



# Langley Vale Wood

## Management Plan 2017-2022

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## THE WOODLAND TRUST

### INTRODUCTION

The Trust's corporate aims and management approach guide the management of all the Trust's properties, and are described on Page 4. These determine basic management policies and methods, which apply to all sites unless specifically stated otherwise. Such policies include free public access; keeping local people informed of major proposed work; the retention of old trees and dead wood; and a desire for management to be as unobtrusive as possible. The Trust also has available Policy Statements covering a variety of woodland management issues.

The Trust's management plans are based on the identification of Key Features for the site and setting objectives for their management. A monitoring programme (not included in this plan) ensures that these objectives are met and any necessary management works are carried out.

Any legally confidential or sensitive species information about this site is not included in this version of the plan.

### PLAN REVIEW AND UPDATING

The information presented in this Management plan is held in a database which is continuously being amended and updated on our website. Consequently this printed version may quickly become out of date, particularly in relation to the planned work programme and on-going monitoring observations. Please either consult The Woodland Trust website [www.woodlandtrust.org.uk](http://www.woodlandtrust.org.uk) or contact the Woodland Trust ([wopsmail@woodlandtrust.org.uk](mailto:wopsmail@woodlandtrust.org.uk)) to confirm details of the current management programme.

There is a formal review of this plan every 5 years and a summary of monitoring results can be obtained on request.

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## WOODLAND MANAGEMENT APPROACH

The management of our woods is based on our charitable purposes, and is therefore focused on improving woodland biodiversity and increasing peoples' understanding and enjoyment of woodland. Our strategic aims are to:

- Protect native woods, trees and their wildlife for the future
- Work with others to create more native woodlands and places rich in trees
- Inspire everyone to enjoy and value woods and trees

All our sites have a management plan which is freely accessible via our website [www.woodlandtrust.org.uk](http://www.woodlandtrust.org.uk). Our woods are managed to the UK Woodland Assurance Standard (UKWAS) and are certified with the Forest Stewardship Council® (FSC®) under licence FSC-C009406 and through independent audit.

In addition to the guidelines below we have specific guidance and policies on issues of woodland management which we review and update from time to time.

We recognise that all woods are different and that the management of our sites should also reflect their local landscape and where appropriate support local projects and initiatives. Guidelines like these provide a necessary overarching framework to guide the management of our sites but such management also requires decisions based on local circumstances and our Site Manager's intimate knowledge of each site.

The following guidelines help to direct our woodland management:

1. Our woods are managed to maintain their intrinsic key features of value and to reflect those of the surrounding landscape. We intervene when there is evidence that it is necessary to maintain or improve biodiversity and to further the development of more resilient woods and landscapes.
2. We establish new native woodland using both natural regeneration and tree planting, but largely the latter, particularly when there are opportunities for involving people.
3. We provide free public access to woods for quiet, informal recreation and our woods are managed to make them accessible, welcoming and safe.
4. The long term vision for our non-native plantations on ancient woodland sites is to restore them to predominantly native species composition and semi-natural structure, a vision that equally applies to our secondary woods.
5. Existing semi-natural open-ground and freshwater habitats are restored and maintained wherever their management can be sustained and new open ground habitats created where appropriate.
6. The heritage and cultural value of sites is taken into account in our management and, in particular, our ancient trees are retained for as long as possible.
7. Woods can offer the potential to generate income both from the sustainable harvesting of wood products and the delivery of other services. We will therefore consider the potential to generate income from our estate to help support our aims.
8. We work with neighbours, local people, organisations and other stakeholders in developing the management of our woods. We recognise the benefits of local community woodland ownership and management. Where appropriate we allow our woods to be used to support local woodland, conservation, education and access initiatives.
9. We use and offer the estate where appropriate, for the purpose of demonstration, evidence gathering and research associated with the conservation, recreational and sustainable management of woodlands. In particular we will develop and maintain a network of long-term monitoring sites across the estate.
10. Any activities we undertake will conform to sustainable forest management principles, be appropriate for the site and will be balanced with our primary objectives of enhancing the biodiversity and recreational value of our woods and the wider landscapes.

## SUMMARY

This public management plan briefly describes the site, specifically mentions information on public access, sets out the long term policy and lists the Key Features which drive management actions. The Key Features are specific to this site - their significance is outlined together with their long (50 year+) and short (5 year) term objectives. The short term objectives are complemented by a detailed Work Programme for the period of this management plan. Detailed compartment descriptions are listed in the appendices which include any major management constraints and designations. A short glossary of technical terms is at the end. The Key Features and general woodland condition of this site are subject to a formal monitoring programme which is maintained in a central database. A summary of monitoring results is available on request.

## 1.0 SITE DETAILS

<b>Site name:</b>	Langley Vale Wood
<b>Location:</b>	Langley Vale,
<b>Grid reference:</b>	TQ209567, OS 1:50,000 Sheet No. N/A
<b>Area:</b>	259.69 hectares (641.71 acres)
<b>Designations:</b>	Ancient Semi Natural Woodland, Green Belt, Site of Local Nature Conservation Importance

## 2.0 SITE DESCRIPTION

### 2.1 Summary Description

Our First World War Centenary Wood has pockets of ancient woodland, diverse and fascinating wildlife and flora, and stunning views over the rolling hills of the North Downs. In the coming years, our ambitious woodland creation scheme will transform the existing arable land into both a natural haven and a living memorial to those who sacrificed so much in the Great War.

### 2.2 Extended Description

Langley Vale Wood was purchased by the Woodland Trust in March 2014 as the First World War Centenary project site for England. At 259 hectares (640 acres), it is the largest of the four centenary woods located in England, Wales, Scotland, and Northern Ireland. The site has direct links to the First World War as it was used for gas training and general officer training during the war. The most notable feature from this war history is the standing remains of a 100 year old larch flag pole in Round Wood.

Previously known as Langley Bottom Farm, the Woodland Trust purchased the land from a private landowner. The farm buildings and the farmyard are not owned by the Trust. Set within the county of Surrey, Langley Vale Wood is located approximately two miles south of the town of Epsom and borders the villages of Langley Vale to the north and Tadworth to the east, with the M25 motorway

abutting the southern boundary.

The farm has been managed predominantly as arable for many years, with open space covering eighty percent of the site and providing habitat for a mix of nationally scarce arable plants, as well as home to ground nesting birds such as lapwing and skylark. An assemblage of rare wild plants associated with arable habitats are recorded on the farm, particularly in arable margins around the site, where they have managed to survive despite years of intensive farm management.

The majority of the site is broken up into a patchwork of fields which are strongly delineated by hedgerows. These hedgerows are currently essential to the connectivity of the existing woodlands, and in turn their connection to those woods outside the site. There are also several notable woodland shaws that run through the site, including Sheep Walk which is a public bridle-way running north to south through the central area. These shaws are classified as ancient woodland and have a similar composition to the larger woodland blocks.

Twenty percent of the farm's area is woodland, much of which is ancient semi-natural woodland (ASNW). There are several named woods on site including the largest, Great Hurst Wood (25.7ha) as well as Downs View Wood, Round Wood, and Little Hurst Wood, which are also classified as Sites for Nature conservation Importance (SNCI). Most of these woods have been unmanaged for a number of years and were predominantly used for pheasant shooting. The woodlands are largely hazel coppice with oak, ash and beech dominating the canopy. Following the damage caused by the storm of 1987, many areas were replanted with broadleaf species and mainly with cherry. There are several veteran trees located around the site, mostly beech, but also some ash, sweet chestnut and cherry. Little Hurst Wood and Great Hurst Wood also show excellent displays of bluebells in the spring.

The surrounding landscape is a mix of countryside and residential land uses including scattered farms, traditional small nucleated villages and larger country homes. Being less than one mile from the Epsom Downs Racecourse, there is a strong presence of horse related activities in the area and frequent use of the public bridleways adjoining the site. Within the wider landscape context, Langley Vale Wood is a part of the distinctive North Downs National Character Area (NCA), which forms a chain of chalk hills extending from the Hog's Back in Surrey to the white cliffs of Dover. Along with mixed agricultural use, woodland is a prominent feature of this landscape as is chalk grassland, a particularly threatened habitat.

Ecological surveys conducted in 2014 revealed a wide range of important wildlife at Langley Vale. As an example, 59 bird species were recorded in the survey area. This included two Birds of Conservation Concern (BOCC), red listed species of ground-nesting birds: skylarks and lapwings. In addition, 28 badger setts were recorded as well as five species of bat. Furthermore, Plantlife considers the arable field margins of Langley Vale Wood to be of national significance, particularly for the presence of red hemp-nettle and ground-pine, as well as five other arable plant species listed as endangered or vulnerable, which have led to site designated as an SNCI for its arable plant communities. The species rich grassland at Langley Vale Wood is of particular ecological importance because of the threatened status of this habitat across the North Downs National Character Area (NCA) and its potential to contain rare species such as certain species of orchids.

