

# LOUGHTON COMMUNITY TREE STRATEGY

*Epping Forest District Council*  
[www.eppingforestdc.gov.uk](http://www.eppingforestdc.gov.uk)



# Loughton Community Tree Strategy

**An Assessment of the Trees, Hedgerows and Woodlands of Loughton Parish in their Historic, Physical, Social, Aesthetic and Cultural Context, with Guidelines for their Care.**

Prepared by Epping Forest District Council

in association with:

Loughton Town Council,

Loughton Residents Association

The City of London Corporation, Conservators of Epping Forest, and  
the Tree Wardens and community of Loughton.

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**This Loughton Community Tree Strategy is dedicated to the past and present tree wardens of Loughton  
and to all lovers of trees.**

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Pupils from Thomas Willingale School enjoying learning about trees

## FOREWORD



**By Pauline Buchanan-Black, Director, The Tree Council**

In the British Isles we love our trees, and that has long been the case. What is new is the evidence to demonstrate that the presence of trees in our towns has a wide range of benefits for us all. We can say with confidence that communities in a tree rich environment will be happier and will live longer and healthier lives. We also know that trees add to the resale value of our homes. Trees help to define our sense of place; they are a distinctive element of our landscapes and even of our cultural heritage.

As residents of Loughton parish you are exceptionally well placed to appreciate the value of trees. You live between two ancient landscapes: the national treasure that is Epping Forest and the willow-fringed flood meadows of the Roding valley.

In your gardens and open spaces you live amongst trees that are a legacy of the former farmland. These include some majestic pollarded oaks, veritable Green Monuments in their own right. You benefit from a legacy of past planting, and indeed continue to enhance your own gardens with a wide array of exotic species, which delight the eye and bring joy to the wider community as well.

We are all well aware of threats to trees in both town and countryside. The pressures include development, pollution and climate change. While we cannot prevent change, we must fight to protect our existing landscape, the countryside and the trees, and to encourage new and appropriate planting for the future. We know that this will only happen if you are all able to work in partnership with the councils and other interested organisations for the good of all.

This Loughton Community Tree Strategy is therefore both timely and inspirational. It results from a true partnership of Epping Forest District Council with many members of the local community, the Tree Wardens and representatives of interested organisations, with the active support of Loughton Town Council.

It is a ground-breaking initiative, of which all concerned should be truly proud. On behalf of the Tree Council I am delighted to be able to endorse the Community Tree Strategy for Loughton.



## **Introduction The Loughton Tree Strategy**



**Reflections at Strawberry Hill Pond**

## Introduction The Loughton Perspective

7 ◀

By Caroline Pond, Town Mayor (2011/12)

I often say that in my ward, Loughton St Johns, I have many times more trees than I do constituents. And if you look at an aerial photograph of our town, you will see how, quite apart from the thousands of trees in Epping Forest, those in streets, along the railway and brook, in private gardens and in public spaces, seem to envelop the houses in a green umbrella in summer, and a network of brown and olive in winter. The roofs of the houses do not predominate. It is the trees, even in the densely built-up parts of the town which engage our attention. They lead the eye up to the vast swathe of trees in the Forest on our northern and western boundary.

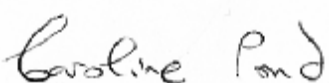
So trees are very important to Loughton, and there is a great deal of public attachment to individual trees and groups of trees; people rightly want to protect and enhance the town's open space and treescape as part of the planning process.

The process of recording and protecting trees was started by our predecessors as far back as the 1930s, and many of those identified by arboriculturists then are still with us today – not, of course, the elms, which were such a part of the Loughton landscape, but which were killed by disease in the 1960s and 70s.

When in 2007 we had the "Your Favourite Tree" campaign, many Loughtonians identified trees or groups of trees that were special to them, and photographs of some of these hang in our Council Chamber. Equally, we did a lot of work identifying veteran trees. Many of these are really old, and have survived from the era of the horse and cart into the present – for instance, along Rectory Lane. Hedges, too, are an important feature, particularly in our three conservation areas.

The Community Tree Strategy for Loughton is the first comprehensive study of our trees, other than in the Forest, and will, I hope, inform and direct how we protect them in the decades to come.

I commend it to you.



## Introduction

# The Epping Forest District Perspective

8 ◀

Cllr. Gary Waller, Portfolio Holder – Safer, Greener & Highways

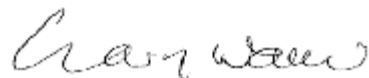
In Epping Forest District we are proud of our trees. Epping Forest District Council is committed to their protection by appropriate management and the use of planning and other powers. We recognise the need to work in partnership with local people, to hear what they say and to act on it, thus protecting the richness of our environment. It is important to ensure that this diverse collection of trees survives for the benefit of future generations.

The Community Tree Strategy for Loughton is the fifth and most ambitious Community Tree Strategy to be produced by Epping Forest District Council and the first to be designed for publication as a web document. Since the first, for Stapleford Abbots, was produced in June 2000, strategies for Theydon Bois, Roydon and most recently for Ongar have been completed. This publication will help us to meet key aims of both the forthcoming Essex County Biodiversity Action Plan and that for Epping Forest District.

The information within this document has been collated from a number of printed sources, tree surveys and unpublished notes, as well as the personal knowledge of members and officers of the several organisations involved, discussions with landowners and many people who appreciate and care for their local trees. Surveys of local residents were carried out and the details gleaned from their answers have been incorporated into this document. We are particularly indebted to the support of Loughton Town Council and the City of London Corporation, Conservators of Epping Forest. The action plan that will follow will set out key initiatives to enhance the local treescape and to safeguard it in future. We intend that these will be undertaken in active partnership with the various sectors, including schools and community groups within Loughton.

Although the residents of Loughton are fortunate in being surrounded by accessible countryside, there is a real danger that, as they go about their busy lives, they may take their local green spaces for granted. As a result they may undervalue them and fail to appreciate their benefits.

This strategy is designed to help them reconnect with trees and the countryside.





## The Treescape 1

9 ◀

Trees and woodlands are an essential backdrop to Loughton, quite literally. They are a key part of the town's landscape character and identity. Many views from within the town are framed by trees, and Epping Forest often dominates the skyline. It is likely that the whole parish was once largely covered with trees: even today the



Beech trees near Loughton Brook

woodlands of Epping Forest cover no less than one third of the parish.

The Forest is protected by the Epping Forest Act passed in 1878. Its ancient boundaries extend to cover many greens and verges outside the main wooded area, throughout the urban parts of Loughton. These separate pieces of Forest land contain many striking trees, especially old oaks. Epping Forest's exceptional nature conservation interest is recognised in two designations. Firstly it is a European Special Area of Conservation (SAC). In addition it is designated as a Site of Special Scientific Interest (SSSI) for its high biodiversity and scarce habitats, including its (so far) uncounted numbers of ancient trees and their many associated species.

The ecology of the Forest is unique; it has developed over centuries as a result of interactions between the local climate, soils, plants, animals and its past management by people. Were it to be lost it could never be re-created.

There are two well-wooded local Nature Reserves within the parish: Home Mead and Roding Valley Meadows. In addition there are two Local Wildlife Sites. These are Longfield Shaw and Broadfield Shaw, both ancient coppiced woods.



Green path beside Loughton Brook

Trees occur throughout the urban area too, in gardens, streets and urban open spaces. Some are old native trees in open spaces and gardens, often survivors of the hedgerows surrounding former fields, which now support houses rather than crops.



Walkers in the Forest

## The Treescape 2

10 ◀



Lombardy poplars beside Rectory Lane, Loughton

In addition, there is now a wide variety of species from across the world, bringing their particular qualities of form, flower, fruit or leaf.

These trees are essential environmental assets. If we can continue to take care of those we have and increase the stock by new planting, on the principle 'right tree, right place', that will help to keep Loughton an attractive place to live and work. Evidence also shows that an attractive town well furnished with trees will encourage an increase in investment in the area and foster a greater sense of civic pride.

The health benefits of the presence of trees, particularly larger specimens, in urban areas are now well documented. It has also been shown to be the case that property values will be higher as a result of their presence.

Through the Living Landscapes and Multifor initiatives there are opportunities to strengthen the green corridors extending from the Forest through the built up areas and into the wider surrounding countryside.

Both the Living Landscapes initiative and the Multifor project will have an impact on the future of the local landscape.

Planning to have a future treescape with large, mature trees present is especially demanding, but also rewarding. The fact that it may (occasionally) take at least a century for action to reach full fruition does not mean it is not worth starting.



Ash Green, Baldwin's Hill, Loughton

## Policy Context

11 ◀

The national guidance affecting trees and woodlands within the UK has been considered in the development of this strategy. The key national documents are noted in [Appendix A](#). Please refer to the original documents for more detail.

The following, in date order, are particularly relevant either directly or indirectly:

*A Better Quality of Life - UK Sustainable Development Strategy* 1990 recognises that the sustainable management of forests and woodlands, the protection of ancient and semi-natural woodlands, and woodland expansion have benefits for development and could provide employment in the recreation and tourism sectors.

*Tackling Health Inequalities Programme for Action* 2003 sets out priorities for reducing health inequalities and the need to increase levels of physical activity, especially within local green spaces.

*Working with the Grain of Nature - England Biodiversity Strategy* 2011 identified woodland as a key habitat for biodiversity. It also recognised that biodiversity conservation is integral to sustainable communities, both in the built environment and in parks and green spaces.

*The Natural Environment: White Paper* 2011 recognises that nature is sometimes taken for granted and undervalued, but that people cannot flourish without the benefits and services our natural environment provides. It sets a positive context for the protection of trees, by asserting that a healthy, properly functioning natural environment is the foundation of sustained economic growth, prospering communities and personal wellbeing.

Local policies are also in place to emphasise the importance of trees and their protection within the local landscape. As work on the Local Development Framework proceeds, it will include information on trees and green infrastructure.

Details of the local planning policies are set out in [Appendix B](#).



Bluebells underneath an Epping Forest oak



## The Purpose of the Strategy

12 ◀

This strategy has been developed as a partnership document with the active involvement of many members of the local community, as well as partner organisations. We hope that this will ensure that it has greater relevance, and provides a true reflection of the wishes of the community. The next stage will be to generate an action plan to begin to implement the aims and objectives set out in 'Looking to the Future'.

**We hope that the information and guidance within it will:**

- help protect Loughton's trees for the future;
  - promote their active management and conservation;
  - ensure successor trees that will have at least an equivalent value;
  - extend tree cover across the town.
- It will also encourage public participation in projects to:
    - improve the overall appearance of Loughton;
    - increase the understanding of the importance of trees; and
    - enhance the local environment.

**The strategy:**

- sets out the history of the treescape of Loughton, and how and why it is as we find it today;
- describes and assesses the current treescape of the parish and examines its physical, historic, social, aesthetic and cultural contexts;
- sets out an overall aim and key objectives designed to:
  - protect the best of the historic landscape of Loughton
  - plan for its sympathetic evolution in the future; and
  - give guidance for residents on the care and conservation of trees.



Purple plum in flower



## Why Trees Matter

13 ◀

Trees provide many benefits to all of us.  
These are some of the reasons why they matter:

- Trees enhance the appearance of our surroundings
- Trees provide inspiration and an invitation to creativity
- Trees improve our health and quality of life
- Trees allow us to enjoy far more wildlife in the urban area
- Trees help to baffle sounds, provide shade and moderate the local climate, filter polluted air, and reduce smog formation
- Trees provide sustainable biofuel, wood for various uses and edible fruits
- Trees in leaf give off oxygen whilst locking up carbon dioxide
- Trees increase property values
- Planting trees is a positive community activity, which leaves a lasting legacy in the local area

Recognising this importance, the district and town councils have various rôles in promoting the care and planting of trees locally, either directly on their own land, or indirectly, using legal powers.

In particular Epping Forest District Council, as the local planning authority has a duty under the Town and Country Planning Act 1990 Section 197 to require the planting of trees, and the powers to protect them legally.



Hornbeams, common trees in the area

## Background Information



War Memorial, King's Green, Loughton

## Location and Population

15 ◀

Epping Forest District covers about 339 km<sup>2</sup> (131 square miles), and is located in the south west of Essex. It is made up of 27 parishes. Loughton parish is towards the south west of the district and covers just less than 15.3 km<sup>2</sup> (6 square miles). All the land outside the urban footprint of Loughton lies within the Metropolitan Green Belt. It is approximately 19 km (9 miles) south of Harlow, 6 km (4 miles) south east of Waltham Abbey, 8 km (5 miles) south west of Epping and 19 km (12 miles) north east of Charing Cross. The town is also situated just south of the M25 and west of the M11. It is the most populous civil parish in the district, with a total of 30,340 at the 2001 census, and second largest (to Canvey Island) in Essex as a whole.

Loughton town lies to the south east of the ancient woodland of Epping Forest, which covers about a third of the parish. Epping Forest in total covers 2,400 hectares (9.25 square miles) and measures some 19 km (12 miles) in length, forming a green crescent, mostly on higher land, from Wanstead Flats in the south, stretching to beyond Epping in the north. To the east of the town are the ancient water meadows in the flood plain of the River Roding.

Loughton is noted for its leafiness, and its undulating land surface supports a surprising number and variety of trees. Within the Forest

the great majority of trees are native species indigenous to the area (although the current species composition has changed as a result of human activity), but its skyline is graced with outstanding evergreens from Europe, Asia and the Americas: spire-like giant redwoods, spreading cedars and stately pines amongst many others.

There is no doubt that Loughton's special mixture of native and exotic trees is an

important visual element in the community's sense of place, and in contributing to the real sense of local distinctiveness.

Open space within the parish is owned and maintained by a variety of bodies including the City of London as Conservators of Epping Forest, Essex County Council, Epping Forest District Council, Loughton Town Council, the London Borough of Newham, Transport for London and others.



The view looking across rooftops towards York Hill

## Topography and Climate

16 ◀

Some of the town is built on very hilly ground and this is reflected in a number of road names such as Hill or Rise. The central main road lies in a dip with steep inclines on either side. The western portion of the parish consists of a dissected plateau bordered by a ridge of high ground, rising to just over 75m (246') above sea level, which acts as a watershed. The streams on the western side flow into the River Lea and those on the eastern side into the Roding. The springs feeding the tributaries to the Loughton Brook are located within the wooded area to the west of the Epping New Road. The Pyrles Brook and its tributary, the Theydon Bois Brook, rise from springs to the north east of Goldings Hill Road.

All these streams lie within relatively steep-sided valleys, produced by an ancient phase of active stream development. These slopes are unstable and sometimes trees will topple as a result of soil creep. The steep hills that



Tall beeches on Staples Hill

are a feature of the more elevated portion of the parish are best suited to growing trees and remain wooded, with the agricultural activities being largely confined to areas of the parish below the 60m (195') contour line.

The local topography has a direct influence on the climate of the parish. The prevailing winds are from the south west and the tree-covered elevated ground to the west influences the amount of rainfall. On the higher slopes this is in excess of 700mm (27.6 inches) per year, but with less falling over the town itself. With their wide catchment area the occasional substantial downpour can quickly fill the local streams, leading to localised flooding. Steps have been taken to reduce this with the creation of the Staples Road Flood Relief Scheme.

There is also a marked temperature gradient, with snow settling for longer on the higher ground.



Staples Road flood relief scheme



The trees on the hill tops come into leaf several days later than those on lower ground or growing within the heat island of the urban area.

