had increased significantly. Many Bronze Age burials have been found across Uttlesford, both through excavation and from aerial photography. These take the form of circular ring ditches (remains of barrows) either in small groups or as isolated features in the landscape. A ring-ditch at Stansted Airport was fortuitously located close to the Pincey Brook, leading to waterlogging and good palaeoenvironmental data surviving. This ring-ditch was slightly earlier than the accompanying settlement, suggesting that its presence had influenced the siting of the settlement. The finds from this structure included the unusual discovery of the bones of aurochs (a giant wild cattle breed) that is thought to have died out in Britain in the Early Bronze Age.

There is widespread evidence of occupation of the environs around Hatfield Forest from the Middle to Late Bronze Age, with the first definite settlements dating to this period. The extensive area excavations at Stansted Airport have revealed a range of Middle to Late Bronze Age settlements. The most important settlement was on the Mid-Term Car Park site, which produced an enclosed settlement with a range of roundhouses, water-holes, pits and other features, the only settlement of this nature on the Boulder Clay plateau found to date. Pottery and radiocarbon dates suggest that the site was occupied for a period of approximately 300 years with a number of rebuilding phases. Other Bronze Age unenclosed settlement evidence has been excavated at Stansted and on other sites across Uttlesford, including on the A120, M11 and the Cambridge to Matching Green pipeline, though most of these comprise a single building or groups of pits and post-holes. The probability is that the Hatfield Forest area would have been utilised, in some form or other, although whether it contained either settlements or fields during this period is unknown.

6.5 THE IRON AGE (700 BC – 43 AD)

The Iron Age is distinguished by the use of iron as the main metal for tools and weapons, with bronze rapidly became confined to jewellery and other decorative uses. Whilst some sites and traditions appear to have continued unchanged, and some of the major social, economic, technological and political developments of the Iron Age had their origins in the Bronze Age, many sites that had been occupied in the Bronze Age were abandoned and new sites founded. Southern Britain in the Late Iron Age was in regular contact and trade with France and the Roman Empire and in 55/54BC Julius Caesar led an unsuccessful invasion of the country. During this middle/later Iron Age Hatfield Forest would have been located close to the tribal boundary between the Trinovantes tribe, whose territory roughly approximated to Essex and the Catuvellauni, whose territory was centred on Hertfordshire.
Evidence for Iron Age occupation is found throughout the area around Hatfield Forest. The hillfort located at Wallbury in Great Hallingbury to the south-west of the forest is probably related to the boundary. This monument still retains its substantial earthworks, which were originally constructed during the Middle Iron Age; however, it was probably occupied through to the end of the Iron Age. A wide range of enclosed and unenclosed settlement sites of this date have been identified. The enclosed settlements range from those that seem to have been occupied by a single family group, comprising a roundhouse and maybe a granary or store-building and fire pits, through to those that may have held a number of families with a range of buildings located within the enclosure. A number of these enclosed sites have been excavated, including an example of a village-sized enclosed settlement excavated to the north of...
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Hatfield Forest on the Airport Catering Site, Stansted Airport. A large number of additional examples have been identified from aerial photographs. Unenclosed settlements, comprising either single or groups of roundhouses as well as single houses, often with associated granaries, have also been excavated. Fieldwork on the gas pipeline from Cambridge to Matching Green and along the A120 has given a good indication of the extent and density of Iron Age occupation in the district, supplemented by recent work analysing enclosure sites visible on aerial photographic web-sites. Again the northern bias of the distribution of Iron Age activity apparent in Fig. 24 is largely a product of the distribution of this archaeological fieldwork, it is probable that a simple density of activity awaits discovery to the south of the Forest.

6.6 THE ROMAN PERIOD (43-410 AD)

The Roman period begins with the conquest of Britain by the Emperor Claudius in 43 AD. Colchester was a principle target of the invasion and became the first capital of the Roman province. Soon after the conquest however a trading centre began to develop at London, at a convenient point for crossing the Thames. The London-Colchester road (now the A118/A12) formed the principal highway eastwards out of Roman London, and it was probably down this routeway that Boudicca and the massed tribesmen of the Iceni and Trinovantes came from the sacking of Colchester to burn the first trading centre at London to the ground in AD 60/61. After the defeat of the rebellion London and Colchester were rebuilt. In the following decades London rose to prominence as the largest and most important town in Britain replacing Colchester as the provincial capital of the province with the Thames providing the link to the rest of the Roman Empire and beyond. In Essex a series of small towns developed, often at nodal points on the new road network, as at Chelmsford and Braintree.
In the vicinity of Hatfield Forest, possible towns or villages are located at Great Dunmow, Bishops Stortford and at Leaden Roding, the latter being a recent discovery. In addition many rural villas/farmsteads have been recorded, particularly to the north of the Forest where archaeological fieldwork has been most active. Detailed excavations have been undertaken on examples at Stansted and at Strood Hall to the west of Great Dunmow, where both the farmsteads, accompanying fields and the family burial-plots have been excavated. Analysis of the Roman landscape in the area suggests that Roman farmsteads are strung out along both sides of the old A120 (itself a Roman road in origin). On average there is a farm every kilometre along the road, each set back from the road in their own fields and linked to the road by a track. An estimate can be made of the financial and social standing of each farm on the basis of its size, type and number of buildings represented and the
richness and number of the finds. A number of very rich Roman burials have been found within the District, including examples at Stansted, Elsenham and Newport. These burials contain both bronze, glass and pottery vessels, frequently with other grave goods including gaming pieces and lamps etc. It is possible that some of these burials would have been beneath barrows, which have now been ploughed flat, but which might originally have been similar to those at Bartlow Hills just outside the northern edge of the District.

6.7 THE SAXON PERIOD (410-1066 AD)

When the official Roman administration of Britain collapsed Britain had already been under attack from across the North Sea, with raids and then settlement by the Saxons, Angles, Friesian and Jutish peoples. It was the Saxons who eventually gave Essex its name, the land of the East Saxons. By the end of the 6th century the kingdom of the East Saxons had emerged as a political force, encompassing what was to become Essex, Middlesex, London and Surrey. The capital of the East Saxons developed as a trading settlement and port at Lundenwic (London), to the west of the old Roman city, during the 7th century. However the East Saxons were to lose Middlesex, London and Surrey to Mercia (a kingdom centred on the Midlands) in the 8th century and their boundaries retreated to approximately that of the historic county of Essex. During the 9th century the kingdom became a province of the kingdom of Wessex.
Evidence for Saxon occupation is relatively rare in the area around Hatfield Forest. However radio-carbon dating of a post-built timber hall at Takeley established that it dated to the late Saxon period. There is evidence for occupation in the Saxon period on a number of the Stansted Airport sites, including a small farmstead and strip fields on the Mid-Term Car-Park site (Havis and Brooks 2004; Cooke et al 2008). There is also palaeoenvironmental evidence from the Pincey Brook which demonstrates that the Stansted Airport area was being actively farmed throughout the Saxon period, the pollen counts suggest large areas of open countryside largely under pasture, with some arable agriculture and woodland (Havis and Brooks 2004).
By the end of the Saxon period it is evident from the Domesday Book that much of
the present distribution of settlements, including church/hall sites, villages and towns
was already in place. Hatfield Broad Oak, which included the area of Hatfield Forest,
belonged to the Saxon Earls of Essex, and through them Harold Godwinson, the last
Saxon king. The Domesday Book records a substantial land-holding in 1066 with
King Harold holding the woodland for 800 pigs (the standard measurement for
woodland) as well as a further 40 acres of woodland held by King Edward the
Confessor’s reeve (this land may have formed the basis of the claim of the
Barrington’s that they had been woodwards of the Forest since before the Conquest).
Certainly much of this woodland may well have been Hatfield Forest. It has been
suggested that some of the other parish boundaries may reflect the ancient
boundaries of pre-Conquest estates, with Little and Great Canfield forming one
estate and Great and Little Hallingbury a second (Havis and Brooks 2004, 341). The
place-name evidence reflects the presence of Hatfield Forest and other woodlands in
the area. Hatfield and Canfield incorporate the Anglo-Saxon feld, which was used of
open land in the neighbourhood of woodland. Leah, which means a woodland
clearing, forms part of the Takeley place-name.

6.8 THE MEDIEVAL PERIOD (1066-1537)

The medieval period begins within the Norman Conquest of 1066. In the immediate
aftermath England was parcelled out amongst the Norman barons and knights. This
is reflected in the Domesday Book for the Hatfield Forest area, where many of the old
manors are recorded as having new landowners. Thus William the Conqueror held
the Hatfield Broad Oak, his son-in-law Count Alan of Brittany and William of Warenne
had portions of the Canfields. The exception was Swein of Essex, who was one of
the largest landowners in Britain, and one of the few pre-Conquest landowners who
kept their land having supported William the Conqueror, including land in the
Hallingburys. The other large land-owner was the church, with the Bishop of
London and the Abbey of St Valery in Caen owning land in the area. A considerable
proportion of manors in the area were held by demesne by the chief lords rather than
being rented out to sub-tenants. This may go in part to explain the concentration of
Norman castles in the area, at Stansted Mountfitchet, Great Easton and Great
Canfield.

The medieval landscape around Hatfield Forest can be broadly reconstructed from a
combination of documentary evidence (including the Domesday Book), excavation
evidence and cartographic evidence, the Chapman and André map of 1777 in
particular gives a good indication of the appearance of the late medieval landscape.
It was a mixed agricultural landscape, with manor-and-church complexes, dispersed
farms, moated sites and tiny hamlets linked by a complex network of twisting and
often sunken lanes and greens (some linear some triangular in plan). Hatfield Broad
Oak was the largest settlement in the area. By calculating the number of swine to
every hundred acres in the Domesday figures and against the modern parish
acreages, the most densely wooded district in all Essex appears to have been the
parishes of Elsenham, Takeley, Stansted, Great Hallingbury and Little Easton.
However there was a reduction in woodland between 1066 and 1086, with Little
Easton losing 50% and the manors’ of St Valery and Eudo Dapifer in Takeley losing
40%. However Oliver Rackham has suggested that the decrease in the number of swine was not due to woodland clearance but rather due to an expansion in coppicing which would have resulted in a loss of wood pasture.

Figure 12 - The medieval landscape in the Hatfield Forest area

Hatfield Forest was one of the smaller royal forests of medieval England. The term ‘forest’ means a district where the crown had the right to keep hunt and kill the ‘beasts of the forest’ (deer and wild swine) and to appoint forest officials to protect the beasts. This did not necessarily mean that the area was entirely wooded, many forests (including Hatfield Forest) had elaborate systems of land management,
involving deer, timber and underwood, livestock and other farming activities. Thus a royal forest could have ordinary farmland, areas of coppice woodland, tracts of rough grazing with pollard trees, other trees and scrub. What is unusual at Hatfield Forest is that all of these elements survive in a recognizable medieval form, a unique example in Britain.

A number of other ancient woods survive in the area and the Chapman and André map records the location of others. To the south-west of Hatfield Forest, Wall Wood and Woodside Green to the south also present a similar combination of coppice wood and grasslands with ancient pollard trees. Wall Wood existed as a defined woodland at least as far back as the 13\textsuperscript{th} century, it has massive, almost certainly medieval, earthworks separating it from both Woodside Green and Hatfield Forest.

In addition to the woodland the area around Hatfield Forest is notable for its numerous deer-parks. These were lower in the social scale than Forests, and could be created by anyone with the ability to afford one, whether a member of the nobility or not. Rackham (1989, p.44) has calculated that there were some 30 parks within a 10 mile radius of Hatfield Forest, making it ‘probably the most parky part of all England’.

Excavations at Stansted Airport and in Takeley have revealed a wealth of new evidence relating to the development of the area in the medieval period. These include a 12\textsuperscript{th}-14\textsuperscript{th} century farmstead at Roundwood, a post-built windmill on the Mid-Term Car-park, industrial activity on the Forward Logistics Base, a series of crofts and tofts (some moated) strung out along the old A120 and the green lane that runs parallel to it, and a later medieval hunting-lodge and deer-park at Stansted Park. As well as the settlement evidence for arable agriculture has been excavating, in the form of shallow parallel ditches, spaced approximately 5-6m apart. These are interpreted as strip-fields.

Figure 13 - Reconstruction drawing of the 12th-14th century farmstead at Roundwood, Stansted Airport
6.9 THE POST-MEDIEVAL PERIOD (1538-1900)

The post-medieval period saw the development of more nucleated villages and the expansion of some of the medieval towns. There were also changes in agricultural production are reflected in changing farm complexes with the development of the Victorian ‘High Farming’ tradition when new ideas culminated in significant alterations in the design and layouts of buildings. A large number of farm complexes reflect this change.

Throughout this period, large parks and landscaped gardens were created. Some, such as Barrington Hall, in Hatfield Broad Oak, were on the sites of former religious establishments whilst others were associated with halls and manors. These include the park designed by Capability Brown at Hallingbury Park. In the late post-medieval period, railways crisscrossed the District; most of these have now been decommissioned, partially as a consequence of the Beeching cuts. The Braintree to Bishops Stortford Railway (now the Flitch Way) was constructed in 1869. It bisects the northern part of Hatfield Forest and now forms the northern edge to the survey area. The post-medieval period also saw increased industrialization, particularly in the towns and around the new railway stations. The industries were largely agriculturally based; they included maltings, breweries and tanneries, brickworks and textiles.

6.10 THE MODERN PERIOD (1901 TO THE PRESENT DAY)

The processes of agricultural change are perhaps most obvious for the modern period, and include the amalgamating of smaller fields to make larger units and the
widespread removal of ancient hedgerows, exacerbated by the loss of standard elms as a consequence of Dutch Elm Disease. In addition, many of the historic Essex barns and other agricultural buildings that are so characteristic of the Uttlesford landscape have been converted to housing.

The area around Hatfield forest contains numerous important defences constructed in the Second World War including both defence lines and airfields. The General Headquarters Line (GHQ) comprised a complex of anti-tank ditches, pill boxes, anti-aircraft guns and other defences which ran either side along the River Chelmer then along Debden Water and finally north along the River Cam. In addition, six airfields were constructed, sometimes on what had been large parks; those at Stansted and Carver barracks still function as airfields or military bases.

![Figure 15 - Aerial photograph taken by the Luftwaffe during World War II of Stansted Airport. The corner of Hatfield Forest is just visible in the bottom left-hand corner](image)

The most significant developments within the District date to the second half of the 20th century, comprising large-scale housing development around Saffron Walden, Newport and Great Dunmow, the construction of the M11 and the expansion of Stansted Airport.
7 SUMMARY HISTORY OF HATFIELD FOREST

7.1 PALAEOLITHIC PERIOD (700,000-10,000 BC)

The Palaeolithic period is marked by repeated glaciations with warmer periods in between them. The Kesgrave sands and gravels that are exposed in the gravel-pits area of the Forest mark an early route (approximately 500,000 years ago) of the River Thames when it flowed across central Essex before being pushed south by the Anglian glaciation. The pudding-stone boulders by the Shell-house were excavated from the gravels during the construction of the lake, they originate from the Radlett area of Hertfordshire and were carried downstream to their current site. However the Kesgrave gravels were laid down during a cold stage and to date no human activity has been found associated with them.

The boulder clay which covers most of Hatfield Forest (and north-west Essex) derives from the residue of the great Anglian glaciation (450,000-400,000 BC).