### 3.0 PUBLIC ACCESS INFORMATION

### 3.1 Getting there

By bus: The E5 bus runs every two hours from near Epsom station to Woodcote Park, Downs Road.

By train: The nearest stations are Ashtead (3.5km/2.2 miles), Tattenham Corner (1.7km/1 miles), Tadworth (1.8km/1.1 miles), Epsom Downs (3.4km/2.11miles) and Epsom (3.7km/2.3 miles).

For up-to-date information on public transport, visit [traveline.org.uk](http://traveline.org.uk), or telephone 0871 200 22 33.

By car:

From the M25 (north/anticlockwise), take Exit 9 signposted Leatherhead/Dorking. At the roundabout take the third exit onto the A243. At the next roundabout take the second exit onto Leatherhead bypass and at the following roundabout take the first exit onto Leatherhead Road, (A24). In Ashtead, turn right onto Park Lane then right onto Farm Lane. Turn left into Langley Vale Road and Langley Vale Wood is on the right, just after the petrol station.

From the M25 (south/clockwise), take Exit 8 signposted Epsom/Reigate. At the roundabout take the third exit onto the A217 and follow signs to Epsom Racecourse. When at the roundabout for the Racecourse, take the exit signposted Epsom and then turn left at the traffic lights. Langley Vale Wood is down the hill on the left.

There is currently no dedicated car park at the wood, but limited parking is available in Langley Vale with a 10 minute walk down to the site along Public Rights of Way. Please park with utmost consideration for local residents.

### 3.2 Access / Walks

Access is by public rights of way from Epsom Downs, Tadworth or Walton on the Hill. If walking on Epsom Downs, be aware that the Epsom Downs are public training grounds for hundreds of racehorses, when accessing via foot and crossing the Downs between the hours of 6am to 12 noon special care should be given at all times and a right of way give to the racehorses present.

Langley Vale Wood has two bridle paths running through the site and one small stretch of public footpath. It is bordered by public bridle paths to the north, east and west with a wide network of paths to the north on Epsom Downs.

Currently, paths within the site are mainly farm tracks. However, there are plans to create 20km (12 miles) of paths through the site, including four kilometres (2.5 miles) of hard surface footpaths and three kilometres (1.9 miles) of multi-user paths for horses and bikes.

## 4.0 LONG TERM POLICY

In fifty years, Langley Vale Wood will be a mosaic of habitats including ancient woodlands, secondary native woodland, neutral and chalk grassland and arable margins. Open habitat in the lower valley will blur into scrub in the midsection and transition into high canopy woodland in the higher areas, similar to that of the existing surrounding landscape. The mixture of habitat types will support a healthy abundance of species and act as a refuge for local flora and fauna as development in the wider area increases.

Management will aim to encourage a woodland habitat that is as resilient as possible to pests, diseases, and the impacts of climate change. This will be achieved by maintaining and creating woodlands that are structurally and species diverse and that support a field layer rich in woodland species. Planted areas will increase the woodland cover on site, eventually connecting the isolated ancient semi-natural woodlands together. Intervention will occur to ensure that shaded rides and paths are opened up to sunlight to encourage ground flora to flourish and micro-habitats to establish in the lying deadwood.

As the only site in Surrey to qualify as nationally important for arable wild plants, the areas allocated to open ground habitats will be specifically managed to provide suitable conditions for rare herbaceous species. Conventional farming practices, including spraying of pesticides, herbicides, and fertilisers will cease. Instead, alternative practices will create the necessary ground disturbance and reduce competition from more common, vigorous species to allow rare plants of arable habitat to thrive. In accordance with the Langley Vale Wood Environmental Impact Assessment (completed in 2016), existing arable plant habitat in the field margins and headlands will be expanded to whole field systems. These open ground management strategies will also provide suitable habitat for breeding populations of ground-nesting birds. Overall, the complex mix of habitats across the site and the ecotones between them will create a diverse landscape that has the capacity to be more wildlife-rich than when the site was managed as an arable farm.

Langley Vale Wood will be a destination site for visitors, with a visitor centre, car park, memorial area, and over 20km of paths. Particularly sensitive areas will be protected from human disturbance through initiatives such as educational signage, fencing, and/or placement of paths. The multi-user network of paths will be managed as open and safe spaces for people to enjoy. The First World War Centenary aspect of the site will still be visible through interpretation but in the long term the emphasis will shift towards nature conservation and public access. Management activities occurring on site and other initiatives will successfully engage the local community in the project. As a result, the site will become a local favourite, being used, valued, and actively supported by the community.



## 5.0 KEY FEATURES

The Key Features of the site are identified and described below. They encapsulate what is important about the site. The short and long-term objectives are stated and any management necessary to maintain and improve the Key Feature.

### 5.1 Open Ground Habitat

#### Description

##### Arable plant zones and margins

Langley Vale Wood is considered of national importance for its arable flora, with at least eight nationally threatened and near threatened species present. Historically, the site has been managed as an arable farm for almost 100 years and this on-going management has enabled arable plant species to survive, largely in the margins, where the farmers' chemical spraying has been less effective.

Langley Vale Wood has been farmed intensively for many years, so there is predominantly only a thin layer of soil above the harder bedrock, which within the open areas, is chalk with flint.

Approximately 85 ha of land will be cultivated for arable plants across the whole site in the first three years of this plan to fully assess which areas should be retained as conservation arable habitat in the long term. After this period, cultivated areas that do not have key arable plant species will be converted to low-input, species-rich grassland.

#### Significance

Langley Vale Wood has a large number of rare and threatened arable plant species and is considered of national importance for the assemblage of species and for the occurrence of eight nationally rare and threatened species (ground pine, red hemp nettle, night flowering catchfly, rough poppy, prickly poppy, cat mint, narrow fruited cornsalad and dwarf spurge), based on threshold scores for assessing the conservation importance of arable plant suites for chalk derived soils (see appendix 3). In addition, there are several species that have been historically recorded on or close to Langley Vale Wood (broad-leaved cudweed, purple viper's-bugloss and field gromwell).

The diversity of rare and threatened arable plants is of national importance and also makes Langley Vale Wood one of the top holdings for arable plants in Surrey. The presence of red hemp-nettle is of particular significance as this species was once widespread across the North Downs, particularly in the area around Langley Vale Wood, but it has only been recorded on the site since 1987. This holding is the only place in Surrey where night-flowering catchfly is present and it has one of the largest populations of cat-mint on arable land in the county. Ground pine was also identified in 2017, which is the first time this plant has been seen on site since 1984 and one of the only sites in Surrey where the plant is present.

#### Opportunities & Constraints

### Opportunities

The site is of national significance, and under a suitable management regime, could become one of the best sites in the UK for arable plants.

The management prescriptions for arable land have been written in conjunction with the prescriptions for species-rich grassland. Although the management for the two habitats is very different, with variations based upon the species present, they are inter-related with some of the arable land possibly being reverted to species-rich grassland after a three year period, and other areas remaining arable where the grassland management opportunities are limited by the ability to graze sub-compartments.

### Constraints

Problem weeds present a constraint. The management undertaken to create a habitat for rare and threatened arable plants also favours problem weeds, such as barren brome (*Anisantha sterilis*), black-grass (*Alopecurus myosuroides*), wild oat (*Avena fatua*), bristly ox-tongue (*Helminthotheca echioides*) and perennial sowthistle (*Sonchus arvensis*). These can be controlled through management, such as alternating between autumn and spring cultivation, the rotational use of grass leys and targeted use of herbicides. However, all of these measures will also potentially affect rare and threatened plants, and management will need to be balanced to reduce the prevalence of these problem species, whilst maintaining healthy populations of the desirable species.

The proposed fencing arrangement provides both an opportunity and constraint. The ability to graze an area may provide a method of controlling vegetation growth in the autumn, and could remove some of the vegetation prior to cultivation. If areas cannot be grazed, the only management available is the mechanical removal of vegetation growth. The sward will need to be cut and removed. With lack of grazing, these areas will also need to be retained as arable rather than reverting to species rich grassland.

### Factors Causing Change

Lack of cultivation - the annual lifecycle of rare and threatened arable plants is reliant on regular soil disturbance. Accordingly, a lack of cultivation will result in these species declining and potentially becoming extinct if the seed bank is not replenished through suitable management.

