



# Warren Farm

## Management Plan 2018-2023

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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 Consequently this printed version may quickly become out of date, particularly in relation to the planned work programme and on-going monitoring observations.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) 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>	Warren Farm
<b>Location:</b>	East Ewell
<b>Grid reference:</b>	TQ232629, OS 1:50,000 Sheet No. 187
<b>Area:</b>	21.55 hectares (53.25 acres)
<b>Designations:</b>	Open Space Recreation 1 (Local Authority designation - Nov. 1994)

## 2.0 SITE DESCRIPTION

### 2.1 Summary Description

This large area of open grassland and planted areas of wood is an important landscape feature in a largely urban environment. It has good views across the site and towards Ewell and also adjoins Nonsuch Park to the north. The young woodland and scrub on the site provide good habitats for flora and fauna that are not generally found in suburban areas. It is well used by local people and has an excellent network of paths.

## 2.2 Extended Description

Warren Farm covers 21.5 hectares (53 acres) in the old Parish of Cuddington, now part of East Ewell in the Borough of Epsom & Ewell. Situated on acidic, free draining loamy soils, the area was historically farmed, producing hay and arable crops, from approximately the 1680s to 1988 when it became the subject of many planning proposals for housing developments.

The Woodland Trust was given Warren Farm in 1994 following a public enquiry on the housing development now to the west of Warren Farm. The developer, Cala Homes, transferred the 53 acres to the Woodland Trust after significant local concern (led by Nonsuch Watch) that the unique rural character and important grassland species would be lost through the development of Warren Farm.

Warren Farm is an important landscape feature for local residents. The site is an area of countryside in an otherwise largely suburban part of Greater London - with fine views across the site to Ewell in the west and a backdrop of mature trees in Nonsuch and Cheam Parks to the north and north-east.

Warren Farm is unique, being undeveloped former farmland within a very suburban landscape. The site is largely open grassland with several areas of planted native broadleaved trees, natural regeneration and some mature trees forming a wooded fringe to the site. The young woodland and scrub areas are a good habitat for songbirds such as linnet, willow warbler and whitethroat. The site is also of importance for other flora and fauna not generally found in suburban areas, such as skylarks and pyramidal orchids. However, the invasive plant - Canadian goldenrod (*Solidago canadensis*) which suppresses native flora in the open spaces - continues to be a problem across most of the site.

Warren Farm is of great importance to, and highly used by, local people. The excellent network of paths provides opportunities for walking and jogging, while the harder surfaced paths (the London Loop and its link to East Ewell Station) are also designated cycleways. Visitor welcome signs are sited at the main entrances. Limited parking is available nearby in Seymour Avenue in the west or Bramley Road in the south.

## 3.0 PUBLIC ACCESS INFORMATION

### 3.1 Getting there

Warren Farm is located in the southern suburbs of London in the borough of Epsom and Ewell. The site is east of Ewell and west of Cheam and is immediately south of Nonsuch Park. Two access points are available from the surrounding suburban roads - Seymour Avenue and Bramley Road. The Seymour Ave entrance has a wide kissing gate suitable for wheelchairs and pushchairs; the entrance point at the end of Bramley Road is a wide open access which goes under a railway tunnel and is suitable for all. Both of these entrances lead onto surfaced all-weather tracks with stoned finish. There is approximately 700m of surfaced path through the site. The surfaced paths are also Public footpaths (fp) Nos. 130 and 131). Fp 131 is also part of the 150 mile London Outer Orbital Path (London Loop) which is intended to provide a circular walk around the Capital.

There are also a number of entry points on the north side which directly link to Nonsuch Park, across a non-motorised double concrete trackway, and these entrances are open wide gaps. One of these entrances leads onto the surfaced path network of the site, the others onto unsurfaced paths. As well as the surfaced paths there are a variety of non-surfaced paths around Warren Farm.

There is not a car-park at the site but there is limited street car-parking close to the site on Seymour Ave, Bramley Road and surrounding roads, which link to the entrances via tarmac paths. The nearest public car-park is at Nonsuch Park, which is approx 400m away.