The Palaeolithic is however a very long period and given that Palaeolithic flint tools have been recovered from the Stort valley to the east and from Stansted Airport, it is entirely possible that there would have been sporadic human activity within the Forest itself.

7.2 THE MESOLITHIC PERIOD (10,000 – 4,000 BC)

From Hatfield Forest itself there are Mesolithic microliths and 2 waste flakes of brown, translucent flint (NTSMR 00510) which were recovered some 100m to the north-east of the present lake. In the Mesolithic period this area probably formed an open marshy expanse within the woodland, a location favoured by Mesolithic people for the wide range of hunting and foraging possibilities presented.
7.3 NEOLITHIC PERIOD (4,000 – 2,200 BC)

Whether there was Neolithic activity at Hatfield Forest is unknown, but given the evidence immediately to the north at Stansted Airport, it seems probable. If nothing else, the marsh area around the stream would have been a draw for hunting groups.

7.4 THE BRONZE AGE (2,200 – 700 BC)

To date there is no evidence for Bronze Age activity in Hatfield Forest. However there is widespread evidence of occupation of the environs around Hatfield Forest from the Middle to Late Bronze Age. The probability is that the Hatfield Forest area would have been utilised, either as woodland, pasture or with small scale settlement.
7.5 THE IRON AGE (700 BC – 43 AD)

There is some evidence for Iron Age activity within Hatfield Forest itself.

Figure 17 - Iron Age find-spots in Hatfield Forest

The Scheduled Monument of Portingbury Rings (NTSMR 00113) in Beggar’s Hall Coppice was trial-trenched in the 1960s and a small number of Iron Age sherds recovered from a buried soil beneath the bank (see 2.2 for discussion of the excavation evidence and Figs 16 and 17). These sherds do not conclusively date the earthwork itself, but they do demonstrate that it must date to the Iron Age or later. It has been suggested that this site represents an enclosed Iron Age farmstead. However, it is considerably smaller than most of the excavated Iron Age sites known
from Essex, but there are a few examples with which it can be compared (see Figure 18). At Ypres Road Colchester a 1st century BC ditched enclosure with a central roundhouse has been excavated (Brooks and Masefield 2005), and an even smaller rectangular enclosure containing a single roundhouse was excavated at Ardleigh, this dates to the Middle Iron Age (Brown 1999). The Lofts Farm enclosure at Goldhanger is known as a cropmark, the faint traces of a single roundhouse are visible within it (Ingle and Saunders 2011). However the enclosing ditches for all of these examples are much narrower than that present at Portingbury Rings, which more closely resembles a medieval moat in its width. The date of the other earthworks at Portingbury Rings is unknown and they are not necessarily contemporaneous. Although conjoined enclosures are known from the Iron Age there are no known examples that match this configuration in Essex.

![Portingbury Rings and comparative plans of small Iron Age enclosures](image)

A single sherd of Iron Age pottery and a flint blade (NTSMR 00511) has also been recovered from recovered from the ground surface at the Warren during the 1993 RCHME survey. Rackham (1989) suggested that the medieval Warren might have re-used an earlier prehistoric earthwork, with the warreners simply converting the enclosure bank into a series of pillow mounds. It is however considered unlikely that the Warren had an origin as an Iron Age enclosure. The earthworks of the Warren are considerably more extensive than those of most Iron Age enclosed settlements, yet it is too small to be a hillfort, as at Wallbury Camp in Great Hallingbury or Amesbury Banks in Epping Forest. Also if the warren earthworks were indeed a prehistoric feature surviving into the medieval period it is puzzling as to why they were not used to demarcate the boundary of Warren Coppice, which lies some 15m
to the east and runs parallel to the Warren for 200m, nor why if the pillow-mounds were constructed from an existing earthwork why it was considered necessary to cut gaps between them.

In summary there is evidence for Iron Age occupation in Hatfield Forest in the form of a number of pottery sherds, and it is possible that there are surviving earthworks of this date, but this remains to be proved. The extensive excavations to the north of the Forest at Stansted Airport and the A120 have demonstrated however a relatively densely populated landscape in the immediate vicinity.

7.6 THE ROMAN PERIOD (43-410 AD)

In Hatfield Forest itself a scatter of Roman pottery was recovered from the south end of Collins Coppice in 1979 on newly turned soil where a pipeline had recently been lain. (NTSMR 00114). A quantity of Roman pottery sherds have also been recovered from the gully beside the road in the centre of the Forest (NTSMR 2042). Overall the pottery is typical of earlier/mid Roman lower-status rural assemblages; it is late 1st to mid-2nd century in date and is dominated by local wares (see 12, Appendix 6).

Although the pottery assemblage is fairly fragmented and abraded, the apparent concentration of a few hundred sherds in a single area provides a good indication that Roman settlement activity was occurring nearby, almost certainly within Hatfield Forest itself. This suggests that there may have been clearings in the forest or that some or all of the area was completely unforested during the Roman period. There is extensive evidence for Roman settlement strung out along the Roman road from Braughing to Colchester which formed the northern boundary of the Forest, as well as across the wider area of Stansted Airport. There are villas at Hallingbury and at Folly Farm, Great Dunmow and probably on the Airport (based on the rich burials that were excavated there), the Hatfield Forest example appears to be at the other end of the social scale and is probably related to a rather small farmstead or holding.
Figure 19 - Roman find-spots in Hatfield Forest

7.7 THE SAXON PERIOD (410-1066 AD)

It is not known whether Hatfield Forest was woodland during the early Saxon period. By the end of the Saxon period (1066) it formed part of the parish of Hatfield Broad Oak. The Saxon manor and settlement of Hatfield Broad Oak belonged to the Earls of Essex, the powerful Godwinson family, before becoming crown property as part of King Harold’s estates. The Domesday Book (Rumble, 1983) records a large and thriving community, however the manor of Hatfield Broad Oak was large and it is not possible to determine how many of the people recorded in the Domesday Book were clustered together on the site of the village and how many were scattered around the
manor on rural settlements. The woodland for 800 pigs (the standard measurement for woodland) is recorded as belonging to King Harold as well as a further 40 acres of woodland held by King Edward the Confessor’s reeve (this may have been the origin of the Barrington’s claim to have been woodwarks since before the Conquest). Much of this woodland may well have been Hatfield Forest.

Figure 20 - Map of Hatfield Forest and Hatfield Broad Oak
7.8 THE MEDIEVAL PERIOD (1066-1537)

Originally the King was owner of the deer and the soil in the Royal Forest, he was also the lord of the two principal manors in Hatfield Broad Oak. The tenants of the Hatfield Broad Oak manors had common rights in the Forest for grazing. In addition the men of Takeley Street, which bordered the Forest but was not part of it, were known as Sharers and also had the right of common-grazing. The Barringtons claimed to have served as hereditary woodwards throughout this period.

In 1238 Henry III granted his holdings in Hatfield to Isabel de Bruce in exchange for her half of the Earldom of Chester. The king retained the Forestal rights, whilst Isabel held the land, the trees and all that was on it. In 1306 following the crowning of Isabel’s great-grandson, Robert the Bruce, as King of Scotland, Edward I confiscated Robert’s English estates. On Edward I’s death in 1307, Edward II granted Hatfield to his sister Elizabeth, wife of Humphrey de Bohun, Earl of Hertford and Essex. This time the grant included not only the manor but also part of the Forestal rights. In 1421 the de Bohun estate at Hatfield Broad Oak was inherited by Anne Stafford, passing to her son Humphrey Stafford, the Duke of Buckingham. In 1446 the Forestal rights were also granted to the Duke of Buckingham by Henry V. In 1521 the third Duke of Buckingham was executed by Henry VIII and his lands confiscated by the King. In 1547 most of the Hatfield estate was granted to Richard lord Rich, these included the Forestal rights.

7.8.1 Forest boundaries

Hatfield Forest was originally larger (Figure 21). Its northern and western limits were the parish boundary, as given in the 1298 perambulation for Hatfield Broad Oak parish. To the east the boundary was the Pincey Brook and Hatfield Park. The southern boundary was the medieval settlement of Wood Row, and the south-east of the Forest abutted the Barrington Lands as recorded in the 13th century Barrington Claim. In the medieval period deer were not confined within a Forest as they were in a park, although they lost their legal protection if they strayed outside the Forest. However in Hatfield Forest the custom grew-up that adjoining farmers had the right (and later the duty) to maintain deer-proof fences to confine the deer within the forest. They were allocated thorns and underwood from the forest for this purpose, either to make a dead hedge or reinforce a live one. Nearly all of these hedges survive, and are very similar to other ancient Essex hedges, but with few pollarded trees. The current boundary to the west is delimited by a deep, steep-sided ditch (NTSMR 00766, 01821), which may be medieval in origin.

7.8.2 Gates

The Forest had 11 gates or hatches sited around its perimeter. The location of these is known from the documentary source but apart from the fact that they were all on routes which survive as roads or foot-paths there is no surviving physical evidence for them. It is presumed however that they took the form of wooden gates as the people responsible for the Woodrow Hatch were repeatedly before the manorial court in the 1440s for failing to repair it.
Figure 21 - Medieval Hatfield Forest, showing the principal landscape elements
7.8.3 Coppices

The interior of Hatfield Forest was sub-divided into 17 coppices, which were coppiced on an 18 year rotation. They were delimited from the plains and each other by banks and ditches. They are individually described below, starting in the north-western corner and proceeding around in a clockwise direction:

**Doodle Oak Coppice (NTSMR 954)**

Doodle Oak Coppice is located at the northern end of the Forest. It is roughly wedge-shaped, with rounded corners, measuring approximately 374m (north-south) by 287m (east-west) at its widest points. It gets its name from the Doodle Oak (see below) which was sited immediately to the south of the Doodle Oak Coppice. The bank (NTSMR 1851) and ditch (NTSMR 1852) survive in part on the east and west sides, however the northern boundary was lost when the railway was constructed in the mid-19th century. The southern half of the coppice is no longer wooded and hasn’t been since the 19th century.

![Figure 22- Doodle Oak Coppice showing surveyed features](image)
Dowsett’s Coppice (NTSMR 955)
Also known as Hampton’s after a farm steward, and possibly also as Huttons (Rackham 1989, 109). It forms part of the Takeley Quarter group of Coppices at the northern end of the Forest. It is sub-rectangular in plan, approximately 453m north-south and 230m east-west. Rackham has argued that the outer bank and ditch (NTSMR 1970 and 1971) that encircles the Takeley Quarter coppices was constructed first, followed by the internal sub-divisions that form the individual coppices (Rackham 1989, 157). This bank and ditch forms the western edge of Dowsett’s coppice, delimiting it from the marshy area bordering the stream. The curving bank and ditch (NTSMR 1990 and 1989) that forms the eastern and southern edge of Dowsett’s is considered to be the earliest of the internal sub-divisions. The southern part of the coppice bank and ditch was surveyed in 2017, no interior features were recorded apart from the ‘motorway’ ditches along the ride and a small area of late drainage features in the north-east corner. The northern edge of the coppice was lost when the railway was constructed in the mid-19th century.
Street Coppice (NTSMR 956)

Street Coppice is the north-eastern coppice in the Takeley Quarter group of coppices. It takes its name from its proximity to Takeley Street. It is roughly trapezoidal in shape, measuring (along its long axis 519m east-west by 278m north-south). The northern and eastern boundary are formed by the bank and ditch (NTSMR 1970 and 1971) which encircle the whole of the Takeley Quarter Coppices. The western boundary is the bank and ditch which delimits Dowsett’s Coppice (NTSMR 1990 and 1989). The south-western boundary comprises a straight bank and ditch (NTSMR 1994 and 1995). Rackham (1989, 157) has argued that the straightness of these boundaries probably represent a later sub-division of the Takeley Quarter. The coppice ditch is on the Street Coppice side of the bank. The survey shows an internal coppice bank and ditch (NTSMR 2031 and 2030) running along the eastern side of a ride, it is considered that this is a mis-identification of a later bank and ditch.

Figure 24- Street Coppice, showing surveyed features

A number of features are located within Street Coppice. These include a dendritic drainage-system, comprising a branching series of curving, shallow ditches (NTSMR 1961, 2021, 2038 and 2025). These are considered by Rackham to be probably
natural in origin (Rackham 1989, 160), but if that is the case, they have clearly been augmented by man.

**Long Coppice (NTSMR 957)**

Long Coppice is located between Street Coppice and Spittlemore Coppice (it is wrongly labelled as Spittlemore Coppice on the OS map). It is roughly rectangular in plan, measuring 504m northwest-southeast and 253m northeast-southwest. The northwest boundary would have been the coppice bank and ditch (NTSMR 01989 and 01990) around Dowsett’s Coppice, the northeast boundary is the bank and ditch (NTSMR 01994 and 01995) separating it from Street Coppice. The southeastern boundary is the coppice bank and ditch that encircles the whole of the Takeley Quarter (NTSMR 01970 and 01971). The division between Spittlemore and Long Coppice is marked by ditch NTSMR 01971), but there is no trace of an accompanying bank. It is possible that this boundary was marked by a hedge instead, as described in a document dated to 1612 as being in use in some of the coppices (Rackham, 1989, 120). There are a number of internal features, comprising drainage ditches of probable post-medieval date.

![Figure 25 - Long Coppice showing surveyed features](image-url)
Spittlemore Coppice (NTSMR 958)
Spittlemore Coppice is the southernmost of the coppices which make up the Takeley Quarter. It is roughly trapezoidal in plan, measuring 562m by 340m along its long axises. The southern boundary is formed by the coppice bank and ditch that encircles the whole of the Takeley Quarter (NTSMR 01970 and 01971). The north-western boundary was surveyed in 2017, it was the coppice bank and ditch boundary of Dowsett's Coppice, to which Spittlemore appears to have been appended. The north-eastern boundary between Spittlemore and Long Coppice is marked by ditch NTSMR 1971, but there is no trace of an accompanying bank. It is possible that this boundary was marked by a hedge instead, as described in a document dated to 1612 as being in use in some of the coppices (Rackham, 120). Within the coppice the little sinuous watercourse (NTSMR 01974) and pond (NTSMR 01978 and 01979) are thought to be natural in origin, they are only intermittently wet.

Figure 26 - Spittlemore Coppice showing surveyed features
Low Street Coppice (NTSMR 959)
Low Street Coppice formed the northernmost coppice of the group of coppices known as the Bush-End Quarter. It is no longer extant, but its extent can be largely reconstructed from the cartographic and earthwork evidence. Roughly triangular in plan, it measured 550m east-west and 480m north-south. The eastern boundary was formed by the Park Pale of Hatfield Park, this probably comprised the Pincey Brook, supplemented by a deer-proof fence. Part of the southern boundary may be marked a ditch (NTSMR 01957), no trace of a bank survives. On the western side there is a short length of bank and ditch (NTSMR 01963 and 01964) that may have formed part of the coppice bank and ditch. The sinuous watercourse (NTSMR 1960 and 1961) at the southern end of the coppice is probably natural in origin.

