

Highgate Wood

Woodland Management Plan 2018-2028

March 2018



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1. Introduction

Highgate Wood lies between Archway Road and Muswell Hill Road in the London Borough of Haringey. It covers 28 hectares, of which about 24 hectares are ancient oak and hornbeam woodland, most of the rest being amenity grassland. It is owned and managed by the City of London Corporation.

A Conservation Management Plan for the Wood published in April 2013 covered all aspects of the management of the site, but its wide scope did not allow detailed consideration of managing the natural environment. That is what this plan aims to achieve.

The layout of the plan very closely follows the Forestry Commission’s standard format.

2. Vision and Objectives

2.1 Vision

The vision is of a well-structured, ancient semi-natural and biodiverse woodland which is managed to sustain its long-term future whilst maintaining its reputation as a safe environment for informal recreation, enjoyment and education.

2.2 Objectives

1. Maintain the overall character of the woodland as hornbeam coppice with oak standards while increasing the diversity of native trees and shrubs.
2. Increase structural diversity of the woodland, with a wider age range of trees and coppice, a well-developed shrub layer and ground flora and abundant aerial and ground-level dead wood.
3. Maintain the ponds and meadow for wildlife
4. Manage for resilience to present and forthcoming threats, such as tree diseases, climate change and invasive plants and animals.
5. Mitigate damage from compaction and erosion while promoting public access and enjoyment.
6. Continue to survey birds, bats and fungi; monitor the population of oak standards and saplings; and record wildlife sightings.

3. Plan Review – Achievements

This is the first specific woodland management plan for Highgate Wood.

4. Woodland Survey

4.1 Description

Highgate Wood is a mixed deciduous ancient semi-natural woodland on a sandy clay deposit of Claygate Beds. The terrain is relatively flat, but there are slight slopes and undulations throughout as well as several prominent earthworks. The highest point is towards the north of the wood, to the north of a drying spring and drainage-fed stream in a shallow valley that now flows only very rarely after heavy rain. The soil is compacted as a result of over a century of constant foot traffic, and is significantly worse in some areas than others.

The canopy largely comprises mature oak standards and long over-stood statuesque hornbeam coppice. Coppicing was still being carried out into the late 1800s, but none was undertaken between the end of the First World War and the 1970s. Both native oak species are present as standard trees, but sessile is much less numerous than pedunculate oak. Both species are suffering from Oak Decline, which has been monitored since 2010. About 12-13 trees are lost annually, or about 1% of the approximately 1154 oak standards in the wood (counted in 2018).

Other trees and shrubs present, many of them planted, include beech, hawthorn (some very old), wild service, wild cherry, small-leaved lime, rowan, silver birch, white willow, hazel, yew, alder buckthorn, holly and goat willow. Ash, elm, field maple and blackthorn are present in smaller numbers. Other trees which have been planted include horse chestnut, European lime, sycamore and Norway maple; many of these are very large old trees now. Some exotic conifers were planted in several places in the early 1970s.

There is relatively little tree regeneration as the canopy is dense in much of the wood. However, where the canopy is thinner and in canopy gaps, such as where oaks are declining and in Conservation Areas, hornbeam, birch, rowan, wild cherry, beech, and goat willow are regenerating, with oak regeneration more limited. Young trees, especially hornbeams, are being severely damaged or killed by grey squirrels stripping bark.

Dead wood habitats are abundant, both aerial and on the ground. The shrub layer is quite well developed in some of the wood but largely absent in other areas, variously due to a dense tree canopy, heavy public use and soil compaction. Bramble and holly are abundant; the latter is selectively controlled. Two hedges have recently been planted.

The ground flora is sparse in much of the wood, although a good range of native species is present, some of them introduced over the past 30 years or so. In spring an excellent display of native bluebells can be enjoyed, and other woodland species which can be found include wood anemone, wild daffodil, lords and ladies, scaly male-fern, primrose, remote sedge, wild garlic and wood and pendulous sedges. Ivy is abundant. The fungi of Highgate Wood have been well studied and documented since 1994, and about 500 species identified, many of which are associated with old trees and some of which are quite rare.

A programme of creating Conservation Areas every 5 years commenced in 1977 and is continuing (see Map 1). The objective is to reduce high canopy coverage to encourage tree regeneration, benefit mature oaks, encourage ground cover and the shrub layer, and to create new hornbeam coppice and pollards. Within these areas selected trees, mostly hornbeam, are coppiced or, occasionally, pollarded. The areas are initially fenced, with the fence being removed after 10 years, although it has been retained in a couple of instances. The first Conservation Areas were small, but their extents have been increased and the 9th and most recent, created in winter 2016/7, covers 0.8 hectares. The total extent of Conservation Areas is currently three hectares.

The wood attracts a diversity of bird species, and at least 28 species breed here regularly. Seven species of bat have been recorded and there have been roosts in many of the oaks. Bat and bird boxes provide additional roosting and nesting places and enable bat populations to be monitored. Regular moth trapping sessions have identified nearly 400 species between 1985 and August 2017.

4.2 Information

Highgate Wood has been designated as Metropolitan Open Land in the Mayor of London's Local Plan, and is also recognised as a Site of Metropolitan Importance for Nature Conservation by the Greater London Authority.