Areas sheltered by trees experience lesser daily and yearly fluctuations in temperature, providing a more stable climate. This canopy will also intercept some rainfall, even during the winter months. As much as 19% of the total precipitation may be diverted in this way. Some of the intercepted rain reaches the ground as stem flow, but some will be evaporated back into the atmosphere.

Trees provide shelter from the wind, rain and sunshine and their presence within gardens or streets has an ameliorating impact on such locations.



## Geology and Soils

17 ◀

The oldest geological deposit is the London Clay, which underlies the whole area. On top of this are small pockets of sand and gravel; some occur in the Bagshot and Claygate beds but others may be glacial in origin. The uppermost Bagshot Beds consist of orange coloured sands with seams of darker loams and clays. Beneath them are the Claygate Beds, which are made up of a sandy clay mixture. The London Clay is exposed on the lower slopes and in the deeper valley bottoms.

Sand, gravel and clays were dug from these geological deposits for various uses – road repairs or brick and tile manufacture. Such quarries have left hollows, some of which are now attractive ponds. These geological formations give rise to a variety of soils, which in turn influences the type of natural vegetation that thrives there. The more gravelly areas on the high ground have weathered to produce acidic soils, which tend

to be waterlogged in winter and lacking in nutrients. Birch and beech grow here.

The dominant tree species on the lower slopes are hornbeam and oak, which can thrive in the more nutrient-rich, sticky and water-retaining soils derived from the London Clay. Such soils can be cultivated with modern machinery, but as they were difficult to plough using a horse-



Acorns



Young beech leaves

drawn plough the majority of fields were traditionally left as pasture. There was of course a ready market for milk and meat in the nearby capital city. Today the surviving fields are largely covered with grass and provide welcome recreational space.

Several wet flushes occur where the springs emerge at the base of gravelly layers on the steep hill slopes, and willows grow here. Willows and poplars are also found along many of the stream sides within the built-up area. Along the flood plain of the Roding the soils are enriched by the alluvial deposits and here too willows thrive.

As most of the gardens and urban open spaces cover former agricultural land, the fertile soils support a wide selection of native and non-native trees.



Flood plain fields used for recreation

## The Story of Loughton's Trees



Woodland canopy

## Prehistory 1

19 ◀

The present landscape of the area has been shaped by the local topography, geology, soils and climate. However its appearance and tree cover has also been considerably modified by human action over at least 3,000 years.

The British Isles have been subjected to a series of ice ages when extensive ice sheets advanced and retreated, modifying the landscape as they did so. As the climate warmed, after the end of last inter-glacial period some 12,500 years ago, various tree species colonised the land surface. These included alder, birch, hazel, oak and small-leaved lime. This mixture of trees and shrubs created the original wildwood. The earliest evidence of people within the local area is from the Mesolithic flint flakes, which were left behind when these hunter gatherers visited the woodlands at least 8,000 years ago. However, it is unlikely that these people made much of an impact on the woodland cover.

There is no record of the actual tree species found in this wildwood before about 4,000 years ago, but an analysis of the pollen record from a bog located at Lodge Road some 3km (1.86 miles) to the north of Loughton shows the major changes in the tree species over time. Initially the wildwood surrounding this bog was dominated by small-leaved lime, oak and hazel. As the human population expanded, birch became more frequent, being the primary coloniser of the clearances that they created.



Hazel nuts provided a welcome source of food during the winter months for humans, red squirrels and dormice

It is known from archaeological evidence in Essex and elsewhere that the people of the Neolithic and Bronze Ages had a complex relationship with trees and woodland. It seems certain that from earliest times selected species of trees would have been harvested deliberately for their useful properties and products. The main uses would have included fuel wood, the constructing of shelters and domestic implements and, in the case of particularly palatable trees, such as elm and lime, winter fodder for livestock.

The wildwood would have been a hunting ground, with every path known intimately. In autumn the woods would have provided fruit, nuts and berries for food. Colonies of wild bees in hollow trunks would have been greatly prized for the honeycomb they produced.

The medicinal properties of certain trees, such as the anaesthetic effects of chewing willow bark, may also have been appreciated. It seems likely that trees were celebrated and worshipped in recognition of their importance to the peoples' lives.



Wych elm leaves



Small-leaved lime leaves

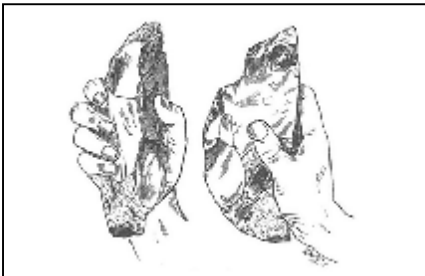


## Prehistory 2

20 ◀

Circumstantial evidence for this has been revealed by excavations at a major Neolithic ritual monument at Springfield, near Chelmsford, and more directly by the discovery of the remarkable "Seahenge" monument, an inverted tree trunk at the centre of a timber circle of 55 oak posts, discovered near Holme-Next-the-Sea, Norfolk, in 1999, now preserved and displayed at Flag Fen, Peterborough.

Farming was first introduced in the Neolithic period, and there was a gradual change from a hunter-gatherer to a farming economy. Evidence from east Essex indicates only small-scale woodland clearance with wild food sources at least as important as cultivated ones.



Flint hand tools had many uses. They could be used to cut meat or scrape animal skins. Flint hand axes were used to fell trees for fuel and for the construction of shelters

How quickly clearance of the woodland occurred locally can only be a matter of speculation. It is likely that the lower land close to streams and rivers would largely have been converted to pasture before the end of the Neolithic around 1,800 BC.

However there is evidence from eastern England for widespread and extensive woodland clearance during the Early/Middle Bronze Age, C1800-1500 BC.



Coppiced hazel bushes showing about four years of growth. Coppiced areas must have been important to early farmers as cut hazel poles had many uses including fencing and basket weaving. Young bushes like this also produce hazelnuts

By the later Bronze Age, C1500-800BC, Essex generally was relatively densely populated, with a well-developed society that traded widely, and with a complex, full agricultural economy. Near the farmsteads were arable fields, with cereal crops grown for local consumption. Domesticated livestock, which was a particularly important commodity to Iron-Age peoples, grazed the woodland and the riverside water meadows at different times of the year. There would also have been areas of enclosed pasture, ditched and hedged to control livestock. Some woods may have been protected from browsing animals by hedges and ditches, so that they could be managed as coppices.



Wild red and yellow plums in hedgerow



## Prehistory 3

21 ◀



19th Century map of Loughton Camp in Epping Forest

The countryside would have been crossed by many drove ways, used to move the animals from one place to another.

Woodland was also valuable as the major source of raw materials for the technology of the day, used for everything from buckets to boats and buildings. Land clearance would have continued into the Iron Age, from about 800BC when the new iron implements allowed for the first time wider-scale conversion of woodland on the clay lands to cereal cultivation.



Loughton Camp in 2012

Iron Age people constructed Loughton Camp about 500 BC. It stands on a strategic spur of high ground 75m (246 feet) above sea level. It might be supposed from this that the area would have been clear of trees, so that this could have been used as a vantage point, but the archaeological and pollen evidence suggests that it was hidden, then as now, within the woodland. Excavating the very extensive ditch and rampart walls of such a camp required considerable effort by the local population. The visible signs of this camp are still impressive today.



Exposed tree roots on part of the eroded embankment of Loughton Camp

## The Romans and After

22 ◀

During the Roman occupation there was further development of the existing agricultural settlements on either bank of the River Roding. There was a villa site on the western side of the Roding. The construction of a substantial bathhouse complex on the opposite bank, just to the south of Abridge, seems to have been an important staging post on the Roman Road from London to Dunmow. Such settlements required the use of considerable amounts of timber and fuel from the nearby woods to meet their daily needs, implying systematic woodland management. It has been estimated that to keep a bathhouse supplied with fuel required at least 18 hectares (45 acres) of coppice to be cut annually.

The Roman legions left during 410AD. Very little is known about the subsequent Saxon period in the local area, as their dwellings were not generally of stone, or with substantial foundations, and were largely constructed of materials which have not survived. However we can safely assume that farmers would have continued to cultivate the fields and use the extensive woodlands on the higher ground as sources of timber and fuel, as well as hunting game there. Waltham Abbey to the west of the Forest was an important Saxon site, and although various invaders may have navigated their way up the Roding, rural life was likely to have been largely unaffected.

The movement of livestock between the wooded upper slopes of the higher ground and the meadows in the flood plain of the river valleys became established as a common right at this time, the animals being driven along what even then would have been ancient drove ways. Traces of some of these tracks are still visible today.

Loughton as a name is first encountered in a charter of Edward the Confessor, where it is called Lukinton. This derives from 'Lukintune' meaning 'the settlement or farm of Luhha' and appears to refer to the area where Loughton Hall was established much later. Two other Saxon hamlets developed around Alderton Hall (Aelwartone - the farm of Aethelwaru), and Debden House (Tippendene).

The administrative boundaries within west Essex were well established by the time of the Norman Conquest. Each manorial and parish area had access to the woodlands on the high ground and the flower-rich water meadows beside the river, with farmland in between.

Each parish boundary was marked by boundary banks on which grew significant trees. This magnificent ancient hornbeam, a descendant of an earlier boundary tree, stands on the Saxon boundary between the Ongar and Waltham Hundreds, which runs through Birch Wood.



Measuring an old boundary pollard in Epping Forest

## Landscape of a Hunting Forest: The Norman and Mediaeval Periods 1

23 ◀

The Domesday Survey gives two snapshots of life in the area, first as it had been in 1066, under Edward the Confessor, and then as it was in 1086 under William I. The entries relevant to Loughton are in the Little Domesday Book, which dealt with Essex, Suffolk and Norfolk. It is actually much larger, and also much more detailed and comprehensive than the greater Domesday Book, which covers much of the remainder of England. This remarkable and invaluable inventory assessed the taxability of every estate in the land and is an extremely useful guide to the population and their taxable resources. From it much can be inferred about the general state of the countryside prior to 1066, including that the manorial system had generally been working well.



Fallen acorns, food for pigs which were turned loose in the woods to fatten up before being slaughtered for winter celebrations

At that time Loughton was fragmented into eight separate estates with the land being seemingly well wooded as it was capable of supporting 1,870 pigs, a notional measure of the size of woodlands containing oaks and beech trees. In addition, there were arable fields and grassy meadows.



Young red stag in mid-summer growing a new set of antlers that are covered in velvet. When the antlers are fully grown the stags rub them against branches, causing some damage to the trees. The native red deer were the favoured animal of the chase

The Norman monarchs loved hunting and the woodlands of Essex were ideally placed to provide them with this sport. Moreover, ownership of hunting rights was a valuable perquisite in the gift of the king, which could be offered in return for loyal service. William the Conqueror had introduced many laws to protect such special areas but it was about 1130, during the reign of Henry I, that the Forest Laws became fully established.

Initially these applied to much of the county of Essex, which had become a Royal Hunting Forest around 1100. This meant that the habitats of animals of the chase, the red deer and wild boar, were given special protection, as well as the animals themselves. The Laws covered not just the wooded areas, but also cultivated and common land. Locally the royal hunting parties were provided with accommodation at Waltham Abbey and later in lodges at Copped Hall and Buckhurst Hill, riding out across the district in pursuit of the deer.

The active management of these local woods as a resource for timber and fuel seems to have been well established before they became part of the Royal Hunting Forest.



## Landscape of a Hunting Forest: The Norman and Mediaeval Periods 2

24 ◀

A number of officials were involved to ensure that these various forms of management continued to be well regulated to meet the needs both of the hunting parties and the local community, which was reliant on the woodlands and adjacent farmland for survival.

A Chief Justice of the Forests administered all the Royal Forests, and a warden was placed in charge of each. Foresters protected the deer and Verderers were appointed to maintain the vert, the food for the deer. Woodwards managed the timber resources, which were vital to the local economy. Such officials walked or rode round the boundary of this area checking on visible markers such as boundary trees as they carried out their perambulation.



Crab apples, winter food for deer

The local people were not permitted to erect high fences to keep out the deer from their cultivated land, nor could they remove holly, thorns or crab apple trees from the woodlands as they were essential food for deer.

Deer were not the only large herbivores in the woods as the local commoners had small numbers of cattle, which grazed in clearings. These animals had to be removed during the middle of summer, the fence month, when the fawns were young.

Only a minority of the trees themselves were left to grow into straight timber trees; most were managed in one way or another to produce different end products: they could be coppiced, lopped or shredded. These products were essential to mediaeval life; as a result timber trees then were less, not more, valuable.



Now a mighty coppard, an ancient beech near the Lost Pond



An oak suitable for use as a source of timber for building houses, barns and windmills



## Woodland Management 1

25 ◀

Much of what is known of woodsmanship in this period comes from records of particular cases. For example sometime before the 13th century a wood in Loughton named Snarryngs had been divided unequally between the abbeys of Stratford Langthorn and Waltham. Stratford Langthorn had three quarters of this woodland. In 1240 an agreement was reached concerning their respective timber rights so that when one abbot needed to fell timber trees he had to contact the other abbot's bailiff and they would then jointly select four trees of equal value. Stratford would then take the first, second and fourth trees with Waltham having to be content with the third. The woodland owned by Stratford Langthorn Abbey became known as Monk Wood and remained in its ownership until its dissolution by Henry VIII in 1538.

After 1538 the 29 hectares (74 acres) of Great Monk Wood and 10 hectares (27 acres) of Little Monk Wood became part of the Duchy of Lancaster, subsequently becoming part of the lands of the Manor of Loughton.

These changes in land ownership led to more felling in 1567 and 1582. Records show that the 15 acres cut in 1589 contained oak, beech, hornbeam and birch. Some trees were pollards, but 500 young trees were also removed, along with 618 crab trees and thorns and two hollies described as being dead at the top.

At this time, the Lord of the Manor was exercising his right to cut this wood for £20, spending £35 on the lopping and then selling the produce for £120! This showed a handsome profit of £75. Using purchasing power as a guide, this would be the equivalent of approximately £11,000 today; using average earnings however it would be the equivalent of an income of £150,000.



This 1904 etching of pollarded hornbeams shows how much of the Forest must have appeared when it was being actively managed for fuel. At this time dead trees were removed from the woods as they were a useful source of firewood

During the 17th century the need for timber for the naval fleet meant that some timber was removed from woodlands, even if it was of inferior quality. Samuel Pepys, who had the responsibility of sourcing such timber, recorded

in August 1662 that many trees were being felled – although he left the actual location vague.

Although there was little quality timber being produced, the old pollarded trees from this part of the Forest were continuously lopped to produce supplies of faggots and logs to meet the local needs. In 1767 the occupiers of Alderton Hall obtained 1,000 faggots and 100 logs per year from the woodland and in 1787 just 500 faggots, but 250 logs.

Coppice management of woodland, such as at Longfield Shaw and Broadfield Shaw, is possibly the oldest method of obtaining a ready supply of young growth. Coppicing is relatively easy to carry out and quickly produces long, straight poles. These may be cut for use after 7–15 years, depending on the particular species and the intended end use. A young tree is cut at ground level and allowed to re-sprout from the stump or stool. The process is then repeated, and over time the stool gains in vigour, and size. As deer and cattle like to eat the fresh growth such stools have to be protected, usually by enclosing a group of them within a stock, and deer, proof fence. In many woods a bank around the wood was constructed first, and the fence put on top. The remnant of the ditch and bank used can often be still found around such woods today, and is an identifying feature of ancient coppice.