Depth of cultivation - turning over the soil through ploughing brings buried seed to the soil surface (within 5 cm) so that it may germinate. Some species have seeds with a hard seed coat which may take several years to break-down through the processes of soil microbial activity and water ingress before the seed germinates. This is a survival strategy for the plant. Seed is repeatedly buried and raised to the soil surface through the action of ploughing providing opportunities for germination. Forms of cultivation that do not turn over the soil, such as minimum tillage, do not bring buried seed to the soil surface and can result in the decline and eventual extinction of rare and threatened arable plants. In addition, minimum tillage may also enable problem weeds, particularly perennial species, to remain intact on the soil surface unless it is sprayed with herbicide, and these species will out-compete desirable arable plants affecting population sizes.

Timing of cultivation - arable plant species may be spring or autumn germinating depending on their ecology and ability to survive over winter as seedlings. Cultivating at the wrong time may result in the plant not being able to germinate or survive until flowering and fruiting to replenish the soil seed bank. Cultivation should be undertaken at the best time for each species at the locations where they have been recorded, or alternate between spring and autumn where this suits the ecology of species present at particular locations and on rotation to control undesirable species.

There is the potential to either overgraze the areas, whereby the soil will be poached and the seed bank damaged, or under grazing, which could allow competitive species to restrict the rarer arable plant species. The conditions are likely to change from year to year, so frequent monitoring of livestock numbers and their effect will be required.

### **Long term Objective (50 years+)**

The site supports sufficient areas, managed as arable habitat, to support surviving assemblages of plants and the distribution and abundance of the species will have increased throughout the arable plant zones and margins. At least 32ha of the site will be permanently managed as arable, being a mix of spring and autumn cultivation, with a history of monitoring to inform the management and an established grazing regime on all appropriate areas.

### **Short term management Objectives for the plan period (5 years)**

Approx 72ha of the site in total will initially be managed for arable plant assemblages. This section of the plan should be read in conjunction with the detailed prescriptions for management of particular species and for on-going monitoring described by Plantlife.

The area breaks down into 3 distinct management regimes as follows:

- approx 40ha where no target species have been previously recorded.
- approx 25ha with target flora species including red hemp-nettle, night-flowering catchfly, dwarf spurge, prickly poppy and rough poppy and ground-nesting birds (lapwing).
- approx 7ha with target species including cat-mint and ground-pine.

Areas with no previous target species (subcpts 1g, 2c, 2h, 3b, 4a, 4b))

- Arable cultivation will be maintained for the first three years of the management plan (2018-20). Cultivation will be undertaken in March/April 2018 followed by cultivation in - - - September/October 2018. The land will then remain undisturbed until cultivation in March/April 2020.
- Annual surveys undertaken to identify any locations of rare and threatened arable plants.
- Annual assessment (Sept/Oct) for competing weeds and need for management (grazing or cut and collect).
- Years 4 and 5 (2021/22) in areas where no rare and threatened arable plants have been found: arable reversion to species-rich grassland will be undertaken (see KF 2: semi-natural open ground habitat).
- Years 4 and 5 (2021/22) in areas where rare or threatened arable plants are found: future management will be determined by whether species are spring or autumn germinating and will follow appropriate management prescriptions.

Areas with current records of target species including lapwing (subcpts 2c, 2f, 2n, 2w, 4d)

- Spring cultivation (March/April) three out of four years. Cultivation should be completed by mid-March in areas where lapwing nest.
- Autumn cultivation (September/October) one out of five years (due 2021). Cultivate in the autumn approximately six months after the spring cultivation. The next cultivation will be in spring (March/April) approximately 18 months after the autumn cultivation in 2023 leaving the soil undisturbed for the entire period.
- Annual assessment (Sept/Oct) for competing weeds and need for management (grazing or cut and collect).

Areas with cat-mint and historical records of ground-pine (subcpts 2c, 2h, 2t, 4b).

- Autumn cultivation (September/October) in 2018 and 2020. Cultivate in the autumn and leave the fallow land in place for approximately two years.
- Spring cultivation (March/April) one year out of five (due 2023 - the first year of the next management plan). Cultivate in the spring approximately 30 months after the previous autumn cultivation.
- Autumn cultivation (September/October) approximately 6 months after the spring cultivation in 2023.
- Annual assessment (Sept/Oct) for competing weeds and need for management (grazing or cut and collect).

## 5.2 Semi Natural Open Ground Habitat

### Description

#### Species rich grassland

Langley Vale Wood lies in the North Downs National Character Area which overall has a significant amount of the priority habitat lowland calcareous grassland. The Mole Gap to Reigate Escarpment Special Area of Conservation and Site of Special Scientific Interest lies to the south west of Langley Vale. At Langley Vale Wood, the majority of the grassland is of recent origin and is species-poor, but there are remnant areas of calcareous grassland (CG3c) covering 0.26 ha. Additionally, more neutral species-poor grassland (MG1e), covering 5.56 ha, could be managed to increase the diversity of species present.

### Significance

Lowland calcareous grassland and lowland meadows are both listed as habitats of conservation concern in Section 41 of the Natural Environment and Rural Communities Act 2006

A number of rare and declining plant species have been identified at Langley Vale Wood and could colonise these areas of grassland. Other taxa associated with grassland include breeding farmland birds, such as lapwings and skylarks, invertebrates and bats (see appendix 3)

### Opportunities & Constraints

### Opportunities

The location of Langley Vale Wood close to other areas of species-rich grassland provides a huge opportunity to increase the quantity of this type of grassland in the area, and create connecting corridors of species-rich grassland across the Surrey Hills. There is an opportunity to create two types of grassland at Langley Vale:

- 1) Larger areas of mesotrophic grassland on the 'clay with flints' soil overlying the chalk - the geology would dictate that most new grassland on site would be of this type.
- 2) Smaller areas of true calcareous grassland where chalk is near or at the surface, for example along small valleys or where the deeper topsoil can be scraped away exposing the more calcareous subsoil.

Where there is existing calcareous grassland and rough grassland, there is an opportunity to implement management that would increase the diversity of the grassland. For example, undertaking cattle grazing would help diversity the grassland by reducing the coarse grasses and creating niches for wildflower seed and fine grasses to germinate.

There are various processes using different techniques to create species-rich grassland. These include:

- natural regeneration adjacent to remnant areas of species-rich grassland;
- using green hay taken from a close-by species-rich grassland;
- spreading brush-harvested seed from a nearby species-rich grassland; and
- sowing a bespoke seed mixture purchased from a seed supplier.

Grazing provides an opportunity at Langley Vale Wood to restore species-rich grassland by reducing coarse vegetation and thatch and create new areas of species-rich grassland.

### Constraints

The majority of the site is arable, and the soils have been heavily modified by extensive tillage and application of fertiliser and herbicides. It is likely that there is no residual seed bed of perennial grassland plants left within the current arable area.

The soil phosphorous (P) indices were relatively high in the majority of the fields tested in 2016, in the region of a phosphorous index of 2-3. It is recommended that grassland creation is undertaken in fields with a phosphorous index of 0 or 1. Thus, there may be a constraint to the eventual sward that could be created. The amount of phosphorous in fields identified for arable reversion can be reduced through management. The existing species-poor grass fields identified for species-rich grassland creation have comparatively low soil phosphorous with an index of 1 or at the lower end of index 2. This means that grassland creation could be undertaken immediately in these fields.

### Factors Causing Change

Invasive species, such as ragwort and tor grass, could out-compete the desired grassland species.

There is the potential to either overgraze the areas, whereby the soil will be poached and the seed bank damaged, or under grazing, which could allow competitive species to restrict the rarer grassland species. The conditions are likely to change from year to year, so frequent monitoring of livestock numbers and their effect will be required.

**Long term Objective (50 years+)**

Establishment of at least 41.6ha of species-rich neutral and calcareous grassland that is managed as pasture and hay meadow across Langley Vale Wood, with a sustainable cutting and grazing regime in place that keeps invasive plants largely under control. A history of monitoring that will inform the on-going management.

**Short term management Objectives for the plan period (5 years)**

Up to approximately 82ha of the site will be managed as species-rich grassland. This area breaks down into 4 distinct management regimes as follows:-

- approx 12.66ha will be managed to rehabilitate species-rich pasture.
- approx 22.45ha of species-rich hay meadow will be restored.
- up to 40ha of species-rich pasture will be created from arable fields where no rare or threatened arable plants are found
- approx 6.6ha to be cut and collected where grazing is not possible

Rehabilitation of species-rich pasture (subcpts 1h, 2p, 2d, 4d)

- Establish a grazing regime to create a sward with 70-80% of the vegetation between 5-15 cm tall and with scattered clumps and tussocks between 5-30 cm tall on 20-30% of the area. Scattered bare hoof marks should cover approximately 20% of the area.
- Grazing will avoid the flowering period from approx mid-May to mid-July and will be reduced or stopped during the winter and if poaching is a problem.
- Stocking levels will be within the range of 0.5 - 1 livestock unit (LU) per ha depending on the time of year, growth rates and ground conditions.
- Grazing will aim to reduce encroachment of undesirable species such as tor-grass and ragwort.
- A monitoring regime will be in place while grazing is in progress to ensure sward conditions are as per prescriptions and undesirable species are under control.