The following protected and/or UK BAP Priority species have been recorded in Highgate Wood:

European Protected Species				
Feature		Within woodland	Compartments (See fig. 2)	Notes
Bats	Common Pipistrelle	yes	many	
	Soprano Pipistrelle	yes	many	
	Brown Long-eared	yes	unknown	
	Daubenton's	yes	5	
	Noctule	yes	many	
	Leisler's	yes	2,14	
	Natterer's	yes	many	

UK Priority Species				
<u>Birds</u>	Lesser spotted woodpecker	yes	2, 13	UK BAP. No record in last couple of years
	Firecrest	yes	5	WCA Schedule 1 1 recent record only
	Redwing	yes	many	WCA Schedule 1
	Song thrush	yes	many	UK BAP
	Dunnock	yes	2, 3	UK BAP
<u>Mammals</u>	Hedgehog	yes	4, 5, 8	UK BAP
<u>Amphibians and Reptiles</u>	Smooth newt	yes	1, 8, 11	WCA Schedule 1
<u>Plants</u>	Bluebell	yes	many	WCA Schedule 8. Especially in the north of the wood
<u>Fungi</u>	Zoned rosette <i>Podoschrypha multizonata</i>	yes	many	UK BAP
<u>Invertebrates : Moths</u>	Shoulder-striped wainscot	yes		UK BAP

	Rosy minor	yes		UK BAP
	Rustic	yes		UK BAP
	Blood vein	yes		UK BAP
	Mullein wave	yes		UK BAP
	Small phoenix	yes		UK BAP
	White ermine	yes		UK BAP
	Buff ermine	yes		UK BAP
	Garden dart	yes		UK BAP
	Small square-spot	yes		UK BAP
	Oak hook-tip moth	yes		UK BAP
	Lunar yellow underwing	yes		UK BAP
	Mouse moth	yes		UK BAP
	Grey dagger	yes		UK BAP
	Mottled rustic	yes		UK BAP
	Small emerald	yes		UK BAP
	Brindled beauty	yes		UK BAP
	Powder quaker	yes		UK BAP
	Toadflax brocade	yes		UK BAP
<u>Invertebrates</u> <u>: other</u>	Stag beetle	yes		UK BAP

The following additional London or Haringey BAP Priority species have been found in Highgate Wood:

Wild service tree Haringey BAP
Native goldenrod Haringey BAP

4.3 Habitat Types

Feature	Within woodland	Compartments	Notes
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Ancient semi-natural woodland	Y	All except meadow (Compartment 15)	
Oak/Hornbeam woodland	Y	All except meadow (Compartment 15)	
Lowland meadow	N	15	Small area of sown wild flower grassland
Wetland habitat	Y	1	Pond

4.4 Structure

Woodland type	Percentage of management plan area	Age structure	Notes
Native broadleaves	95	Even aged	Understorey present in about half the wood, natural regeneration present, especially hornbeam.
Conifers	5	Even aged	Single or small groups of conifers present in several areas of the wood.

5. Protection

5.1 Risk Matrix

This section lists actual and potential risks to the Wood, and for each the likelihood of its presence, its actual and potential impact, and planned action to manage the threat.

5.2 Plant Health

Threat	Oak Processionary Moth
Likelihood of presence	Very high; present in neighbouring wood.
Impact	High: major impact on public health and access to the wood
Response	Monitoring. Follow FC guidelines

Threat	Chronic oak decline
Likelihood of presence	Present

Impact	Significant decline in veteran oaks
Response	Monitoring. Promoting trees, for example by reduction in canopy competition. Encouraging oak regeneration and planting new oak trees.

Threat	Oak mildew
Likelihood of presence	Present
Impact	Drastically reduces regeneration
Response	None

Threat	Sweet chestnut blight
Likelihood of presence	High (present in south London)
Impact	Relatively low due to small numbers
Response	Follow FC guidelines

Threat	Ash dieback
Likelihood of presence	High: present in near-adjacent woodland
Impact	Low due to small numbers of ash present
Response	None

5.3 Deer

Threat	Muntjac
Likelihood of presence	Has been sighted. Present at most in very small numbers
Impact	None
Response	None

5.4 Grey Squirrels

Likelihood of presence	Present in high numbers
Impact	High. Very serious bark stripping, especially on young growth, resulting in misshapen trees, tree death, and high canopy branch failure. Competition for habitat with hole nesting birds and bats.
Response	Culling. Culling in spring and summer 2017 may have caused the reduced numbers observed and was restarted in winter 2018.

5.5 Water and Soil

Threat	Compaction
Likelihood of presence	Present. Much of the soil in the wood is compacted.
Impact	High. Serious existing impacts on health of trees, shrubs and ground flora, fungi, and soil microorganisms.

Response	See item 5.8, people and dogs.
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Threat	Lowering of water table
Likelihood of presence	Present. Reduction in spring water and reduced flow.
Impact	Moderate. Drought has accentuated decline in oaks by old spring lines..
Response	None.

5.6 Environmental: Air Pollution

Likelihood of presence	High
Impact	Unknown. Ongoing research by student.
Response	Maintain tree health and resilience

5.7 Climate Change Resilience

Threat	Increasing temperatures and other weather extremes
Likelihood of presence	High
Impact	Decline in mature trees, flora and fauna.
Response	Increase species diversity of trees and shrubs.

5.8 Other Risks

Threat	People and dogs
Likelihood of presence	Present in high numbers. Visitor numbers are increasing in general, and especially by play groups and educational visitors etc.
Impact	High: compaction (see above), damage to plants and fungi, and disturbance to wildlife, especially birds.
Response	While maintaining public access to the majority of the woodland, prohibit or dissuade entry to selected areas through permanent and (mostly) temporary fencing and dead hedging, and placing impediments to access such as logs and laid trees. Maintain footpaths. Consider erecting signage and changing path surfaces and routes if required. Consider further ways to focus access onto particular high-use areas.

Threat	Potentially damaging invasive plants
Likelihood of presence	High: present (e.g. laurel) and present recently (Japanese knotweed)
Impact	Low at present, but potentially high (e.g. Japanese knotweed and <i>Crassula helmsii</i>)
Response	Monitor. Control when necessary.