## Woodland Management 2

26 ◀

Coppice poles have many uses and cut beech makes excellent charcoal. Hornbeam wood gives off a great deal of heat and was favoured as source of fuel, being sold to bakers for their bread ovens. Oak bark was used in the tanning of leather and the wood burnt. Unseasoned ash also burns well, and can be used for tool handles. Hazel poles have many uses. Although beech is not generally thought of as a tree that adapts well to coppicing there are some ancient beech coppice stools of considerable size surviving from the mediaeval period.

The alternative method of cutting wood from a tree is to create pollards by lopping or cutting the trunks at about head height to remove a crop of poles. This was less efficient, and more labour intensive, so was only done where, as in the Forest itself, grazing animals could not be physically excluded. Such trees sprout and can be cut again after 10–15 years. The new upward growth was out of reach of browsing animals, which could however nibble any lower shoots that appeared on the trunks. Many of the trees in the Forest were managed in this way over a long period of time. It is likely that those portions of the Forest where most pollards grew were densely stocked with trees; essentially they were efficient fuel factories and there would have been very few gaps between the trunks. The lopping took place between 12th November and 23rd April with the cutting

being confined to Mondays, although there may well have been some trimming of the pollards on other days and at other times of the year. The wood could be removed on sledges drawn by no more than two horses. Wheeled carts were forbidden.

There are also records of oaks being shredded. Shredding involved the removal of short side branches from straight-trunked trees, which would be allowed to grow until felled for timber. The shredded branches were fed to cattle and the dry brittle twigs could be used as kindling.



Hornbeam fruits



A hornbeam pollard ready to be lopped once more

## The Forest in the 18th Century

27 ◀

Section of Chapman and André map of Epping Forest, 1777



This map shows the distribution of the wooded part of the parish in the 18th century, with the farmland between it and the River Roding. We are fortunate in having an eyewitness account of the appearance of local landscape during the mid-18th century.

In March 1748 the Swede Pehr Kalm, who was a guest of Richard Warner of Woodford, commented about his travels in England, recording in his journal:

*'Immediately to the North and East of Woodford there lies a beautiful forest. The trees had not been allowed to grow high, but after they obtained a height of 9–12 feet they had polled them for firewood or for some other purpose. They had afterwards thrown out many branches, and thus made a crown.'*

He goes on to mention that holly was very common and was cut to 12 feet. He remarked that the beech, hornbeam and oak all retained their brown leaves and that many trees had ivy climbing up them. [Brown leaves linger on the lower branches of beech, hornbeam and oak providing protection against frost damage].

He also noted that: *'Hedges are planted around all ploughed fields, meadows and pastures, gardens and kitchen gardens and often around ordinary courtyards and farmhouses.'*

*The hedges consisted most of hawthorn with blackberries and dog roses interspersed. The height of these hedges was commonly 6 feet, 9 feet and sometimes 12 feet; sometimes also only 3 or 4 feet. The thickness was from 2 feet to 6 feet or more. In these hedges accidents such as wind, birds, mice, etc. have afterwards planted several other trees as oaks, ashes, hornbeam, elder, elm and holly. The pollarded oaks spread out like a crown, and formed a good shelter for cattle in hot sunshine or storm. All the twigs in this crown were very often cut and carried home for fuel.'*

He commented: *'They are an incredible ornament to the country, because wherever one turns his eye it seems as if the country were a beautiful and delightful garden.'*



Hawthorn blossom

## 19th-Century Landscape 1

28 ◀

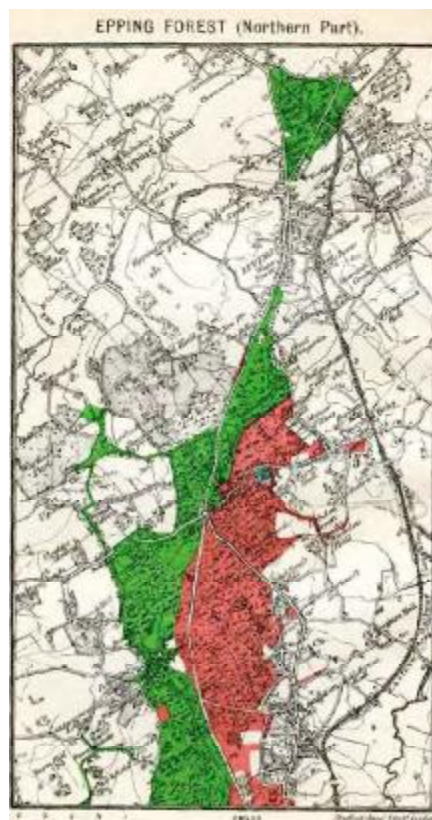
The regular cropping of the pollards in the parish continued to meet the needs of the small local population. However, during the Napoleonic Wars the Gunpowder Mills at Waltham Abbey required additional beech wood from the Forest for conversion to charcoal.

The land use details produced in 1848 show that approximately one third of the parish was wooded, with the remainder being farmland with just a few scattered houses. This landscape was much as it had been for the previous three centuries, with the local population using the local resources of woodland, hedgerow and fields to meet their immediate needs.

This all changed over the next 20 years as transport links with London opened up the opportunity of increased settlement and a move away from a land-based economy serving the community. It became more profitable to use the land in other ways, primarily by covering it with dwellings and commercial premises.

The local Lord of the Manor enclosed most of the woodland of the parish shown in red on this map. Some portions were clear felled to make way for the proposed housing development.

These enclosures met with fierce opposition from the local commoners and others who



Enclosed land shown in red, unenclosed Forest land in green

joined forces to protest about this situation. The story of the long legal fight to save the Forest has been recorded in detail elsewhere\*, but ultimately it resulted in a successful outcome with the passing of the Epping Forest Act 1878, which gave it protection. The City of London purchased the freehold of the Forest land and was appointed as Conservators of the Forest, becoming responsible for its future care under this Act of Parliament.

The Epping Forest Act 1878 specifically decreed the cessation of the common rights of digging gravel, clay, cutting turf, lopping and topping, cutting of underwood and assignments of fuel, with such rights passing to the Conservators. Lopping Hall in Loughton was built as compensation for the loss of lopping and associated fuel wood rights.

\*Addison, Sir W. (1991) *Figures in a Landscape*.



The Lopping Hall



## 19th-Century Landscape 2

29 ◀

The Act also mentions that:

*"The Conservators shall at all times as far as possible preserve the natural aspect of the Forest . . . and shall protect timber and other trees, pollards, shrubs, underwood, heather gorse, turf and herbage growing on the Forest . . ."*



## The Story of Loughton's Trees Managing Epping Forest



An old pollarded oak near to the Epping New Road



## Managing Epping Forest 1

31 ◀

In 1878 Epping Forest was in a sorry state. Parts had been clear felled in preparation for housing development. Certain areas had been ploughed up some years before. Elsewhere the undergrowth was quite dense beneath many of the ancient pollarded trees.



This photograph shows an oak on a boundary of a plot prepared for development

In the early 1880s there was much debate about how the Forest should be managed to ensure that it could be enjoyed by those who wished to visit it. At that time the old pollarded trees were viewed as being unattractive and unproductive, being examples of the exploitation of the trees by the local commoners.

A policy of thinning of these densely packed trees was started, with considerable numbers being removed from the local area. This met with approval from a number of experts, who viewed the regenerating saplings in the spaces created with much enthusiasm.

In January 1884 Alexander McKenzie, Superintendent of Epping Forest, had been able to purchase some 332,799 young trees at a cost of farthing each from the Lawson Seed and Nursery Co Ltd of Edinburgh. Some of these were native species, but the selection also included a number of non-native trees. A number of these trees were planted within parts of the Loughton parish to replace those previously cut down. These plantations were fenced for 20 years to keep out the deer and cattle. They now add variety to these parts of the Forest.

This initial selection of alien species was criticised by local naturalists and there was no further planting of trees. Thereafter natural regeneration was encouraged.



Planted group of beech trees on the Stubbles, Loughton. Original furrows can be seen in the foreground

## Managing Epping Forest 2

32 ◀

In addition to the felling of the old pollarded trees, there was considerable thinning of the underwood and the sale of these wood products continued to bring in an income to the Forest until the 1960s.



19th Century tree clearances on the edge of Loughton



## Managing Epping Forest 3

33 ◀

In the early 1970s Dutch Elm Disease caused the death of the elms on the edges of the Forest and these were cut down. Regular removal of the old pollards ceased, leaving about a third of the original number to continue to grow taller over time.

Soon afterwards the woodland managers started to appreciate the biological importance of the ancient pollarded trees and since then steps have been taken to ensure their active conservation.

The first Management Plan for the Forest was produced in 1998 and gave specific details of the condition of the woodlands and their future care.

Epping Forest is now considered to be one of the most important areas of ancient woodland within Europe. Its significance is recognised

by Natural England as a Site of Special Scientific Interest as, amongst other special interest features, it contains so many veteran pollarded trees and all three main types of UK wood pasture. The Forest is also designated by the UK Government as a Special Area of Conservation under the EU Habitats Directive. The part of the Forest within the parish of Loughton contains many thousands of veteran pollards. The majority of these are beech, but

there are significant numbers of hornbeams and oaks as well. Large areas contain trees of a similar age, which are liable to wind damage and a number are lost each year. When these areas were surveyed in 2009, many of these old beech trees were showing signs of stress due to a combination of poor air quality, dry summers and sheer old age.

A number of the old pollarded oaks were being out-topped by taller beeches, and as a result were dying.

The 2004-2010 Management Plan for the Forest considered various ways to maintain the wellbeing of these ancient trees. For oaks and beeches, these include phased crown reduction to remove some of the canopy in an attempt to prevent their physical collapse and thereby prolong their lifespan.



Dead wood habitat on an ancient beech



A recently managed pollarded hornbeam



Wind-damaged beech

## Managing Epping Forest 4

34 ◀

Because it is so labour-intensive this cannot be attempted over the Forest as a whole, but it has been applied to a carefully selected population of 'Keystone Trees'.

These have been selected as being particularly important trees, either as individuals or groups.



Dead pollard oak tree among taller beeches



A numbered tree tag on a beech pollard. The location of this tree is registered by GPS



This glade on Warren Hill shows oaks, that have been selected for crown reduction work and haloing. The surrounding vegetation is cleared to give them space to grow



In Debden Slade a number of new pollards have been created to provide replacements for the older trees

A Keystone Tree Strategy has been produced for the Forest's oaks and beeches, and all the pollards of these two species are currently being located, mapped and examined.

The hornbeams, which respond better than beech to lopping, are being selected for pollarding in various parts of the Forest, including those within Loughton. Lopping of these trees was actually re-started in this part of the Forest in 1982 by volunteers cutting old hornbeam pollards near High Beach.

Crown reduction reduces the weight and the height of the canopy and encourages new growth lower down the trunk of the tree.

## Planting Fashions

35 ◀



View from Hillcrest Road, towards Albion Hill with some fine giant redwoods on the skyline

Loughton has many varied buildings, a few of which date from the 17th and 18th centuries. There are a number of fine Victorian and Edwardian houses, which were set in large gardens with trees, hedges and shrubs. More recently built houses tend to have smaller gardens, but the majority still have trees within them. Many of the town's streets are tree lined, although in many areas of the town the majority of the tree cover is in gardens, rather than the street.

Fashion has always played a significant role in the selection of trees for inclusion in gardens or as street trees. Towards the end of the 19th century, Alexander McKenzie was noted for his use of London planes in his planting schemes within London. These are a cross between the American and Asian planes, and have 'hybrid vigour', being even faster growing, and potentially taller and longer-lived than either parent. As Superintendent of Epping Forest,

he arranged for the planting of a substantial number of them alongside the roads across Wanstead Flats. Others were planted on the fragments of Epping Forest within Loughton such as on King's Green, Standard Green and five on the patch of green at the junction of The Crescent and the High Road.

A number of other London planes are found as street trees on Alderton Hill and the corner of Summerfield Road and Hillcrest Road, as well as in private gardens and in St Mary's Churchyard.

It would appear those architects and occupiers of the 19th and early 20th century houses within Loughton often favoured the planting of the then fashionable trees, the Himalayan or deodar cedar, Wellingtonia, Atlas cedar, lime, London plane, horse chestnut and yew, leaving a substantial legacy to the present day.

Hedges around the older properties contain a wide variety of shrubs, especially hawthorn, but many include such evergreens as privet, holly, yew, Leylandii or Lawson's cypress. All of these are useful for winter shelter or summer shade. They add considerably to the privacy within the gardens and of course the visual character of the area.

More recently planted hedges include cherry laurel and viburnum, as well as the currently very popular *Photinia* Red Robin. All hedges provide habitats for many kinds of insects and birds, with food, nesting sites and shelter.



## Loughton's Trees Today



Broadstrood, Goldings Manor



## Trees and Landscape Character 1

37 ◀

In 2008 Essex County Council published their Landscape Character Assessment for the county. More recently this has been supplemented by a more detailed assessment for the district, and *A Settlement Edge Landscape Sensitivity Study*, which is particularly important to ensure that the landscape is fully respected in any decisions concerning the expansion of settlements as part of the Local Plan.

Much of Loughton parish lies within the character area defined by the County-wide assessment as the Epping Forest Ridge. This is described as woodland with steep-sided

valleys containing intermittent streams, flowing through the urban area towards the river Roding. Below 60m the land slopes eastwards to the Roding valley. Historically this land was cultivated, the fields being surrounded by hedges. Most of these fields were built over in the 20th century but some have survived, largely as recreational open spaces.

A major component of the character of the local landscape is the range of native tree and shrub species within the woodlands and hedgerows. These have persisted in the town as it has developed. The main woodland species are birch, beech, crab apple, cherry,

hawthorn, holly, hornbeam, oak, wild service and willows. In addition to these, ash, blackthorn, elder, elm, field maple, hazel and wild plum occur in the hedgerows.

Within the Forest itself many thousands of these trees are ancient pollards and to date another 250 veteran trees have been identified within the former hedgerows outside the Forest.

(A veteran tree is defined generally as being at least 250 years old, but with some allowance made for trees of shorter-lived species, such as birch, beech or willow).



Woodland glade



View of the Epping Forest ridge from the top of Woodbury Hollow

## Trees and Landscape Character 2

38 ◀

Key elements of the guidance on protecting such landscapes include the sensitive management of these ancient trees, as well as conservation of the traditional hedgerows.

The Landscape Character Assessment for the district analyses the context of the town in terms of the Roding Valley, the Epping Forest Ridge and the countryside separating the town from Theydon Bois, part of the Theydon Garnon character area.

The Landscape Sensitivity Study notes in particular the areas of both enclosed and open character in the surrounding countryside, the importance of these areas to prevent the coalescence of settlements, and the particular visual contribution and high sensitivity of Epping Forest.