The nearest bus stop is on Cheam Road, at the entrance to Nonsuch Court Ave (which leads onto Seymour Ave). The bus stop is about 700m from the entrance to the site at Seymour Ave. The service No is 470 and buses run every 1/2 hour Mon-Fri. Two train stations are nearby - Ewell East is the nearest and is within 1km. Cheam railway station is a little more than a 1 km, and also has the nearest public toilet (but does not have a designated disabled toilet).

Further information on public transport is available from Traveline - [www.traveline.org.uk](http://www.traveline.org.uk) or phone 0870 608 2608.

### 3.2 Access / Walks

## 4.0 LONG TERM POLICY

In the long term, Warren Farm will continue to be a mosaic of approximately 80% neutral grassland and 20% woodland and scrub combined. The mixture of habitat types will support a healthy abundance of species and act as a refuge to local flora and fauna in an otherwise urban landscape. The grassland at Warren Farm supports species such as skylarks, linnets, starling and the small blue butterfly, which are in decline nationally and focal species in the Local Biodiversity Action Plan of Epsom and Ewell Borough.

The woodland will mature with a scrub boundary maintained as a wildlife buffer to the grassland. Oak will dominate the woodland canopy, with a mixed broadleaf understory including hazel and sycamore. Species such as hawthorn and crab apple will be part of the diverse scrub belt around the grassland, which itself will support a species-rich community of native wildflowers, free from threatening invasive species.

On-going maintenance will ensure access remains easy and safe. This will be achieved through maintaining entrances and the path network and regular safety inspections of site infrastructure and higher risk tree zones. Warren Farm will continue to be a green haven in London suburbia.



## 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 Secondary Woodland

#### Description

Woodland currently covers approximately 20% of the site (4 ha) and is predominately around the site's boundary (subcompartments 1a, 1b and 1c). The woodland is mixed broadleaf, and can be broadly divided into two categories: pre-existing semi-mature and planted. The pre-existing semi-mature woodland in the east corner of the site and along the southern boundary is dominated by oak with an understorey of sycamore and hazel and scrub edge of hawthorn, sycamore, suckering elm and blackthorn.

In 1995, around the northern and western boundary of the site, the Woodland Trust planted oak, ash, field maple and hazel. The planted fringes are now well established and scrub is beginning to gradually encroach into the open grassland creating a soft boundary between the two habitats. Ground flora in the mature woodland is dominated by ground ivy and is overall poor in diversity. Similarly, in the scrub areas, ground flora is lacking in diversity and dominated by Canadian goldenrod (especially close to compost piles) and grasses although in open glades bee orchids can be found in abundance. Other invasive ground flora found on site includes Japanese knotweed, bamboo and buddleia, likely to have been introduced from neighbouring gardens.

#### Significance

The woodland is valuable habitat for wildlife in an otherwise urban environment. The scrub transition from woodland to grassland is especially valuable for biodiversity, providing winter cover and feeding habitat for a number of bird species including linnet, mistle thrush and skylark, all on the Red Data list.

#### Opportunities & Constraints

Constraints: Dominance of Canadian goldenrod suppressing woodland flora establishment.

Opportunities: Diversify woodland structure through coppicing or scalloping the path edges

#### Factors Causing Change

Invasive species (Canadian goldenrod, buddleia, Japanese knotweed, bamboo)  
 Pests and diseases (oak processionary moth (OPM) and ash dieback)  
 Squirrel damage

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

Warren Farm will remain around 20% wooded, a quarter of which will be managed to maintain a soft scrub fringe between mature broadleaf woodland and neutral grassland. The mature woodland will be rich in biodiversity, with a varied age structure and free from invasive species.

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

In this plan period 2018-2023, the woodland areas will continue to develop into mature woodland and be monitored for tree health.