Restoration of species-rich hay meadow (subcpts 1c, 1h, 2b, 2p, 3b)

- Establish approx 5ha of grassland in late summer/autumn 2020 including ground preparation, seeding and rolling.
- Establish hay-cutting regime from 2021. Timing will be dependant of flowering of grasses and wildflowers; usually July-August.
- Establish aftermath grazing regime with cattle or sheep from late August to October/November with 0.5-1.5 LU/ha depending on the sward cover and vegetation growth after hay cutting. Aim for sward height of 5-8cm.
- Control any ragwort present by hand-pulling or spot-spraying prior to hay-cutting.
- Undertake early cutting or grazing if sward-height is 10+ cm by February (no grazing or cutting April-July).

Creation of species-rich pasture (up to 40ha depending on presence/absence of target arable species - see KF1)

- Establish grassland areas late summer/autumn 2021 including ground preparation, seeding and rolling.
- Establish extensive grazing regime with cattle or sheep from July 2022 onwards. Aim for a sward with 70-80% of vegetation between 5-15 cm tall with scattered clumps and tussocks between 5-30 cm tall on 20-30% of the area. Scattered bare hoof marks should cover 20-30% of the area. (Estimated stocking rate 0.5 LU/ha).
- Grazing will avoid the flowering period of May to July/August and wet conditions to avoid poaching.
- From 2023 onwards management will be as per species-rich pasture above.

Cut, collect and harrow (subcpts 1b, 1f, 2b)

- Cut and collect in August every year from 2018



## 5.3 Ancient Semi Natural Woodland

### Description

Approximately 20% (52ha) of Langley Vale Wood is existing woodland. Most of this is classified as ancient semi natural woodland (ASNW), although part of Round Wood is secondary woodland and is included in this key feature. Seven of the named woods are largely or entirely composed of ancient woodland (41 ha). The three largest: Great Hurst Wood, Little Hurst Wood and Downs View Wood (east) are designated Sites of Nature Conservation Importance (SNICIs). Woodlands throughout the site support a wide variety of species. Important features include the marsh tit, 28 badger sets, five species of bat including the relatively rare Natterer's, and several notable invertebrates including the Roman snail, a UK BAP species.

The woodlands form two distinct types. The first are woodland blocks ranging in size from 2ha at Gillettes Wood to 26 ha at Great Hurst Wood. The second is large linear shaws like Sheep Walk (3.4ha). Both types of woodland are mainly categorised as W8 under the National Vegetation Classification (NVC). This community type comprises predominantly ash, field maple, and hazel. W10 is found only in Great Hurst Wood. Dog's mercury is the most distinctive field layer species and bluebell is also frequent. Little Hurst Wood and Downs View Wood East both has significant storm damage in 1987 and subsequently replanted with a mix of oak, cherry and ash. All woodlands have had history of coppice regime, but not for at least 30 years and many of the (largely hazel) coppice stools are now over-stood. Full descriptions of the individual woods are contained in Appendix 1: compartment descriptions.

### Significance

Ancient woodlands are a prominent feature of Langley Vale Wood and the surrounding landscape, with several other woodlands located nearby, predominantly located on the hill tops. Whilst Surrey is the most wooded county in the country, the threat to ASNW persists due to increasing development, intensive agricultural practices, and presence of potentially devastating diseases such as ash dieback and oak processionary moth. Climate change is expected to put significant external pressure on woodlands as changes to precipitation patterns, storm frequencies, and temperatures push established species outside of their habitable ranges. While prevention of these threats is all but impossible, good management practices and connecting the fragmented woodlands on site will enhance resilience and better protect the ASNW from these pressures.

### Opportunities & Constraints

#### Opportunities

To retain the ancient and veteran trees as important landscape and wildlife features.  
To explore partnerships with other institutions or organisations in the research on ash dieback and oak processionary moth. Test proactive management if/where appropriate.

#### Constraints

Substantial increase in human traffic in the ASNW could lead to compaction issues, vandalism, littering, etc. if not managed correctly.

### Factors Causing Change

Increasing shade and loss of coppice structure in minimum intervention stands; mammal damage (squirrel, deer, and rabbit); tree disease (ash dieback)

### Long term Objective (50 years+)

High forest woodland with a good structural and species diversity and an understory of native shrubs and young trees, brought about by creating wide rides and occasional thinning/clearings. Good deadwood habitat present through standing and fallen dead trees and ancient living trees. Ground flora should continue to contain specialist woodland plants, indicative of ancient woodland.

Maintained ride networks will selectively open up the canopy, providing the necessary conditions for a significant element of early successional habitat and a ground layer rich in herbaceous species. Natural regeneration in the openings and on the edges of woodlands will not be threatened by browsing.

Veteran trees will be retained wherever practicable, providing important habitat for invertebrates, birds, and bats. The next generation of veteran trees will be encouraged, leading to species like oak and beech becoming veterans within 50-100 years.

### Short term management Objectives for the plan period (5 years)

Manage the main body of the ancient woodland through limited intervention during this plan period, retaining ancient and veteran trees wherever practicable. Management will be carried out in 5 ways to add to structural diversity and maintain access;

- Ride management (2ha)
- Softening edges of woodlands where they border open space (1ha)
- New paths created (0.5ha)
- Monitoring for trees pests and diseases
- Deer impact assessments (all woodlands, woodland creation and natural regeneration areas)

Ride management (subcpts 2m, 2r, 4c)

- Intervention will be limited to activities that will improve or enhance the understory habitats. This will be achieved through ride side management of the overgrown rides, tracks and paths in the ancient woodlands. Where appropriate, this work will be carried out by volunteers.

Softening edges of woodlands (subcpts 2k, 2m, 2r, 4c)

- Where existing woodlands border open space, reduction in some of the trees will be carried out to allow more light into these areas. Where appropriate, this work will be carried out by volunteers.

New paths (subcpts 1j, 2k, 2r, 4c)

- To enable access through the site, some paths will be extended and created. Where appropriate, this work will be carried out by volunteers.

Ash dieback is present on the site. Oak processionary moths have been found on site so we can expect to find nests within the next few years. Regular monitoring will document the advance of ash dieback and will catch OPM early if nests are found.

Deer impact assessments will continue to be carried out annually to establish any increase in damage over the course of planting and establishment of young trees. Any deer management will be based on the findings of the deer impact assessment.

## 5.4 New Native Woodland

### Description

The site is currently 80% (210ha) farmed landscape, mainly arable, with some fields suitable for grazing. Approximately half of this area (100ha) will be converted to new native woodland, mostly by tree planting. Approximately 25% of the woodland creation area will be left for natural regeneration. These areas have been chosen specifically as they are adjacent to ancient woodlands where the seed source is abundant. The geology is predominantly chalk with flint, whilst some of the wooded higher parts of the site have a thin clay cap.

The 52ha of existing woodlands are scattered on the higher areas of the site. The new native woodland will follow a similar trend in order to retain the vistas and views through the site and blend the visual aspect of the site with the surrounding landscape, as was recommended by the consultant landscape designer (see Appendix 3). The new woodland will also buffer and extend core areas of existing woodland. Planted woody shrubs and natural regeneration areas will form a progression from managed grassland/open ground areas in the valleys to mixed broadleaf woodland, increasing the range of habitat types for wildlife. A network of managed rides will be maintained throughout all of the woodland creation areas to provide public and management access and additional open habitat.

The new woodland areas will consist of a native broadleaved tree and woody shrub mix. The planting mixes will largely be drawn from the 2014 vegetation survey of existing woodland communities on site (please refer to 5.2 KF f3 and compartment descriptions in appendix 1 for further detail of woodland species). The selected tree species will be suited to site conditions and matched, where appropriate, to the adjacent existing woodlands. Some areas such as the community orchard, the coppice woodland, the area around the proposed visitor centre, and the tree-lined avenues will be planted with species appropriate to the particular location and function. Woodland planting will be in sinuous rows to enable mechanised management and reduce the visual impact of planted lines. Most areas will be planted in individual tree shelters to prevent damage by deer and rabbits and to facilitate volunteer planting; some areas, specifically the coppice woodlands, will be fenced.