View from Colebrook Lane across the fields towards Theydon Bois



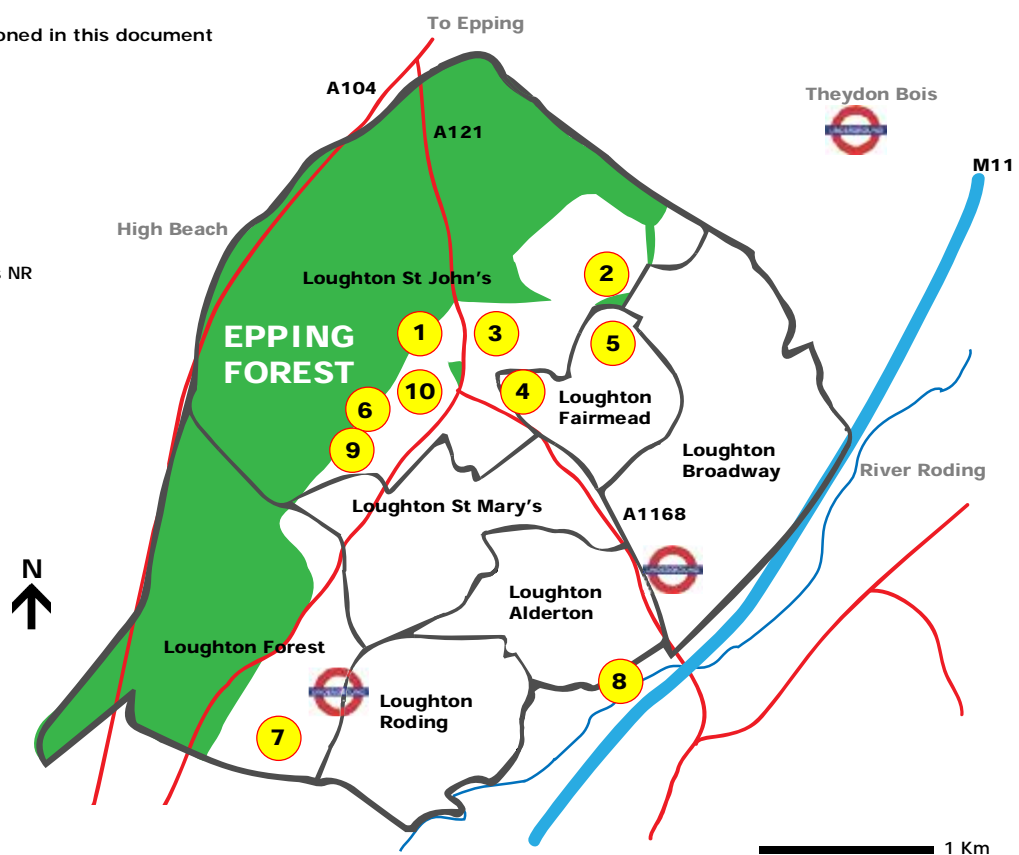
Managed old ash tree beside Rectory Lane

## Map of Loughton

39

 Locations of places mentioned in this document

- 1 Baldwins Hill
- 2 Debden Green
- 3 Goldings Manor
- 4 Hillyfields
- 5 Home Mead LNR
- 6 Little Cornwall
- 7 North Farm
- 8 Roding Valley Meadows NR
- 9 Staples Road
- 10 York Hill



## Neighbourhoods in Loughton 1

40 ◀



Loughton High Road looking from Kings Green

There are a number of distinct neighbourhoods in Loughton, each of which has a special character:

*Old Loughton*, which refers to the area around Loughton High Road, the original settlement along the main road.

*Debden Green* is a hamlet set around an ancient green in the north-east corner of the parish. Debden House is an adult learning and conference centre in Debden Green run by the London Borough of Newham; the grounds include a campsite. It has a number of fine trees and a walled garden.

*Goldings Manor* is a modern estate of mostly large detached houses built in the grounds of Goldings, a large mansion demolished after being hit during the Blitz.



Broadstrood, Goldings Manor

Debden Green





## Neighbourhoods in Loughton 2

41 ◀



Hornbeams as street trees

*Roding Estate or South Loughton* is an area south-east of the Central Line railway and was mostly built up in the interwar years. There are a number of small greens planted with various specimen trees and some tree lined roads. One of the ancient green lanes is still present.

*Debden* lies to the east of Loughton High Road; it was built by the London County Council



Fairmeads, Debden

between 1947 and 1952 to provide housing for people from London whose homes had been destroyed or damaged during the Second World War. A significant number of old trees have been retained in selected areas, with fragments of Forest land and verges containing significant trees.

*Little Cornwall* is a hilly area of north-west Loughton closest to Epping Forest characterised by steep hills, weather-boarded houses, narrow lanes and high holly hedges. There are some mature trees in gardens.



Woodbury Hill, Loughton

*Great Woodcote Park* is a modern estate at the southern end of Loughton; although surrounded by trees the individual garden plots are small.

The open spaces have been planted with new trees around the communal areas.



Planted trees screening industrial unit, Langston Road

*Oakwood Hill and Langston Road*: here in the industrial estates tree planting was a requirement of the development plan.

The number and kind of trees now present in these areas varies according to their history, particularly the nature of the land use beforehand, and also garden size. Many trees are from former large gardens, or from countryside hedgerows.



Planted birch trees, Great Woodcote Park

## Conservation Areas 1

42 ◀

There are three Conservation Areas within Loughton and more details of these are available on the Council's website, [www.eppingforestdc.gov.uk](http://www.eppingforestdc.gov.uk)

The presence of trees is important as a reason for designating these special areas. The trees then automatically become protected.

*Baldwin's Hill* forms part of the area of Loughton known locally as 'The Hills' and made up of Baldwin's Hill, York Hill, Kings Hill, Pump Hill and Woodbury Hill. These roads all lie on rising ground. From the central section of Baldwin's Hill in particular, which follows the crest of the sharp ridge and where the land enclosed for housing is not continuous, there are fine views over Epping Forest and towards the location of Loughton Camp, as the land falls sharply away to the west.



The edge of Baldwin's Hill Conservation Area

The building plots on the west side of Baldwin's Hill were enclosed from the Forest before the passing of the Epping Forest Act of 1878.

The Act allowed houses and gardens already established, albeit illegally to remain.



View from outside Jacob Epstein's house within the Baldwin's Hill Conservation Area

*Staples Road* comprises an attractive, linear group of houses and a school on the edge of Epping Forest. This corner of green space has some fine old pollards.

Several young trees have been planted in the last two years to provide in time, successors to the veteran oaks.

With a few exceptions, all the buildings in the Conservation Area were built in the last three decades of the 19th century. The houses are effectively sandwiched between two dense areas of trees, the Forest and those in the rear gardens.



1906 postcard of School Green showing fallen oak tree



School Green in 2012

## Conservation Areas 2

43 ◀

*York Hill* is a peaceful residential area that benefits from the tranquillity and views of the adjoining Epping Forest, as well as the survival of hedges, which follow and define the historic road pattern. There is a steep and dramatic rise from King's Green, off Church Hill, to the two greens outside the Gardener's Arms public house at the top of York Hill. There are particularly prominent and ancient oaks on School Green.

York Hill itself forms the backbone of the Conservation Area. The close proximity of houses to the street and the long lengths of high hedgerows create the character of country lanes. It is notable for its long lengths of holly hedges, which are an important part of its character, and specifically mentioned in the reasons for its designation. Unusually, the district council has been able as a result to take special legal measures to give them extra protection.



High-hedged road off York Hill

While there are several areas of 20th-century development, the houses have been incorporated into the landscape so that they do not visually dominate.



View up York Hill



The twin trunked swamp cypress on York Hill

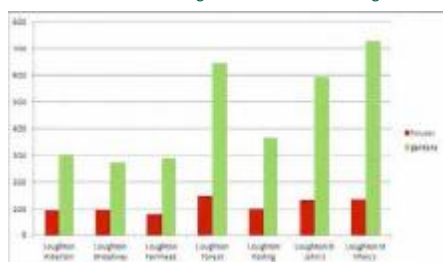


## Trees in Gardens 1

44 ◀

The density of housing varies across the town; some properties have exceptionally large gardens containing many mature trees, others have much smaller gardens, but overall the amount of garden space is considerable, making the town appear very green.

*Areas of houses and gardens in wards in Loughton*



**Data from Generalised Land Use Database Statistics for England 2005**

On the whole, the larger gardens are associated with the Victorian or earlier properties and contain mature trees, some native and others planted. Those created on former Forest land often have pollards within them. Others may have former hedgerow oaks within their gardens. A number of these large old gardens have now been subdivided, but where possible a number of the specimen trees survive and these have now generally been protected by TPOs (Tree Preservation Orders).

There are several other gardens containing collections of evergreen trees. The grounds at Loughton Hall, the former home of the Lord of the Manor, has several fine cedars. A group of visually prominent Corsican pines still stands as a reminder of the former garden of Dr Fred Stoker at the Summit, although these trees have caused contention, as a result of their proximity to dwellings, and many others of the trees have proved impossible to retain, and been removed by agreement.



These fine Wellingtonias were planted in the garden of Pollards, a large property on the hillside between Warren and Albion Hills

Hazelwood, off Upper Park, still retains many of the original mature trees from that property, including a fine Wellingtonia.

The grounds around the Warren House were designed by Humphry Repton. There are fine evergreen oaks and cedars. Successive Superintendents of Epping Forest, who occupied this property, have added their own selection of trees.



The Warren Gardens



View along Upper Park

## Trees in Gardens 2

45 ◀

With the choice of so many tree species, the gardens of Loughton are full of trees. Many are primarily decorative but 62% of those surveyed reported they had fruit trees in their gardens.

It is worth noting that many old trees in gardens and their old roots support the rare and endangered stag beetle. This species does not just rely on the Forest to survive but can be considered a flagship species for the Loughton-wide treescape (see Biodiversity section pages 74-82).



Adult stag beetle



Flowering cherry trees in front gardens on Hillcrest Road



Deodar in garden, York Hill

## Loughton's Trees Today Street Trees



Hornbeam catkins on the edge of Hillyfields



## Street Trees 1

47 ◀

One of the specific features of Loughton is the great variety of trees that flourish there. Initially most of these trees seem to have been survivors of the old hedgerows or were planted in front gardens.

Planting of street trees took place as the town developed and often led to fierce debates about the costs involved.

The minutes of various committee meetings record that Loughton Urban District Council was keen to start a Register of Trees. Most of the trees noted in 1926 were old hedgerow trees often growing in groups.

By December 1936, some 98 trees had been registered and were marked by galvanised metal labels.



This early view of Church Lane shows some of the seven ash and 68 elms, which were listed. The central photograph shows the same view today. The photograph on the right shows one of the horse chestnuts in the High Road

In 1937 the Council engaged a consultant, A. C. Le Sueur, to recommend additional trees for registration and accepted his report in 1938. A number of his listed trees still survive, but sadly most of his notable elms have not.

A century ago larger stately trees with big leaves such as the London plane and horse chestnut were popular and there are many local examples.

Our perception of what makes an appropriate street tree has changed over time as roads have become more congested with cars, street furniture, signs, lamp posts, overhead cables and telecom cabinets.



A successful street tree will be attractive and grow well in difficult conditions, but not become too big, be easy to look after and not have overly large leaves, or squashy fruits. Planting trees in busy streets and other public places is not a straightforward process. Roads and pavements have many service ducts beneath them, and the soil is generally compacted and de-natured.



## Street Trees 2

48 ◀

Gas mains may leak fumes and the soil is considerably impoverished and compacted. Digging the right-sized hole in which to plant a tree can be hazardous, as cables and pipes have to be avoided.

Responsibility for the care and planting of street trees lies with Epping Forest District Council, with a budget from the County Council, which is the Highway Authority.



Trees pruned to avoid overhead cables

Choice of the right street trees is a matter of balancing all the factors in the particular case. Small and decorative trees cause fewer problems, and are much enjoyed, but are normally short-lived, and far less effective in soaking up pollution and in creating a green environment than larger and more robust trees. On the other hand the larger trees can cause more shading for adjacent residents, particularly in narrower streets, and are more

likely to cause problems with sticky 'honey dew' dripping from leaves. They also require more pruning to prevent issues such as potential subsidence in areas of clay subsoil and interference with overhead cables or high-sided vehicles.

Planting street trees is expensive and research is being carried out to reduce costs and improve their survival rates. Thirty years ago as many as 600 small 'bare-root' trees were planted locally each year, but the failure rate was between 40-50% due to vandalism and lack of provision for aftercare. In the past five years



Newly planted trees, April 2011

the target number for new planting has been around 200, with the trees being larger and carefully selected. Most of these have been container grown, which greatly improves their survival rate. They are also larger, with a trunk diameter of 14-16cm or even 16-18cm, which makes them harder to damage by casual vandalism. To plant such a tree is more expensive, but the result has been that the success rate has been considerably increased.

The root ball of such trees is carefully prepared over several years by the supplier before the tree is dispatched. The roots will have been inoculated with mycorrhizal fungi to help growth and fresh soil will be placed in the hole before the tree is planted. A watering tube is put in place and regular watering will ensure that the tree is given the best possible aftercare.



A watering tube

## Street Trees 3

49 ◀

The result of these changes is that, of the 187 trees planted in 2007/08, 162 are still growing well and of the 190 planted in 2008/09, 169 are still alive. A total of 208 trees were planted in 2010/11, 91 of these in Loughton.



Red oak leaves in spring



Red oak leaves in autumn



Norway maple in autumn

Their progress is regularly monitored. Any trees which die are examined to check on likely causes of death and signs of disease are noted. With such careful monitoring and continuing refinements of planting techniques it is the intention that the survival rate will be increased to 95%.

A register of all trees in public places is being prepared and this large database will provide useful information about the various tree species within the District and allow an informed plan to be developed to consider succession planting for the replacement of aging or diseased trees.



Veteran oak reflected in puddle



## Street Trees 4

50 ◀

As a response to climate change there will be the need to select different species, which will cope with the warmer and drier conditions. This may create problems for some of the existing trees, but also an opportunity to expand the range of trees beyond what has been possible up to now.

There is a need for further tree planting within the District as a whole. Residents are encouraged to suggest locations for more tree planting in streets or other public places. These requests will be integrated into the overall plan.

One of the significant problems within the urban area is lack of car-parking space. The 2001 Census lists 12,861 households in Loughton who collectively owned 15,419 cars or vans. Some properties have suitably sized garages, but for many householders off-street parking in the front garden is the only option.



Off-street parking in The Drive

Many gardens are now fully paved with no space for trees or shrubs. Dropped kerbs are required for access and street trees may have to be felled to allow this.

If a tree has to be felled, then if possible new street trees are planted with the householder paying a contribution towards the costs of any replacements. The use of a method of giving street trees a realistic value can assist in obtaining a proper level of compensation for trees that have to be lost. (See Valuing Trees, pages 74-75)

There is a scheme to allow residents to honour the memory of a loved one, through the planting of a commemorative tree. Many residents have found this a positive contribution to coping with loss. Their contribution of £75 goes towards the total planting costs; they are given help with the selection of a suitable species.



Flowering cherries in April



Newly planted trees on Church Hill

## Loughton's Trees Today Urban Open Spaces



The top of Hillyfields Open Space

## Urban Open Spaces 1

52 ◀

Towards the eastern side of Loughton are scattered well-used urban open spaces, often with trees. Some, particularly the larger oaks, are survivors from the old field hedgerows, but much planting has also been carried out. A notable example has been the creation of the Millennium Grove on Hillyfields.

This was planted to acknowledge the role played by personnel from the armed services on active duty across the world by selecting trees representative of each continent, but suitable for the climate and soils of Essex. They were then planted in grouped areas. They included gum trees from Australia and cherries from Asia.

As its name suggests, Hillyfields is just that and a combination of poor site conditions and very heavy vandalism resulted in the failure of many of the original trees, particularly the cherries on the eastern slope. The group planting of smaller trees and shrubs to the west of the site (the European area) was the most successful.

Recently, larger specimen trees have been planted into this area, and these are now thriving. The Town Council has continued to plant additional replacement trees, and the overall appearance of the open space has benefitted greatly, despite the original difficulties.