6. Management Strategy

Management Objective	Management Intention
<p>1. Maintain the overall character of the woodland as lapsed hornbeam coppice with oak standards while increasing the diversity of native trees and shrubs.</p>	<p>The overall character of hornbeam coppice with oak standards will be maintained by:</p> <ul style="list-style-type: none"> • Retaining and promoting the great majority of existing oak standards, and thinning around a proportion to reduce competition. • Existing seedling and sapling oaks will be promoted, for example by clearing vegetation around them, cutting back nearby trees to encourage young trees to thrive, and thinning regeneration where necessary. • Increasing the number of young oaks by both natural regeneration and planting. For the latter, seedlings or acorns will be sourced from Highgate Wood or Hampstead Heath and grown on locally, but it may be necessary to also buy in new stock. • Retaining the majority of the existing lapsed coppiced hornbeam, and especially the finest specimens. Where hornbeams are to be felled, they will mostly be coppiced. Some trees have little potential to re-grow from the base, in which case pollarding may be tried instead. • Regenerating hornbeam by thinning and coppicing patches of naturally regenerating hornbeam saplings. These will subsequently be managed in a regular coppice cycle. <p>The diversity of trees and shrubs will be increased by:</p> <ul style="list-style-type: none"> • Planting further suitable native trees and shrubs, including some which are currently uncommon in the wood. Possible species include small leaved lime, wild service, hazel, hawthorn, spindle and alder buckthorn.

	<ul style="list-style-type: none"> Continuing with the programme of creating new Conservation Areas, and creating new or expanding existing smaller canopy gaps. These and existing gaps will provide suitable sites for tree and shrub planting. New Conservation Areas will be created at 5 year intervals, but this rate will be kept under review and will necessarily decrease in the longer term as more of the woodland is managed. <p>Figure 3 indicates were the next Conservation Areas and other works are planned.</p>
<p>2. Increase structural diversity in the woodland with a wider age range of standard trees and coppice, a greater number of pollarded trees, and a better-developed shrub layer. Maintain high quantities of aerial and ground-level dead wood.</p>	<p>This will be achieved by:</p> <ul style="list-style-type: none"> Encouraging natural oak regeneration and planting native trees and shrubs (see Objective 1 above). Establishing new coppice of hornbeam (see Objective 1 above) and hazel. Pollarding more trees, especially hornbeam which would otherwise need to be felled in Conservation Areas or other areas where canopy gaps are to be created. This has two advantages. Firstly, it creates additional habitat variety. Secondly, it preserves hornbeam stools which would otherwise be lost. Hornbeams which have epicormic shoots at 1-3 metres are the most suitable for pollarding. Although pollarding does not accord with the historic character of the wood it is considered that this is the optimum way of retaining as many original stools as possible. Creating monoliths (dead standing trunks) where trees, especially oaks, would otherwise need to be felled entirely.
<p>3. Maintain the ponds and meadow for wildlife.</p>	<ul style="list-style-type: none"> Control tree growth around the ponds Cut or pull areas of grass in the meadow, and invasive plants such as bramble and creeping thistle as required.

	<ul style="list-style-type: none"> • Create bare areas close to yellow rattle seed-heads to ensure regeneration by this annual plant
4. Manage for resilience to present and forthcoming threats, such as tree diseases, climate change and invasive plants and animals.	<p>This will be achieved by:</p> <ul style="list-style-type: none"> • Increasing the diversity of native trees and shrubs (see Objectives 1 and 2). • Promoting tree health by ensuring good growing conditions, e.g. by reducing or thinning selected trees to increase space and light for others. • Continuing to control grey squirrels by trapping. • Monitoring tree health. • Eradicating or managing invasive plants.
5. Mitigate damage from compaction and erosion due to visitor activities whilst promoting public access and enjoyment	<ul style="list-style-type: none"> • Leaving fences or dead-hedges around Conservation Areas and elsewhere for as long as is acceptable. • Laying trees where possible across shortcuts and along path edges.
6. Continue to survey birds, bats, fungi; monitor the population of oak standards and saplings; and record wildlife sightings.	<p>This will be achieved by:</p> <ul style="list-style-type: none"> • Continuing the programme of monitoring oak canopy decline which was initiated in 2010. Re-survey will be carried out at minimum every 2 years. • Continuing with other existing surveys and record keeping.