Figure 27 - Low Street Coppice showing surveyed features
Table/Elgin Coppice (NTSMR 960)
Table Coppice was re-named in the late 19th century as Elgin Coppice to honour a relative of the Houblons, the Earl of Elgin. The earlier 'Table' place-name refers to the adjoining Table Plain. It is the westernmost coppice in the coppice group known as Bush-End Quarter. Roughly trapezoidal in plan, it measures 527m by 507m along its long axises. The encircling coppice ditch (NTSMR 01907) survives virtually intact (apart from where it is breached by the road), but the survival of the accompanying coppice bank (NTSMR 01906) is more intermittent. It is possible that this was deliberate, as the bank is missing on the north-east and south-west sides where Table Coppice abutted Middle Coppice and Bush-End Coppice respectively.

The internal features within this coppice can all be ascribed a post-medieval or World War II date.

Figure 28 - Table/Elgin Coppice showing surveyed features

*Middle Coppice (NTSMR 961)*
Middle Coppice was the middle coppice in the coppice group known as Bush-End Quarter, with Low Street Coppice to the north, Table/Elgins Coppice to the west and Bush-End coppice to the south. The eastern boundary was formed by the park pale for Hatfield Park, this probably comprised the Pincey Brook, supplemented by a deer-proof fence. It was irregular in plan, measuring 651m by 361m at its greatest extent. It is no longer extant, but its extent can be largely reconstructed from the cartographic evidence. There is however little physical evidence for it surviving. It is possible that ditch NTSMR 01957 marks the northern boundary and drain NTSMR 01900 the southern boundary, but this is by no means certain. The western edge is formed by the Table/Elgin Coppice ditch (NTSMR 01907). There are only a few internal features, none of which appear to be medieval in origin.

Figure 29- Middle Coppice, showing surveyed features
Bush-End Coppice (NTSMR 962)

Bush-End Coppice is sited in the coppice group known as Bush-End Quarter, with Middle Coppice to the north and Table/Elgins Coppice to the west and Gravel-Pit coppice to the south. It was irregular in plan, measuring 535m east-west by 406m north-south. It is no longer extant, but its extent can be reconstructed from the cartographic and earthwork evidence. The western limit is marked by the Table/Elgin Coppice ditch (NTSMR 01907). The eastern boundary was formed by the park pale for Hatfield Park, this probably comprised the Pincey Brook, supplemented by a deer-proof fence. The northern boundary may have been drain NTSMR 01900, but this is by no means certain. The southern boundary bank and ditch still largely survives (NTSMR 01885 and 01886). There are a number of internal features, none of which are thought to be medieval in origin.

Figure 30 - Bush End Coppice showing surveyed features

Gravel-pit Coppice (NTSMR 963)
Gravel-pit Coppice is the southernmost of the coppices in the coppice group known as Bush-End Quarter. It is separated from the rest of Bush-End Quarter by a narrow tongue of plain. It was irregular in plan, measuring 363m east-west by 228m north-south. The western boundary is marked by a coppice bank and ditch (NTSMR 00847 and 00848). The northern and eastern boundary comprised a ditch only (NTSMR 00847). The southern boundary bank and ditch still largely survives (NTSMR 01885 and 01886). There are a number of internal features, none of which are thought to be medieval in origin. The southern boundary comprised the boundary of the Forest itself, a deep, steep-sided ditch. A small portion of this coppice in the south-east corner has been lost and no longer forms part of Hatfield Forest. There are internal features, most of which date to either the late post-medieval period or the Second World War. However in the north-western part of the coppice there is a branching watercourse of probable natural origin (NTSMR 00849-00851), this drains into the lake (formally the valley of the Sherman Brook).

Figure 31 - Gravel-pit Coppice showing surveyed features
Warren Coppice (NTSMR 964)
Warren Coppice is the northern coppice in the pair of coppices known as Fairstead Quarter. It is no longer extant, but its extent and form can be reconstructed from the cartographic and earthwork evidence. It was roughly oblong in plan and measured approximately 534m from north-west to south-east x 293m from north-east to south-west. The north-western and south-western boundary comprised a coppice bank and ditch (NTSMR 00622 and 00621). The southern boundary was formed by the coppice bank and ditch that encircles Collin’s Coppice (NTSMR 00713 and 00712). The eastern and south-eastern boundaries have been destroyed in the creation of the upper and lower lakes. There are a number of internal features, most of these relate to the 18th century re-modelling of the shell-house and lake area.

Figure 32 - Warren Coppice showing surveyed features
*Collin’s Coppice (NTSMR 965)*
Collin’s Coppice is the southern coppice in the pair of coppices known as Fairstead Quarter. It was originally known as Firesteads or Fairsteads. It is irregular in plan, measuring 707m north-south and 414m east-west. The coppice boundary was defined by a bank and ditch (NTSMR 00713 and 00712) on the southern, western and northern sides. However, part of the northern coppice bank and ditch is missing, presumed lost as a consequence of the 18th century re-modelling of the lake area. The east side comprises a deep steep-sided field-ditch (NTSMR 00734), there are a number of large oaks and coppice stools along this boundary. The coppice is now divided into 5 areas, separated from each other by tracks, these probably date to the 18th century. There are a number of internal watercourses, some of which may be natural in origin (NTSMR 00725, 00731, 00732, 00754). A 13th century finger-ring (EHER 4519) was found September 1980 in Collins’s Coppice (present location unknown).

Figure 33 - Collins Coppice showing surveyed features

*Emblem’s Coppice* (NTSMR 966)
Emblem’s Coppice is located in the south-eastern corner of Hatfield Forest. It is roughly rectangular in plan, measuring 630m north-south by 196m east-west. The northern and eastern boundary are defined by a coppice bank and ditch (NTSMR 00769 and 00770). Part of the southern boundary survives (NTSMR 00771 and 00780, and possibly 00765), but it has been disturbed by the construction of the 19th century road at this point. The western boundary is the deep, steep-sided field ditch (NTSMR 00766) which marks the edge of the Forest and the edge of Hatfield Broad Oak parish. A track runs parallel to this western boundary, approximately 9m in from it. This is shown on the historic maps and links the former Wall Wood, Lyphatch, Beggars Hall and North Hatch Gates and may well be medieval in origin. There is small-scale quarrying (NTSMR 00778) of unknown date in the north-east corner of the coppice close to the Lyphatch gate. The other features within the coppice are all considered to be post-medieval in date.

Figure 34 - Emblems Coppice showing surveyed features

Lodge Coppice (NTSMR 1726)
Lodge Coppice is named after Forest Lodge, which lies immediately adjacent to its south-eastern boundary. The coppice is irregular in plan, measuring 817m northeast-southwest by 423m east-west. The south-eastern and southern boundary is defined by a coppice bank and ditch (NTSMR 001727 and 001728). The western boundary is the deep, steep-sided field ditch (NTSMR 00 766) which marks the edge of the Forest and the edge of Hatfield Broad Oak parish. The northern and north-eastern boundary line is less clear due to the disturbance caused by the modern widening of the rides that border the coppice on this side. The ride that separates Lodge Coppice from Round Coppice appears to be post-medieval in origin (see below). However the ride between Lodge Coppice and Beggars Hall Coppice may have had its origins as a tongue of plain extending from the area of ‘The Table’ to the gate at Beggar’s Hall. The internal features include two dendritic drainage systems, which may have had a natural origin before being modified and straightened in the post-medieval period. There is a notable row of veteran hornbeams along the coppice bank (NTSMR 001727, Figure 35) adjacent to Forest Lodge that appears to have originated as a hedgerow, raising the possibility that this coppice was in part protected by a live hedge.

Figure 35 - Hornbeams on Lodge Coppice coppice bank
Round Coppice (NTSMR 967)
Round Coppice is triangular in plan rather than round. It measures 706m northeast-southwest and 391m east-west. The eastern boundary is defined by a coppice bank and ditch (NTSMR 001768 and 001769). This joins the boundary bank and ditch of Lodge Coppice at its southern end, demonstrating that the ride which now separates the two coppices is not original. The coppice bank and ditch (NTSMR 001728 and 001727) on the northeast side of Lodge Coppice formed the boundary between the two coppices, much of this has been lost due to the construction of the ride. Coppice ditch NTSMR 001727 is on the Round Coppice side of the boundary which suggests that Lodge Coppice was enclosed first. The northern boundary is harder to define (Figure 38), although there has clearly been at least two phases of activity as evidenced by the coppice bank and ditches for Round Coppice and Beggar’s Hall Coppice (NTSMR 001768 and 001769 and NTSMR 00904 and 00905). The ride between Round Coppice and Beggars Hall Coppice may have had its origins as a tongue of plain extending from the area of ‘The Table’ to the gate at Beggar’s Hall. If this is the case the arm of NTSMR 001768/001769 that curves round to the west would have roughly followed the line of the modern ditch NTSMR 001793. However
If the ride is not an original medieval feature that short length of ditch could conceivably have continued at a sharper angle, so that it joined into the southern boundary ditch of Beggar's Hall Coppice. Alternatively the original eastern edge of the coppice may have proceeded in a straight line, joining in with the stub end of the Beggar's Hall Coppice bank and ditch NTSMR 00904 and 00905, which would mean that the coppices precede the ride. However it is also possible that the two stubs of coppice bank and ditch represent a later attempt (either in the medieval or post-medieval period) to cut off the ride and regulate access to the central plain area from the west.

Figure 37 - Round Coppice showing surveyed features
**Beggar’s Hall Coppice** (NTSMR 968)

Beggar’s Hall Coppice is named after the adjoining Beggar’s Hall Farm. It and Hangman’s Coppice originally formed a single wood known as Northwood. It is roughly wedge-shaped, measuring 694m east-west by 362m south-north. The boundary of the coppice is delimited by a coppice bank and ditch (NTSMR 00905 and 00904) on the east and south sides, and the southern part of the west side. The northern coppice bank and ditch (NTSMR 00904 and 00905) is very straight, and is considered to be a later (although still medieval) division, dating to the sub-division of Northwood into Beggar’s Hall and Hangman Coppice. The remainder of the western boundary comprises the deep, steep-sided field ditch (NTSMR 00766) which marks the edge of the Forest and the edge of Hatfield Broad Oak parish. A short stub of the coppice bank and ditch protrudes from the south-east corner of the coppice. It is not clear whether this was originally part of the adjoining Round Coppice bank and ditch or whether it represents a subsequent attempt to close off the ride (see discussion for Round Coppice).
Beggar’s Hall Coppice contains a number of internal features, of which the most significant is Portingbury Rings (NTSNR 00113, see below). A number of the watercourses may be natural in origin (NTSMR 00918-00920).

**Figure 39 - Beggar’s Hall Coppice showing surveyed features**

*Hangman’s Coppice* (NTSMR 969)
The origin of the name Hangman is not clear, Rackham says that he could find no evidence that it had ever belonged to the village hangman and suggests instead that
it was named after a Mr Hangman. It and Beggar’s Hall Coppice originally formed a single wood known as Northwood. The coppice is irregular in plan, measuring 508m east-west by 494m north-south. The western boundary comprises the deep, steep-sided field ditch (NTSMR 00 766) which marks the edge of the Forest and the edge of Hatfield Broad Oak parish. In the north-west corner both the coppice and Hatfield Forest curve around the edge of a field called Yeminloke (Rackham 1989, 70) belong to Thremhall Priory, Takeley. This field is first recorded in 1248, and appears to have been expanded by assarting part of the forest in 1305. A tongue of plain extended around the edge of the forest at this point from the North Hatch gate up to the area of plain to the north of the Doodle Oak. This was flanked on its west by the field boundary and to the east by the coppice bank and ditch (NTSMR 00814 and 00815). There has been evidently some re-modelling in the past of the coppice, as the northern coppice bank and ditch extends across the mouth of the tongue of plain. It is not clear whether the coppice originally extended to the Forest boundary and the plain was subsequently cut out of it or whether the plain is original and the extension of the coppice boundary was an attempt to incorporate it into the coppice. The coppice ditch can be traced around all of the northern and eastern side of the coppice, but the bank is more patchy. The southern coppice bank and ditch (NTSMR 00904 and 00905) is very straight, and is considered to be a later (although still medieval) division, dating to the sub-division of Northwood into Beggar’s Hall and Hangman Coppice. There are a number of internal features, none of which are considered to be medieval in origin.

Figure 40 – Hangman’s Coppice showing surveyed features
7.8.4 Forest Lodge (NTSMR 00110)

Forest Lodge is ‘the only medieval Forest Lodge of which any particle remains above ground’ (Rackham 1989, 172-8). The western half of the current structure incorporates the earliest surviving portion of the original Lodge. This is typical of the ‘service end’ of a medieval hall-house, of which there are many examples in Essex. The service wing would have comprised a buttery and pantry with a bedroom above. The rest of the building would have been the great hall open to the roof, with possibly a parlour beyond with a bedroom above. The service wing would have been separated from the great hall by a screens passage, with a front door and back door opening on to this passage. There would have been a hearth within the hall, however the absence of soot-blackening in the surviving roof space suggests that the missing portion of the hall must have included either a chimney or a smoke-hood. What survives is the buttery and pantry, the screens passage and part of the great hall, together with the bedroom above, with a loft in turn above that.

The Lodge is located in a central position within the Forest, and has evidently been carefully sited in order to enable the maximum lines of sight across the plains. The maximum sight lines converge on a point outside of the present building, approximately where the original parlour would have stood. Rackham has therefore speculated that instead of a parlour, or on top of the parlour would have been located a standing or observation tower. These were a normal feature of parks and sometimes of Forests and were used as a grandstand for visitors to watch ceremonial hunts, in Hatfield it would have also had a useful role in observing the comings and goings on the Plains. The medieval Lodge (Rackham’s Stage 1) was a plain building with little ornament, of an average size for a hall-house.

The dating of this structure is a matter of deduction. The hall-house is a medieval building-type, dating from the 13th-15th century. However the apparent presence of a chimney or smoke-hood and the loft over the bedroom would suggest a date at the end of the medieval period. The presence and siting of the building suggests someone who was prepared to put money into constructing it for the use of a Forester and was intending to use it for hunting deer. However the building fell into dereliction before being re-modelled at the beginning of the 17th century. The implication of this is that the Lodge was constructed by one of two land-owners, either the Dukes of Buckingham or Henry VIII. Rackham has argued that the balance of probability is that it was constructed by Edward, Duke of Buckingham, in the 1510s, and fell into disrepair following his execution in 1521.

There are a number of earthworks associated with the Forest Lodge. The Lodge lies within an irregular enclosure, this encloses approximately 2.8 ha. and is delimited by a bank and ditch. To the south of the Lodge there is the shallow-depression of a wide ditch (NTSMR 00930 and 00939). It is tentatively suggested that this may represent an infilled moat, however this feature cannot be traced on the eastern or northern side of the Lodge. A circular pond (NTSMR 00936 lies on the edge of the possible moat. A Lodge Close is recorded in 1608, and it may well be earlier in date. If it is indeed a medieval feature it would have had the effect of narrowing the plain considerably at this point, to approximately 78m, and creating a funnel through which deer or livestock would have to pass in front of the possible standing.
Figure 41 - Forest lodge showing surveyed features

7.8.5 Possible moat (NTSMR 001714)
The earthworks of a possible infilled moat are visible in the plain to the north of Forest Lodge. These form a rough parallelogram, the total area measures 83m north-south by 73m east-west. The interior platform is approximately 66m north-south by 56m east-west, and the infilled ditch ranges in width from 4-12m. There is a possible causeway entrance in the south-west corner and two possible spurs of ditch at the south-east and north-west corners. The north-east corner has been disturbed by later quarrying. There are numerous comparable medieval moats from the parishes around Hatfield Forest (of which a small selection are shown in Figure 43). These vary in size from large examples enclosing an entire farmyard or garden, to
smaller examples which encircle a single building. They have a tendency to be roughly square in plan, but there are numerous exceptions to this rule. Conjoined examples are known as well as examples with protruding arms of moat. A geophysics transect across the earthwork (Appendix 4) has established the presence of an enclosing ditch as well as other possible features both inside and outside the enclosed area.