- Annually, Canadian goldenrod will be pulled by volunteers from April-Sept and then strimmed by contractors before setting seed. These works will focus on the areas with the greatest densities of goldenrod. Area approx. 1ha where it is found in greatest concentrations every year. Area approx. 1ha.
- Japanese knotweed, currently a small patch less than 0.5 ha in the overgrown vegetation on the east side of the main north-south path by the information board, will be eradicated by the end of the plan period by spraying with glyphosate.
- Bamboo, currently a small patch less than 0.5 ha found along the west boundary of the site, will be cut and removed.
- Buddleia, currently one of two bushes outgrown from neighbouring gardens along the west boundary will be cut and removed.
- Signs of OPM and ash dieback will be monitored annually as part of tree safety inspections.
- Mature woodland will be assessed every 5 years for squirrel damage and regeneration levels to ensure canopy gaps do not exceed 20% of total woodland.
- Two areas of previously coppiced hazel in the semi-mature woodland (subcompartment 1c), combined area of less than 0.5 ha, will each be cut once in 5 years to maintain variation in woodland structure. Next cut due 2020.
- Carry out annual tree inspections in Zone A woodland areas (beside railway and behind houses at Seymour Avenue), alternating summer/autumn inspections.

## 5.2 Open Ground Habitat

### Description

Open ground accounts for approximately 80% of Warren Farm (17.4 ha - subcompartments 2a, 2b, 2c, and 2d). Its survival is largely due to the site's former agricultural past and the efforts of the local community (namely Nonsuch Watch) to save it from development. Broadly, the open ground is considered to be unimproved, neutral lowland grassland, i.e. have not been subjected to any agricultural improvement such as application of fertilisers or herbicides. Such grasslands have declined by up to 95% in the 20th century due to changes in agricultural practice. Under the National Vegetation Classification (NVC), two types of grassland can be identified. Mesotrophic Grassland community 1 (MG1) is the main grassland community, characterised by the constant presence of false oat-grass, accompanied by other grasses such as red fescue, cock's-foot, common bent and Yorkshire fog. In these areas, sub-communities of common knapweed (MG1e) and downy oat-grass (MG1d) are also found. The presence of species such as hogweed, yarrow, ribwort plantain, bird's foot trefoil and red clover increase the diversity of the grassland so that it is to be considered of significant conservation value although it is not of the quality to be designated a Site of Special Scientific Interest. Areas where downy oat-grass become frequent and constant suggests that there may be a shift towards a more calcareous grassland community in this part of the site, namely the downy oat-grass community CG6. However, it is only an indication, as other calcareous species normally associated with CG6 such as rough hawkbit, glaucous sedge, salad burnet and stemless thistle are absent from the site. Notable grassland species include: kidney vetch, the food plant of the small blue butterfly and pyramidal and bee orchids.

During the period when there was little management at Warren Farm as it changed hands in the late 1980's and early 1990's, Canadian goldenrod (*Solidago canadensis*) became established throughout the grassland and under the some of the less developed woodland. Canadian goldenrod is an invasive non-native species of plant, first introduced into cultivation in Britain in 1648, from its native range in the North America, where it occurs in prairie grasslands. Canadian goldenrod propagates freely by seed but also can spread vegetatively, as it has a creeping rhizome. The plant is prolific and is suppressing the native grasses and herbs. Following a consultation period when various management options were considered, including grazing, deep ploughing and increasing woodland cover, efforts to effectively control the spread and reduce impact of the plant began in 2010. Management involves engaging the local community in pulling the plant by hand, collecting the arisings and dumping them in compost piles in the woodland edge. The 'cut and remove' regime on the grassland also helps to curb the spread as the plant is prevented from setting seed. The density of Canadian goldenrod varies across the site. Effective management has had an impact on areas towards the east of the site where Canadian goldenrod is almost absent and grassland species have returned as has the small blue butterfly.

Surveys undertaken in 2015/16 recorded up to 38 bird species at Warren Farm including skylarks, house sparrow, linnets, song thrush and starling. Meadow brown, common blue and the small blue butterflies can be found on site.

### Significance

The presence of unimproved grassland at Warren Farm means the site is of significant conservation value in its suburban London context. Both neutral and calcareous grassland is in national decline and are UK priority habitats. Bee orchids (*Ophrys apifera*) were recorded in several places across the site in the summer of 2016. This is the first time in seven years that this rare orchid species has been spotted on site.