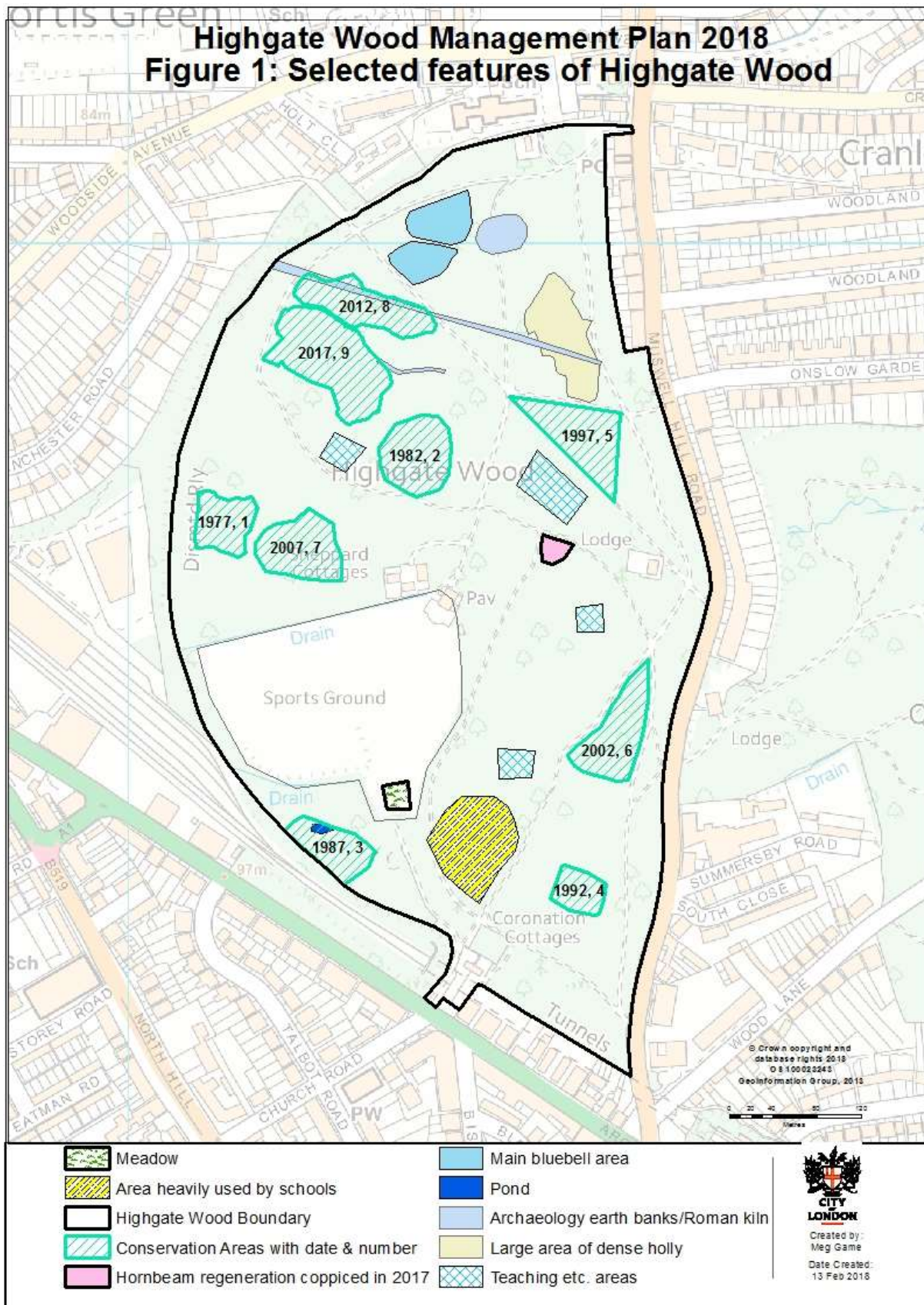
7. Stakeholder Engagement

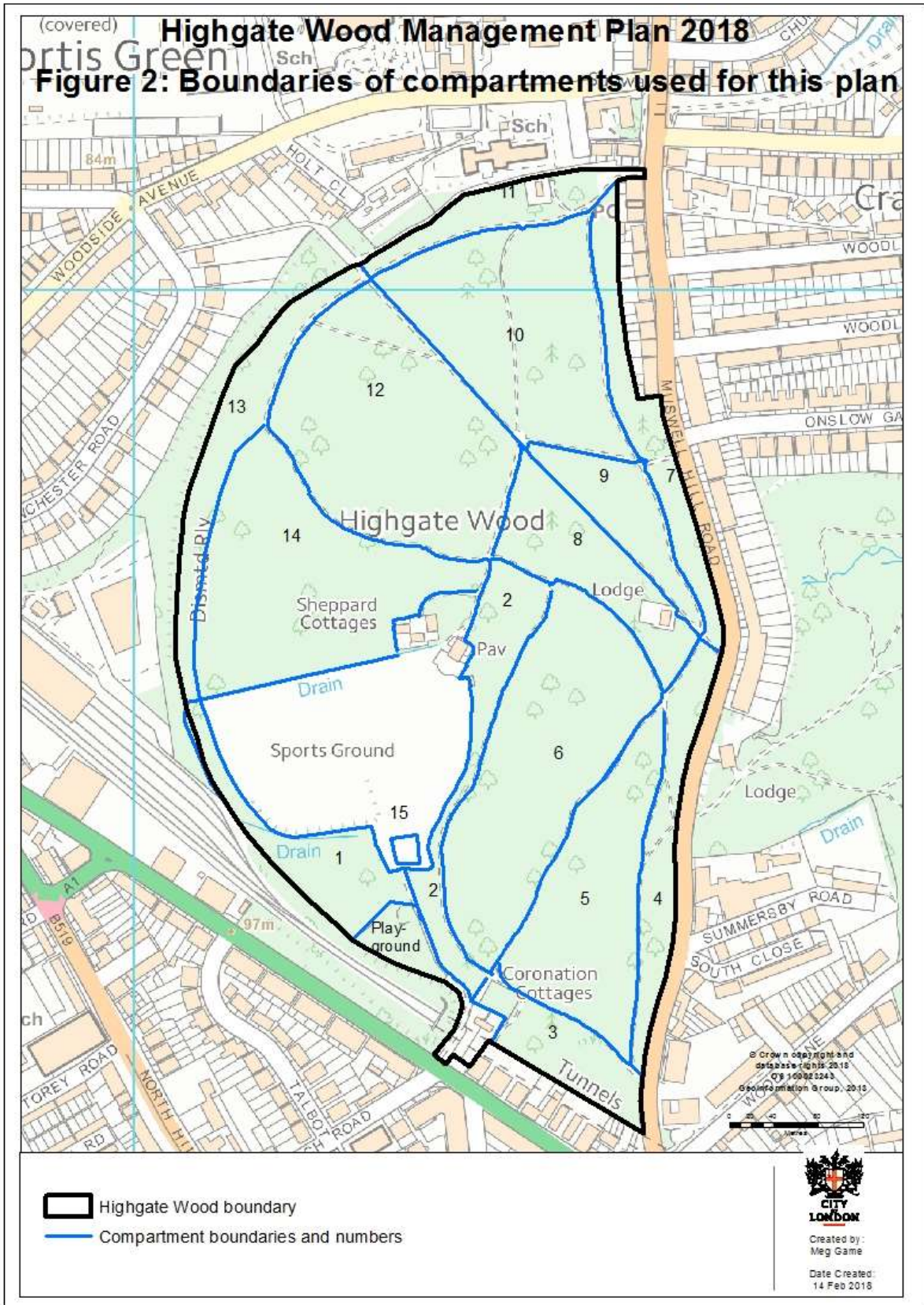
This will be achieved by making local people aware of the draft plan, providing copies, and inviting comments, for example by placing notices near main entrances to the wood, through dialogue with users and user groups and through social media.