There are several other green open spaces within the town (including small areas of Epping Forest Land), containing a variety of native and non-native trees.

A database is being prepared for each site; which will list the trees present and their condition. This will help to produce future management plans for these areas, to be drawn up in consultation with local residents.



A veteran oak on the green at Fairmead



## Urban Open Spaces 2

53 ◀

Loughton Town Cemetery contains a number of interesting trees. Its designer, Edward Egan, retained a large oak as a feature tree and added limes along the boundary with the churchyard. Various evergreens including yew and blue Atlas cedars have been added. Other trees include snowy mespil (or Amelanchier), purple plums, red oaks and two young golden rain (Kolreuteria) trees.



Loughton Town Cemetery

A particularly important amenity is the linear open space along the River Roding, with its lake, characteristic willow pollards, water meadows, playing fields, riverside walk, woodland, and access to the historic Roding Valley Meadows Nature Reserve.



Jessel Green, Debden



Hillyfields



Oak tree beside Rectory Lane

## Nature Reserves

54 ◀

The Roding Valley Meadows Nature Reserve has a total size of 56.5 hectares (139 acres) but only 18.46 hectares (45 acres) of this is within Loughton parish, the rest being across the River Roding in Chigwell parish. The Reserve is owned by Epping Forest District Council and managed by the Essex Wildlife Trust.



Secondary woodland has developed on the southern edge of Oakwood Hill following the removal of the prefabricated houses built there in the 1940's

The hedgerows on the Reserve include a significant number of mature oak and willow trees with blackthorn and hawthorn scrub.

Home Mead Local Nature Reserve is a small site of 1.82 hectares (4 acres) off England's Lane, Debden. It is also owned by the District Council, and managed by ESS and assisted

by Epping Forest Countrycare, who carry out tasks according to what is required. The main entrance is situated off England's Lane, Loughton. It contains an interesting mosaic of young deciduous woodland, scrub and acid grassland. There are firm paths with benches, an ideal place for a walk.



A tranquil place in Home Mead



Hawthorn berries a rich source of food for wildlife

An outdoor event called "Birdsong" was held in November 2005 to introduce the site to the local community. Co-ordinated by Epping Forest Arts, it involved storytelling, music and dance by a number of young people from Davenant Secondary School.



Candlelit walkway in Home Mead LNR

Such celebrations with their lingering memories all help to reinforce our engagement with the natural world.

Management plans are in place for these reserves and volunteer working parties assist with planned maintenance on a regular basis.

## Green Corridors 1

55 ◀



TfL manages the trackside of the Central Line not just for the safety of its operations, but for the benefit of wildlife too. This green corridor provides an east-west link through the parish, which is further enhanced when it runs alongside the fields at North Farm part of the City of London's Buffer Land Estate.

Central Loughton still contains a considerable number of the mature ash, hornbeam, oak and willow trees that were listed in the pre-war tree surveys.

When the Debden Estate was laid out after 1945, the LCC planners ensured that many of the fine mature trees remained on the green spaces between the houses. The majority of these old trees are oaks, but there are also a few gnarled hornbeams and field maples.

These mature trees were within the hedgerows of the fields as shown in the 1851 tithe award for Loughton. Most were pollarded trees, lopped by generations for fuel. Most have been unmanaged for well over a century and provide habitats for many creatures.

These lines of trees and associated shrubs ensure there are major green corridors throughout the urban area, for example running from Buckhurst Hill to Spring Grove, along the High Road, or Buckhurst Hill to Langston Road, along Roding Fields. These provide not just visual continuity between the gardens and open spaces but also safe havens for various birds such as robins, blackbirds, blue tits and hedge sparrows. Hedgehogs, foxes, wood mice and voles as well as bats move along them in search of shelter and food supplies.

Because they consist largely of native species they support in various ways a wide variety of wildlife. The foliage is consumed by a wide range of insects, which in turn are consumed by various predators. Many moth caterpillars feed on birch, oak and hawthorn, each different species adding to the biodiversity potential of these habitats.

In 2006 a grant from the Heritage Lottery Fund and GreenArc enabled Epping Forest District Council to initiate a Favourite Trees project; which invited local people to nominate trees that were special to them.

A number of favourite trees were nominated by the people of Loughton, and three are included in the top 50.

Full details of these are available in Favourite Trees on the website [www.favouritetrees.org](http://www.favouritetrees.org)



Fields at North Farm



## Green Corridors 2

56 ◀

Oak, willow and hawthorn are amongst the richest of species, in terms of their value as wildlife habitats, potentially harbouring up to 360 different species each. It is this wide mix of species that is important as it gives variety to the scene, as well as alternative food sources for the many different creatures.



Holly hedges are a feature of parts of Loughton and these provide shelter and food during the winter months

Various beetle species also feed on native trees, including some that tunnel into the sapwood, while others feed on the heartwood. However even the non-native sycamore can be very important, providing plentiful food for many birds, which feed on the prodigious numbers of aphids found on its leaves.

Many of these old trees within the hedges are protected by Tree Preservation Orders. A significant number of others have been surveyed in the past decade and their details appear on the Favourite Trees website:

[www.favouritetrees.org](http://www.favouritetrees.org)



Caterpillar on an oak leaf



Woodpecker hole in dead trunk



Green corridors link gardens to open spaces

## Looking to the Future



## Looking to the Future

58 ◀

The following section looks at the way ahead and considers the main issues that need to be resolved, practically and sustainably.

This report shows how Loughton's current treescape has been influenced by the local geology and centuries of human activity. The urban parts of the parish retain traces of the former agricultural landscape, as many old hedgerow trees and fragments of hedges still survive amongst the houses and their gardens. The town is buffered by woodlands to the west, where the extent of Epping Forest remains much as it was centuries ago. To the east are the level floodplains alongside the River Roding and, providing the vital linking green corridors between the Forest and the meadows, there are the many green spaces and gardens of the urban part of Loughton itself.

As we face up to the pressures for further built development, greater levels of atmospheric pollution and the uncertainties of climate change, the relationship between trees and people will intensify as we struggle to live in a more sustainable way.

The following analysis, and the action plan that will follow, highlights some of the ways in which the local community can help trees to remain central to the wellbeing of the area, by ensuring that they continue to grow well, to provide oxygen, shelter, shade as well as an appealing backdrop for urban life.

Taken together, the strategy and the action plan, prepared and implemented in partnership with the community are intended to ensure that we can better enjoy the present abundance of trees and ensure that there will be a legacy of trees for future.

### Survey Results

Any Community Tree Strategy has to consider the attitudes of the people towards trees in their neighbourhood and residents were surveyed at several events and asked to complete a short questionnaire, which was also available on the Loughton Town Council's website. There were 118 responses to the questionnaires. In addition to completing the forms, a number of individuals made comments concerning trees or nominated Landmark Trees.

In response to the question:

**Do trees improve the quality of your surroundings?**

On a scale of 1-10 78% gave a high score of 10 and 3.5% gave a medium score of 5 whilst 10.5% scored the value of trees at 8.

The survey also revealed that 60% had planted trees either in their own gardens or elsewhere and regularly kept an eye on their progress. Some 62% revealed that they had productive fruit trees in their gardens, although in some cases, birds and squirrels ate the fruits before they could be harvested!

A number of streets were suggested as suitable locations for planting more trees and these requests will be evaluated and followed up, where possible.



Flowering cherry



Veteran trees beside Rectory Lane



## Overall Aim

**To protect, maintain and enhance the landscape and trees of Loughton, by working in partnership for the benefit of current and future generations.**

The current treescape of the parish is a mixture of historic influences and more recent choices of planting, which has created an attractive landscape with abundant trees. However the circumstances that formed that landscape have changed irrevocably, challenging those attempting to shape or manage that legacy in a changing world. The future of the Forest is one such issue: how to shape a new meaning for an invaluable and irreplaceable legacy of pollard trees that are however over-mature and ill-suited to cope with a changing climate? In the countryside generally the majority of the native trees and the woods were managed for wood products. The hedgerows were part of a largely pastoral landscape, where they were important for shelter and enclosure for cattle and sheep. Neither is now the case.

What has become clear recently however is how important that treescape is for human health and wellbeing, as well as in creating a sense of place, and forming a key characteristic of the wider landscape. In the (relative) flatlands of southern Essex large trees play a vital rôle in shaping the urban landscape and the surrounding countryside; in the Forest

effectively they are the landscape. In the town, they add to property values, they clean the air of pollutants, they moderate the climate, intercept rainfall and have a rôle in flood prevention and carbon storage. Studies have shown how effective the presence of trees is, alone or as part of a natural setting, in lowering stress and preventing illness. It may truthfully be said that trees are an essential part of what makes Loughton a town worth living in.

Therefore, although the rôle of trees in providing fuel, building materials and other physical products has largely passed, their new rôle as 'green infrastructure' is equally vital, and if anything it will increase in years to come. There is, of course, also a set of perennial problems associated with trees in any town. They are potentially very large living structures, requiring care in selection, management and eventually replacement. Where this fails, or indeed circumstances change, conflict may arise. However it is important that these not be overstated; the great majority of trees provide pleasure and enjoyment, and with goodwill and sound advice problems may be addressed, and solutions found.

Responsibility for the current and future management of the trees of Loughton falls on the elected councils, a range of public and private organisations and the many private individuals who own and care about trees.

To influence positively such a diverse tree population in a changing world requires a shared vision, strength of purpose, imagination and good planning, but most of all partnership and cooperation between all concerned.



Oakwood Hill



Flowering cherries

## Key Objective 1

## Tree Planting and the Street Scene

60 ◀

### The Street Scene

Loughton has a wide variety of street trees and the survey responses indicated that there was an overall appreciation of trees as a considerable asset to the town. However, there were also clear indications that more trees would be beneficial in specific areas. Many front gardens now lack trees as they are covered with hard standing for vehicles. The planting of suitable trees would enhance the appearance of areas. Where there are specific constraints inhibiting planting of street trees residents could be encouraged to plant suitable species within their own gardens.

A number of respondents mentioned the desire for prior consultation with them in respect of choice of tree species and location and for more frequent aftercare.

There are also concerns about potential problems that trees can cause such as building subsidence, damage to pavements, larger trees outgrowing their situation and excessive shading, but with careful attention to species selection and management these can generally be minimised.

### Future Funding

Restricted financial resources are likely to continue to be a problem, making it more difficult to plant trees and to fund active aftercare. Finding alternative solutions including partnerships with local residents and businesses to seek sources of alternative funding or offers of help are a priority. A policy of 'right tree right place' will also assist in ensuring cost-effective long-term management. However the great benefits that trees bring to health, and even the vitality of the local economy, should be considered as well. In the longer term, there is a need to work towards a more sustainable solution regarding the identification of best sites, regular watering and other management of newly planted trees, with the aim of enhancing the diversity of species and overall attractiveness of the streets. The ability to measure the changes in contribution to the public good of the street tree population, by recording its Capital Asset Value for Amenity Trees (CAVAT value), gives an excellent opportunity to demonstrate good practice.

### New Planting

There has been considerable street tree planting over recent years, but a number of mature trees are nearing the end of their natural life span. In addition various diseases are threatening several species in particular ash and horse chestnuts, and there will be a need to plan for their eventual replacement.

**There are opportunities throughout the town for more planting:**

- to maintain tree cover
- to replace over-mature or diseased trees
- to increase tree cover where space permits.

This can be achieved by tapping into the various sources of available funding for new trees and by seeking sponsorship.

## Key Objective 1

## Tree Planting and the Street Scene

61 ◀

To increase the number, health, appropriateness and overall value of the street tree population, and contribute to a sustainable future by:

- (i) identifying partnership arrangements or additional sources of funding to increase the number of trees planted and their continued aftercare;
- (ii) maintaining an active and proactive programme of street tree planting for the town that is sustainable and appropriate;
- (iii) continuing to maintain the safety of the street tree population;
- (iv) completing the database of all street trees and using this information to monitor the overall value, health and potential life span of the street tree population;
- (v) continuing to recycle the arisings from necessary tree work as a mulch or passing it on for incorporation into biofuel projects.



## Key Objectives 2 and 3

## Trees in Open Spaces

62 ◀

### Trees in Open Spaces

Loughton is fortunate in the number and variety of its open green spaces, most protected in the local plan from development and including others that are candidates for adoption as Village Greens.

Trees feature in the majority of these green spaces; some are veterans, having been there for centuries, while others have been added in recent years.



Ancient trees provide a backdrop to newly planted trees on Hillyfields

Each of these spaces, whatever its size, is appreciated by those living nearby.

There are opportunities for carefully considered and appropriate tree planting but any plans for future planting should be carried out only after consultation with the local residents.

### Development of a Community Orchard

Although fruit trees are grown in some of the larger gardens, those who live in flats or have small gardens do not have such ready access to home-grown fruit. A new orchard has been planted in the grounds of Roding Valley High School and the creation of one or more additional community orchards in suitable locations would be of general benefit. There is an example of a successful community orchard in the north of the district, planted and managed by the Roydon Tree Warden Group, and Roydon Countrycare. A new orchard is an excellent way of conserving many kinds and varieties of fruit trees native to Essex that are not used commercially, many with superior flavour, as well as creating a beautiful community space.



### Key Objective 2

- (i) To improve the appearance of the major green open spaces within Loughton by a tree-planting programme, implemented in partnership with residents, and
- (ii) to strengthen local pride in these green spaces by encouraging a greater involvement in the aftercare of new planting.

### Key Objective 3

To seek community support for the establishment and long term-care of a community orchard within the town.

## Key Objective 4

## Trees in Gardens

64 ◀

### Trees in Gardens

Compared to the nearby London boroughs, Loughton has a far higher proportion of its trees in gardens as against streets. Of course the size of garden tends to dictate whether there are trees, and if so whether they are larger or smaller. The presence of trees within so many of them provides pleasure to the eyes and can bring additional benefits to residents, not least to their health. Many of these originated in the gardens of large houses, now gone, but leave behind a substantial legacy of fine trees.

However, over time large trees in particular may cause problems such as excessive shading or root damage to foundations, and enter and clog old or leaking drains. Modern gardens, particularly in new developments, are often much smaller than they previously would have been, and trees can then be a mixed blessing.



Rowan berries

Sometimes pruning may be a solution in other cases removal, perhaps with more appropriate new planting, may be the only answer. Advice should be sought before embarking on tree surgery or removal. Many of Loughton's trees are legally protected, so this is important both to ensure that permission is obtained if necessary, and to make sure that the work is necessary, and well considered. The tree surgeon's motto is worth quoting: "think twice, cut once!"

The selection of trees for new planting within residential gardens is a matter of personal choice, but there is plentiful advice available on the right choice of species to thrive, complement its setting, and add to the overall appearance of the garden.

Well-stocked gardens are also good for wildlife and the links between gardens are excellent wildlife corridors. In her recent book, *Wildlife of a Garden; a thirty year study*, Jennifer Owen has recorded just how valuable gardens are for wildlife, with their mixture of native and exotic plants. Many of the gardens in Loughton contain a similar array of plants and these will attract animals both large and small, giving a great deal of pleasure to those who observe them.



A black pine in a front garden, Upper Park

## Key Objective 4      Trees in Gardens

65 ◀

- (i) To support the appropriate management of existing trees within gardens and appropriate new planting, particularly where they will contribute positively to the appearance of the town;
- (ii) to protect those trees that give character to the town and to ensure that the most important trees are not felled except where it has been demonstrated to be both necessary and justified;
- (iii) to encourage the planting of more trees and bushes within gardens, particularly species with flowers and edible fruits; and
- (iv) to encourage wildlife by the introduction of suitable planting to provide them with food and shelter throughout the year.