The grassland provides feeding and breeding habitat for a number of threatened birds. Allison (2015 & 2016) recorded 35 bird species on site during the breeding season in 2015 and 38 bird species during the breeding and over-wintering seasons in 2016. Combined, surveys recorded 7 species found on the Red Data List (herring gull; house sparrow; linnet; mistle thrush; skylark; song thrush and starling) and 8 found on the Amber List (bullfinch; dunnock; green woodpecker; kestrel; stock dove; tawny owl; whitethroat and willow warbler). Several of these species have been in sharp decline across the UK since the 1970s.

Additionally in 2016, the number of small blue butterflies (*Cupido minimus*) increased nearly 20 fold over the three previous years while the small copper (*Lycaena phlaeas*) increased by 15 fold over the previous year, which is in contrast to the declines witnessed elsewhere across the country.

Despite the pressures from its suburban surroundings, high visitor (and dog) use and threat from invasive plants, Warren Farm has the potential to support a diverse species-rich grassland community.

### Opportunities & Constraints

#### Constraints:

Dominance of Canadian goldenrod, threat of other invasive plants (e.g. Japanese knotweed) and encroachment of scrub suppressing native species-rich grassland from establishing.  
Ground-nesting birds need consideration when undertaking grassland management.

Opportunity: to create a species-rich lowland grassland supporting a diverse community of fauna including priority bird and butterfly species

### Factors Causing Change

Invasive species including Canadian goldenrod and scrub suppressing the establishment of species-rich grassland.  
High visitor and dog use disturbing ground-nesting birds

### Long term Objective (50 years+)

Warren Farm will remain approximately 80% grassland, the majority of which will be a neutral (MG1) grassland community with a soft wooded edge free from the threat of invasive non-native flora. Continuous “cut and remove” management will prevent scrub encroachment and help to maintain a species-rich flora community dominated by false oat-grass and including species such as kidney vetch, bee and pyramidal orchids.

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

During the plan period, management will focus on the control of Canadian goldenrod by undertaking the following:

- Annual hand pulling of Canadian goldenrod across all grassland areas from April to August. Greatest focus for mass community events in subcompartments 2c and 2d (combined area of 5.5ha) in June and July. Regular volunteers to continue pulling in the wooded areas and in subcompartment 2a (3.63 ha) to prevent goldenrod returning. All arisings to be composted in woodland edge.
- Annual cut and collect of subcompartments 2a, 2b, 2c and 2d (combined area of 11.67 ha) in late August/beginning of Sept (before Canadian goldenrod sets seed); all arisings to be composted in woodland edge.

## 5.3 Connecting People with woods & trees

### Description

This site is part of the Welcoming Sites Programme (WSP), a Woodland Trust initiative which aims to improve recreation and access provision at our key sites. The WSP will lead to a series of lasting upgrades that will improve the visitor experience and will likely increase the number and range of visitors to this site. An attractive and serviceable network of tracks and paths will further encourage the appreciation of the woodland and grassland habitats, both on the site and in the locality. The site will be managed to meet the required high standards of WSP and will provide a clear welcome: well-maintained entrances, furniture, signs and other infrastructure as well as sustainable path and track surfaces across the variable ground conditions where appropriate. Improved access will better facilitate use by a wider range of visitors. An engagement plan will set out a plan for engagement activities, further enhancing public visits to the site.

Warren Farm is located in the suburb of Cheam, next to the boundary between the London Borough of Sutton and Epsom & Ewell Borough. Approximately 75,000 people live in the locality. The site is located in a generally affluent area with good transport links and adjoins the Epsom & Ewell Council-owned Nonsuch Park which has visitor facilities including a car park, café and toilets, and welcomes approximately 120 visitors daily. Warren Farm currently receives very high usage from visitors.

There is network of approximately 4.5km of paths through Warren Farm which are wide and easily accessible. Many circular walks are possible and much longer walks, including the London Loop, connect through this well established network. The site is increasingly popular with casual walkers including people exercising dogs as well as people wishing to enjoy an area of relatively undisturbed open space. The harder surfaced paths are suitable for people who are less-abled and who require wheeled access; cyclists, people with children in pushchairs, buggies and prams. The perimeter path is around 2 km in length and the other paths make walks of several kilometres possible within the site.