The siting of the earthworks is of interest, positioned as it is on a nodal point of the central plain. As with Forest Lodge, the lines of sight are extensive. In addition the earthworks would have necessitated the funnelling of livestock and deer to either side of the structure. The short spurs of ditch on opposing corners would have further emphasised this funnelling. It is suggested that the site may represent a predecessor to the Lodge. It is possible that ‘the Table’ place-name which was used for this area of plain in the post-medieval period refers to this earthwork.

Figure 42 - Possible moat showing surveyed features
7.8.6 Portingbury Rings (NTSMR 00113)
Portingbury Rings needs to be considered as a possible medieval feature. The dating evidence, which is very limited in nature, only indicates that the earthworks must be Iron Age or later in date. However it is hard to find a convincing comparison.
to this site within the Iron Age. It has already been suggested (see Section 7.5) that the width of the ditches (NTSMR 00881) around the platform (some 8m) bears comparison to other moated sites. The central area is quite small at 30 by 26m but is easily large enough to accommodate a structure. To the east there is a larger enclosed rectangular area (73m by 93m), again enclosed by a wide ditch (averaging 8m). Again this is comparable in size to known moated sites in Essex (Figure 43). Conjoined moats are known from Essex, usually with one moated enclosure containing the house, and the second either enclosing other structures or the garden. However there is little that is comparable to the linking earthwork between the smaller and larger earthworks at Portingbury Rings.

It is of course possible that Portingbury Rings pre-dates the medieval period, but was adapted and expanded in the medieval period. Its location within Beggar’s Hall Coppice raises a number of issues, it may pre-date the Coppice or possibly it served as one of the Forest official’s residences.

Figure 44 - EH surveyed features at Portingbury Rings
7.8.7 Doodle Oak (NTSMR 00509)
The site of the most famous tree in the forest and one of the widest ever measured in England. It stood in the plain just south of Doodle-Oak Coppice. It has been claimed to have been the original Broad Oak (Hatfield has been called Broad Oak since 1136), although Rackham feels this is unlikely. "Dowdle oke" was already a landmark in c.1630 when it is mentioned for the first time in a document. There are two portraits: one engraved in 1807 (Rackham, 1989, fig.34) shows the oak with a short, hugely stout, pot-bellied trunk and a remarkably spreading crown. In 1838 it was measured at 12.8m wide at the base and 18.29m around the pot-belly. The remains of the stump were excavated in 1949 by Maynard Greville who found it to have been 14.9m round at the base. He calculated that the whole tree would have had c.850 annual rings, or more, and would have dated from about AD 950. The oak seems not to have been an ordinary pollard but could have been a giraffe-pollard cut especially high, a style of medieval and Tudor pollarding. (Rackham, 1989, 242-245). The Doodle Oak last produced leaves in 1858 and had disappeared by 1924.

7.8.8 The Plains
The plains are an integral part of the original Forest, forming open areas of grassland, set with ancient oaks, maples, hornbeams, ashes and hawthorns. In addition to the deer, there were common grazing rights for cattle, sheep, goats, horses and geese. Tongues of plain extend between some of the coppices, usually leading to another plain or to a gate out of the Forest. Here and there within the plains are scrubs, comprising thickets of young trees, thorn and the occasional ancient tree. It is probable that there have always been scrubs within the Forest, but these would have not been fixed in location or extent, and were not defined by wood-banks.

The plains are described individually below (please note that the names used are not necessarily the original names)

Woodrow Quarter
A large open space (originally c. 1531m north-south by 1126m east-west ), accessed at the southern end by Woodrow Hatch, from the west by Wall Wood Gate and from the east by Flowentye Herne Hatch. The dispersed settlement of Wood-Row marked the limit of Woodrow Quarter. The northern end of the plain is taken to be Forest Lodge. The plain was crossed by the route known as the London Horsepath. A tongue of plain leads down to the Lyphatch on the west side of the Forest. The southern half of the Woodrow Quarter was enclosed in the mid-19th century. The EH survey records a coppice bank and ditch (NTSMR 00750 and 00751) around the area of scrub located to the south of Forest Lodge. This is considered to be a mis-identification. The other earthworks identified by the survey are not thought to be medieval in origin.
Warren Plain
The name for this area is not original, but has been used for ease of reference. It comprises the broadly triangular space between Forest Lodge and the possible moated site, and incorporates the area of the early post-medieval warren. It measures approximately 575m north-south by 420 east-west. Forest Lodge controls...
the access to this space from Woodrow Quarter and the possible moated site does the same from the Table Plain. There are a number of internal earthworks. Ditches NTSMR 00710, 01710, 01711 and 01712 may mark the former line of the London Horsepath, this route is known from the post-medieval period but could be medieval in origin. To the north of Forest Lodge is a group of shallow linear furrows orientated north-west to south-east (NTSMR 949), current interpretation based on comparison with similar undulations in the Rides, is that these represent areas of wear on the London Horsepath. Further earthworks of a similar nature were identified during the earlier RCHME survey (RCHME, 1993, 8) of the area. To the north of Warren Cottage are one or more possible building platforms (RCHME, 1993, 8), defined by ditches (NTSMR 1704, 1705, 1706, 1707), although these may also represent areas of erosion on the Horsepath.
Figure 46 - Warren Plain showing surveyed features
The Table Plain
An irregular area located between the modern track, the possible moated site and the Doodle Oak. The place-name The Table has been applied to this area since the early post-medieval period. It adjoins Gravel-pit Plain and tongues of plain between the coppices leading up to Thremhall Green, Takeley Street and Warren Plain. It measures 666m north-south by 400m east-west. The Shermore Brook runs down the eastern side of this plain. The northern half has been under scrub for a number of years, but is in the process of being cleared. There are a few historic oaks at the southern end of the plain. There are a number of undated earthworks within the plain area, including a cluster of small, shallow quarry pits in the northern half.

Figure 47 - Table Plain showing surveyed features
The area of plain in the north-west corner of the Forest was known as Thremhall Green in the early post-medieval period, when a fair was held on it. It is sited to the immediately to the south of the Augustinian priory of Thremhall, from which it gets its name. The plain opened out at the northern end to form a long strip of open land on the southern side of Stane Street (this no longer forms part of the Forest). Tongues of plain link to the North Hatch Gate and to the Table Plain. There are a number of undated earthworks. About half of the surviving plain is under scrub.

Figure 48 - Thremhall Green showing surveyed features
Takeley Street Plain
This comprised a long strip of open land on the southern side of Stane Street (this no longer forms part of the Forest), at the eastern end of this was a wider open area bordered by Street Coppice to the south-west and Low Street Coppice to the south-east. The plain was crossed by the route known as the London Horsepath. There are a number of undated earthworks, of which ditches NTSMR 01965-7 may mark the route of the London Horsepath.

Gravel-pit Plain
Gravel-pit Plain is immediately adjacent to The Table Plain, and they may well have been considered as a single entity in the medieval period. It is delimited by the modern access road to the north-west, Table Coppice to the north-east, Gravel-pit Coppice to the south-east and Warren Coppice to the south-west. Tongues of plain
linked it to Bush-End and possibly to Collin’s Coppice. It is irregular in plan, measuring c. 613m northwest-southeast by 283m northeast-southwest. Nearly half of this area is now under the mid-18th century lake. It is probable in the medieval period that this area would have comprised either damp grassland or fen on either side of the Shermore Brook (the place-name ‘more’ also indicates a marshy area). The sandy area to the north of this was quarried for gravel in the early post-medieval period and it is entirely possible that this activity also took place on an intermittent basis in the medieval period. In addition to the quarries there are also a number of undated banks and ditches.

**Figure 50 - Gravel-pit Plain showing surveyed features**

*Bush-End*
A small, irregular shaped plain located in the south-east of the Forest, of which very little still remains within the Forest. It was originally bordered by Bush-End Coppice to the north and Gravel-Pit Coppice to the west, to the east was the dispersed
settlement of Bush-End the Pincey Brook and the Pale of Hatfield Park. It was linked by a tongue of plain to Gravel-Pit Plain. There are a number of undated earthworks.

Figure 51 - Bush-End showing surveyed features

7.8.9 The London Horsepath
Hatfield Forest was crossed from north-east to south-west by the route known as the London Horsepath, which entered the Forest at Takeley Gate and exited at Woodrow Hatch, this route is known from the post-medieval period but could be medieval in origin. Ditches NTSMR 00710, 01710, 01711 and 01712 may mark the former line of the London Horsepath across Warren Plain, and possibly also ditches NTSMR 01965-7 on the Takeley Street Plain. Despite its name, there is no evidence that this route led to London (any more than any other roughly northeast-southwest route in
Essex did), and it can only be traced with any certainty within the confines of the Forest, with a possible extension through Wall Wood to Woodside Green. The probability is that it was a local shortcut linking the Hallingburys to Takeley and the main east-west road to Colchester.

7.8.10 Anti-highwayman trench
A strip of open land (known as a trench) was located between the northern coppices and Takeley Street. A statute of 1284 required that undergrowth and woodbanks be removed from a distance of 200 ft either side of the king’s highway to cut down on the cover for highwaymen (this requirement does not appear to have continued into the 14th century). This land is no longer within the Forest boundary.

7.9 LATE 16TH-17TH CENTURY
The Barrington Family who claimed to have been hereditary woodwards for the Forest since before the Conquest had become country squires by the purchase of the former Hatfield Priory. An Arbitration of 1576 between the Richs and the Barringtons established Sir Thomas Barrington as the owner of the trees (but not the soil or pasture) of the north-eastern third of the forest (north-east of the Shermore Brook) and to have common-rights in the whole Forest for certain animals.

In 1592 the Rich family sold their interest in the Forest (the right to keep deer, the soil of the whole Forest and the trees in the western two-thirds) to Lord Morley of Great Hallingbury, and in 1612 they sold the rest of the Hatfield estate, including the lordship of the manor of Hatfield Broad Oak to Sir Francis Barrington, which included the right to hold courts and fine offenders. The result was constant litigation and occasional violence between the Barringtons and the Morleys, as well as complaints from and against the Commoners and Sharers.

In 1666 Thomas, Lord Morley sold Hallingbury and the soil and deer of Hatfield Forest to Sir Edward Turnor, leading to yet more disputes.

7.9.1 The Coppices
Although the coppices are medieval in origin, the earliest lists of them date to the late 16th-17th century. The arbitration of 1576 stipulated that Sir Thomas Barrington should after felling a coppice fence it to keep livestock from eating the regrowth, but he was not to fell and enclose more than 10 hectares a year, presumably to protect the rights of the Commoners. Each enclosure stood for 9 years before being re-opened to grazing. The fence probably comprised a dead hedge made of thorns, although in some areas the presence of veteran trees, notably hornbeams, on the coppice banks raises the possibility of live hedges also being used. In 1612 the coppices are recorded as having gates with locks and keys. In 1624 it was specified that 6 years after coppicing deer-leaps should be constructed in the fences, which allowed the deer but not other livestock in. However there seems to have been an ongoing problem with livestock getting into the coppices and eating the young shoots.
This period also saw continuous disputes between the major families who owned the coppices, the Barringtons and the Morleys. There is no evidence for any significant re-modelling of the coppices during this century, but the numerous law-suits illustrate all forms of minor activity including the re-cutting of ditches, creation and breaking-down of hedges and banks and the repair (or lack) of gates.

7.9.2 Forest Lodge (NTSMR 00110)

The parlour and standing end of Forest Lodge appears to have partially collapsed or been dismantled during the second half of the 16th century. Around 1600 it was repaired and remodelled to form the present building, which has a broadly symmetrical appearance (Rackham 1989, 178, Stage II). The original roof was taken down and rebuilt (the original carpenter’s marks can be seen on many of the rafters, but they are not in sequence). The lofts were made into habitable rooms with the insertion of windows at the gable-end, and the newer loft had a new elm floor. The chimney probably also dates to this time, it is built of thin bricks (2¼ inches thick), these date to before the mid-17th century. Originally it had two flues, but a third flue and an upstairs fireplace were added soon after construction. Rackham has suggested that this rebuild took place under the Morleys shortly after they purchased the Forestral rights (the right to keep deer) in 1592.

Further re-modelling took place, possibly when Sir Edward Turnor revived the Forestral rights around 1670. A back range was added to make an L-shaped building. The frame of this range is free-standing, rather than integrated into the existing structure, and the carpentry is different, consisting of squarish panels between the timbers. There is a contemporary chimney set into this framework. Probably at the same time the exterior of the building was plastered over and decorated with pargetting in rectangular panels (part of this survives). Rackham dates this extension to the late 17th century on the basis of the bricks in the chimney, however the Vernacular Building Survey dates it to the early 18th century on the basis of the type of principal studs in the timber-frame.

The Lodge Close is mentioned in the rangership grant of 1608, it is surrounded by a bank and ditch.
Figure 52 - Hatfield Forest in the 17th century
7.9.3 The Warren (NTSMR 00112)

The Warren is located in the angle of plain between Collin’s Coppice and Warren Coppice (Figure 46). It consists of a roughly oval earthwork enclosure, approximately 4 ha in area, the encircling enclosure consisting in part of 13 pillow mounds. Within this enclosure are a further 5 linear pillow mounds and 4 circular mounds (buries), as well as Warren Cottage at the northern end of the site. Each linear pillow mound is sub-rectangular in shape, flat-topped, and surrounded by a ditch. The mounds vary greatly in length ranging between 13m and 45m; 7m to 10m wide and 1m high. The circular pillow mounds are smaller, only 0.4m high and measuring 5m to 6m in diameter. They are also encircled by a ditch. The two forms of mound are likely to have served the same basic function: an artificial burrow which facilitated the commercial farming of rabbits. The enclosure ditch is U-shaped in profile, generally 5m wide and up to 0.8m deep. The internal bank is poorly preserved, but can survive to a height of 0.4m. The warren is a Scheduled Monument (SM 24886), Shallow drains lead south from these pillow mounds towards the south-eastern edge of the enclosure.

The 22 mounds were purpose-built as rabbit warrens to assist in the commercial farming of rabbits. However, it is unclear whether the main oval earthwork was constructed at the same time as the individual warrens or was an earlier construction that was later converted into the rabbit warrens.

The documentary records for the Forest include a mid-17th century petition by the Sharers (commoners) accusing Lord Morley of ‘lately making a Warren in the Forest’, and he was repeatedly fined in connection with keeping rabbits from 1639 onwards, including ‘making Coney Burroughs and erecting a Cottage’. In the late 1680s the Warren was revived by Sir Edward Turnor, who introduced fresh rabbits, built Warren Cottage and employed a warrener.

The northern half of the site is now covered with giant horse-chestnuts, but with no pollards or ancient thorns, and, it may have been treeless in the past. A geophysics transect was attempted across the site (Appendix 4), but this was unsuccessful in identifying any definite archaeological features, due in part to the amount of existing vegetation making the walking of transects difficult and partially due to the amount of previous disturbance on the site (including tree-throws and animal burrows).