The majority of the planting will be phased for completion in early 2019. The first 10,000 trees were planted in No Home field (cpt 4b) in December 2014 with a mix of 25 native species (other areas of the site will be planted with a mix of 14 different species). Trees and shrubs were planted on the former arable field in shelters in wide sinuous rows with a large path bisecting down the middle. A mix of wildflower species was spread between the trees and one year later grass and wildflowers dominate the field layer with high survival rates among the trees. Future planting sites will undergo a similar treatment, although field systems will be taken out of agricultural production at the end of the season prior to planting and a grass/wildflower seed mix, suitable to the specific soils of the site, will be sown to create a wildflower meadow prior to the canopy forming. Similar mixes are likely to be used in all other woodland creation areas.

### Significance

One of the Woodland Trust's key aims is to increase woodland cover by creating new native woodlands throughout the country. Langley Vale was purchased as one of four First World War Centenary sites across the UK with the specific intention to create commemorative woodland. Although this site sits within Surrey, the most wooded county in the country, additional woodland in this arable farm will fit well within the wider landscape. The planned areas for new native woodland on site will buffer and protect existing ASNW from nearby disruptive land uses (development, roads, agriculture, etc.). It will also increase the size of woodland blocks and connect existing woodlands together, further benefitting wildlife and enhancing the resilience of the woodlands that remain on site.

### Opportunities & Constraints

#### Opportunities

To connect formerly fragmented areas of ancient woodland with targeted native woodland planting.  
To restore the landscape with new native woodland on higher ground.  
To increase the resilience of woodlands under threat from potentially devastating pests and diseases with buffer planting of a wider range of locally native species.  
To engage local people with tree planting events.  
To provide long-term data on establishing woodland on arable land and the effects on local wildlife populations that could benefit future woodland creation projects across the country.  
In the future, there may be opportunities to supply woodland products for on site management activities and the needs of the local community.

#### Constraints

Various invasive plants (eg. ragwort) appearing in fields that were previously managed as arable will need to be addressed with minimal to no herbicide application. Alternative weed management could be costly and/or difficult, but if not addressed, could potentially impact survival rates of trees.  
Ground nesting birds and rare arable plants are important conservation features of the site that will be affected by converting farmland into woodland.  
Planting the majority of the new woodland in a short time period to meet WW1 centenary objectives could have logistical difficulties and result in an undesirable even-aged structure of the woodland across a significant area of the site.

### Factors Causing Change

Invasive plants, such as ragwort and barren brome  
Wind damage in exposed areas  
Deer and rabbit damage  
Tree disease, such as OPM and ash dieback (natural regeneration only)  
Succession from long-term open ground to a wooded habitat.

### Long term Objective (50 years+)

A minimum of 159ha of the site will be woodland. Areas of existing woodland (in 2014) will be connected by new native woodland, creating larger, more resilient woodland habitats. Planted areas will have become established woodland with a robust species diversity that resembles the surrounding woodland landscape. The broad composition is likely to be oak, beech and hazel with some ash if the anticipated die-off is not as severe as predicted, and a small component of other minor tree and shrub species. Secondary woodland areas will have maintained open spaces (rides, glades and paths) to add to the structural and species diversity.

Areas of woodland creation that serve a specific purpose (community orchard, coppice, visitor centre, First World War commemoration and avenues) will be well looked after and providing the benefits they were intended to - for example: fruit to the local community; woodland products for on site management activities; visual aesthetics in public areas.

### Short term management Objectives for the plan period (5 years)

To progress with the approved EIA planting plan and conditions using a number of mechanisms including contractors, volunteers, and natural regeneration to create 107ha of new native woodland

Farming activity on site will be phased out by end of 2018 and prepare ground for planting in all proposed planting areas, including sowing wildflower/grass seed mix in subcpts 1b, 1d, 2a, 2j, 2q, 2s in late 2017 and 1b and 3a in late 2018.

Plant 20ha of new woodland (areas 7, 8, 12, 13, 14 and 17a in the planting plan) in the 2017/18 season at a density of between 1,800 and 2,000 trees per hectare.

Plant the cherry avenue in subcpt 1b in 2017/18 season as standards and individually fenced.

A regiment of 68 trees, 17 each of beech, field maple, silver birch and whitebeam, will be planted in compartment 1b in 2017/18 season as standards

Plant 35ha of new woodland (areas 10, 11, 15, 16 and 17b in the planting plan) in the 2018/19 season at a density of between 1,800 and 2,000 trees per hectare. A specific area in compartment 1b will be planted to commemorate 6,096 British lives lost in the battle of Jutland.

Ensure successful establishment of new native woodland through active monitoring and intervention as required. Tackle invasive plants that threaten to out-compete planted trees as appropriate (pre-seeding arable fields with grass species, intermittent halo spraying, mowing, hand pulling, etc.). Monitor new woodland areas to understand survival rates of different species, and act as required with beating up or invasive species control, to ensure the woodland is healthy, establishing well, and fully stocked to the required stocking density after five years of planting.

Newly-planted coppice in compartments 2g and 2o to have hazel cut in year 2021 if suitably well established.

## 5.5 Connecting People with woods & trees

### Description

Langley Vale Wood is England's First World War Centenary site and is scheduled to be a Woodland Trust Destination site from 2019, and it is anticipated to attract approximately 110,000 visitors per year in the first five years. To achieve the Woodland Trust's vision of a UK rich in woods and trees for people and wildlife at Langley Vale Wood, we are creating a mosaic of habitats as a demonstration of landscape-scale conservation, rich in wildlife and fully open to the public to explore.

As well as establishing Langley Vale Wood as a peaceful, protected place for native wildlife to flourish and for visitors to enjoy, we will incorporate a First World War memorial area that complements the surrounding natural landscape and acts as a living tribute to those who lost their lives in the First World War.

Langley Vale Wood has two existing bridle paths running through the site and one small stretch of public footpath. It is bordered by public bridle paths to the north, east and west with a wide network of paths to the north on Epsom Downs. There are numerous entrances to site from these paths, but the main entrance is off the 'Sheep Walk' bridle path. There are no current parking facilities for visitors on site so most visitors walk from Langley Vale village or Tadworth.

There are several local villages and towns nearby, including Langley Vale, Ashted, Walton on the Hill, Tattenham Corner and Tadworth (combined population approx. 35,000). Larger towns, such as Epsom (pop c. 31,000) and Leatherhead (pop c. 11,000), are within an easy reach by car and central London is less than an hour by train. Several other nature reserves, including Box Hill (more than 800,000 visitors/year) and Ashted Common, are within a twenty minute drive of the site. The main visitor groups for this site, based on an understanding of the local population, are anticipated to be families, retirees and mature couples.

Langley Vale Wood is a landscape of rolling hills with several ancient woodlands, two of which are particularly good for bluebells, and several species of rare arable plants.

There are approximately 6km of permissive footpaths being mown each year to help visitors explore the site, which will increase over time.

It is anticipated to create a number of bespoke visitor facilities for the site, reflecting the importance of this site as England's First World War Commemorative woodland. The facilities will include a car park, visitor centre, memorial area, hard surface paths and a natural play area (dependant on attaining the relevant planning consents). Information panels to engage and inform visitors will be placed around the wood with interpretation of the natural features of the site as well as in relation to WW1 sculptures and other key features. The key themes of commemoration, community and resilience will inform all interpretation and engagement activities and are part of Langley Vale Wood's 'Spirit of Place', which refers to the unique, distinctive and cherished aspects of a place.

The Woodland Trust has hosted several successful planting events at the site since 2014, with an average of 600 people attending each event. More events are planned for the 2018/19 planting season, alongside a celebration event in summer 2018 to mark the WW1 centenary, and a commemoration event in November 2018 as part of national activities in the run up to Remembrance

Day.

Over 100 people are currently registered to volunteer on the site and this includes practical conservation tasks such as coppicing, arable plant monitoring and managing the Sainsbury's community orchard. Additional volunteers for a bird monitoring group will be recruited in early 2018.

There are several local schools nearby that have been involved in the site, including Vale Primary School and City of London Freeman's school. Activities have included tree planting and partaking in our 'Seeds to Trees' project.

Sainsbury's is the main sponsor for the First World War initiative and have been heavily involved in the project, with three areas of the site funded directly from them; the community orchard, the regiment of trees and the cherry avenue. Other businesses, including Epsom Racecourse, have also been involved in the project.

Archaeological potential has been identified in the form of the possible meeting place of the Copthorne hundred, within compartments 1a and 1b, in view of its relative location to the banked boundary referred to as Nutshambles (boundary between compartments 1a and 1b).

A programme of geophysics, fieldwalking and metal detecting was carried out across the proposed car park and visitor centre field in 2018 (compartments 1a and 1b), avoiding areas of newly planted trees or proposed tree planting. This was subsequently followed by trial trench investigations in compartment 1a in 2019. No evidence was found to indicate that the area was the site used for the Copthorne hundred (see 'Report: Langley Vale Car park Visit Centre\_Geophysics, Fldwlk, MD Survey' and 'Langley vale Arch archaeological evaluation report').