There are 2 secondary schools, 2 primary schools and one school which covers pre-prep to sixth form within approximately 1km of the site. There is also an active forest school, Down in the Woods Ltd, which regularly uses the site.

Volunteering is the main people engagement focus at Warren Farm, and the site has a dedicated team of 10 volunteers who undertake activities throughout the year including goldenrod pulling and collecting, and small scale coppicing. During the summer the prevalence of Canadian goldenrod requires mass engagement goldenrod pulling volunteering opportunities to make an impact, which is achieved through public and corporate volunteering.

There are a number of WT sites within close proximity to Warren Farm, including First World War centenary wood, Langley Vale Wood (LVW) as well as some small sites. Due to its proximity to Langley Vale Wood, which is hoped to be WT's key visitor site in the SE from 2019 (part of the Destination Site programme), the community local to Warren Farm will be encouraged to attend LVW events and activities in the short to medium term, rather than holding separate community engagement events at Warren Farm (with the exception of mass volunteering as outlined above).

### Significance

Warren Farm provides an area of open space for recreation purposes in a residential area within close proximity to London. There is a good path network, welcoming signs and well-kept entrances which all help to enhance the enjoyment of visitors and encourage the site's use by the public. Warren Farm is the only Woodland Trust site in southeast England that offers large-scale public engagement volunteering opportunities in the summer (ie not linked to tree planting). Warren Farm's location close to London also provides a number of corporate volunteering/partnership opportunities not afforded by many other WT SE sites.

## Opportunities & Constraints

### Constraints

Anti-social behaviour/illegal activities - motor cycles, dog fouling and vandalism to signs and trees detracts from the value of this site for informal public access.

### Opportunities

As it is in a built up area, it provides an area for local people and for people from closer by (mainly from London) to use the site due to the transport links in place close to the site. The nearest train station is in Banstead which is less than 2km away.

The area has many community groups and fairs etc which could be used for promotion of mass volunteering opportunities for goldenrod activities in the summer: targeting local schools/community groups/local shops and eateries etc.

High usage of the site could hold opportunities for the membership team during mass participation events.

Due to its proximity to London, Warren Farm is a key site for corporate volunteering opportunities.

Develop a relationship with Nonsuch Park to promote volunteering opportunities.

Education and providing information on site to users regarding Canadian Goldenrod through interpretation on site.

## Factors Causing Change

Fly tipping, anti-social behaviour and fires. Increased usage could result in increased likelihood of damage to the site.

## Long term Objective (50 years+)

Warren Farm should continue to offer the local residents and surrounding area with a well maintained site: path network, entrances and on site interpretation regarding management of the site.

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

During this plan period the short term objective is to provide a high quality experience for a range of pedestrian visitors which is safe and enjoyable and to maintain and grow volunteering capacity.

- Approximately 4.5km of paths and entrances will be maintained twice a year in May and August to allow continued access across the site. This will include strimming ride edges and appropriate tree safety work identified by safety inspections every 2 years.
- Infrastructure such as gates, signs and information boards will be inspected annually and maintained or replaced as necessary.
- Access from Seymour Avenue will be upgraded to a high level access disabled kissing gate to allow access for large mobility vehicles with a radar key
- Establish continuity and increase impact of volunteer group through recruitment and training of a volunteer lead to manage volunteers, support for new volunteer recruitment and organise public goldenrod-pulling activities.



## 6.0 WORK PROGRAMME

Year	Type of Work	Description	Due By
2018	AW - Visitor Access Infrastructure	Installation of radar gate at Seymour Avenue entrance and install dedicated bench where old bench with removed in early 2017	31/03/18
2018	AW - Visitor Access Infrastructure	Installation of centre wire - all access, metal, RADAR kissing gate from Seymour Avenue	30/04/18
2018	LC - Fly Tipping	Removal of two benches from woodland in subcpt 1c - visible on approach from path from Seymour Avenue - see map for details Removal of bamboo dumped/cut in woodland subcpt 1a - see map for details Fill in gap between newly installed kissing gate and existing management Attempt to dampen noise of kissing gate closing	30/04/18
2018	AW - Visitor Access Maintenance	First Path Cut Annual management of approximately 4.5km of paths and all entrances, through two path cuts- May and August	31/05/18
2018	WMM - General Site Management	Cut back hedge that is growing through the fence on Seymour Avenue.	30/06/18
2018	AW - Visitor Access Maintenance	Second Path Cut Annual management of approximately 4.5km of paths and all entrances, through two path cuts- May and August.	28/08/18
2018	NWH - Invasive Plant Control	Volunteer hand-pulling of Canadian goldenrod across all grassland areas and dense patches in woodland from April to late August. Focus of mass pulling in compartments 2c and 2d in June and July with continuous regularly puling in compartment 2a.	31/08/18