Only three warrens with pillow-mounds have survived in Essex; at Hatfield Forest, High Beaches in Epping Forest and at Little Baddow, although over 70 warrens have been identified from the documentary sources (Leach 2010).

7.9.4 Warren House or Cottage (NTSMR 00111)

Warren House is located just inside the Warren earthwork. The documentary evidence (see above) suggests that the first warren cottage was erected by Lord Morley in or just before 1639.
This original structure seems to have been replaced by the current building. This (without the modern additions) was a tiny two-storeyed structure, 7.9m by 3.8m inside. It may originally have had only one room on each floor. At the rear is a staircase turret and there is a full-sized chimney with a walk-in fireplace (2.1 x 1m) sat one end. It is built of a dark red brick with in places ornamental blue headers forming a diagonal pattern. The roof has heavy roof-plates resting on the wall and is tiled.

The dating for this building is not certain. Rackham (1989, 181-184) believes the main brickwork and roof timbers date to the late 1680's based on the visual dating of these features and documentary evidence. This includes the Turnor valuation of 1690 which mentions 'a Conny warren with a very good new brick house and the stock of connies' as well as the evidence of the men who made the bricks and carted them dating the construction of the building to the late 1680s. However the Listed Buildings Description for the structure suggests a mid-18th century date with later 19th century modifications and an early 19th century date has been suggested by the Vernacular Buildings Survey.

7.9.5 Gravel-Pits
Sand and gravel is scarce within the immediate vicinity of Hatfield Forest and as a consequence even the small-deposits along the Shermore Brook were exploited. The mineral-rights belonged to the land-owner, but if he exercised them he could be fined by the manorial court for destroying the pasture. The gravel-pit next to gravel-pit coppice had begun to be excavated prior to 1610, the dates for the other smaller pits are not known.

7.10 18TH CENTURY
The 18th century development of the Forest has been more fully described by Sarah Rutherford for the National Trust (Rutherford, 2016), and the broad results only are summarised here. The Hallingbury estate, together with the rights to Hatfield Forest, was sold in 1729 to Jacob Houblon. The landscape design is based on two successive phases of the mid-18th century (1740s-60s) for an owner, Jacob III Houblon, with the vision to create an extensive detached pleasure ground within a medieval forest. Houblon initiated the landscape and then called in the internationally renowned landscape designer Lancelot ‘Capability’ Brown to suggest modifications on a plan (that is a rare survivor of his work), a number of which were implemented. The design was always emphasised by predominantly native and localised groups of commonly available exotic trees. It is of national historic interest (Rutherford, 2016). Major landscaping works included the creation of the lake, the Shell House, the remodelling of Warren Coppice and the planting of ornamental conifers and other foreign trees, both near the lake and along the Cedar Ride (Avenue) which linked the Forest to Hallingbury Place. The cutting of the radiating rides through the coppices also dates to this phase.
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Only features or changes which can be ascribed to the 18th century are described here, if something is not mentioned it is because there was little or no change from the preceding centuries.

7.10.1 The lake and dam
The lake is first mentioned in 1754, where it is described as having been made ‘several years’ before, destroying the grazing as a consequence in that area. The subsequent litigation of 1758 details how Sir Jacob Houblon made a dam of earth in 1746 across a boggy part of the forest through which the Shermore Brook flowed. This created a small lake of about 3.2ha., which was stocked with fish. Jacob Houblon III made a plan in 1757 to alter the lake, through the construction of two curving arms at either end. The southernmost arm was created, although it necessitated the doubling of the length of the dam, the northern arm was never made.

7.10.2 The Shell House (NTSMR 00491)
The Shell House, which overlooks the lake, was built in the mid eighteenth century for Sir Jacob Houblon as an ornamental tea-house for his family and guests. It was constructed possibly either around 1746 (when the lake was formed) or a decade or so later when it is pictured on 1757 Hollingworth and Lander survey. It seems to have been an addition to a previously two-roomed cottage. Some unspecified work, perhaps interior decoration, was still being undertaken by 1759. Lady Alice Houblon wrote in 1907 that the decoration of the Shell House was the work of Jacob Houblon’s daughter Laetitia who would have been 15 years old in 1757. The Shell House is a single-storeyed, one-roomed building with a timber frame which is clad on the exterior with flint into which is set patterns of sea-shells. A bird made of oyster-shells adorns the keystone. There appears to be a brick base to the walls behind the flint-work. The facade, with a pedimented gable head, has rusticated quoins and arched rustication around the central door. The interior comprises of a single room with panelled walls and a vaulted plaster ceiling decorated with shells. The floor is stone-flagged.

A watching-brief was undertaken during the excavation of new drainage runs (EHER 46540) around the Shell House, no finds or features recovered.
Figure 53 - Hatfield Forest in the 18th century
7.10.3 The Coppices

Doodle Oak Coppice (NTSMR 954)
Two straight rides were cut through Doodle Oak Coppice (Figure 22), the edges of these are marked by drainage ditches (NTSMR 00186 and 001853).

Dowsett’s Coppice (NTSMR 955)
A ride was cut through the top north-east corner of the coppice, a drain marks its edge (NTSMR 01984).

Street Coppice (NTSMR 956)
Two of the pattes d’oie rides (NTSMR 01995/02005 and 02030-02032) were cut through this coppice. These were linked by east-west rides (NTSMR 02003 and 01992, 01994-5).

Long Coppice (NTSMR 957)
Three pattes d’oie rides cross Long Coppice (Figure 25). Drain NTSMR 01991 partially marks the line of the westernmost of these rides and bank NTSMR 02001 marks the line of the central ride. The southernmost ride follows the southern edge of the coppice (NTSMR 01971).

Spittlemore Coppice (NTSMR 958)
Three pattes d’oie rides cross Spittlemore Coppice (Figure 26). Banks NTSMR 01976 and 01977 mark the edge of the easternmost of the rides.

Low Street Coppice (NTSMR 959)
The 1757 survey shows Low Street Coppice as a coppice, but only depicts scattered trees within the boundary.

Middle Coppice (NTSMR 961)
The 1757 survey shows Middle Coppice as a coppice, but only depicts scattered trees within the boundary.

Bush-End Coppice (NTSMR 962)
The 1757 survey shows Bush-End Coppice as a coppice, but only depicts scattered trees within the boundary.

Warren Coppice (NTSMR 964)
A cruciform pattes d’oie is shown in this coppice on the 1757 survey map. Originally this extended to the edge of the Forest, but it was truncated by the construction of the southern extension to the lake at some date prior to 1777. The modern road largely follows the line of the northwest-southeast ride, it is possible that ditches NTSMR 00825, 00826 and 00801 mark the southern end of this ride.

In the south-east corner the Shell House was constructed and a little garden made around it. By 1777 the Chapman and André map shows the outlines of the coppice and what appears to be an avenue of trees on either side of the new rides, but only
sporadic trees within the remainder of the coppice. Timber trees felled included oak and chestnut. By 1803 the coppice was back in coppicing rotation but it never fully recovered as woodland. The eastern and south-eastern boundaries of Warren Coppice have been destroyed in the creation of the upper and lower lakes.

Collin’s Coppice (NTSMR 965)
Collin’s Coppice had an 8-point pattes d’oie (Figure 33). Bank NTSMR 00739 marks the easternmost of these rides and drains NTSMR 00728 and 00729 mark the south-eastern ride.

Emblem’s Coppice (NTSMR 966)
Emblem’s Coppice was crossed by three east-west rides. The southernmost of these is demarcated by track NTSMR 00776. It linked into an avenue which ran from Hallingbury Place park onwards across the Wood-Row Quarter plain.

Lodge Coppice (NTSMR 1726)
Lodge Coppice was crossed by three east-west rides (drainage ditch NTSMR 01735 may mark the southernmost of these) and one long north-south ride. A line is shown on the 1757 survey in the approximate position of bank and ditch NTSMR 01732 and 01733 but it is not entirely certain whether this is an original feature or just a fold in the map.

Round Coppice (NTSMR 967)
Round Coppice had an eight-point pattes d’oie (Figure 37). Drainage ditches NTSMR 01798 and 01802 may mark the line of two of these rides.

Beggar’s Hall Coppice (NTSMR 968)
Beggar’s Hall Coppice was subdivided by five rides, the northernmost of which follows the coppice boundary.

Hangman’s Coppice (NTSMR 969)
Hangman’s Coppice was sub-divided by three rides, two north-south and one diagonal.

7.10.4 The Plains

Woodrow Quarter
An avenue of elms was planted at some date prior to 1757, this ran west-east from the new ride across Emblem’s Coppice to the Forest boundary. The original elms have been lost, but suckers survive. To the south of this the 1757 map depicts what appears to be a belt of closely planted trees in formal lines, and there are other apparent formal groupings of trees next to Wall Wood.

Warren Plain
The boundary for the Forest Lodge Close appears to have changed slightly, with the addition of a small extension at the south-eastern corner.

The Table Plain
Some of the quarrying on Table Plain may well date to this period.

**Takeley Street Plain**
The gradual loss of the Bush-End Quarter coppices (see above) led to the opening up of the eastern end of the Takeley Street Plain.

**Gravel-Pit Plain**
Part of Gravel-pit Plain was submerged when the lake was constructed (see above). Extraction is known to have taken place intermittently on the gravel-pit.

### 7.11 19TH CENTURY

The 19th century saw changes to the fabric of the Forest, first gradually and then more drastic as the century progressed. In 1832 John VII Archer Houblon bought the Barrington interest in the Forest, following the death of the last of that line. At about that time he also bought out five of the Sharers of Takeley Street. This included the first changes to the Forest Boundary, as a consequence of the 1857 Enclosure Act. This saw the end of Commoners rights to the Forest, including the grazing of animals and the collection of firewood. Pieces of land were given as compensation to the Commoners and others with claims on the Forest, including the seven remaining Sharers. These allocations were set out around the margins of the medieval Forest, with the Sharers getting the land which bordered the southern side of Takeley Street. The result of this is that the Forest only retains its medieval boundary on its western side, the other boundaries date to 1857. A number of cast-iron fence-posts along the Forest boundary date to this period.

Only features or changes which can be ascribed to the 19th century are described here, if something is not mentioned it is because there was little or no change
Figure 54 - Hatfield Forest in the 19th century
7.11.1 Forest Lodge (NTSMR 00110)
In the mid-19th century, judging by the map evidence, the stable range or barn was added to the western end of the original house. Pine timber stud construction clad with horizontal weatherboarding under a gables plaintile roof. The south side has stable door and a plank door both flanked by multi-paned windows. The west gable also has two carriage house doors. This addition was probably by John VII Archer Houblon as part of the Victorian emparking. Attached to the Lodge are a number of out-buildings which also date to this period. They include a specially-built butchery shed with pulleys in the roof for hanging carcasses of deer.

7.11.2 The Doodle Oak (NTSMR 00509)
The Doodle Oak last produced green leaves in 1858. Rackham (1994, 243) speculated that this might be linked to the draining of the forest a few years before.

7.11.3 The Coppices

*Doodle Oak Coppice* (NTSMR 954)
Doodle Oak Coppice was still extant in 1841 but had disappeared by 1874, the 1st edition map shows instead a scatter of individual trees.

*Dowsett's Coppice* (NTSMR 955)
The northern end of Dowsett's coppice was truncated by the building of the railway in 1869.

*Street Coppice* (NTSMR 956)
The northern side of Street Coppice was truncated by the building of the railway in 1869.

*Long Coppice* (NTSMR 957)
A number of the linear drains (NTSMR 01962, 01996, 01998, 02000) in this coppice may date to the mid-19th century period of improvements.

*Spittlemore Coppice* (NTSMR 958)
A number of drains (NTSMR 01974, 01975) in this coppice may date to the mid-19th century period of improvements.

*Low Street Coppice* (NTSMR 959)
Low Street Coppice was no longer extant by 1838.

*Table/Elgin Coppice* (NTSMR 960)
A fence appears to have been erected around this coppice, as evidenced by the survival of a number of cast-iron fluted pillars. The fence itself was only about 4-feet high and must have been intended to exclude cattle rather than deer from the coppice.

*Middle Coppice* (NTSMR 961)
Middle Coppice was no longer extant by 1838.
Bush-End Coppice (NTSMR 962)
Bush-end coppice was no longer extant by 1838.

Gravel-pit Coppice (NTSMR 963)
A fence appears to have been erected around this coppice, as evidenced by the survival of a number of cast-iron fluted pillars. The fence itself was only about 4-feet high and must have been intended to exclude cattle rather than deer from the coppice.

Warren Coppice (NTSMR 964)
Warren Coppice was still largely extant in 1881, but by 1874 it had been converted to a plain with scattered trees, these included a number of exotics.

Collin’s Coppice (NTSMR 965)
A fence appears to have been erected around this coppice, as evidenced by the survival of a number of cast-iron fluted pillars. The fence itself was only about 4-feet high and must have been intended to exclude cattle rather than deer from the coppice.

7.11.4 The Warren
The warren was no longer in use as a warren. The horse-chestnuts were probably planted after 1857, Rackham considers it unlikely that any date of the current trees date to this period (Rackham 1989, 214).

7.11.5 The Plains

Woodrow Quarter
The avenue of elms was no longer extant by 1838. In 1857 the Enclosure Act saw the southern end of the Woodrow Quarter enclosed, it no longer forms part of the Forest.

Warren Plain
The loss of Warren Coppice saw the expansion of Warren Plain into that area.

Thremhall Green
The loss of Doodle-Oak coppice saw the expansion of Thremhall Green into that area. The northern edge of this plain was lost to the forest in 1857 as part of the Enclosure Act.

Takeley Street Plain
Takeley Street Plain formed part of the enclosure act and ceased to be part of the forest in 1857. The 1869 railway, which follows the line of the medieval anti-highwayman trench, now forms the limit of the Forest.

Gravel-Pit Plain
Part of Gravel-pit Coppice was incorporated into Gravel-pit Plain.

7.11.6 ‘Public drains’
In the 1850s attempts were made to improve the drainage of the Forest (Figure 55). These included the straightening of the Shermore Brook (Drain No. 1) and the cutting of a further 7 major ‘public drains’. Of these Public Drain 2 followed the line of the now defunct coppice boundary between Low Street and Middle Coppice and Public Drain 3 the coppice boundary between Middle Coppice and Bush-End Coppice.
7.12 THE MODERN PERIOD (1901 ONWARDS)

The Houblons left Hallingbury in 1909 and their estate and the forest went into decline. Hatfield Forest was put up for sale in 1923. Edward North Buxton, a staunch National Trust Council member and a lifelong supporter of historic forests decided to buy the Forest. However his telegram miscarried and the Forest was sold to a Mr Place and to timber-merchants. Buxton however persevered, purchasing the first part of Hatfield on his death-bed in 1924 and instructing his sons to buy the rest. This they did, and they together with Major Archer Houblon who owned Table Coppice presented Hatfield Forest to the National Trust in October 1924. Other changes to the site are associated with the Second World War and changes associated with the National Trusts management practises. Only features or changes which can be ascribed to the 20th century are described here, if something is not mentioned it is because there was little or no change.