In addition, two strip lynchets were identified in an archaeological survey in 2014 in compartment 21.

## Significance

Langley Vale Wood is England's First World War commemorative wood and has a huge amount of history associated with this, including army camps either side of the site at Woodcote and Tadworth, gas training in Round Wood where one of the original flagpoles still exists and numerous stories and photographs associated with this period.

The site will not only offer access for pedestrians, but also link several existing public bridleways together with the multi-user paths, thereby creating circular paths for horses and bikes that enable them to stay off the roads.

This will be the first time that a Woodland Trust site has had this level of visitor facilities incorporated into the design from conception and reflects the importance of Langley Vale Wood for visitors and the Woodland Trust.

Both Nutshambles bank and the two strip lynchets show evidence of historic land use of the site and should be preserved.

## Opportunities & Constraints



### Opportunities

The vast majority of the site has been closed to the public as it's a working farm, so very few people have had the opportunity to explore this particular landscape.

Potential to create a range of permanent visitor infrastructure, including car park, memorial area, visitor centre, natural play area and hard surface paths

Opportunity to educate people about conservation and the First World War

Opportunity for large scale events, including tree planting and events associated with the commemoration of the First World War

Opportunity for a range of volunteer roles, including wildlife monitoring, assisting with the visitor centre and practical tasks

Potential for partnership working, such as Park Runs

Opportunity for educational partnerships with schools, such as Forest Schools

Develop relationships with contacts at local reserves, AONB etc eg Box Hill, Surrey Hills re: joint promotion

Opportunity to explore wellbeing activities at site as part of wider WT wellbeing awareness activities planned for 2019 and beyond

Opportunity to host WT bluebell self-guided app activities

Opportunities for membership development at events or on sites during key dates throughout the year

Recruitment of Visitor Experience Officer (consistent with staffing for Destination Sites) for site to run and promote a range of engagement events and activities

### Constraints

Planning permissions required for much of the permanent visitor facilities

Visitors may cause disturbance to wildlife, such as ground nesting birds

Visitors may cause issues with littering, dog fouling and anti-social issues.

Dog attacks could potentially occur on grazing animals

Lack of current infrastructure on site restricts event and engagement opportunities

All operations should avoid Nutshambles bank and visitors should be directed away from it.

Woodland should be prevented from establishing on the two strip lynchets where they appear in open space

### Factors Causing Change

Increased visitor numbers at the site

New network of paths

Visitor numbers different from anticipated

### Long term Objective (50 years+)



Langley Vale wood will offer a high quality visitor experience in line with its Woodland Trust Destination Site designation, which will include a visitor centre, car park, hard surface paths, memorial area and a natural play area. Free and open access will continue through a well maintained path and entrance network. A welcoming atmosphere will continue to be provided through information boards, waymark signs and seats. Horse riding and cycling routes should be clear and well signed. An established 'Friends of' group will help with general management and volunteer tasks.

The site will attract a large number of visitors and there will be regular events and volunteer opportunities for visitors to become involved in. Langley Vale Wood will remain England's First World War commemorative woodland, but post 2018 will be focused more toward conservation, wildlife and education.

Nutshambles bank and the two strip lynchets will be managed in perpetuity

### **Short term management Objectives for the plan period (5 years)**

E-newsletter sent to all supporters on CARE four times per year from 2017

To establish a volunteer bird monitoring group in 2018

To establish a Friends of Group by end of 2019

Create hard surface (approximately 3km) and multi-user paths (approximately 4km) in 2018/19

Entrances to be created 2018, including kissing gates, fencing, interpretation boards and appropriate signage

Path cuts 2-3 times per year, or as appropriate from 2018

Waymarked circular routes to be established with signage by end of summer 2018

To have planning permission for the visitor facilities granted by spring 2018

To create the 75 space car park, with 100 space overflow in 2018

To create the memorial area in 2018

To create the natural play area in 2019

To create the visitor hub in 2020

Ensure volunteers receive appropriate training and support and qualifications are up to date

To hold two First World War commemoration events in 2018, one in the summer and one in November

To undertake relevant requirements to achieve accreditation as Destination Site in 2019

Signage and interpretation to be installed on compartment 1a side of Nutshambles bank in early 2020

Following inspections, trees showing signs of failure or likely to be windblown will be removed to avoid disturbance to ground works.

Any desire line paths to be blocked off and vegetation to be maintained along the bank to deter access over the bank

Vegetation to be cut on the two strip lynchets every 3-5 years

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## 6.0 WORK PROGRAMME

Year	Type of Work	Description	Due By
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## APPENDIX 1: COMPARTMENT DESCRIPTIONS

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Key Features Present	Designations
1a	4.37	Open ground	2018	Non-wood habitat	Services & wayleaves		Green Belt
<p>This field is where the car park for the site will be located and is locally known as Nutshambles. The car park will have 75 permanent spaces, with 100 space overflow facility. The compartment is bordered by a public bridleway and horse path to the north with Langley Vale Road beyond and Headley Road to the west.</p>							
1b	36.73	Oak (pedunculate)	2017	Wood establishment	Services & wayleaves		Green Belt
<p>This large field includes fields known locally as part of Langley Vale field, part of 16 acre field, most of Three Meadows and Downs Field. This compartment will have the visitor centre, memorial area and regimental planting, all located in the north of the compartment. The rest of the compartment will be planted with a mix of native broadleaf woodland, 61 acres of which will be sponsored acre groves. The compartment also contains Jutland Wood - an 8 acre woodland planted in memory of those who lost their lives at the battle of Jutland. Several paths run through this area, including hard surface pedestrian paths. The compartment is bordered to the south by ancient woodland, to the west by a strip of ancient woodland and hedgerows and to the east by open space.</p>							
1c	6.75	Open ground	2017	Non-wood habitat	Services & wayleaves		Green Belt
<p>This compartment, part of Langley Vale field, will be managed as species rich grassland. It borders a hedge to the north and open space to the south.</p>							
1d	4.63	Oak (pedunculate)	2017	Wood establishment	Services & wayleaves		Green Belt
<p>This compartment, locally known as Headley Road field, will be segmented into nine acre groves, to be planted with native broadleaf species. A looped hard surface path will run through the compartment and link with the car park to the north and the natural play area to the east. The north, south and west edges of the compartment are bordered with mature hedgerows and woodland shaws.</p>							
1e	1.52	Ash	1700	Min-intervention	Services & wayleaves		Ancient Semi Natural Woodland, Green Belt

<p>Area of ancient woodland to the north of Gillettes cottages. The trees are mainly ash, cherry and oak with hazel coppice, elder, hawthorn, and holly in the understory. Hawthorn and blackthorn are found along the boundaries and bluebell, nettle, and wood anemone dominate the ground flora. More species of herbaceous plants can be found in the field layer where the canopy is naturally sparse or where maintained tracks have opened up the canopy. Some younger trees, mainly cherry, were planted in 1990's.</p>							
1f	3.02	Other	2017	Non-wood habitat			Green Belt
<p>This compartment, locally known as Brick field, will contain the natural play area and a community orchard, planted as part of our work with Sainsbury's. A hard surface path will run through this area, connecting with the car park and other areas of the site. Ancient woodland borders the north and west of the area, with mature hedgerows to the east and south.</p>							
1g	2.40	Open ground	2017	Non-wood habitat	Services & wayleaves		Green Belt
<p>Part of the field known locally as Three Meadows, this area will be managed for arable plants for the first three years of the management plan period and monitored. If no arable plants are found then it may be reverted to species rich grassland from year four.</p>							
1h	9.54	Open ground	2018	Non-wood habitat	Sensitive habitats/species on or adjacent to site		Green Belt
<p>Known locally as Cows Field and Horse Meadows, this compartment will be managed as species rich grassland. It borders woodland creation to the south and west and hedgerows to the east.</p>							
1i	0.79	Ash	1700	Min-intervention	Services & wayleaves		Ancient Semi Natural Woodland, Green Belt
<p>Area of ancient woodland to the south of Gillettes cottages. The trees are mainly ash, cherry and oak with hazel coppice, elder, hawthorn, and holly in the understory. Hawthorn and blackthorn are found along the boundaries and bluebell, nettle, and wood anemone dominate the ground flora. More species of herbaceous plants can be found in the field layer where the canopy is naturally sparse or where maintained tracks have opened up the canopy. Some younger trees, mainly cherry, were planted in 1990's.</p>							
1j	3.42	Ash	1700	Min-intervention			Ancient Semi Natural Woodland, Green Belt