2018	NWH - Invasive Plant Control	<p>Annual cutting and removing arisings in compartments 1-6, 7A &amp; 7B, 8-12 in the last week of August, to be left to decompose in allocated areas in the woodland area (see EMC maps).</p> <p>Time sensitive - the cut must take place in the last week of August or first few days of September. Contractor to provide WT Site Manager with two weeks notice of exact day so all necessary parties can be notified ahead of time.</p>	05/09/18
2018	WMM - Invasive Plant Control	Spray Japanese knotweed currently a small patch less than 1 acre in the overgrown vegetation on the east side of the main north-south path by the information board, with glyphosate - application rate 5l/ha	07/09/18
2018	WMM - Invasive Plant Control	Strim goldenrod growing in secondary woodland areas.	14/09/18
2018	CS - Ecological Survey & Assessment	<p>Setup volunteer survey programme for butterflies, birds, and Goldenrod densities.</p> <p>Butterflies: establish transects in compartments 9, 10, and 11 with annual monitoring in June Birds: conduct winter and summer bird surveys Goldenrod: record the density cover of GR every year at the end of July</p>	15/09/18

2019	AW - Visitor Access Maintenance	<p>First Path Cut of approx. 4.5km of path (May)                      incorporating EMC specs 1.1 and 2.1:</p> <ul style="list-style-type: none"> <li>- Cut selected paths (refer to EMC map), ensuring a minimum of 2m of unobstructed bare ground and/or low cut vegetation.</li> <li>- Remove overhanging/encroaching branches along paths, avoiding coppiced hazel.</li> <li>- Strim 1m radius around all info boards, benches, way marker posts, and pedestrian/vehicle gates.</li> <li>- Cutback/mow any encroaching vegetation of access points from Seymour Avenue, the underpass and main entrances from Nonsuch Park to ensure 4-5m wide track for first 20m along main entrance track.</li> <li>- Litter (as defined in spec 1.1) to be removed prior to any work at entranceway. Pick-up minor litter along path - do not mow over.</li> <li>- Oil (wd40 or equivalent) all padlocks on all vehicle access gates into woodland (for first path cut only).</li> </ul>	31/05/19
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2019	AW - Visitor Access Maintenance	<p>Second Path Cut of approx. 4.5km of path (August)                      incorporating EMC specs 1.1 and 2.1:</p> <ul style="list-style-type: none"> <li>- Cut selected paths (refer to EMC map), ensuring a minimum of 2m of unobstructed bare ground and/or low cut vegetation.</li> <li>- Remove overhanging/encroaching branches along paths, avoiding coppiced hazel.</li> <li>- Strim 1m radius around all info boards, benches, way marker posts, and pedestrian/vehicle gates.</li> <li>- Cutback/mow any encroaching vegetation of access points from Seymour Avenue, the underpass and main entrances from Nonsuch Park to ensure 4-5m wide track for first 20m along main entrance track.</li> <li>- Litter (as defined in spec 1.1) to be removed prior to any work at entranceway. Pick-up minor litter along path - do not mow over.</li> <li>- Oil (wd40 or equivalent) all padlocks on all vehicle access gates into woodland (for first path cut only).</li> </ul>	28/08/19
2019	NWH - Invasive Plant Control	<p>Annual cutting and removing arisings in compartments 2a, 2b, 2c, and 2d in the last week of August, to be left to decompose in allocated areas in the woodland area (see EMC maps).</p> <p>Time sensitive - the cut must take place in the last week of August or first few days of September - before Canadian goldenrod has set seed.</p> <p>Contractor to provide WT Site Manager with two weeks' notice of exact day so all necessary parties can be notified ahead of time.</p>	04/09/19
2019	WMM - Invasive Plant Control	Strim dense patch of Canadian goldenrod growing in secondary woodland areas.	06/09/19