7.12.1 First half of the 20th century

The Coppices
The first half of the 20th century saw the fortunes of the Houblons and the Forest in decline. Although grazing and some wood-cutting continued, fences do not appear to have been maintained with the consequence that uncontrolled browsing led to the demise of some of the coppice stools and the growth of birch and thorn in their place. In 1924 the National Trust became the owner of the whole of the post-enclosure Forest. The Trust roughly followed the management regime of the Houblons, although scrub was allowed to increase on the plains and the coppice fences were not restored so that cattle got into the coppices. Gradually the coppicing regime was reduced just to thinning.

The Plains
In the 1920s or 30s the scattered trees on the plain to the north of the Doodle Oak site appear to have been considerably thinned out.

Gravel-pit Cottage (NTSMR 00506)
Gravel-pit Cottage is located within Gravel-Pit Coppice. It dates to about 1910. It is two storey red brick building with a kitchen outshut to the rear. Associated with this is a well and pump (NTSMR 00227).

Shell House area (NTSMR 00491)
The two-storey cottage behind the Shell House was demolished in 1923 or 1924, and replaced by a single-storey wing (the Fisherman’s Shelter) on the northern side. This is brick-built and open-fronted with three internal fireplaces.
Figure 56 - Hatfield Forest in the first half of the 20th century
7.12.2 Second World War
The Second World War saw a number of changes within the Forest, with the concealment of military installations within Table/Elgin Coppice and Gravel-pit Coppice. These were possibly associated with the 43rd Wessex Division who were stationed in Hatfield Forest in the September of 1940, or with Stansted Airfield immediately to the north.

Figure 57 - World War II features in Hatfield Forest
Track (NTSMR 00840)
A hard-surfaced track (NTSMR 00840) was laid by the military from the main road through Table/Elgin Coppice to the lake. This forms the basis of the modern track.

Military hut bases (NTSMR 001909-01954)
22 military hut bases are still identifiable within Table/Elgin Coppice, located on either side of the track. These were raised from the ground on little metal legs and surrounded by low banks, only the banks and the legs survive. They measure approximately 9m by 9.5m. The enclosing banks in particular show well on the Lidar coverage of the area (see Appendix 3, Figure 76).

Ammunition shelter (NTSMR 01944)
Set slightly apart from the huts in the south-west corner of the Coppice was a brick-built ammunition shelter (NTSMR 01944), this was enclosed within a bank of earth, designed to absorb the impact of any accidental explosion. The wall survives to a height of 1.6m.

Bomb craters
A number of possible bomb craters have been identified within the forest, these are circular in form (averaging 3-5m wide) and form a conical depression, they are most numerous at the Stansted Airport end of the Forest in Street Coppice.

Practise trenches (NTSMR 00869)
A number of trenches which were reputedly dug for practise purposes survive in Gravel-pit Coppice, these average 2.4m wide by 0.6m deep and comprise a series of linked dog-legs.

Concrete structure (NTSMR 00870)
In the southern part of Gravel-pit Coppice there is a sunken three-celled rectangular structure of unknown date. It measures in total 4m by 5.3m and is approximately 2m deep. The main area comprises a 4x4m concrete cellar-like structure, divided down the middle by a wall, a pipe stands upright in the south-west corner of the westernmost of the two cells. Attached to the southern end of the main block was a rectangular structure, also sunken and made of concrete. This measured 1.3m by 3.2m. Two pipes of the sort used for sewers link this cell to the main cells. The purpose of this structure is unknown, the presence of the pipes might suggest that it served as the base for a toilet block, but precisely how it functioned is unclear.

Ditch (NTSMR 01888)
This has been identified as a military ditch by the EH survey, it is not known why.

7.12.3 1950s onwards
The Forestry Commission re-planted Emblem’s Coppice with conifers in 1965-9 and Spittlemore Coppice in 1974. Around 1963 seven small groves of trees, each of a different species, were planted on the plains, three of these are shown on the map as circular or triangular fenced areas. The two car-parks, one at the Bush End Road
entrance and one at the Shell House are also modern additions added by the National Trust to limit vehicular damage to the Forest.

*Shell House and café area (NTSMR 00491)*

In 1928 a plan was drawn up for a single-storey wing to the south of Shell House to balance the Fisherman’s Shelter on the north, and for a two-storey cottage to the rear of the Shell House, but this was not executed until the 1950s.

The café, toilets and shop complex (NTSR 00492) date to 1982, they replace earlier structures depicted on the OS maps.

*‘Motorways’.*

in the 1960s new routes were bulldozed through the coppices, each bordered by a drainage ditch on either side, these were intended to ‘open up’ the woods by replacing overgrown 18th century rides. They are known locally as ‘motorways’ and are referred to by that term by Rackham (1989). They are characterised by a pair of machine cut ditches, averaging 0.8m wide by 0.6m deep. NTSMR 718, 719, 721, 722, 912, 913, 1793, 1794, 1972, 1973 are all examples of these.
Figure 58 - Hatfield Forest in the late 20th century
8 OTHER NATIONAL TRUST LAND-HOLDINGS IN THE VICINITY OF HATFIELD FOREST

8.1 WALL WOOD AND WOODSIDE GREEN

Wall Wood and Monk Wood are located to the south-west of the Forest, and although not part of it, they were anciently associated with it. Both woods can be traced back to the 13th century, and they maybe Anglo-Saxon in origin. Wall Wood was the wood of Walbury Manor in Great Hallingbury, whilst Monks Wood was part of the manor of Monksbury, which belonged to the monks of Bermondsey Priory in Surrey. They adjoin Woodside Green, which is an irregular triangle in shape, reminiscent of the plains in the Forest. The woods are separated from the green by a medieval bank and ditch, whilst houses (many of which are Listed) abut the green along its western side. The western edge of the green was also marked by a series of small, largely linear ponds, some of these survive to the present day, whilst others have been infilled. The eastern side of the woods has been encroached upon by farmland, and the boundaries are now incomplete. The green once had pollard trees on it, a few of which survive, and there may also have been pollards on the boundary bank. Woodside Green is divided between the parishes of Great and Little Hallingbury, whilst Wall Wood was in the former and Monks Wood in the latter. Together they formed a wood-pasture common with two coppices and a plain, like a miniature Hatfield Forest.

A number of metal-detecting finds, ranging in date from the Late Iron Age to the post-medieval period, have been made in the field to the rear of Monks Wood. There are no archaeological records for the green or Wall Wood, apart for the landscape features themselves. There are two buildings located on the Green itself, Woodfold is a late 16th-early 17th century building, whilst Wallwood Cottage is a 19th century red brick cottage, both are Listed. The Listed Buildings along the western edge of the Green range in date from the 15th to the 19th century, with the majority having their origins in the 17th-18th century. They comprise farmhouses, and associated farm-buildings, cottages and a pump and pump-house.

In 1592 both Walbury and Monksbury manors belonged to the owners of Hatfield Forest. The coppicing regime continued into the post-medieval period, by the early 19th century it was operating on an 18-year cycle. The trees on the green also belonged to the lord, not the commoners, they were pollarded. The historic maps show more trees on the green than are currently present. The 1777 Chapman and André map shows that overall the relationship between the Green, woods and settlement has changed little. There were a number of additional buildings on the western green edge that are no longer extant and the small irregular-shaped paddock to the south of Woodfold contained a house and garden, there is no cottage at the site of Wallwood. The 1780s Estate map for Hallingbury Place shows both of the Woodfold holdings, and a small cottage on the site of the later Wallwood cottage. The current Wallwood is Listed as being of 19th century date.

Woodside Green was given to the Trust by Major Houblon in 1935, whilst Wall Wood had been presented in 1946 by the Essex and Puckeridge Hunts. Monks Wood is in
private hands. In 1959-64 four acres in the north-east of Wall Wood were planted with larch, Sitka Spruce, Douglas fir, Thuja, beech and oak. Some of this planting survives. In about 1966 more of the wood was replanted, bringing the total to about a third of the wood in all. Deep ditches were dug to increase drainage, as much of the wood is very wet.

As part of the assessment of the Hatfield Forest an earthwork survey was undertaken of Woodside Green and Wall Wood (Figure 59). This identified a range of features, not all of which were archaeological in origin. The wood is encircled by a coppice ditch, an accompanying bank is only visible on the west side of the wood, both are presumed to be medieval in origin. Within the southern half of Wall Wood there is a dendritic network of drainage channels, which appear to be natural in origin, these have been linked by what is clearly a man-made ditch (NTSMR 2147), this drains into the coppice ditch on the west side of the wood. The south-west to north-east ride (NTSMR 2153 and 2211) in the north of the wood is thought to have had its drainage enhanced in the 1960s, this picks up the northern edge of much of the natural drainage pattern. The north-south ride from Hallingbury Road (NTSMR 2156 and 2154) was put in for the purposes of timber extraction from the plantation. The linear array of ditches to the north (NTSMR2215) are 1960s in date and were put in as an attempt to improve the site for conifers. There are a series of dry ponds at the corner of the wood, opposite Lodge Farm. These are not depicted on the 1st edition OS map, but it is probable that they are historic in origin. NTSMR 2093 and NTSMR 2099 could conceivably have formed part of a moat around Lodge Farm, which has a surviving pair of conjoined ponds on its western side.

There are a number of features on Woodside Green. By far the largest and the most enigmatic of these is a right-angled shallow dry ditch (NTSMR 2133) at the southern end of the green. The right-angle corner meets the edge of the post-medieval enclosure to the south of Woodfold, and it is possible that it relates in some way to this field. It is however equally possible that it pre-dates Woodfold entirely, and possibly even pre-dates the green. The other features comprise shallow ditches and scarps and a number of irregular hollows, some of which may be tree throws and others may have been areas of small-scale quarrying (NTSMR 2098, 2011). There are a few patches of miscellaneous earthworks (NTSMR 2086-9) these comprise very low vaguely parallel ridges, whilst it is possible they represent cultivation ridges or ridge and furrow the surveyor favours a natural explanation as possible drainage run-off channels.
Figure 59 - Wall Wood and Woodside Green showing surveyed features
Figure 60 - Wall Wood and Woodside Green showing drainage
8.2 TILE-KILN GREEN

The National Trust holding at Tile-kiln Green to the west of the Forest (close to the M11 junction) comprises the Green itself. Settlements based on greens are ubiquitous in Essex north of the A12 (Hunter 1999, 99). Hunter considered that most of them became established in the 12th and 13th centuries. The example at Tile-kiln Green, is linear in form, comprising a widening of the verge on either side of the road. The tile-kiln that it was named after appears to have been located just outside the south-east corner of the green.

![Figure 61 - Tile-kiln Green](image)
8.3 LITTLE HALLINGBURY

The National Trust holdings at Little Hallingbury comprise the three historic greens, Wright’s Green, Mott’s Green and Stortford Road. Little Hallingbury is located to the south-west of Woodside Green and is bisected by the M11. As at Tile-kiln Green (8.2) they are probably 12th to 13th century in origin. The Stortford Road green is a very narrow linear green and effectively comprises a widened verge. Mott’s and Wright’s Green are both triangular greens, Wright’s being sited at the junction of three roads, whilst Mott’s represents an area of common-land set to one side of the road. Historically Little Hallingbury was a poly-focal settlement, with the church and rectory located at one end of the string of small greens and the Hall at the other end, and the houses spaced out along the green.

Figure 62 - Little Hallingbury greens
## BIBLIOGRAPHY AND CARTOGRAPHIC SOURCES

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10 GLOSSARY OF TERMS

**Bronze Age**: The period from about 2,000 BC, when bronze-working first began in Britain, until about 700 BC when the use of iron begins.

**Crop-marks**: Variations in the sub-soil caused by buried archaeological features results in different crop growth visible from the air.

**Iron Age**: The period from about 700 BC when iron-working arrived in Britain until the Roman invasion of 43 AD.

**Medieval**: This is the period between the Norman Conquest of England in 1066 and the dissolution of the monasteries in 1538.

**Mesolithic**: The period following the end of the last ice age and prior to the introduction of farming in the Neolithic 10,000 – 4000 BC.

**Neolithic**: The period from about 4000 BC when farming and pottery manufacture began in Britain, until about 2000 BC when metalworking began.

Palaeolithic: The Palaeolithic period covers the time span from the initial colonisation of Britain, c. 700,000 years ago to the end of the last ice age c 10,000 years ago.

**Post-medieval**: The period from 1538-1900

**Red Hill**: Iron Age or Roman salt making site

**Roman**: The period of Roman occupation from 43 AD through to 410 AD.

**Saxon**: The period of Saxon occupation from 410 to 1066.

**Scheduled Monument**: (Formerly Scheduled Ancient Monument): A site of national
archaeological importance protected under the 1979 Ancient Monuments and Archaeological Areas Act.

11 LIST OF ABBREVIATIONS

CUCAP: Cambridge University Collection of Air Photos
EHER: Essex Historic Environment Record
EH: English Heritage
ERO: Essex Record Office
Essex Air Coverage 2000: UK Perspective Millennium photos
HMSO: Her Majesty’s Stationary Office
NGR: National Grid Reference
NMP: National Mapping Programme
NTSMR: National Trust Sites and Monuments Record
OS: Ordnance Survey
RAF: Royal Air Force
RCHME: Royal Commission for Historic Monuments in England
APPENDIX 1: CARTOGRAPHIC EVIDENCE

Barrington Hall map, 1624
The earliest large-scale map to show the Forest was made for Sir Francis Barrington in 1624 (D/DQ 14/191). It only covers the southern-eastern portion of the Forest. It shows Gravel-pit Coppice (labelled The Coppice) and Warren Coppice (unlabelled) and Wood Row Green as a treeless plain tapering down into the Hatfield Broad Oak Road. Two deer are depicted in the area of the coppice, otherwise there is no further detail. The fields between Barrington Hall and the Forest have changed little between 1624 and the present day.

Hollingworth and Landers map, 1757
In 1757 Jacob Houblon commissioned the map-makers Hollingworth and Landers to make a map of the Forest (D/DB P37). This was drawn at a scale of 20 inches to the mile on parchment and is remarkably detailed. It shows the medieval extent of the Forest (named Takeley Forest, a common variation at that period), depicting and naming 17 coppices and three compartments with scattered trees in the north-east corner of the Forest (formerly Low Street, Middle and Bush-End coppices), plantations on waste at Wood Row, rides (some gated), The Lodge, Warren House, The Pond, gravel-pit, Old Woman’s Weaver, the Sherman Brook and London Road (the track which runs between Hamptons Coppice and Street Coppice and across the Forest exiting through Wood Row). The newly made lake is also shown as well as a large detailed drawing of the front elevation of ‘The Shell House’.

Figure 63 - Hollingworth and Landers map, 1757
Mackoun map (1766)
Sir John Barrington had an atlas of his estates drawn in 1766 by the cartographer Mackoun, which included Hatfield Forest (D/DQ 14/192 and D/DQ 14/38). Only the coppices belonging to him are depicted in any detail, and the three former coppices of Low Street, Middle and Bush-End are shown as indistinguishable from the plains.

Figure 64- Mackoun map, 1766

Chapman and André map, 1777
The Chapman and André map of Essex (published 1777) depicts roads, rivers and settlements, churches, mills, parks and woodland. The majority of buildings are shown from a plan perspective, with the exception of churches and some mills; though at too small a scale to discern individual details. However the map is not always entirely accurate, particularly with regard to woodland.