8. Monitoring

Management Objectives/Activities	Indicator of Progress/Success	Method of Assessment	Frequency of Assessment	Responsibility	Assessment Results
Increase the diversity of native trees and shrubs and the structural diversity of the wood	Average of 25 trees or shrubs planted annually; replanting of failures	Field survey	Annually	Staff	
Maintain the ponds and meadow	Pond not over-shaded; lady's bedstraw, yellow rattle and black knapweed frequent in meadow	Assess need for management; carry out work	Annually	Staff	
Resilience to threats	Trees surveyed for OPM and sweet chestnut blight, and appropriate measures taken	Survey all oak and sweet chestnut trees	Annually	Staff or outside contractor (OPM)	
Mitigate compaction and erosion	Further use of natural barriers	Survey	Quarterly	Staff	
Survey and maintain owl and bat boxes; survey oak standards and saplings; record wildlife sightings	Bat and bird boxes monitored and repaired; ¼ of oak standards surveyed for decline; oak saplings surveyed; wildlife sightings recorded	Survey	Annually for boxes; biennially for oak decline and oak saplings; as required for wildlife sightings	Staff	

Appendix 1: Figures





Highgate Wood Management Plan 2018

Figure 3: Selected specific management proposals



	Meadow
	New Conservation Areas with date; all boundaries indicative
	New hornbeam pollarding/coppicing
	Potential for coppicing hornbeam regeneration & planting trees
	Existing Conservation Areas

CITY OF LONDON
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Meg Game
Date Created:
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Appendix 2: Compartment Descriptions and Management Plans

Items Applying to the Wood as a Whole

All compartments except the Meadow, Compartment 14, contain mature hornbeam and oak (mostly English Oak, *Quercus robur*); this is not stated individually, to avoid repetition. All except the meadow also contain holly.

Several management tasks apply generally throughout the wood, and are not listed individually by compartment unless of special note. These include:

- Planting native trees and shrubs in suitable canopy gaps
- Promoting veteran trees, e.g. by thinning around them to reduce competition
- Recording and monitoring of flora, fauna and fungi.
- Carrying out the continuing surveys of oak decline and young oaks every other year.
- Maintaining owl and bat boxes.
- Controlling invasive plants, mostly non-natives such as laurel, but also selected native species, such as holly and ivy in the woodland and bramble and creeping thistle as necessary in the wildflower meadow. Holly is relatively invasive and is abundant in the wood; it can become too dominant if not managed, shading out ground flora, other shrubs and tree regeneration. Ivy can restrict ground flora and, although ivy in trees is a valuable wildlife habitat, it can imperil trees if it grows into the canopy. Bramble creates important habitat in the woodland, but could quickly come to dominate the wild flower meadow.
- Monitoring and control, where possible, of pests and diseases. This includes control of grey squirrels, which have greatly increased in recent years and are causing severe damage to trees by stripping bark. Many young trees and regenerating coppice have been affected so badly that they have become very deformed or have even died; hornbeam and beech are particularly affected. Without squirrel control it is impossible to maintain a healthy woodland, with young trees growing up to replace the mature oak trees and hornbeams when these eventually decline and die.

Descriptions and Specific Management by Compartment

In order to describe the wood in more detail and to outline the intended specific management proposals, it has been divided conceptually into 15 compartments. The main paths have been used as boundaries for these, as indicated in Figure 2 below.

Appendix 2 provides a basic description of each compartment and its intended management. Some of the main management projects are indicated on Figure 3.

General Management

Cpts	Prescription	Year(s)
All	Control invasive native and non-native plants where required	All
All	Maintain fences and dead hedges	All
1-14	Continue surveys of oak decline and oak regeneration	Every second year: 2018, 2020, ...
1-14	Thin around young oaks and other desirable trees and shrubs	All
1-14	Plant trees and shrubs where there are suitable canopy gaps	All
1-14	Control grey squirrels	All

Specific management by compartment

Cpt	Description	Management	Year(s)
1	<p>This compartment contains Conservation Area 3, created in 1987, which is permanently fenced, and within which are two ponds. This area contains the largest concentration of young and early mature oaks in the wood, with 63 oaks with a dbh of 6 to over 26 inside and to the north of the area; many are developing well. Other species include birch, 1 sweet chestnut, 1 wild service, cherry and rowan. Hornbeam regeneration is not very prevalent, but some trees are developing well on the western side of area.</p> <p>Outside and to the west of the Conservation Area is a group of young beech, hornbeam and birch under which planted wild flowers and diverse fungi grow. The strips along the field edge and to the north-west contain a mix of planted trees and shrubs, maturing well. The strip to the north-west contains a line of mature white willows, mostly decaying, and other, younger, trees. North of and opposite the playground fence are a line of relic laid hornbeam.</p>	Within Conservation Area 3; continue to thin and control tree growth around the ponds.	As required
		Within Conservation Area 3; remove excessive pond weed, leaves and silt when required.	As required
		Within Conservation Area 3; continue to thin around selected young oaks and other well-developing trees. Control ivy.	As required
		Along the strip parallel with field edge; coppice hazel and other species.	2019 then about every 10 years
		Along field edge; continue to control ivy, monitor willows, reduce and thin around selected trees, maintain hedging and fencing along boundary and cut back bramble from area planted with bulbs (the Field of Hope).	As required
		Near café, between the 2 areas previously fenced and planted; build more robust dead hedging, similar to those used to protect bluebells in compartment 10, and plant shrubs.	2018