2019	PE - Events - General	For a year end thank-you bbq/picnic reception. Details and dates TBD following discussions with Sally and Rebecca.	30/09/19
2019	NWH - Invasive Plant Control	Volunteer hand-pulling of Canadian goldenrod across all grassland areas and dense patches in woodland from April to late August. Focus of mass pulling in compartments 2c and 2d in June and July with continuous regularly pulling in compartment 2a.	30/09/19
2019	WMM - General Site Management	Cut back hedge that is growing through the fence on Seymour Avenue.	01/12/19
2020	WMM - Coppice Management	Coppice matured hazel stools in mature woodland (compartment 1c); stack arisings in habitat piles or as boundary hedge - Nonsuch voles.	31/01/20
2020	AW - Visitor Access Maintenance	<p>First Path Cut of approx. 4.5km of path (May)</p> <p>incorporating EMC specs 1.1 and 2.1:</p> <ul style="list-style-type: none"> <li>- Cut selected paths (refer to EMC map), ensuring a minimum of 2m of unobstructed bare ground and/or low cut vegetation.</li> <li>- Remove overhanging/encroaching branches along paths, avoiding coppiced hazel.</li> <li>- Strim 1m radius around all info boards, benches, way marker posts, and pedestrian/vehicle gates.</li> <li>- Cutback/mow any encroaching vegetation of access points from Seymour Avenue, the underpass and main entrances from Nonsuch Park to ensure 4-5m wide track for first 20m along main entrance track.</li> <li>- Litter (as defined in spec 1.1) to be removed prior to any work at entranceway. Pick-up minor litter along path - do not mow over.</li> <li>- Oil (wd40 or equivalent) all padlocks on all vehicle access gates into woodland (for first path cut only).</li> </ul>	31/05/20

2020	AW - Visitor Access Maintenance	<p>Second Path Cut of approx. 4.5km of path (August)                      incorporating EMC specs 1.1 and 2.1:</p> <ul style="list-style-type: none"> <li>- Cut selected paths (refer to EMC map), ensuring a minimum of 2m of unobstructed bare ground and/or low cut vegetation.</li> <li>- Remove overhanging/encroaching branches along paths, avoiding coppiced hazel.</li> <li>- Strim 1m radius around all info boards, benches, way marker posts, and pedestrian/vehicle gates.</li> <li>- Cutback/mow any encroaching vegetation of access points from Seymour Avenue, the underpass and main entrances from Nonsuch Park to ensure 4-5m wide track for first 20m along main entrance track.</li> <li>- Litter (as defined in spec 1.1) to be removed prior to any work at entranceway. Pick-up minor litter along path - do not mow over.</li> <li>- Oil (wd40 or equivalent) all padlocks on all vehicle access gates into woodland (for first path cut only).</li> </ul>	28/08/20
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2022	WMM - Coppice Management	Coppice matured hazel stools in mature woodland (compartment 1c); stack arisings in habitat piles or as boundary hedge - Nonsuch voles.	31/01/22
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2022	AW - Visitor Access Maintenance	<p>Second Path Cut of approx. 4.5km of path (August)                      incorporating EMC specs 1.1 and 2.1:</p> <ul style="list-style-type: none"> <li>- Cut selected paths (refer to EMC map), ensuring a minimum of 2m of unobstructed bare ground and/or low cut vegetation.</li> <li>- Remove overhanging/encroaching branches along paths, avoiding coppiced hazel.</li> <li>- Strim 1m radius around all info boards, benches, way marker posts, and pedestrian/vehicle gates.</li> <li>- Cutback/mow any encroaching vegetation of access points from Seymour Avenue, the underpass and main entrances from Nonsuch Park to ensure 4-5m wide track for first 20m along main entrance track.</li> <li>- Litter (as defined in spec 1.1) to be removed prior to any work at entranceway. Pick-up minor litter along path - do not mow over.</li> <li>- Oil (wd40 or equivalent) all padlocks on all vehicle access gates into woodland (for first path cut only).</li> </ul>	28/08/22
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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	6.60	Mixed broadleaves	1995	Min-intervention		Connecting People with woods & trees	Other
A thick belt of planted native broadleaves extends around the northern and western boundaries with scrub encroaching from the edges. The tree belts were planted in 1995 and contain oak, ash, field maple and hazel and the scrub contains oak, hawthorn and sycamore together with suckering elm and blackthorn.							
1b	1.26	Sycamore	1988	Min-intervention		Connecting People with woods & trees	
The western and southern edges have screens of scrub and trees that are gradually spreading into the compartment, but very slowly.							
1c	2.03	Oak (pedunculate)	1860	High forest		Connecting People with woods & trees	
There is a small clump of mature woodland towards the east side which has developed from an outgrown hedgerow.							
2a	3.63	Open ground	1731	Non-wood habitat	People issues (+tve & -tve), Sensitive habitats/species on or adjacent to site, Services & wayleaves	Connecting People with woods & trees	Other