The Chapman and André map shows the coppices and plains of the forest occupying roughly their current extent, except for in the southern part of the forest where an avenue of trees is depicted running west-east from Hallingbury Place to Barrington Hall. To the south of this was an area of open plain, now subdivided into fields as part of Wood Row. The Doodle Oak, Forest Lodge and The Cottage (Warren House) are labelled. Warren House appears to be surrounded by a fenced area containing a cross-shaped ornamental planting of trees which extends down to the lake edge. The lake also has altered in shape, with the addition of a curving extension to the south-west and an island. The A120 is shown as lying within the forest at the northern end and the Bush End Road has yet to be built. The rides do not appear to have been particularly accurately plotted.
Figure 65 - Chapman and Andre map, 1777

Tithe award map for parish of Hatfield Broad Oak, 1838
This is a relatively large scale map at 6" to the mile, showing individual coppices, entranceways, rides, buildings etc belonging to West Mersea Parish in the early 19th century, accompanied by an Award giving details of field name, land use, acreage in acres, rods and perches, landowner and occupier (D/CT 166B). This shows the Forest in considerable detail. Major changes include the apparent loss of the avenue
of trees in the southern part of the Forest. Warren House is not shown, however Warren Coppice is shown as re-planted right up to the lake edge, encircling the shell house. A small pond is shown to the rear of the shell House approximately where the modern car-park is now. A pond is also shown outside the north-east corner of Gravel-pit Coppice and another on the westernmost ride from Eight Wantz Ways (Hamptons Coppice) close to the Shermore Brook.

Figure 66 - Hatfield broad Oak tithe map, 1838
Enclosure Award plan of Hatfield Forest
The 1857 Enclosure Act saw land on the margins of the Forest parcelled out amongst the commoners and others with claims on the Forest in compensation for them losing their rights to the Forest itself (Q/RDc 48A). The map shows the planned changes, not all of which were implemented. The new Bush End road and the former Forest to the east of it was enclosed, as was the Wood Row area at the southern end of the Forest. However the proposed enclosures numbered 3 and 14 within the north-east corner of the present Forest extent were not enclosed, nor were the proposed house-plots and ‘occupation road’ at the southern end next to Forest Cottage (Plots 34-46 on the plan). Warren Coppice is labelled New Pond Coppice and Elgins Coppice is down as Table Coppice.

Figure 67 - Enclosure award map, 1857
Ordnance Survey 1st edition 25” sheet 1874 and 1st edition 6” Sheet, 1881

The 1st edition OS maps are extremely accurate in their depiction of the Forest, including the mapping of individual pollards on the plains, the wood-banks around the coppices, the irregular shapes of individual rides and where conifer trees had been planted. The earthworks of the warren and Portingbury Hills are depicted (Figs 10 and 11). The maps also record the most significant changes to take place in the park, its reduction in size from its original medieval extent to its current boundaries. To the north the construction of the railway cut it off from Takeley Street which it had previously abutted and to the east and south the 1857 Enclosure Act saw land on the margins of the Forest parcelled out amongst the commoners and others with claims on the Forest in compensation for them losing their rights to the Forest itself. Bush End Road was constructed around this time and by 1874 formed the eastern limit of the Forest. The loss of two and a half coppices is also recorded by these maps, Warren Coppice and Doodle-Oak Coppice and part of Gravel-pit Coppice.
Hatfield Forest, Essex – Archaeological and Historic Landscape Survey 2017

Figure 68 - 1st edition Ordnance Survey map, 1874 and 1881

**Ordnance Survey 2nd Edition, 1897**
There are only a few changes between the 1st & 2nd Edition OS Maps (1874 and 1897). The gravel-pits are depicted in more detail and the earthworks for the warren are not shown at all.

Figure 69 - Ordnance Survey 2nd edition, 1897
Ordnance Survey 3rd Edition, 1921
The principal change is the addition of a new building and associated fenced area (Gravel-pit cottage) within Gravel-pit Coppice.

Figure 70 - Ordnance Survey 3rd edition, 1921
This is virtually unchanged from the 3rd edition OS map, except that the scattered trees on the plain to the north of the Doodle Oak site appear to have been considerably thinned out.

Figure 71 - Ordnance Survey 4th edition, 1938
Modern Ordnance Survey 1:10000
There are a number of significant changes that occurred between the drawing of the 4th edition Ordnance Survey map (1938) and the modern 1:10000 OS map. Firstly there is the hard-surfaced tracks from Bush End Road through Elgin Coppice, which were originally created during World War II to enable access to the military installations hidden within the coppice. The Forestry Commission planting in Emblem’s Coppice in 1965-9 is shown by the conifer symbol on the map, but not the re-planting in Spittlemore Coppice in 1974. Around 1963 seven small groves of trees, each of a different species, were planted on the plains, three of these are shown on the map as circular or triangular fenced areas. Also in the 1960s new routes were bulldozed through the coppices, each bordered by a drainage ditch on either side, so as ‘open up’ the woods by replacing overgrown 18th century rides, these are shown on the modern map. The two car-parks, one at the Bush End Road entrance and one at the Shell House are also modern additions added by the National Trust to limit vehicular damage to the Forest.
Figure 72 - Modern OS Survey, 1:10,000
APPENDIX 2: EXCAVATION EVIDENCE

**Portingbury Rings** (Figs 16 and 17)

Trench A was located on the south-east side of the westernmost earthwork, it was approximately 18m long and 1m wide, it cut across both ditch NTSMR 881 and platform NTSMR 882. This revealed that the ditch (NTSMR 881) originally had been approximately 3.8m wide and 1.8m deep. It was roughly U-shaped in plan and had a 30cm deep layer of peat (Layer 10) in its base. This was overlain by a layer of grey silt (Layer 9), which appears to have slumped in from the sides, with the larger proportion deriving from the outer edge of the dish, perhaps indicative of disturbance along that edge. Over this was a layer of reddish-brown silt (Layer 8), again this was largely banked up against the outer edge of the ditch. On the inner side of the ditch the ground rose in a gentle curve and flattened out leaving an open space or berm of approximately 3.6m between the inner lip of the ditch and the bank. The bank itself was formed from compacted clay with naturally occurring chalk and flints (Layer 3), approximately 1m high at its highest point, 4.2m wide at the base and 2.4m wide at the top. The cut for a possible post-hole (0.25m wide x 0.3m deep) locate right up against the bank is shown on the section drawing, its positioning is suggestive of some form of timber revetment to the bank. Underlying the bank and extending beyond it into the centre of the monument was what appears to be patches of a buried soil, c. 0.25m deep (Layer 5). At the north-west end there was a small discrete area simply labelled ‘black and grey’ (Layer 4), the report makes no interpretation of this, but the colouring raises the possibility that it was the site of a hearth. Overlying the partially-filled ditch and the butting up against the bank was a deposit of brownish clay with chalk inclusions (Layer 2), this was interpreted as material that had slipped from the bank. Peter Huggins (Huggins 1978) has also demonstrated using the theorem of Pappus that the volume of material present is considerably more than can be accounted for by an unsupported bank, he argues however that if the bank had a timber revetment or was of box construction, it could have contained a greater volume of earth and therefore could conceivably be the source for much but not all of Layer 2. Alternatively Layer 2 represents a later reshaping of the monument to form a raised platform. Underlying the buried soil layer 5 was a layer of clay, this was interpreted by the excavated as being archaeological in origin, however it now considered on the basis of comparison with other sites that this is more likely to be natural, possibly having its origins as the subsoil that would have been originally associated with Layer 5. The dating of the bank and ditch is uncertain, four small sherds were retrieved, these were identified as being of Iron Age date by Patricia Wilkinson of the Passmore Edwards Museum. One, a heavily flint and quartz-gritted sherd was found ‘under the bank’, probably from buried soil layer 5. The other three sherds came ‘from under the slip’, it is not clear whether this means the material that had slumped into the ditch or the thick clay layer that covers much of the site. They comprised two dark grey quartz-gritted fragments and a lightly calcite-gritted sherd in a soft red fabric. The other finds comprised some animal bone, burnt flint, charcoal and a small flint blade, 4cm long with re-touch along one edge. The dating evidence is not therefore very good, all that can be stated with
certainty the buried soil must be Iron Age or later in date, and therefore the bank must also be Iron Age or later in date. The bank and the ditch may well be contemporaneous, with the material for the former derived from the latter, but there is no definitive proof that this is the case.

Figure 73 - Portingbury Rings excavation (Wilkinson 1978)
Trench B was cut across the southern side of the adjoining enclosure (NTSMR 885), it was approximately 2.4m long and 1.2m wide. Once excavated the ditch was found to be U-shaped, approximately 1m deep, with three fills. The earliest of these was a brown clay with chalk (Layer 3), which appears to derive from material rolling in from either side. Above this was a layer of grey brown silt (Layer 4), probably the result of natural silting up of the feature. The final fill was a thin layer of clay. It is not known whether any of the finds come from this feature, and it remains undated.

Trench C was a small trench, approximately 5m long and 2m wide, sited on what is described as a narrow causeway linking ditches 881 and 885. The excavator said that natural was reached at 0.23m, the top surface of which was embedded with a number of large stones, although there were not sufficient of these to suggest a cobbled surface. It is not known whether any of the finds come from this feature, and it remains undated.

**Forest Lodge access track**
Monitoring of construction work on the Forest Lodge access track (TL53461955) in 1999 recovered Late Iron Age/Roman pottery sherds.

**Anti-parking ditch on the main access road**
Monitoring of the excavation of the anti-parking ditch along the edge of the access track (TL53772020) in 1997 recovered Late Iron Age/Roman pottery sherds.
APPENDIX 3 - AIRBORNE LIDAR, HATFIELD FOREST

By Helen Saunders

Airborne Lidar (Light Detection and Ranging) consists of an active laser beam being transmitted in pulses from an aircraft and the returning reflection being measured. The survey method uses the principle of measuring distance through the time taken for the pulse of light to reach the target and return. The results can then be used to create a Digital Terrain Model (DTM) based on the measurements of the returning pulse to the sensor (English Heritage, 2010, 4-5). The key data recorded with lidar is height data (three-dimensional coordinates on the ground) which makes the detection of features of archaeological interest possible.

For the past 18 years the Environment Agency (EA) has been carrying out extensive Lidar surveys across the country and uses the data for creating flood models, assessing coastal change and evaluating land use. The EA Lidar archive covers 72% of England covering mainly flood plains, coastal zones and urban areas. In 2015 the EA Lidar archive was made available, free of charge, for anyone to use and the data can be downloaded from the Geostore (www.geostore.com/environment-agency/survey.html#survey). Along with different spatial resolutions, the EA Lidar archive generally offers two sets of data for each survey resolution; Digital Surface Models (DSM) and Digital Terrain Models (DTM). A DSM includes all surface features including vegetation and buildings generated by the first return of the laser (i.e. are the first points to bounce back often reflected by the tree canopy or buildings) whereas the DTM removes these higher level surfaces (normally using the last return of the laser, i.e. the last point to bounce back often from the ground surface). While a DTM can reveal earthwork features below vegetation cover the data manipulation used can smooth and ‘soften’ the archaeological detail (English Heritage, 2010).

The use of existing Lidar data for archaeological survey purposes is well established and has been used within Historic England’s National Mapping Programme (NMP) for several years, but while many of the NMP surveys have successfully used Lidar to record new features it does have its limitations for archaeological surveys. Of particular relevance to archaeological use is that Lidar does not penetrate the ground, therefore if the archaeological features are sub-surface then the Lidar will not be able to record anything except general topography. In addition Lidar does not ‘see through the tree canopy’, but relies on penetration of light through gaps in the canopy and this enables the ground surface to be recorded under certain circumstances (English Heritage, 2010). However, when used in conjunction with standard aerial reconnaissance material the Lidar data can be invaluable.

The EA archive was checked for Lidar coverage of the Hatfield Forest Project area. However, while much of the surrounding area appears to have extensive Lidar, ranging in resolution from 2m to 50cm (both DTM and DSM data), the majority of the Hatfield forest area has no available data. Figure 74 shows the availability of DTM data at a 2m spatial resolution. This pattern is similar for both the 1m and 50cm spatial resolution.
Figure 74 - Extract from EA Lidar Archive web page show data availability around the Hatfield Forest Area (the green shaded area shows available DTM at 2m spatial resolution)

Despite this apparent lack of data within the majority of the project area, all available data was downloaded to establish how much overlap into the project area there was. Individual 1km data tiles were converted to raster using tools within Esri’s ArcMap and Figure 75 shows the extent of the 1m DTM lidar data in the vicinity of the project area. While data for the entire area is not available an area to the east of Hatfield Forest does have some limited coverage, particularly around Elgin Coppice. A hillshade image derived from the 1m DTM lidar data was created to aid the interpretation of the visible features, by allowing subtle changes in the topography to be seen more clearly (Figure 76)
The hill-shade image allows the ditches and banks within the area to be seen, particularly the ditches and low-level banks that surround the coppices (NTSMR 847 and 1907). The paths and rides within the coppices are also clearly defined. Within Elgin Coppice the banks and bases of several of the military depot huts can be seen on either side of a path (A on Figure 76). On the Takeley Quarter Plain the line of drains NTSMR 1957, 1900 and 1891 are clearly visible, these represent 19th century recuts of natural tributaries of the Pincey Brook, the line of the preceding stream valleys can also be discerned from the lidar. It appears that these formed the boundaries to the Low Street and Middle Coppice. To the south of drain 1891 is the faint trace of a small square enclosure (B on Figure 76), this is not visible on the ground. Features NTSMR 973 and 974 comprise two shallow sunken features, 973 in particular resembles a possible sunken way linking the possible enclosure B to the...
Bush End track. NTSMR 1903 comprises a linear feature running from inside Elgin’s/Table Coppice down to the road, it can be faintly discerned on the other side of the road where it joins drain 1900, it is visible on the ground as a very low bank. A second similar linear feature to the south is not actually visible on the ground and was not surveyed, it appears to lead into the Pincey Brook. It is suggested that both features may represent drainage runs from Elgin’s/Table Coppice, possibly associated with the Second World War activity there.

Figure 76 - Close up of hill-shade image created using 1m DTM Lidar data of the area
Conclusions

While the majority of the features that are visible on the limited data available within the project area are known and have been previously recorded, the data shows the potential for lidar within the Hatfield Forest area. While full coverage of the project area is not currently available the Environment Agency and other companies are continuously carrying out lidar surveys and if data becomes available for Hatfield Forest there is good potential for new features to be recorded, although the limitations of the survey data should be remembered. If additional features were to be identified through lidar it is recommended that ground surveying is also carried out.
APPENDIX 6: ROMAN POTTERY REPORT

by Anna Doherty, February 2017, UCL Archaeology South East

Introduction and methodology

A small assemblage of Roman pottery was recovered during ditch clearing in Hatfield Forest in the late 1990s. The majority of the sherds were in bags marked as coming from NGR TL5376 2023 and dated as being discovered on 07.05.97. An additional bag of 21 sherds contained a label marked with a later date, 01.08.99, and the following description: ‘Roman feature by access track to Forest Lodge, from surface of dark upper fill’. This is the only information available and it therefore remains uncertain whether or not the sherds originate from sealed archaeological deposits; however, the fairly consistent late 1st to mid 2nd century dating of the material suggests that this is a possibility.