## Key Objective 5

## Countryside and Nature Reserves

66 ◀

### Countryside and Nature Reserves

Although only a small fraction of the surrounding countryside is now farmed, it retains much of its historic character with its surviving hedgerows and veteran trees. The hedgerows now are under threat from neglect rather than faced with removal. Lack of regular management means that they are less suitable as nesting sites for birds and that a gradual loss of tree cover is seen, as mature trees are lost naturally over time and not replaced.

The overall appearance of the countryside and its wildlife value is recognised nationally as being important, with new planting being encouraged by grant aid. The County wide and District Biodiversity Action Plans both stress the importance of these habitats; the main aim of the Essex Wildlife Trust's Living Landscapes project is to encourage sympathetic

management of the countryside as a whole, ensuring that modern agriculture does not destroy the wildlife and landscape resource, and making living green links between the existing few specially designated habitats.



Volunteer clearing willow scrub



Field maple



An ancient hedge on Jessel Green in need of management and some new planting

## Key Objective 5

## Countryside and Nature Reserves

67 ◀

- (i) To work in partnership with landowners and farmers to ensure that local hedgerows are retained, with sustainable management to achieve continuity of mature tree cover and to enhance their value, visually as landscape features and for biodiversity; and
- (ii) to foster a greater awareness and respect for the local nature reserves and encourage greater practical involvement by local residents in their care.



Hedge laying by local volunteers

## Key Objective 6

## Epping Forest

68 ◀

### Epping Forest

The Management Plan for Epping Forest is being revised and will include long-term proposals for the continuation of management of the large number of veteran trees that are showing considerable signs of stress. In addition, it will outline plans for managing the other habitats and prescribe techniques to maintain and enhance their biodiversity.

The Forest is a popular venue with local residents as the survey revealed that 66% are regular visitors to the Forest. The Conservators are seeking new ways to inform visitors about the management proposals for the continued wellbeing of its many trees.



A local tree warden explaining the value of an ancient oak pollard



Wood pasture oak near Lincoln's Lane, Epping Forest

The regular production of *Forest Focus*, leaflets on specific topics, notice boards, the website, forum meetings and guided walks can provide up-to-date information on work being carried out.



## Key Objective 6

## Epping Forest

69 ◀

- (i) To continue management of the Forest to protect and enhance, so far as is practicable, its biodiversity and to conserve its special character, in accordance with the terms of the Epping Forest Act 1878 and the current Management Plan;
- (ii) to enhance public enjoyment of the Forest and increase the understanding of its management;
- (iii) to continue to enhance the landscape character of the 'buffer land' at North Farm by continued maintenance of its hedgerows; and
- (iv) to involve the public with the conservation and enhancement of the special character of the Forest and 'buffer lands', including selective tree or hedgerow planting.





## Key Objective 7

## Trees and Planning

70 ◀

### Trees and Planning

A considerable number of trees in Loughton are legally protected. The oldest orders date from the mid-20th century and they continue to be made, chiefly on selected trees where there is the possibility of development.

Of course the exercise of legal powers is not the only way to protect trees. They may also be protected by better knowledge and understanding of the importance of their role in enhancing the health of the community, and in a range of issues, such as mitigating the environmental effects of likely climate change. Recognition within the community of trees of local importance can also play a part. For this reason the council has undertaken projects such as Favourite Trees, and indeed this Community Tree Strategy, to protect trees by working together, as well as through legal control.



Newly planted hornbeams at Langston Road

There are strong policies in the Epping Forest District Local Plan on trees in the context of new development and these are rigorously enforced to ensure that important trees are not lost or damaged as a result of development, and that new buildings have appropriate and effective landscaping.

The Local Plan also contains the district council's policies to guide consideration of applications to fell or prune preserved trees, or trees in conservation areas. These encourage reasonable management, but guard against unnecessary loss.

Requests to prune or fell preserved trees are looked at individually and take into account the overall value to the public of the tree within its setting, as well as the reasons given.

At present a new Local Plan is in preparation, so the current policies will be reviewed and updated. However the importance of Green Infrastructure is recognised at the core of the new draft plan, so the outcome should be that the importance of trees is strengthened in planning for the future.

So that it has the proper weight in planning issues it is intended that this document will be adopted as supplementary planning guidance.

This will allow it to be used when taking decisions on planning applications and in planning appeals and enquiries so as to give greater weight to the Local Plan policies.



A protected oak surrounded by houses

## Key Objective 7

## Trees and Planning

71 ◀

- (i) To use planning powers where appropriate and specifically the policies in the Local Plan to protect features identified as being of special importance to the amenity character and setting of the town, especially Landmark Trees, Favourite Trees, ancient trees and hedgerows and woodland outside Epping Forest;
- (ii) Not to permit the felling of preserved trees, subject to a Tree Preservation Order, except where that has been shown to be both necessary and justified;
- (iii) To protect trees in the context of new development, and to ensure that adequate provision is also made for new planting;
- (iv) To undertake a specific Favourite Trees project for Loughton, and record the results on the Favourite Trees website.



## Background Information



**Surviving hedgerow oaks on the top of Hillyfields Open Space**

## 10 Facts About Trees

73 ◀

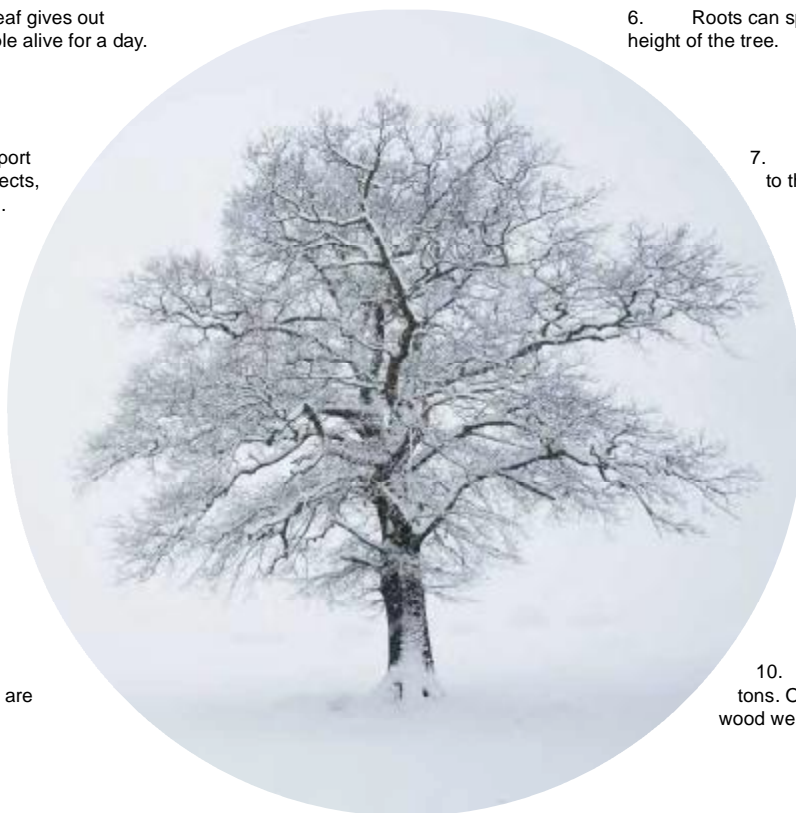
1. One large tree when in leaf gives out enough oxygen to keep 10 people alive for a day.

2. A large oak tree can support over 300 different species of insects, birds, mosses, lichens and fungi.

3. Dead leaves, twigs and branches provide organic material for reviving the soil and new growth.

4. The tree canopy intercepts 19% of rainfall, which reduces risks of flooding and erosion.

5. 90% of the roots of trees are found in the top 1 metre of soil.



6. Roots can spread outwards up to 3 times the height of the tree.

7. Strong anchor roots are close to the trunk to hold the tree in place.

8. There are many fine feeding roots which take in water and nutrients from the soil.

9. In summer some 2,500 litres are absorbed through the roots of a large, mature tree each day and pumped up to its leaves and branches.

10. A large tree can weigh many tons. One square cubic metre of fresh wood weighs roughly 280 kilos.



## Valuing Trees 1

74 ◀

### Capital Asset Value for Amenity Trees (CAVAT)

It is now possible to place a value on street trees using CAVAT. This technique has been developed by Chris Neilan, Landscape and Tree Officer at Epping Forest District Council. It provides a method for managing trees as public assets rather than liabilities. It is designed not only to be a strategic tool and aid to decision-making in relation to the urban tree stock as a whole, but also to be applicable to individual cases, where the value of a single tree needs to be expressed in monetary terms. It was reviewed in *Trees in Towns II*, Case Study 9, establishing and justifying the tree budget.

There are two versions of the CAVAT method:

1. The Full Method is recommended for use in decisions concerning individual trees or groups,

when precision is required and sufficient time is available for a full assessment.

2. The Quick Method is intended specifically as a strategic tool for management of the stock as a whole, as if it were a financial asset of the community.

To demonstrate how CAVAT works, three trees were selected for assessment. One of these was an acacia outside Chong's restaurant in the High Road, Loughton. The value of this tree is £5,571, or approximately 30 newly planted trees in total crown area.

The examination of a second larger acacia tree outside the Halifax bank in the High Road in better growing condition produced a value of £9,767, or about 55 new trees.

The third tree was the London plane on Kings Green, close to the War Memorial. Following



appropriate measurements and examination this tree was valued at £133,239, with a crown equivalent of about 740 newly planted trees.

These values reflect:

- stem size, as a shortcut to expressing the total crown volume
- accessibility
- the completeness and condition of the crown
- species characteristics
- safe life expectancy.

Taken together, these factors allow the expression of a value for our street trees.

The London Tree Officers Association (LTOA) have taken a particular interest in supporting the trialling and development of CAVAT. Further information can be accessed through their website:

[www.ltoa.org.uk](http://www.ltoa.org.uk)



An acacia in Loughton High Road



Measuring the girth of a tree

## Valuing Trees 2

75 ◀

### i-Tree or Urban Forest Assessment Applications

The value of trees within an urban setting has been investigated in the USA for a number of years. The US Forest Service has taken a leading role over several decades and has been able to develop innovative tools to help quantify these values.

The i-Tree Eco application is currently being trialled in the UK. It can express a value for the quantifiable element of the work trees do for the benefit of the community at large. Part of that value is the “structural” or replacement value, effectively the same as its CAVAT value; it also gives an indication of the value of trees for mitigation of pollution and reduction of storm water run-off, and for carbon capture. Generating these values requires a substantial volume of data about the urban tree stocks, including their growth form and condition as well as a great variety of economic data.

This application provides a useful audit of the landscape value of trees within an urban setting. The baseline information gathered is potentially extremely useful to planners, architects and developers as an argument for ensuring that space continues to be made for large trees in cities and urban areas in general.

Knowledge of the tree stock present will also help engage decision-makers, increase community awareness of their value and help build new partnerships.

A pilot study of the value of trees according to i-Tree in Torbay, Devon, has recently been published. The results are available here:

[www.itreetools.org/resources/reports/Torbay\\_UF\\_Report.pdf](http://www.itreetools.org/resources/reports/Torbay_UF_Report.pdf)



A view of Loughton's treescape from Hillyfields

## Financial Savings

76 ◀

### Financial Saving via Asset Management

Traditionally the management of the tree and woodland resource within the local authority has been viewed as a cost to that local authority and the community it serves.

Whilst the benefits of trees and woodlands have been recognised and appreciated for many years, the balance sheet has always indicted expenditure with no perceived financial benefit.

This approach militates against trees which do not register as assets of benefit to the community as a whole and therefore deserving of resources, commitment and funding commensurate with their value.

In many instances trees within the urban realm are identified as potential liabilities in terms of building and infrastructure damage and trip hazards, and of course they incur management costs in pruning, watering or replacement.

Cost savings in the region of 18.5% have been demonstrated by local authorities that have planned proactive management regimes for their street trees. Such authorities were also able to retain more trees implicated in claims as a result of planned management.

Recognising the value of trees within an area and proactively planning for their future management must in the long run bring financial savings.

Adequate information about the current tree stock should result in a healthy tree population with a diverse age range and variety of species suited to the local area and changing climate.

This will bring many benefits to the community in which they flourish.

Recent surveys state that access to trees is worth up to £300 per individual.



Surviving elm trees on a green space in Wellfields, Loughton



## Favourite Trees 1

77 ◀

Epping Forest District Council initiated a Favourite Trees project, which invited local people to nominate trees that were special to them.

A number of favourite trees were nominated by the people of Loughton and three of these are included in the top 50.

Full details of all of these are available on the website [www.favouritetrees.org](http://www.favouritetrees.org)

**This tree, the Willingale Oak, received the most nominations overall.**



Countryside Officer Paul Hewitt measuring the Willingale Oak with pupils from the Thomas Willingale School

It stands in the grounds of Thomas Willingale School, which is named after the local folk hero Thomas Willingale.

Several years ago, there was a threat to fell this tree as there was a suspicion that it was posing a threat to the foundations of an adjacent property. But the Head Teacher and her pupils were determined to save their tree. Fortunately it was protected by a Tree Preservation Order and by persistent lobbying, which emphasised that the tree was too valuable to be lost, it was not felled. A root barrier was installed between the tree and the house thus stabilising the property and leaving the tree to be enjoyed.

**The second favourite tree is a swamp cypress.**

This magnificent tree stands in the private garden of Rose Cottage, opposite 50A York Hill, Loughton. It is clearly visible from the footpath and from various vantage points in the town.

The swamp or bald cypress is a native of North America, growing in the boggy conditions of the Florida Everglades, where it was discovered by John Tradescant the Younger in 1640. They were popular in 19th-century large gardens but require warm summers for good growth.

This particular tree has been protected since 1932, when the then Loughton UDC recognised its significance in the local landscape.



Detail of the bark of the swamp cypress on York Hill



## Favourite Trees 2

78 ◀



The third winner was Father's Oak.

This maiden tree, with a girth of 4.07m, stands in a prominent position on a piece of green space beside Borders Lane and Alderton Hill in Loughton. Wendy Webb nominated this tree in 2006 as a tribute to her father, who enjoyed sitting under it.

### Further Surveys

The Favourite Trees project continues to develop and the associated website now hosts over 3,000 trees from across the district.

Few of the trees within Epping Forest are included on this website but are recorded separately by the City of London, which maintains records of its incredible number of fantastic old trees. Regular monitoring of selected keystone or outstanding trees is being

carried out by volunteer tree wardens. Within Loughton some 250 native veteran trees have been discovered, the majority of them oaks. This survey will continue to locate and record the remaining trees.

In addition to finding and recording the older native trees within the parish there is a desire to know the location of some of the more significant introduced trees in gardens and open spaces, as these add so much to the local



Measuring the girth of a veteran oak

landscape, and to include their details in the Favourite Trees database.

Some of these are significant public trees in well-used areas; others are visible over garden walls or from vantage points within the town.

A separate database of the various public trees is being prepared, which will become a useful management tool.

Discussions with local residents indicated that certain trees had a special significance and a list of additional nominations for Favourite Trees is being accepted.

Please contact Countrycare at Epping Forest District Council with details of any trees that you think are worthy of inclusion on this register.