<p>Sheep Walk is made up of out-grown shaws and hedgerows that have merged overtime around a former downland sheep walk. Ash and beech dominate the canopy of this wood with sections of abundant field maple, wild cherry, and sycamore. Oak is quite sparse throughout. The shrub layer is a mix of hazel, hawthorn, holly, elder and the rare yew. Dominant species in the field layer differ among stands though dog's mercury, wood anemone, and bluebell are the most common. There is a public bridleway running through it, connecting to other public bridleways to the north and south.</p>							
1k	3.24	Mixed native broadleaves	2018	Wood establishment			
<p>Part of the field known as Langley Vale field, this area will be left for natural regeneration of woodland. It borders the visitor centre to the south, hedgerows to the north and open ground to the east.</p>							
2a	0.87	Oak (pedunculate)	2019	Wood establishment			Green Belt
<p>A thin strip of woodland creation, bordering ancient woodland to the west and open ground to the east.</p>							
2b	4.84	Open ground	2018	Non-wood habitat			Green Belt
<p>An area of the field known locally as Gallops Field, this area will be managed as species rich grassland. It borders new woodland to the north and west and open ground to the east.</p>							
2c	28.34	Open ground	2018	Non-wood habitat	Sensitive habitats/species on or adjacent to site, Services & wayleaves		Green Belt
<p>This large area will be managed for arable plants. The area to the east will be permanently managed in this way, with nationally scarce red hemp nettle identified here from 2014. Other areas will be managed for the first three years of the management plan period and monitored. If no arable plants are found then it may be reverted to species rich grassland from year four. It is part of the fields known locally as Gallops Field and 40 Acres Field. It borders a mix of open ground and woodland/hedgerows.</p>							
2d	2.28	Open ground	2018	Non-wood habitat			Green Belt
<p>Part of the field known locally as Nohome Field, this area will be managed as species rich grassland and borders open space to the west and north and new woodland to the east.</p>							

2e	9.12	Oak (pedunculate)	2014	Wood establishment	Services & wayleaves		Green Belt
<p>This compartment is the bulk of the field known locally as Nohome Field and the field to the south. Half of this area was planted with native broadleaves in 2014 and the other half in 2016. All planting was carried out by local community volunteers. It borders woodland to the east and open space to the north, west and south.</p>							
2f	1.62	Open ground	2018	Non-wood habitat	Sensitive habitats/species on or adjacent to site		Green Belt
<p>This small area will be managed for arable plants. It is bordered by new woodland to the north and south, with open space to the east. Night flowering catchfly has been identified in this area since 2014.</p>							
2g	8.05	Oak (pedunculate)	2017	Coppice			Green Belt
<p>Area planted in January 2017 as hazel coppice with oak standards. The area is bordered by ancient woodland to the north and south and open space to the east and west.</p>							
2h	10.70	Open ground	2017	Non-wood habitat	Sensitive habitats/species on or adjacent to site, Services & wayleaves		Green Belt
<p>Known locally as Car Park field, this area will be managed for arable plants permanently to the north and for the first three years of the management plan period in the rest of the field and monitored. If no arable plants are found then it may be reverted to species rich grassland from year four. It borders new woodland to the south and hedgerows to the north.</p>							
2i	2.57	Oak (pedunculate)	2017	Wood establishment			Green Belt
<p>Small area of the field known locally as Car Park field. The compartment was planted with mixed broadleaves in February 2017 by the local community. It borders ancient woodland to the south and west and open space to the north and west.</p>							
2j	8.46	Oak (pedunculate)	2018	Wood establishment	Services & wayleaves		Green Belt
<p>To be planted with native broadleaf species in 2018. The area has hedges on two sides and ancient woodland to the north and east. A public bridleway runs along the western edge.</p>							

2k	5.90	Ash	1700	Min-intervention			Ancient Semi Natural Woodland, Green Belt
<p>This woodland, known locally as Downs View Wood East, is located toward the eastern edge of the site, near Ebbisham Lane. Historically managed as hazel- ash- field maple coppice with ash and pedunculate oak standards, this woodland has seen significant modifications. This has resulted in an ash dominated canopy with five visibly different parts throughout: the south-east was recently managed for game birds and differs with the occasional beech in the canopy; the secondary woodland in the south contains planted ash, oak, cherry and walnut; the centre-west was cleared and converted to high forest of ash, cherry, and oak; the north-eastern stands of replanted woodland likely experienced significant storm damage and now display juvenile ash, elder, and English elm; and the north-western stands exhibit the historical hazel coppice under oak standards. The ground layer is slightly variable between parts, although dog's mercury and nettle are common throughout. In addition, remnants of a medieval farming strip lynchet are visible north to south where the woods adjoin Ebbisham Lane field</p>							
2l	5.36	Mixed native broadleaves	2018	Wood establishment	Archaeological features, Services & wayleaves		Green Belt
<p>An area of the field known locally as Ebbisham Lane, left for natural regeneration. An archaeological feature, medieval lynchet, is located to the west of the compartment, linking the ancient woodland to the west.</p>							
2m	6.04	Hazel	1700	High forest			Ancient Semi Natural Woodland, Green Belt
<p>Located centrally to the site, the wood was badly damaged in the 1987 storm when its eastern edge was completely windblown. The wood is largely hazel understory with ash dominating and inter-planted oak throughout. Beech, sweet chestnut, and field maple are also present. Over-stood coppice is confined to boundary stands . The far north-east of the wood was entirely replanted with ash, field maple, pedunculate oak and wild cherry and is still distinctive from the rest of the wood with a similar age structure and rows evident. Almost all of this wood has been modified through replanting, recent use as a pheasant pen and occasional inter-planting with pedunculate oak, though it has retained the ASNW classification. The ground flora has an excellent display of bluebell in the spring and dog's mercury is also common. The south-west boundary has suffered from escaped rhododendron and dumping of garden waste from the neighbouring cottage. A number of paths run through the wood, a legacy from when pheasant shooting was carried out in the wood. These paths are being widened through ride edge coppicing to allow more light in. The wood is designated as an SNCI.</p>							

2n	1.05	Open ground	2018	Non-wood habitat	Sensitive habitats/species on or adjacent to site		Green Belt
A thin strip of ground managed for arable plants, with ancient woodland to the west and north and open space to the east and south.							
2o	4.92	Oak (pedunculate)	2017	Wood establishment			Green Belt
This area, locally known as Searchlight, was planted in February 2017 as hazel coppice with oak standards. It is bordered to the north and west with ancient woodland and to the east and south by hedgerows. A footpath runs through this compartment.							
2p	3.33	Open ground	2018	Non-wood habitat	Services & wayleaves		Green Belt
Area to be managed as species rich grassland. The centrally has been unfarmed for many years and some typical chalk grassland species have been appearing, such as pyramid orchid. It is surrounded by a mix of woodland and open space.							
2q	0.87	Oak (pedunculate)	2018	Wood establishment			Green Belt
Small area to be planted with mixed broadleaves in 2018. Borders established woodland to the east and open space to the west and north							
2r	5.07	Ash	1920	Min-intervention			Ancient Semi Natural Woodland, Green Belt
This wood is part ASNW and part secondary woodland. The oldest stand is in the north and is dominated by hazel coppice and elder with ash and oak and the occasional yew in the canopy. The remainder of the woodland has encroached onto the surrounding grassland since the 1940s and is dominated by hazel coppice with cherry and ash canopy. The ground flora is mainly nettles and dog's mercury. Prior to acquisition, the central area of this wood contained pheasant pens and the associated clearings have resulted in a richer ground flora in the scrub-cut open areas including: three species of speedwell, sweet violet, cowslip, selfheal and common mouse-ear to name a few. This wood is of particular importance to the theme of Langley Vale because it was used for training in the First World War and a 100 year old flagpole is still present in the northeast corner of the wood. A network of paths go through the northern part of the wood, largely a legacy of the previous pheasant shoots.							