The pottery was examined using a x 20 binocular microscope and quantified by sherd count, weight, Estimated Vessel Equivalent (EVE) and Estimated Vessel Number (ENV) on pro forma records and in an Excel spreadsheet. Fabrics and forms were recording using the Essex regional type-series (Biddulph et al 2015, incorporating form codes from Going 1987).

Overview of fabrics and forms

As shown in Table 1, about 80% of the assemblage is made up by grey wares. More than half of these are typical of the Hadham industry, the remainder are unsourced. A few examples of oxidised or white-slipped wares were also recorded, again including both Hadham and unsourced vessels. There are notably low levels of typical early Roman fabrics. For example, there are only a few examples of grog-tempered or shell-tempered sherds; however, fairly well-fired storage jar fabrics are marginally better represented. Black surfaced wares are also relatively uncommon, accounting for about 8% of the assemblage and these are all micaceous sandy wares, probably also deriving from the Hadham area.

<table>
<thead>
<tr>
<th>Code</th>
<th>Fabric description</th>
<th>Sherds</th>
<th>Weight (g)</th>
<th>ENV</th>
</tr>
</thead>
<tbody>
<tr>
<td>BB2</td>
<td>Black-burnished ware 2</td>
<td>1</td>
<td>22</td>
<td>1</td>
</tr>
<tr>
<td>BSW</td>
<td>Black-surfac ed wares</td>
<td>21</td>
<td>107</td>
<td>21</td>
</tr>
<tr>
<td>COLB</td>
<td>Colchester buff ware</td>
<td>7</td>
<td>39</td>
<td>5</td>
</tr>
<tr>
<td>ESH</td>
<td>Early shell-tempered wares</td>
<td>1</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>GROG</td>
<td>Grog-tempered wares</td>
<td>3</td>
<td>21</td>
<td>3</td>
</tr>
<tr>
<td>GRS</td>
<td>Sandy grey wares</td>
<td>91</td>
<td>590</td>
<td>91</td>
</tr>
<tr>
<td>HAR</td>
<td>Hadham grey wares</td>
<td>123</td>
<td>682</td>
<td>120</td>
</tr>
<tr>
<td>HAWO</td>
<td>Hadham white-slipped oxidised wares</td>
<td>1</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>HAX</td>
<td>Hadham oxidised wares</td>
<td>3</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>LRC</td>
<td>Lower Rhineland colour-coated ware</td>
<td>1</td>
<td>3</td>
<td>1</td>
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</table>
Hatfield Forest, Essex – Archaeological and Historic Landscape Survey 2017

<table>
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<tr>
<th>Code</th>
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<th>Count</th>
<th>MWSRF</th>
<th>MWSRS</th>
<th>RED</th>
<th>SGSW</th>
<th>OXW</th>
<th>STOR</th>
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<tbody>
<tr>
<td></td>
<td>Miscellaneous fine white- or cream-slipped red-buff wares</td>
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<td>13</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Miscellaneous white- or cream-slipped sandy red wares</td>
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<td>34</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Miscellaneous oxidised wares</td>
<td>3</td>
<td>13</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>South Gaulish samian (La Graufesenque)</td>
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<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Storage jar fabrics</td>
<td>8</td>
<td>122</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>268</td>
<td>1678</td>
<td>262</td>
<td></td>
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</tbody>
</table>

Table 1 - Quantification of Roman fabrics

Few regionally-traded Romano-British wares were identified but these include examples of Colchester buff ware and a single sherd of BB2, also probably of Colchester origin. A single sherd in a white ware fabric is tentatively identified as Oxfordshire white ware, since it is a very small fragment which appears to have been slightly burnt and it would represent the only element in the assemblage which is necessarily of later 2nd or 3rd century date. Imported fine wares include a single bodysherd of 1st century south Gaulish samian ware and another from an indented beaker in 2nd century Lower Rhineland colour-coated ware.

The vast majority of vessels attributable to a general form class are jars; however, many of these are partial rim profiles which are difficult to attribute a specific form type (Table 2). Of the more diagnostic forms, there are two examples each of 1st/early 2nd century (G20) cordoned necked jars and 2nd century or later (G24) plain necked jars. There is also an example of a black-burnished style everted rim jar (G9) in Hadham grey ware and a BB2 rounded rim dish (B4.2) with acute lattice decoration, both post-dating AD120. A carinated bowl (C16.4) in an unsourced coarse white-slipped ware dates to c.AD100-160. A tiny fragment probably from a bead-and-flange mortarium was also recorded. This is the possible Oxfordshire white ware sherd and although very little of the profile is present the bead appears to be quite prominent, similar to those on late 2nd to 3rd century forms (e.g. D4-D5).

<table>
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</tr>
<tr>
<td></td>
<td>A2.5</td>
<td>1</td>
<td>0.05</td>
</tr>
<tr>
<td>Dishes</td>
<td>B4.2</td>
<td>1</td>
<td>0.05</td>
</tr>
<tr>
<td>Bowls</td>
<td>C</td>
<td>1</td>
<td>0.15</td>
</tr>
<tr>
<td></td>
<td>C12?</td>
<td>1</td>
<td>0.15</td>
</tr>
<tr>
<td></td>
<td>C16.4</td>
<td>1</td>
<td>0.15</td>
</tr>
<tr>
<td>Mortaria</td>
<td>D</td>
<td>1</td>
<td>0.15</td>
</tr>
<tr>
<td>Jars</td>
<td>G</td>
<td>12</td>
<td>0.38</td>
</tr>
<tr>
<td></td>
<td>G20</td>
<td>2</td>
<td>0.18</td>
</tr>
<tr>
<td></td>
<td>G24</td>
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<td>0.19</td>
</tr>
<tr>
<td></td>
<td>G9</td>
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<td>0.08</td>
</tr>
<tr>
<td>Beakers</td>
<td>H</td>
<td>1</td>
<td>0.08</td>
</tr>
<tr>
<td>Total</td>
<td>25</td>
<td>1.08</td>
<td></td>
</tr>
</tbody>
</table>

Table 2 - Quantification of Roman pottery forms
Amongst the fine or table wares there are two examples of later 1st century (A2) platters, one in Hadham grey ware and another in Colchester buff ware. Two partial profiles in fine black-surfaced fabrics possibly come from bowls loosely imitating samian forms. One, which also features fine comb-stabbed decoration, is similar to Going’s C12 form; another is a small fragment from a fine flange. Finally the single body sherd of Lower Rhineland colour-coated ware has an indented profile, demonstrating that it comes from a beaker.

Discussion and conclusions

Overall the pottery is typical of earlier/mid Roman lower-status rural assemblages. It is dominated by local coarse wares, especially from the Hadham industry, and by jars and coarse bowls, with relatively few examples of fine table wares or imported fabrics. Although the current assemblage is fairly fragmented and abraded, the apparent concentration of a few hundred sherds in a single area provides a good indication that Roman settlement activity was occurring nearby, almost certainly within Hatfield Forest itself. This suggests that there may have been clearings in the forest or that some or all of the area was completely unforest during the Roman period.

Although several sherds are clearly of 1st century date, there is a notable lack of tempered and black-surfaced wares especially when contrasted with the largely pre-Flavian assemblage from recent excavations at Takeley (Doherty 2015). There, grog- and shell-tempered wares together accounted for about 10% of the assemblage and black-surfaced wares for over half of fabrics. This suggests that the current assemblage largely post-dates c. AD70. Most other fabrics and forms are consistent with a c. late 1st-mid 2nd century date; however, a single sherd of possible Oxfordshire white-slipped ware is probably later in date (c. late 2nd-3rd century). It should also be noted that the small group of pottery labelled as having been recovered in 1999 does not contain many feature sherds, and is therefore less closely datable, though it appears to contain a similar range of fabrics to the main group collected in 1997.

Interestingly then, the assemblage appears to belong to a period which is relatively poorly represented in other major excavations in the area. Some high status late 1st-mid 2nd century cremation burials were recorded, alongside a single group of pottery from a ditch at Stansted DCS (Wallace 2004, 301-302) and a several hundred sherds of mid Roman were also noted at Stansted LBR (Stansbie & Biddulph 2008, 18.9). However the vast majority of local sites including Takeley and Stansted ACS, LCTP and MCTP had little to no pottery of late 1st or 2nd century date (Doherty 2015; Going 2004, 139; Stansbie & Biddulph 2008, 18.3-6).

References


APPENDIX 4: GEOPHYSICAL SURVEY
Hatfield Forest
Geophysical Evaluation

Final Report - Revision 1.

This report documents a geophysical evaluation at Hatfield Forest in Essex. The evaluation was to determine if geophysical techniques were suitable for assessing archaeology within the forest.

Client: Essex County Council
Date of issue: April 2017
AG Project No.: AG1255
FOREWORD

1. This report has been prepared by Atlas Geophysical Limited with all reasonable skill, care and diligence within the terms of the contract with the Client and within the limitations of the resources devoted to it by agreement with the Client.

2. This report is confidential to Essex County Council and The National Trust. Atlas Geophysical Limited accepts no responsibility whatsoever to third parties to whom this report or any part thereof, is made known. Any such party relies upon the report at their own risk.

3. This report shall not be used for engineering or contractual purposes unless signed above by the author and the approver, and unless the report status is 'Final'.
1. Introduction

1.1. A Magnetometer investigation was undertaken on the site in Hatfield Forest, Takeley, Essex.

1.2. Data acquisition took place on 7th February 2017 using magnetometry techniques.

1.2.1. The investigation commenced at 0900GMT and concluded at 1600GMT.

2. Background

2.1. Hatfield Forest is an ancient woodland containing numerous features of potential archaeological significance.

2.2. Geophysical investigation of these features has not been previously undertaken using non-intrusive methods. A trial was therefore commissioned to ascertain if geophysics was viable in this location.
3. **Survey Methodology**

3.1. A Magneto MXPDA 5 channel Magnetometer manufactured by Sensys (Germany) was deployed for the geophysical survey of the test areas.

3.1.1. The Magneto MXPDA system incorporates 5 fluxgate Magnetometers separated at intervals of 0.25m mounted on a 1m wide wheeled cart maneuvered across the site by hand.

3.1.2. The sampling rate was controlled by an odometer attached to one wheel of the cart. Readings were taken every c.250mm, spatially referenced with RTK-GNSS and logged in a handheld computer.

3.2. To remove inconsistencies and background noise the data were filtered and processed using algorithms in Matlab, then imported into dedicated MAGNETO software developed by Sensys.

3.2.1. Problematic or overlapping track files were removed and the data was interpolated for export as separate georeferenced GeoTiff files. The GeoTiffs were imported into QGIS software and overlain with OS mapping data. Interpretation was then undertaken and the significant anomalies digitised as shapefiles and images for import into AutoCAD.

3.3. Four discrete areas around the Warren were identified for the survey plus one location in the open area to the northwest of the Warren.

3.3.1. Survey location rationale were based on:

1. Representative data sample from within the earthwork.
2. Representative data sample crossing the earthwork.
3. Representative data sample crossing the earthwork and potential outer ditch.
4. Representative data sample crossing the earth.
5. Subtle earthwork outside of the warren area.

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*Figure 2: Sensys Magneto MXPDA setup*
4. Findings of the Magnetometer Survey

4.1. Magnetometer Results: Warren, Hatfield

4.1.1. Magnetometer survey in the warren area was somewhat complicated by the vegetation ground cover. Despite this reasonably high quality data was recorded across four areas, with minimum affects from background geology. Sampling was undertaken at the interior of the warren and three locations on the west, north-east and south-west perimeter. Several anomalies of potential archaeological significance were mapped (Fig. x, y).

Figure 3. Magnetometer data from the ‘Warren’.
Contains OS data © Crown copyright and database right (2017).
4.1.2. Anomalies 37, 38, 42-51, 56, 57, 59, 61, 65-68:
A series of globular and point anomalies were recorded across the survey area, including two notable concentrations near the centre of the interior (anomalies 45 and 46). A small proportion of these were dipolar readings, potentially indicating ferrous responses. The remainder may indicate the site of minor archaeology features, potentially pits or other cut features associated with the use of the warren, or remains of old tree bowls.

4.1.3. Anomaly 39-41, 53-55, 58, 60, 62-64:
These anomalies correlate with the earthworks around the perimeter of the site and the areas on either side of this feature. Possible linear anomalies 53 and 54 in the north-west area could relate to drains or other form of linear archaeological features along the inside of the perimeter earthwork, which could feasibly relate to the medieval warren.

4.1.4. The results of the prospective survey within the ‘Warren’ indicate that useful results regarding archaeological remains can be achieved in this area, but that a larger magnetometer survey is likely to be problematic due to the vegetation survey.
4.2. Magnetometer Results: North-west enclosure, Hatfield

4.2.1. The magnetometer provided high quality data from the area of the north-west enclosure, with minimum affects from background geology. Several anomalies of potential archaeological significance were mapped across a transect of data record across the north-south axis of the visible enclosure (Figs. 5 and 6).

Figure 5. Magnetometer data from north-west enclosure.
Contains Google Earth data © Landsat copyright and database right (2017).
4.2.2. Anomalies 1-25:
A series of globular and point anomalies were recorded in three concentration at the northern and southern areas of the survey area. A proportion of these were di-polar readings, indicating ferrous responses. The remainder may indicate the site of old tree bowls or small archaeology features, potentially pits or other cut features associated with the use of the enclosure.

4.2.3. Anomaly 26 and 32:
These linear anomalies appear to correlate with the southern and northern ditch of enclosure, respectively.

4.2.4. Anomaly 27-31:
A series of poorly resolved linear and curvilinear anomalies across the interior of the enclosure. These may relate to archaeological features, the significance of which is at present not clear.

4.2.5. Anomaly 33-34:
Two prominent linear and curvilinear readings to the north of the enclosure. These seem to correlate with the location of a possible quarry and may be related to this feature.
4.2.6. Anomaly 35:

An area of globular readings at the north side of the enclosure. This is beside several other point and linear readings, and may indicate an area of archaeological remains, potentially related to use of the enclosure.

4.2.7. Anomaly 36:

An area of magnetic disturbance near a tree in the southern part of the enclosure. The significance of this reading is not clear, but could indicate archaeological remains or ground disturbance associated with the adjacent tree.

The results of the prospective survey over the north-west enclosure indicate that a further larger survey would produce useful data for mapping archaeological remains in this area of the forest.
A Magneto MXPDA 5 channel Magnetometer manufactured by Sensys (Germany) was deployed for the geophysical survey of the test areas.

The Magneto MXPDA system incorporates 5 fluxgate Magnetometers separated at intervals of 0.25m mounted on a 1m wide wheeled cart maneuvered across the site by hand.

The sampling rate was controlled by an odometer attached to one wheel of the cart. Readings were taken every c.250mm, spatially referenced with RTK-GNSS and logged in a handheld computer.

To remove inconsistencies and background noise the data were filtered and processed using Matlab, then imported into dedicated software developed by Sensys.

Problematic or overlapping track files were removed and the data were exported in Geotiff format. The Geotiffs were opened in GeoTiff software and combined with OSM mapping data.

Four discrete areas around the Warren were identified for the survey plus one location in the open area to the northwest of the Warren.

Survey location rationale were based on:
1. Representative data sample from within the earthwork.
2. Representative data sample crossing the earthwork.
3. Representative data sample crossing the earthwork and potential outer ditch.
4. Representative data sample crossing the earth.
5. Subtle earthwork outside of the earthwork area.