Large oak on the green space, Etheridge Road, Debden

## Biodiversity 1

79 ◀

Biodiversity is the sum of all species, both large and small, inhabiting a specific habitat. The ability to measure biodiversity involves the preparation of lists and enables consideration of how best to manage that habitat for the greatest benefit. Producing such a list involves a whole team of people, including experts used to dealing with the unusual and rare specimens that may be discovered.

In 1997 work began to produce a Biodiversity Action Plan (BAP) for Essex and this led to the completion of a District BAP, agreed in 2008. These plans specifically mention the value of veteran trees as habitats. Stag beetles and wild service trees are also considered to warrant special protection. However, retaining a wide variety of habitats within an area is important too. Trees and shrubs of all ages are vital components as they support such a wide variety of other organisms.

Veteran trees provide many nooks and crannies, ideal as hiding places for invertebrates as well as potential nest sites for birds. Even a tree such as a wind-damaged ancient crack willow can be retained with careful management and will be particularly important as a habitat for beetles.

A good mix of young and old trees of different species provides a richer potential for a greater diversity of wildlife to thrive.



A managed crack willow tree in the Roding Valley Meadows Nature Reserve

### Stag Beetles

Stag beetles are Britain's largest and heaviest beetles. They are listed as a protected animal under Schedule 5 of the Wildlife and Countryside Act 1981 and are currently classified as Nationally



Stag beetle larva

Scarce Category B. Although they are found across parts of Europe their distribution is becoming restricted due to habitat loss, as they feed on rotting wood often buried below the ground. Here in the UK they are often found in urban and semi-urban locations.

Loughton is one of their strongholds as they often appear in the warm summer evenings in the larger gardens that contain old trees.

They are also found close to the embankments of the Central Line, where a green corridor of tangled and rotting vegetation provides ideal feeding grounds for the larvae. Crevices in trunks or nearby walls, which absorb the sun, can also provide excellent daytime shelters for the adult beetles during the summer months, where they can hide from predators such as magpies and cats.

Leaving a few tangles of vegetation round these older trees will also help these superb but scarce insects survive.

The People's Trust for Endangered Species monitors the distribution of stag beetles. [www.ptes.org](http://www.ptes.org)

## Biodiversity 2

80 ◀

### Veteran Trees

Loughton is home to a significant population of veteran trees; where possible they are being found and recorded, which is an essential first step to their being managed appropriately. These individual ancient trees are all the more important lying so close to the vast population of old trees within the Forest. Studies have shown that trees in the wider landscape close to important concentrations of ancient trees can support the same rare species.

Ancient trees provide niches to support a wide range of other organisms, from mosses and fungi on the bark, and in the wood, to nesting sites and food for birds and bats.

They are particularly important for the range of invertebrates they support, including some special beetles. Woodpeckers excavate holes into dead heartwood and feed on beetle grubs living there. The characteristic drumming of the great spotted woodpecker uses the resonance of a hollow limb to advertise its presence far and wide.



A veteran oak in Debdon; the hollow trunk and dead wood provide shelter and food for various creatures

### Wild Service Trees

While the majority of veteran trees within the woodlands of the Forest are oak, beech and hornbeam, there are some old crab apples, hollies and hawthorns too. However it is the wild service tree, *Sorbus torminalis*, which generates interest on account of its comparative rarity. It is considered to be an indicator of ancient woodland.

Its old English name was the chequer tree. There may well be a connection between the tree name and the traditional use of the chequerboard as the sign for a pub, as well as its occasional use as the name of country pubs.



Wild service leaf in autumn

## Biodiversity 3

81 ◀

This may be because the wild service tree's brown fruits were used to flavour beer before the introduction of hops, or because the pattern of its bark or the mottled appearance of its fruit recalls a chequerboard.

The woodland within the Loughton parish contains a number of these trees and their distribution was mapped by Ernest Lloyd in the 1970s. His results were written up in the *London Naturalist* in 1975. At that time he recorded 271 trees, not all of them within the Loughton parish. There are a significant number of ancient specimens, very rare for this already uncommon species, which may be seen from their form to have been pollarded repeatedly over the course of their long lives.

Wild service trees are now being mapped and registered within the Forest, with the veteran pollards included on the Forest's Veteran Tree Register.

Elsewhere a survey is being undertaken to find these trees again, and to locate them on GPS. Interestingly it appears that an effect of recent changes in weather is that wild service berries are now starting to germinate successfully and are producing saplings; the location of these young trees will also be recorded.

### Hollow Trees

Many old trees are hollow inside, as the heartwood has been decomposed by the action of heart rot fungi. This is a natural process and even to some extent beneficial to the old tree, which can reuse the nutrients released from the deadwood. A wide range of invertebrates such as woodlice and beetle larvae feed on this rotting wood.

In Epping Forest these are being studied as part of a long-term assessment of their distribution, but little is known of those which occur in the more isolated veteran trees that survive in gardens. They are vulnerable, because most beetles are unable to travel far.

Some of the hollow trees in the Forest or in former hedgerows provide roosting sites for various species of bat, although few surveys have been carried out in the Loughton area. Bats emerge at dusk and fly off in search of moths and other insects to eat. Bats are protected species under the Wildlife and Countryside Act 1981 and if tree works are required on older trees a survey has to be carried out to check if bats are present.

Fallen branches are also an important habitat where birds and small mammals may seek shelter and colourful bracket fungi help with the process of decomposition.



Bracket fungus on fallen branch

Most trees require the support of helpful fungi to supply them with nutrients and water. These are known as mycorrhizal fungi and they have a symbiotic (mutually beneficial) relationship with the roots of trees, offering them some protection against attack by harmful pathogenic species such as honey fungus.



The fly agaric is associated with birch trees



## Biodiversity 4

82 ◀

### Epiphytes

There are various epiphytic, mosses and lichens, which grow on the bark of tree trunks, branches and twigs.

The bark of ash, elder, maple and willow tends to support a better growth of mosses and lichens than the bark of beech or hornbeam. This is due to the chemical composition and the nature of the bark of different species.



Moss-covered log in Epping Forest

However, the types of epiphytes found on bark are also influenced by the amount of rainfall and pollution levels in the area. Surveying epiphytes may therefore give some indication of local air quality levels.

### Mistletoe

Mistletoe, which is a semi-parasitic green plant, grows on a variety of tree species. It has been recorded on apple trees in Loughton since the 18th century. There have been sporadic records since then but in recent decades the number of colonies is clearly increasing, as is the range of host species, including additionally false acacia, snowy mespil and silver maple.



Mistletoe berries, winter food for the mistle thrush

By choosing to plant mixed groups of native trees, therefore, it is possible over time to support many more species of invertebrates. These in turn will provide a range of food for other creatures.



Ash keys provide food for birds such as bullfinches

Some of the recently introduced species provide alternative sources of nectar or seeds, although some like sycamore and other maples are inclined to be invasive.

Evergreens give good shelter in wet, windy or cold conditions both for humans and wildlife!

## Roots Matter

83 ◀

A tree's roots, although hidden, are absolutely vital to its wellbeing.

The stronger anchoring roots are closer to the trunk and the finer feeding roots, which absorb water and nutrients, fan out in a large circle for a considerable distance into the surrounding soil. They can spread as far as three times the height of the tree. 90% of roots are found within the top metre or so of the ground.

Tree roots require oxygen if they are to absorb water and nutrients, and grow best in soil containing some organic matter. Their roots do not function well if the ground is compacted or becomes waterlogged for any length of time. Trees in situations like this will struggle to grow well and often need to be replaced.

Roots are very vulnerable to damage by changes to the soil surface, whether directly, by digging or trenching, or indirectly through



Cracked paving caused by growing roots

passage of heavy machinery. Even minor improvement works, such as the construction of decking or laying paving slabs, can be harmful, if not carefully approached.



Physical damage to tree roots means that they are more vulnerable to infection by parasitic fungi such as the honey fungus illustrated above. It may be difficult for a mature tree, in particular, to compensate for lost or poorly functioning roots, and the tree can show signs of stress as a result. It may take up to five years for the signs of stress to appear after the roots have been damaged. Typically a damaged tree may produce smaller leaves, which fall prematurely, and its branches die back. It is much better to avoid root damage in the first instance by ensuring an adequate protection zone around the tree, ideally using only hand tools beneath the canopy. Lowering the soil level is also injurious and banking up material over the roots causes damage too.

Trees which grow beside well-trodden paths are also vulnerable to soil compaction and their roots suffer, potentially shortening the life of the tree. Mulching with a thin layer of suitable material can be helpful, but prevention is best and where possible re-routing of the path should be considered as a solution. It is possible to aerate the compacted soil with a special machine to introduce oxygen, thus giving the tree a new lease of life.

The majority of tree roots have a symbiotic relationship with one or more mycorrhizal fungi which help them to grow. These fungi have fine hyphae in close contact with the roots, but they also form a mycelial mass within the soil. This greatly improves the effectiveness with which the plant can gather nutrients from the soil.



This tree was planted with some leaf mould containing suitable fungi, and large numbers of these brown roll rim toadstools *Paxillus involutus* now appear each autumn, indicating a healthy and beneficial association with the host tree

## Natural Regeneration

84 ◀

Trees and shrubs are propagated by seeds, which are dispersed in many different ways. Some like ash or birch are blown some distance from the parent tree; others such as the oak rely on being planted by birds such as jays. Small wind-blown seeds like those of birch are produced in large numbers and this species can quickly colonise bare ground.

Some species like ash or wild service need to be chilled for two winters before they germinate, while others like elm or willow will only germinate successfully if they fall on damp ground.

A group of saplings shelter each other and tend to grow faster than a lone tree exposed to wind and sun. There is safety in numbers as seedlings are very vulnerable to predation by herbivores such as caterpillars or voles. Often they dry out before they can grow a good supporting root system.

However, self-seeded trees can produce good healthy specimens that are naturally well suited to their surroundings. There will be a mixture of species, natives as well as introduced species, and the density of cover will be uneven as competition plays a part in the establishment of these saplings as they grow to maturity.

Natural regeneration is occurring in parts of the Forest with a wide range of species appearing, both native and introduced. New copses of naturally sown trees are also present in a number of overgrown corners of the parish and these are thriving with the minimum of aftercare.

Self-sown trees include ash, cherry, hawthorn, rowan, yew, whitebeam, wild service, willows, wych elm, cherry laurel, elder, false acacia, holm oak, sycamore, Norway maple, sweet chestnut, Turkey oak and others. Some are rather invasive, such as the non-native maples, and the evergreen or holm oaks and Turkey oaks. Non-native trees support fewer types of insect and this may well impact on insect numbers in the future.

When choosing planting stock, particularly for a countryside location, the conscientious tree planter will check the provenance of any planted native trees. Many container-grown trees originate from mainland Europe and are genetically different from home-grown stock. There is also the possibility that animal or fungal pests may hitch a ride on such imported nursery stock.

Nursery-grown trees grow well in new situations providing they are carefully planted to reduce root damage and given plenty of water for several years to help them become established.



Elder seeds are dropped by birds and many germinate in waste ground

## Surviving Elms



Elm flowers, small but beautiful

Pre-war records indicate that elms were a significant feature of the local landscape. Some of these elms disappeared as a result of the built development, but nearly all of the remaining elms became infected by Dutch elm disease in the 1970s.

This is caused by a fungus *Ophiostoma novo-ulmi*, which is spread by a beetle *Scolytus scolytus* that lives under the bark of mature elm trees. The female beetle lays eggs through the bark and the larvae eat the tissues, creating channels beneath the bark as they grow.

The fungus spreads throughout the tissue of the trunk, forming blockages, which prevent the upward movement of water through the water-conducting vessels and the tree dies.

However, many infected elms are still able to sucker from their roots, sending up new growth.

These young shoots survive for about 15 years before succumbing to the fungus and dying back once more. This cycle of growth repeats indefinitely and such elms occur in many local hedges, where they support some of the specific creatures which depend on them.

There was a group of five East Anglian elms at Wellfields, which Mark Hanson in his book *Essex Elm* records as being present in 1989. In an attempt to save them, they were regularly treated by a fungicide, Lignasan BLP (carbendazim phosphate). This was injected into the base of the tree and the hole sealed off with a bitumen cap.



A bitumen cap still present after 22 years

In 2011 four of these trees still are thriving and have increased in girth, a pleasing success story. A disease-resistant strain of elm has been developed and will be planted in some localities in future years.



One of the surviving elms on the green at Wellfields



## Trees as Inspiration

Loughton has long benefitted from a vibrant cultural community, which recognises the importance of its surrounding agricultural and wooded landscape and special trees. James Paul André, the watercolourist, recorded its pastoral nature in the 1830s. Jacob Epstein captured the essence of the Forest's trees as did Octavius Deacon, Haydn Mackey, Lucien Pissarro, Walter Spradbery and John Strevens, each in their own distinctive style.

William Brown Macdougall lived at Elm Cottage, Debden Green. *Blossom Time* is a well-known painting of his, which can be viewed at: [www.bbc.co.uk/arts/yourpaintings/paintings/blossom-time-epping-forest-essex-36278](http://www.bbc.co.uk/arts/yourpaintings/paintings/blossom-time-epping-forest-essex-36278)

Others too have immortalised individual trees or local landscapes, either in prints, etchings or photographs.



Pupils at Thomas Willingale School recording observations on trees

Many of their works are in the collection at the Epping Forest District Museum: [www.eppingforestdc.gov.uk/leisure\\_and\\_culture/museum/](http://www.eppingforestdc.gov.uk/leisure_and_culture/museum/)

Some of the local schools use the nearby trees as sources of inspiration to meet the requirements of the national curriculum. There are many local opportunities to paint, sketch



Creative artwork

or photograph the landscape, either as an individual or as a member of a group, or just to sit and muse beneath its many trees. So why not get out and about to look at the trees? Do visit the library for details of various activities or check online:

[www.visiteppingforest.org](http://www.visiteppingforest.org)  
[www.everythingeppingforest.org](http://www.everythingeppingforest.org)



Shadows in the landscape

## Getting Involved

87 ◀

The Tree Council was founded in 1974 and since then has organised a nationwide scheme of tree wardens to work within their parishes on a wide range of activities, focussed on the protection and planting of trees.

Epping Forest district has a number of voluntary tree wardens within many of its parishes, who keep a watchful eye on trees within their own patch. They report on the condition of street trees, make suggestions for new trees, and initiate community projects, for example with local schools, and help survey trees and hedgerows.

Another group of tree wardens are helping to monitor the state of special keystone oaks and beeches within Epping Forest itself.



Photographing details of a keystone beech

If you would like to become involved please contact Epping Forest Countrycare (contact details in contacts section pages 98-99).

For helping with tree surveys within Epping Forest itself, contact the City of London-Epping Forest:

[www.cityoflondon.gov.uk/volunteerEnrolment](http://www.cityoflondon.gov.uk/volunteerEnrolment)

The Tree Council has a number of informative publications for the public and for teachers. One of its most recent projects encourages local people to make use of the natural bounty of the hedgerows: [www.treecouncil.co.uk](http://www.treecouncil.co.uk)

The natural country harvest of wild berries and fruit is one of nature's great gifts, whether eaten raw straight from the bush, or made into jellies, jams or chutneys.



Checking the details of nail gall on a field maple leaf

However, if you do go foraging for blackberries, damsons, sloes or other fruits growing beside a road please remember that they may be contaminated and should be washed before use.

Please also make sure that the trees or shrubs don't obviously belong to someone and if there are livestock in any fields do take care always to close gates behind you.