	Together with the adjacent playground the compartment contains 23 veteran oaks and 30 veteran hornbeams of notable stature		
3	This is a dense area, with abundant holly, bramble and ivy, which help screen the adjacent properties along Archway Road. The canopy includes conifers, such as fine silver firs to the east, and cedars, and pines to the west, There is also a mature European lime and some young ash. There are relatively few hornbeams compared with some other parts of the wood. 15 dead oak trunks add to the habitat diversity. An exceptionally large hawthorn grows next to the garage of 2 Coronation Cottages. The area is popular with birds due to its lack of disturbance and density of vegetation. The compartment contains 25 veteran oaks and 19 veteran hornbeams of notable stature.	Maintain current character.	As required
		Promote unusual hawthorn tree.	As required
4	The edge of this compartment slopes down to the adjacent road. There are quite a variety of planted trees, many of them large and over-mature, including horse chestnut, wild cherry, ash, European lime and elm, the latter possibly a hybrid. Several young oak trees are present near New Gate. Holly forms an understorey in parts, and helps shield the wood from the road; hazels and other shrubs have been planted, and introduced native daffodils are doing well here. The compartment contains 21 veteran oaks and 51 veteran hornbeams of notable stature.	In the longer term, consider removing some of the shade-producing horse chestnut trees, and re-planting with native trees and shrubs.	Beyond timescale of this plan
5	This compartment contains 2 conservation areas.	Within Conservation Area 4; gradually thin out a proportion of rowan and birch to encourage	2018 to 2020

<p>Within Conservation Area 4, created in 1992, there are 10 young oak trees, mostly self-seeded and not very robust, 4 planted wild service trees, only one of which is thriving, a tall, well-maturing planted sweet chestnut and 2 tall maturing wild cherry. This area has the highest density of thriving planted hazel in the wood (27 trees). Hornbeams are barely present in this area. Self-seeded birch (26 trees) and rowan (30 trees) dominate the area</p> <p>Conservation Area 6, created in 2002, at the northern tip of the compartment, is relatively open due to ongoing management. Coppiced and pollarded hornbeams have been re-cut regularly to allow light to the 9 oak standards that were planted within the site, 6 of which are thriving, plus 1 sapling doing well. This area has the best survival rate of hornbeam coppice/pollard of all the Conservation Areas. It also contains self-seeded goat and grey willows, silver and downy birch, rowan, transplanted and planted wild service and wild cherry, and 2 elms planted recently which are resistant to Dutch Elm Disease. A hedge was planted and laid along the perimeter, which mainly consists of hawthorn, but also contains hazel, crab apple, field maple, and spindle. Bramble is controlled to promote the ground flora. Naturally occurring flora includes pendulous, wood and remote sedges, and introduced species include greater stitchwort, red campion, bluebell, wild daffodil and foxglove. An area of wet-loving vegetation, especially sedges and <i>Polytrichum</i> moss, grows where there are localised seepages.</p> <p>One of the best wild service trees and the largest lapsed hornbeam coppice in the whole wood lie just to the south of the area.</p>	more hornbeam and other species.	
	Around Conservation Area 6; continue to maintain a living hedge by allowing light to the base of hedge and supplement with dead hedging where required to prevent paths across site.	As required
	Within Conservation Area 6; plant more shrubs in gaps in living hedge line, including more hawthorn and crab apple.	As required
	Within Conservation Area 6; continue to control bramble, and promote ground flora and oaks by thinning goat willow, birch and rowan	As required
	Within Conservation Area 6; re-coppice and re-pollard some of the hornbeams every 10-20 years, and cut them back from oaks regularly.	As required
	Create a Conservation Area in the middle section of the compartment, where the ground is currently bare.	Beyond the timescale of this plan
	Continue to promote oaks in south-east corner and in Conservation Areas 4 and 6.	As required

	<p>The middle section, between the two Conservation Areas, is somewhat bare.</p> <p>Numerous oak seedlings grow amongst bramble in the south-east corner. A horse chestnut tree was cleared here to promote these.</p> <p>The compartment contains 82 veteran oaks and 71 veteran hornbeams of notable stature.</p>		
6	<p>The southern section of this compartment is heavily used by schools, amenity groups and people cutting across to other paths. It is largely bare, with little ground flora or shrub layer. There are two large notable beech in this section and storm damaged oaks, some in decline.</p> <p>The middle section of this area contains one of the highest densities of young hornbeams, due to management in the 70's and 80's to fence off small areas. It also contains a grove of 10 oaks planted in the early 70's that are doing well, plus two mature wild service trees in this area, one large sweet chestnut, and 11 notable veteran birch trees.</p> <p>The northern end of the compartment is also getting trampled through heavy use by visiting groups of children.</p> <p>The compartment contains 122 veteran oaks and 78 veteran hornbeams of notable stature.</p>	Create a new conservation area in the southern section, to regenerate this declining and relatively lifeless area. This will entail reducing the canopy, planting new trees and shrubs, and fencing.	2022
		In central area, coppice groups of young hornbeam in stages, creating coppice areas with light around young oaks to promote them.	2018 onwards
		Continue to thin the grove of oaks in the centre of the compartment.	As required
7	<p>This area, parallel with the road and houses' gardens, has a varied tree structure and species diversity. There is much ivy and bramble, with some bare ground. Ground flora includes wood anemone, lords and ladies, and bluebells.</p> <p>There are 3 mature European limes, 1 very large Norway maple,</p>	Monitor elms for Dutch Elm Disease.	All
		Control Norway maple seedlings.	All