Subcpt 2a, in the north-east corner of Warren Farm, accounts for approximately one quarter of the site's grassland. It has the lowest density of Canadian goldenrod overall, with density increasing towards the south-east corner of the subcpt. 2a is the most diverse and species-rich area of calcareous grassland at Warren Farm, the predominant grass species are false oat-grass and downy oat-grass. There is a wide range of plants to provide nectar and pollen for insects, including substantial numbers of pyramidal orchids and common broomrape - both indicators of good quality chalk grassland. Kidney vetch and yellow-rattle are also abundant, while ox-eye daisy is locally abundant with frequent occurrences of wild carrot, hedge bedstraw and bird's-foot trefoil. Other species of note include grass vetchling, common knapweed, and common spotted-orchid.

To the volunteer group, this area is known as Sleepy field and Thin field.

2b	2.54	Open ground	1731	Non-wood habitat		Connecting People with woods & trees	
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Subcompartment 2b lies along the southern boundary of the site, adjacent to the railway line. This is generally a less species-rich area than 2a and the vegetation in places is quite coarse and species-poor. It becomes more species-rich towards the western end and in particular in the south-western corner. This subcpt is predominantly false oat-grass grassland with only occasional downy oat-grass. There is a small area of upright brome grass towards the western edge, which includes agrimony, bird's-foot trefoil, fox and cubs, red clover and hairy tare. Goldenrod is quite dense at the eastern end of this subcpt, and present throughout, though at a lower density to the south-west.

To the volunteer group, this area includes Top field.

2c	2.58	Open ground	1731	Non-wood habitat		Connecting People with woods & trees	
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Subcpt 2c lies in the centre of the grassland, adjacent to the main north-south walking/cycling route through Warren Farm. This area is generally quite rank and dominated by false oat-grass, though the subcpt becomes more species-rich toward its eastern edge near the path as well as the south-west corner where a small patch of ladies bedstraw can be found. The species-rich area contains a diverse sward supporting vegetation typical of calcareous grassland, including downy oat-grass, kidney vetch, wild carrot, wild marjoram and pyramidal orchid. Overall, this subcpt supports most of the herbs that were found in 2a, such as bird's foot trefoil and common knapweed; but at much lower frequencies. Goldenrod is prevalent in this subcpt though slightly less so in the south-west corner.

To the volunteer group, this area includes McDonalds and Parkrun field.

2d	2.92	Open ground	1731	Non-wood habitat		Connecting People with woods & trees	
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Subcpt 2d occupies the northwest end of the grassland at Warren Farm and is bordered on two sides by scrub margin and planted trees. This subcpt is mostly dominated by Canadian goldenrod, with the western and northern ends being so dense in the invasive species that most other species are excluded. The south and east ends of the subcpt also contain heavy patches of goldenrod as well as quite rank false oat-grass grassland. Apart from yellow-rattle and hedge bedstraw, herbs are only occasional or locally frequent. Species that occur elsewhere in the grassland are present in this area, but in much lower numbers.

To the volunteer group, this area includes Guiding meadow and DofE corner.

## 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.