2s	1.91	Oak (pedunculate)	2018	Wood establishment			Green Belt
Strip of new woodland to be planted in 2018, bordering woodland to the west and open space to the east and south.							
2t	1.14	Open ground	2018	Non-wood habitat	Sensitive habitats/species on or adjacent to site		Green Belt
A small area to be managed for arable plants for the first three years of the management plan period and monitored. If no arable plants are found then it may be reverted to species rich grassland from year four. Area to the east is open space and to the north is woodland.							
2u	0.69	Oak (pedunculate)	2017	Wood establishment			Green Belt
Small area of woodland planted in 2017 with mixed broadleaves. Bordered by woodland to the east and open space to the west							
2v	0.78	Ash	1850	Min-intervention			Green Belt
A thin strip of secondary woodland with some large beech trees present, as well as ash, hazel, hawthorn and a few oak. Some bluebells present in the spring. The southern edge was damaged in the 1987 storm and replanted with a mix of ash and cherry, but these have been overtaken by ash regeneration.							
2w	0.44	Open ground	2018	Non-wood habitat	Sensitive habitats/species on or adjacent to site		Green Belt
A thin strip of ground to be permanently managed for arable plants. There is new woodland to the north and open space to the south.							
2x	2.68	Ash	1700	Min-intervention			Ancient Semi Natural Woodland, Green Belt
Located adjacent to a public bridle path, this is a small block of ASNW. The wood has undergone significant clearing and replanting approximately 20-25 years ago. However, most of the planted cherry has died. Planted ash and out-grown ash coppice form the canopy. Mature beech is present along the northern boundary. The understory is dominated by hazel, with occasional field maple, elder and hawthorn present. The ground layer is heavily shaded, allowing for an abundance of dog's mercury, nettle, and bramble with patches of bluebells present and green hellebore notably recorded here. The wood is designated as an SNCI.							

3a	13.04	Oak (pedunculate)	2019	Wood establishment			Green Belt
Area of woodland to be planted in 2019 on fields known locally as Walton Lane and Jennies. To the west is hedgerow and woodland, to the east is open space.							
3b	8.85	Open ground	2018	Non-wood habitat			Green Belt
Large area of field, locally known as Pumping station, to be managed as species rich grassland. The compartment has hedgerows to the north, east and south, with new woodland to the west.							
4a	6.40	Mixed native broadleaves	2015	Wood establishment	Services & wayleaves		Green Belt
This compartment, locally known as Steeple Cottage, will be left for natural regeneration. The area is surrounded by hedgerows, with the edge of Great Hurst Wood (cpt 4c) to the south.							
4b	8.12	Open ground	2015	Non-wood habitat	Services & wayleaves		Green Belt
This compartment, locally known as Penn, will be managed for arable plants for the first three years of the management plan period and monitored. If no arable plants are found then it may be reverted to species rich grassland from year four. The area has hedgerows to the north and east, with Great Hurst Wood (cpt 4c) bordering to the south.							
4c	25.69	Ash	1700	Min-intervention	Services & wayleaves		Ancient Semi Natural Woodland, Green Belt

Large area of ancient woodland, known as Great Hurst Wood, with ash, oak, beech, sweet chestnut and understory of mainly hazel coppice. Also some cherry, hawthorn and Large areas of bluebells in the spring, as well as bracken and bramble. Several paths run through the wood as a legacy of the pheasant shooting and these will be widened with scallops. The M25 runs along the border to the west of the wood and there is a small parking area to the north, adjacent to an area of replanting following the 1987 storm (mainly ash and cherry).

This is the largest block of ASNW on the site, known as Great Hurst Wood and located on the southern edge of the site and bordering the M25. All but the recent plantings in the far northeast and southeast corners are ancient. It is the only area of the property on clay-with-flints soils and its slightly acidic clay-rich loam soils display the only W10 community on the site, which is dominated by sweet chestnut with ash and downy birch. Other key tree species are hazel, field maple and hornbeam. Standards are oak and ash. Some areas appear to have been planted with beech and the secondary woodland in the northeast and southeast corner was planted with an ash, oak and wild cherry mix. Great Hurst Wood likely has the largest population of toothwort in Surrey as well as an excellent display of bluebells in the spring. Dog's mercury is also abundant amongst the ground flora. The BOCC red listed UK BAP species, the marsh tit, was observed in this wood. There is a small, private parking area to the north and a circular path that runs through the wood and links with adjacent compartments to the north-east. The wood is designated as an SNCI.

4d	4.98	Open ground	2018	Non-wood habitat	Sensitive habitats/species on or adjacent to site, Services & wayleaves		Green Belt
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An area of species rich grassland, locally known as Back O' Pips. A small part of the area will be managed permanently for arable. Great Hurst Wood borders to the west, with hedgerows to the south and east.

4e	0.62	Mixed native broadleaves	1850	Min-intervention			Green Belt
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A small area of secondary woodland with ash, cherry and oak.

## GLOSSARY

### **Ancient Woodland**

Ancient woods are defined as those where there has been continuous woodland cover since at least 1600 AD. In Scotland ancient woods are defined strictly as sites shown as semi-natural woodland on the 'Roy' maps (a military survey carried out in 1750 AD, which is the best source of historical map evidence) and as woodland all subsequent maps. However, they have been combined with long-established woods of semi-natural origin (originating from between 1750 and 1860) into a single category of Ancient Semi-Natural Woodland to take account of uncertainties in their identification. Ancient woods include Ancient Semi-Natural Woodland and plantations on Ancient Woodland Sites (see below). May support many species that are only found in ancient woodland.

### **Ancient Semi - Natural Woodland**

Stands in ancient woods defined as those consisting predominantly of native trees and shrubs that have not obviously been planted, which have arisen from natural regeneration or coppice regrowth.

### **Ancient Woodland Site**

Stands in ancient woods that have been converted to plantations, of coniferous, broadleaved or mixed species, usually for timber production, including plantations of native species planted so closely together that any semi-natural elements of the understorey have been suppressed.

### **Beating Up**

Replacing any newly planted trees that have died in the first few years after planting.

### **Broadleaf**

A tree having broad leaves (such as oak) rather than needles found on conifers (such as Scots pine).

### **Canopy**

The uppermost layer of vegetation in a woodland, or the upper foliage and branches of an individual tree.

### **Clearfell**

Felling of all trees within a defined area.

### **Compartment**

Permanent management division of a woodland, usually defined on site by permanent features such as roads. See Sub-compartments.

### **Conifer**

A tree having needles, rather than broadleaves, and typically bearing cones.

### **Continuous Cover forestry**

A term used for managing woods to ensure that there are groups or individual trees of different ages scattered over the whole wood and that some mature tree cover is always maintained. Management is by repeated thinning and no large areas are ever completely felled all at once.

### **Coppice**

Trees which are cut back to ground levels at regular intervals (3-25 years).

### **Exotic (non-native) Species**

Species originating from other countries (or other parts of the UK) that have been introduced by humans, deliberately or accidentally.

### **Field Layer**

Layer of small, non-woody herbaceous plants such as bluebells.

### **Group Fell**

The felling of a small group of trees, often to promote natural regeneration or allow planting.

### **Long Term Retention**

Discrete groups of trees (or in some cases single trees) that are retained significantly past their economic felling age. Operations may still be carried out within them and thinning is often necessary to maintain stability.

### **Minimum Intervention**

Areas where no operations (such as thinning) will take place other than to protect public safety or possibly to control invasive exotic species.

### **Mixed Woodland**

Woodland made up of broadleaved and coniferous trees.

### **National vegetation classification (NVC)**

A classification scheme that allows an area of vegetation to be assigned to the standardised type that best matches the combination of plant species that it contains. All woodlands in the UK can be described as being one of 18 main woodland types (W1 - W18), which principally reflect soil and climatic conditions. For example, Upland Oakwoods are type W11, and normally occur on well drained infertile soils in the cooler and wetter north and west of Britain. Each main type can be subdivided into numerous subtypes. Most real woods contain more than one type or sub-type and inevitably some woods are intermediate in character and can't be properly described by any sub type.

### **Native Species**

Species that arrived in Britain without human assistance.

### **Natural Regeneration**

Naturally grown trees from seeds falling from mature trees. Also regeneration from coppicing and suckering.

## **Origin & Provenance**

The provenance of a tree or seed is the place where seed was collected to grow the tree or plant. The origin is the geographical location within the natural range of a species from where seeds/tree originally derives. Thus an acorn collected from a Turkey oak in Edinburgh would have an Edinburgh provenance and a southern European origin.

## **Re-Stocking**

Re-planting an area of woodland, after it has been felled.

## **Shrub Layer**

Formed by woody plants 1-10m tall.

## **Silviculture**

The growing and care of trees in woodlands.

## **Stand**

Trees of one type or species, grouped together within a woodland.

## **Sub-Compartment**

Temporary management division of a compartment, which may change between management plan periods.

## **Thinning**

The felling of a proportion of individual trees within a given area. The remaining trees grow to fill in the space created.

## **Tubex or Grow or Tuley Tubes**

Tubes placed over newly planted trees or natural regeneration that promote growth and provide protection from animals such as rabbits and deer.

## **Weeding**

The control of vegetation immediately around newly planted trees or natural regeneration to promote tree growth until they become established. Either by hand cutting or with carefully selected weed killers such as glyphosate.

## **Windblow/Windthrow**

Trees or groups of trees blown over (usually uprooted) by strong winds and gales.