Sloes, autumn fruits



Survey discussion by tree wardens

# GLOSSARY

1 - 5

## Glossary 1

89 ◀

### **Ancient hedgerow:**

Hedgerows which existed before the Enclosure Acts (1720-1840). These support a great variety of plants and animals, being species-rich with on average five or more native woody species in a 30m length.

### **Ancient tree:**

A very old tree in its final stage of life, which is of biological interest as well as aesthetically or culturally special.

### **Ancient woodland:**

A wooded area which has been continuously covered by trees since at least 1600.

### **Arboretum (pl arboreta):**

A park or garden dedicated to a living collection of planted trees and shrubs.

### **Bagshot Beds:**

One of the locally important geological strata made up of pale yellow to orange brown fine-grained sands. Lying immediately above the Claygate Beds, it was often excavated to produce bricks and tiles. On weathering it produces an acidic and freely draining soil.

### **Biodiversity:**

The variability among all living all organisms of an ecological complex.

### **Carbon reduction strategies:**

These explain how an organisation is going to reduce its carbon dioxide emissions through a range of measures that address heating and lighting of buildings, powering equipment, procuring goods and services, sending waste to landfill, and staff and visitor travel.

### **Claygate Beds:**

A geological deposit of sandy clays with patches of stiff brown clay and fine-grained sand, which lies above the London Clay. Springs form at the junction of these different geological strata.

### **Commoners' Rights:**

Historic rights by local people to lop trees, graze cattle and dig gravel on common land.

### **Community Infrastructure Levy (CIL):**

This is a new mechanism to deliver investment into local infrastructure. The levy will be a standard charge decided by local planning authorities and levied by them on new development.

### **Coniferous tree:**

A cone-bearing tree, often evergreen with needle-like leaves.

### **Coppice:**

A traditional form of woodland management in which a tree is cut off at ground level and new shoots are allowed to re-grow before being cut again every 7–25 years. The cut stump is called a coppice stool and becomes larger and irregular over time. The straight stems produced were very useful as poles or were burnt for fuel.

### **Coppard:**

The trunks from an old coppice stool that became converted into pollards due to a change in the management regime some centuries ago. Many of these are very ancient perhaps as much as a thousand years old.

### **Deciduous tree:**

One which sheds its leaves in autumn.

### **Dendrochronology:**

A technique used to date timber by examining the pattern in the sequence of the annual growth rings in a trunk. A full sequence may give both the planting dates (from the centre) and the felling date (outside).



## Glossary 2

90 ◀

### Dieback:

A natural process occurring in trees, which shed their upper limbs from the tip as they die. May be caused by lack of available water under drought conditions, or a response to frost or wind damage. It can also be caused by a pathogen such as the fungus *Chalara fraxinea*, which attacks ash trees.

### Domesday Survey:

The survey of England in 1086 that assessed the landholding and the wealth of the manorial estates. It records the changes that occurred during the reign of William I.

### Ecosystem services:

These are the environmental processes that produce resources utilised by humans, such as clean air, water and food.

### Epiphyte:

A plant which grows upon another, only using it for support. These are commonly mosses, ferns and lichens.

### Evergreen tree:

A tree which retains its leaves for more than one season, its leaves being replaced in time.

### Faggot:

A tied bundle of cut branches carried out of the wood for use as firewood, often used to heat baking ovens as they burn quickly, giving off a good heat. A statute of 1542 prescribed a standard size as being, one yard long and  $\frac{3}{4}$  yard in girth if they were to be sold.

### Geodiversity:

The natural processes and variety of rocks, fossils, minerals, landforms and soils that shape the landscape.

### Geographic Information System (GIS):

This is an information system for capturing, storing, analysing, managing and presenting data that is spatially referenced.

### Green Flag Award:

This is a national quality standard for parks and green spaces in England and Wales. Both Epping Forest and the Roding Valley Meadows Nature Reserve have received this award.

### Green infrastructure:

This is a network of connected, high-quality, multi-functional open spaces, corridors and the

links in between that provide environmental services and multiple benefits for people and wildlife.

### Heat island:

This is an urban area that is significantly warmer than its surrounding rural areas. Wasted energy from homes and vehicles heats the area in winter. Buildings absorb radiant energy in the summer, making urban areas much warmer than any vegetated areas.

### Landscape character:

A distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another, rather than better or worse.

### Living Landscapes:

This is one of the most ambitious conservation plans in UK history. Across the country the Wildlife Trusts are working to transform the environment by restoring, recreating and reconnecting wildlife-rich spaces in rural and urban areas by working in partnership with local communities. The Essex Wildlife Trust is spearheading the initiative in the Epping Forest area.

## Glossary 3

91 ◀

### **Local Area Agreements (LAA):**

These are contracts between central government and a local area (local authorities and local strategic partnerships), which set the priorities for a local area and identify funding streams.

### **Local Plan:**

This is a portfolio of local development documents that together provide a framework for delivering the spatial planning strategy for an area.

### **Local Strategic Partnerships (LSP):**

These are non-statutory partnerships between public bodies, private business and the voluntary and community sectors to coordinate the contribution that each can make to improving local facilities. They are responsible for developing and driving the implementation of community strategies and local area agreements.

### **London Clay:**

This is an old underlying geological deposit, a fossil-rich marine clay laid down some 55 million years ago. When freshly exposed it is a stiff bluish clay that becomes brown on weathering. As London Clay contains significant amounts of high plasticity clay this can result in shrink/swell clay subsidence due

to volume changes associated with drying out under drought conditions. The soils derived from this are heavy, of poor agricultural quality and have a tendency to become waterlogged.

### **Metropolitan Green Belt:**

This is a land use designation given to the countryside that lies adjacent to urban areas and is protected from development.

### **MultiFor Management of Multifunctional Forests:**

This is a three-year project part-funded by the European Union (European Regional Development Fund ERDF) within the framework of the European INTERREG IV A 2 Mers Seas Zeeën Cross-border Cooperation Programme 2007-2013.

It has been developed as a direct response to previous work on tree initiatives within the Epping District and the funding will be used to further protect and expand the ancient trees and woodlands across south west Essex. By working closely with landowners and farmers the project aims to enable planting of new hedgerows, trees and woods that will reconnect isolated ancient trees and woodlands. In parallel, two further projects will see major enhancement works to a number of woods and a scientific study of trees and woods in south west Essex.

Essex County Council's local partners include Epping Forest District Council, Harlow Council, The National Trust, The Woodland Trust, the City of London (Epping Forest), the BTCV and the Forestry Commission.

### **Mycorrhizal fungus:**

A specific fungus that forms an association with the roots of a tree or other plant to form a symbiotic relationship, assisting the host organism with the uptake of water and minerals essential for growth in exchange for manufactured food.

### **Mycelium:**

A network of fine fungal hyphae from which may arise a fruiting body such as a toadstool. Although almost invisible within the substrate, the mycelium enables the fungus to spread widely and obtain nourishment from its surroundings by enzyme action on the available food supply.

### **Perambulation:**

A legal document defining a piece of land by describing its boundaries. These often noted significant trees that provided fixed points on such boundaries, which were walked by landowners and other officials to check on unauthorised land takes.

## Glossary 4

92 ◀

### **Pollard:**

A tree produced as a result of being lopped or cut back on a regular cycle at a specific height above the ground, the cut branches being used mainly as a source of fuel.

### **Primary woodland:**

Areas of uncleared woodland surviving from fragments of the prehistoric wildwood.

### **Royal Forest:**

Areas of England under the authority of the Forest Laws. Essex became a Royal Forest in 1100 and Epping Forest is one of the surviving examples of this Royal Forest.

### **Section 106 agreement:**

This is a legally binding agreement between a local planning authority and a land developer that places obligations on the developer to minimise the impact of the development on the local community and provide community benefits.

Obligations can include providing funds for traffic-calming measures, new play facilities, public art, tree planting, cycle paths, meeting places and affordable housing.

### **Sapling:**

A young tree.

### **Saprophagous:**

An animal feeding or subsisting on dead organic matter, hastening its decomposition to inorganic and organic compounds.

### **Saproxylic invertebrates:**

These creatures are dependent on dead or decaying wood as a food source for part of their life cycle.

### **Secondary woodland:**

Woodland that has developed on land since 1600. It may have grown from natural seeding of abandoned farmland, or may be planted woodland.

### **Significant tree:**

A notable tree that is worthy of being recorded on account of its species, age or other special quality such as shape or location.

### **Site of Special Scientific Interest (SSSI):**

These are sites identified for the importance of their geological features and wildlife habitats.

### **Supplementary Planning Document (SPD):**

This is a piece of guidance supplementing the policies and proposals in development plan documents.

### **Sustainable Community Strategy (SCS):**

This is a strategy prepared by a local authority, through a local strategic partnership, setting out a long-term vision for promoting and improving the economic, social and environmental well-being of an area.

### **Symbiosis/symbiotic relationship:**

A mutually beneficial physiological relationship between two or more different species. Many trees have a symbiotic relationship with one or more specific mycorrhizal fungi, and may even be dependent upon this to establish and then to grow well.

### **Timber:**

The end product of large, well-grown trees used for construction purposes. These can be hardwoods such as oak or softwoods such as pine.

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### **Tree Preservation Order (TPO):**

An order made by the local planning authority (LPA) under the Town and Country Planning Act 1990 for the protection of trees within an area. LPAs have a legal duty to protect trees in the context of development; for many years the district council has had a very active programme of protection of trees by TPOs, and there are now a great many such orders in the Loughton area.

### **Understory:**

The smaller trees and shrubs which growing beneath the tallest trees in the woodland.

### **Underwood:**

The cut branches from a pollard or coppice often used as a source of fuel, but could be fed to grazing animals.

### **Verderer:**

A traditional rôle, rather like a modern-day magistrate, but established in the 11th century within the Royal Hunting Forests to deal with offences against the Forest Laws. Verderers presided over sessions held in the Forest Courts.

Since the passing of the 1878 Epping Forest Act there are four Verderers elected every seven years by the registered commoners of the Forest.

The Verderers see themselves as representing the views of all local people who care for the Forest. They are full members of the Epping Forest and Commons Committee and play a vital rôle in explaining the policies and management plan of the Conservators to the public.

### **Veteran tree:**

An alternative name for an ancient tree. Can be used to describe a tree which is prematurely aged and trees in maturity. Veteran oaks have a trunk girth of at least 3m.

### **Wildwood:**

Woodland that was re-established over much of Britain following the end of the last Ice Age around 10,000BC.

### **Woodland Access Standard (WAST):**

This is the Woodland Trust's strategy to ensure that everyone has woodland that is within easy reach of where they live. The standard applies to both urban and rural areas.

### **Wood pasture:**

This is a traditional method of managing woodland in which the trees were lopped above the reach of any browsing animals present within the woodland. The pollarded trees produced a crop of poles. Lopping increases the

life span of such trees, many of which are very ancient.

Within Epping Forest three types of wood pasture have been identified: beech-oak woodland, oak-hornbeam woodland and birch-oak woodland.



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## Useful Contacts

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[www.eppingforestdc.gov.uk/Council\\_Services/planning/countrycare/default.asp](http://www.eppingforestdc.gov.uk/Council_Services/planning/countrycare/default.asp)

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### Loughton Town Council

[www.loughton-tc.gov.uk](http://www.loughton-tc.gov.uk)

### Epping Forest District Council Environment and Street Scene

Tel: 01992 564562

### Adaptation Strategies for Climate Change in the Urban Environment (ASCCUE)

[www.sed.manchester.ac.uk/research/cure/research/asccue](http://www.sed.manchester.ac.uk/research/cure/research/asccue)

### Arboricultural Association

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[www.trees.org.uk](http://www.trees.org.uk)

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**Epping Forest Conservation Volunteers**  
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**Essex Wildlife Trust**  
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[www.ltl.org.uk](http://www.ltl.org.uk)

**London Tree Officers Association**  
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**Natural England**  
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## Appendix A

### These are the relevant Policy Documents and initiatives

#### International Policies

Rio Declaration on Environment and Development, Rio de Janeiro, June 1992.

United Nations Framework Convention on Climate Change (Kyoto Protocol 1997).

Sustainable Europe for a Better World May 2001.

World Summit on Sustainable Development 2002.

#### National Context

Sustainable Development the UK Strategy, 1994.

Biodiversity: the UK Action Plan, 1994.

Veteran Tree Initiative, 1996.

Hedgerow Regulations, 1997.

A Strategy for England's Trees, Woods and Forests, 2007.

Trees in Towns II, Research for Amenity Trees No. 9, Chris Britt & Mark Johnston, 2008.

A Woodfuel Strategy for England. Forestry Commission, England, 2008.

The Natural Environment White Paper, 2011.

#### The Regional Policies and Initiatives

Essex CC Biodiversity Action Plan 1999, new plan adopted in 2011.

Essex Design Initiative, 2005.



EFDC Biodiversity Action Plan, 2008.

Epping Forest Management Plan, 2004–2010.  
(including the November 2008 Keystone Tree Strategy)

London Trees and Woodland Framework, 2005.

ECC Landscape Character Assessment, 2008.

ECC Woodland Strategy, 2011.

EWT Living Landscapes, 2010.

Local Wildlife Sites, 2009 onwards.

MULTIFOR Project, 2009.

Loughton Open Space Audit, 2009.

## National Planning Policy 11

Several national Planning Policy Statements and Guidance Notes relate to the protection, management and enhancement of woodlands and trees.

At the time of publication the following PPSs and PPGs were of direct relevance:

- PPS7 Countryside.
- PPG9 Nature Conservation.
- PPG17 Open Space, Sport and Recreation.

The following policy documents are relevant in part:

- PPG2 Green Belts.
- PPG3 Housing.
- PPG6 Town Centres and Retail Developments.
- PPG15 Planning and the Historic Environment.
- PPG25 Development and Flood Risk.

## Appendix B

### These are the relevant policies from the current Local Plan

#### Policy LL1

*The Council will continue to act to:*

- (i) conserve and enhance the character and appearance of the countryside.

#### Policy LL2

***The Council will not grant planning permission for development within the countryside unless it is satisfied that the proposal will:***

- (i) respect the character of the landscape; and/or
- (ii) enhance the appearance of the landscape; and
- (iii) where appropriate involve the management of part or all of the remainder of the site to enhance its contribution to the landscape.

#### Policy LL7

*The Council will:*

- (i) promote tree and woodland planting where it is considered that this will lead to significant amenity benefit;
- (ii) seek to protect trees and woodland of amenity value; and
- (iii) promote good standards of tree care and woodland management.

### Policy LL8

***The council will give consent for works to a tree or woodland protected by a Tree Preservation Order provided that it is satisfied that:***

- (i) the health and appearance of the tree will not be impaired; and
- (ii) the works will not justifiably inhibit or prevent the full and natural development of the tree; or
- (iii) the works are necessary to its continued retention and consistent with good arboricultural practice; or
- (iv) in the case of woodland, the proposed works are consistent with the principles of sound woodland management.

### Policy LL9

***The Council will not give consent to fell a tree or woodland protected by a Tree Preservation Order unless it is satisfied that it is necessary and justified.***

Other than for woodland, any such consent will be conditional upon appropriate replacement of the tree(s).

### Policy LL10

***The Council will refuse to grant planning permission for any development which it considers makes inadequate provision for the retention of:***

- (i) trees; or
- (ii) natural features, particularly wildlife habitats such as woodlands, hedgerows, pond and watercourses; or
- (iii) man-made features of historical, archaeological or landscape significance.