	<p>and a group of elms to the south of Onslow Gate. To north of Onslow Gate are 5 very tall mature silver fir and mature and young blackthorn. Further north is a scattering of various conifers of different sizes, a mature beech, and old hazels and hawthorns.</p> <p>The compartment contains 24 veteran oaks and 41 veteran hornbeams of notable stature</p>		
8	<p>The western half has a variable shrub layer: bare; or dense holly; or with good hazel, bramble and alder buckthorn in a canopy gap. An excellent dense shrub layer at the southwest corner provides good visual distinctiveness and habitat variety, with 2 young and sapling oaks. There is a patch of young hornbeams along the western edge. In the centre, there is a Wild Learning/Forest School area, where ground is largely bare and heavily trampled.</p> <p>In the eastern half, there is an old but not very robust wild service tree. Holly is abundant, with much ivy and some bare ground. Around the Lodge are a planted mixture of conifers and an early mature beech.</p> <p>The compartment contains 48 veteran oaks and 18 veteran hornbeams, of notable stature.</p>	Area for possible pollarding of hornbeams near NW corner.	2018/19
		Reduce canopy of trees and shrubs near young oak to encourage growth	As required
		Possible area for glade creation in eastern half.	2021/22
9	<p>The western half consists of Conservation Area 5, created in 1997, which is now relatively dense, but with much ivy, and holly was beginning to dominate, so it has recently been reduced in an area in the middle. Good mixed tree ages and species, with 4 early mature wild cherries and several</p>	Within Conservation Area 5 control holly and ivy and re-coppice some hazel and bird cherry every 10 years or so.	As required
		Within Conservation Area 5 re-coppice hornbeams throughout the area.	As required

	<p>planted bird cherries, as well as self-seeded rowan, birch, and goat willow. Hornbeam regeneration is good throughout, but with many young trees recently stripped and killed.</p> <p>In the eastern half, a canopy gap has recently been created by storm damage, and some holly cleared to make way for planted oaks. Otherwise, the ground is heavily shaded and mostly bare.</p> <p>The compartment contains 26 veteran oaks and 18 veteran hornbeams of notable stature</p>	<p>Within Conservation Area 5 plant 10 more oaks and 5 or more wild service trees grown from seed from trees on Hampstead Heath, as well as hawthorn and hazel.</p>	2018
10	<p>This compartment includes a fine area of native bluebells, enclosed by dead-hedges, with access to view from a path through the middle, in which holly has been lifted and controlled and ivy kept low.</p> <p>There are many well-spaced large veteran oaks in this area, some of which were photographed in the early 1900s and are still thriving.</p> <p>Three very large mature bundle-planted beech trees grow in a line to north of drinking fountain, with much beech regeneration, including 2 more notable single stem trees. The shrub layer is variable, and there are several old hawthorns.</p> <p>There is a large area of dense holly to the south-west.</p> <p>The compartment contains 85 veteran oaks and 107 veteran hornbeams of notable stature.</p>	<p>Maintain bluebell area as at present, controlling bramble and holly and renovating dead hedge when required.</p> <p>Create new Conservation Area in 2022 in area of dense holly.</p>	<p>As required</p> <p>2027</p>

11	<p>The eastern end contains a good species diversity of; several robust planted hazels and alders, early mature ash, Scots pine, beech, larch, maturing planted red oaks, a very tall silver fir, and a notable old hawthorn. The ground is covered by dense bramble and ivy.</p> <p>In the central section, there is abundant holly, but also lots of young yew coming up. There are 5 veteran wild cherries of notable stature.</p> <p>The western end contains 1 mature and 2 early mature beech, some elder, field maple and beech regeneration, and herb bennet covers the ground where storm damage has let in more light. The ground is bare in more shaded places.</p> <p>The compartment contains 10 veteran oaks and 20 veteran hornbeams of notable stature</p>	<p>There are several uninspiring hornbeams at western end, although one has <i>Ganoderma lucidum</i> at the base. These could be coppiced to create a glade.</p>	2023
		<p>Continue to control ivy on some trees</p>	As required
12	<p>This compartment contains three Conservation Areas.</p> <p>Holly dominated much of the understory in the southwest of Conservation Area 2, created in 1982, but some has recently been laid, and 2 oak saplings planted. There is excellent hornbeam regeneration to the south and west, that is being thinned. A ring of oaks, some non-native, were planted in 1986 as a centenary celebration. 20 young oaks are maturing.</p> <p>Conservation Area 8, created in 2012, remains fenced (2018). It encloses a length of earthworks. The canopy is relatively open in the western half, where several hornbeams were coppiced, and the ground is covered in a dense layer mostly of bramble, providing useful habitat. There is more tree</p>	<p>Within Conservation Area 2; reduce tall holly group to south of area to increase light.</p>	2018/19
		<p>Within Conservation Area 2; continue to thin/coppice hornbeams, especially damaged ones.</p>	As required
		<p>Within Conservation Area 2; continue to control holly and ivy.</p>	As required
		<p>Within Conservation Area 8; remove any tree regeneration on the main part of the earthworks.</p>	As required
		<p>Within Conservation Area 8; retain fence around entire area until 2023, while encouraging growth of laid material to reduce access when fence is removed.</p>	As required
<p>Within Conservation Area 8; continue to transplant young wild service trees from the earthwork</p>	As required		

	<p>cover in the western half, and the ground is bare. Young trees have been laid along the northwest boundary, and 8 hornbeams were recently laid at the northern boundary to the area, in order to reduce compaction and trampling in future. The area contains 2 wild service trees of notable stature.</p> <p>To the northwest of the area is a section of wood where some hornbeam were coppiced and reduced, and some wild service seedlings have been planted.</p> <p>Conservation Area 9 was created in early 2017, and works were continued into 2017/18. There has been extensive coppicing and grubbing of holly and 18 hornbeams have been coppiced and 4 reduced, and 6 beeches coppiced and 1 pollarded in order to open the canopy. Holly and other trees have been laid along the northern and southern edges of the area to create a living barrier to supplement some artificial fencing. The area contains several veteran oaks of notable stature, as well as 2 early mature oaks.</p> <p>The compartment contains many very wet patches that could be sites of springs, including an old spring that used to flow regularly, but is now dry, likely due to the influence of a pumping station just outside the northwest side of the wood.</p> <p>The compartment as a whole contains 142 veteran oaks and 77 veteran hornbeams of notable stature</p>	and into areas to north and south.	
		Within Conservation Area 8; reduce some of the hornbeams on the eastern side of the area	2019/20
		Within Conservation Area 9; plant oak, small-leaved lime, wild service, hazel, hawthorn and possibly other shrubs.	2018
		Within Conservation Area 9; continue to control holly and laurel.	As required
		Within Conservation Area 9; maintain laid and dead-hedged fencing.	As required
	Outside the conservation areas dig 1-2 scrapes in damp areas.	2019	
13	At the northern end, there are several very old hawthorns along the path edge, 1 mature tall beech and 1 tall veteran wild cherry, which is near the sign for the	Monitor 2 important oaks: one is the largest and most impressive English oak in the wood, and the other is an important Noctule mating roost tree	As required

	<p>earthwork, which is clearly visible here.</p> <p>In the central section, one of the biggest and most impressive oaks in the wood grows by an old stream bed, where there are also some remnant wood anemones and planted hazel.</p> <p>Further south is one of the largest veteran hollies, an area of early mature oaks, and some regeneration of oak, hornbeam, beech, cherry and rowan. Otherwise the ground is either bare or covered in ivy. Several old hawthorn and guelder rose still survive here. Further along, in the southern section is another important oak in the middle of the path which contains an old Noctule bat roost. The ground is very bare, but interesting fungi have been found here.</p> <p>The compartment contains 40 veteran oaks and 34 veteran hornbeams of notable stature.</p>	<p>Potential for coppicing a few uninspiring hornbeams in the very southernmost section, being mindful of and not too close to the oak with a bat roost</p> <p>Pollard the large hornbeams on the visible section of the earthwork, by the sign, so they do not uproot in the long term.</p>	<p>2020/21</p> <p>2019/20</p>
14	<p>This compartment contains 2 conservation areas, and the highest density of mature oaks in the wood. The north-west is dense with holly and young trees developing under a largely oak, rather than hornbeam, canopy. Conservation Area 1, created in 1977, was cleared, apart from one mature oak, and planted with oaks, many of which are now badly stripped and have damaged crowns as a result; some have died from honey fungus. 33 young oaks survive. This area contains a good density of maturing</p>	<p>Within Conservation Area 1; thin around selected trees, coppice some hornbeam, and control spread of ivy</p> <p>Around Conservation Area 7; Keep fence up indefinitely, to protect both the bee hives and bird boxes, and maintain fence by filling paling gaps with holly and replacing posts as they rot. Consider planting more hedge plants along fence line where light allows.</p>	<p>2018 onwards</p> <p>As required</p>

	<p>hornbeams, with scope for future coppicing. Self-seeded birch and goat willow are doing very well, and there is a good population of fungi associated with birch, including fly agaric and <i>Russula</i> spp. Other species thriving include wild cherry, yew, and beech. This area has not been intensively managed or thinned, as an experiment to compare with other Conservation Areas, but management now might be beneficial.</p> <p>Conservation area 7 was created in 2007. Hornbeams on the western side and southern edge were coppiced, but only one survived. Three were pollarded and have survived. There is very little hornbeam regeneration inside this area. 4 planted oaks and 3 planted wild service trees are growing well just inside and outside the gate into the area. The northwest corner of the area was left alone but fenced to protect a very large oak with owl boxes on it used by tawny owls and kestrels. A hedge was planted on the south-west edge of the oak. Bee hives were introduced into the area in 2016.</p> <p>Several hornbeams were felled and hazel planted in an area to the south of Conservation Area 1.</p> <p>Crab apple, hazel and hawthorn were planted along the field edge at the southern boundary of the compartment.</p> <p>The compartment contains 170 veteran oaks and 83 veteran hornbeams of notable stature.</p>	<p>Within Conservation Area 7; continue to thin around developing oaks and wild service trees and hedge, and coppice self-seeded trees to south of the bee hives.</p>	<p>As required</p>
		<p>Within the area to the south of Conservation Area 1, coppice hazel, and re-coppice every 10-20 years</p>	<p>2018 onwards</p>
		<p>Continue to cut holly back from field edge to maintain a sunny bank as continued habitat for mining bees.</p>	<p>As required</p>
<p>15</p>	<p>This meadow was sown with native wild flower seeds in 2012. Flowers such as black knapweed, yarrow, creeping thistle, hedge and lady's bedstraws and yellow rattle grow amongst the grasses. The wild flowers provide good</p>	<p>Control any bramble and reduce creeping thistle if it becomes invasive. Lift and pull out grass around wild flowers, making sure that grass is reduced around some yellow rattle seed-heads.</p>	<p>As required</p>

	nectar to bees and other invertebrates.		
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