

Warren Farm

(Plan period – 2023 to 2028)



WOODLAND
TRUST

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Introduction to the Woodland Trust Estate

The Woodland Trust owns and cares for well over 1,250 sites covering almost 30,000 hectares (ha) across the UK. This includes more than 4,000ha of ancient semi-natural woodland and almost 4,000ha of non-native plantations on ancient woodland sites and we have created over 5,000ha of new native woodland. We also manage other valuable habitats such as flower-rich grasslands, heaths, ponds/lakes and moorland.

Our Vision is:

“A UK rich in native woods and trees for people and wildlife.”

To realise all the environmental, social and economic benefits woods and trees bring to society, we:

- **Create Woodland** – championing the need to hugely increase the UK’s native woodland and trees.
- **Protect Woodland** – fighting to defend native woodland, especially irreplaceable ancient woodland and veteran trees; there should be no loss of ancient woodland
- **Restore Woodland** – ensuring the sensitive restoration of all damaged ancient woodland and the re-creation of native wooded landscapes.

Management of the Woodland Trust Estate

All our sites have a management plan which is freely accessible via our website

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.

The following principles provide an overarching framework to guide the management of all our sites but we recognise that all woods are different and that their management also needs to reflect their local landscape, history and where appropriate support local projects and initiatives.

1. Our woods are managed to maintain their intrinsic key features of value and to reflect those of the surrounding landscape. We intervene in our woods when there is evidence that it is necessary to maintain or improve biodiversity, safety and to further the development of more resilient woods and landscapes.
2. We establish new native woodland for all the positive reasons set out in our Conservation Principles, preferably using natural regeneration but often by planting trees, 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. Where possible, we pro-actively engage with people to help them appreciate the value of woods and trees.
4. The long term vision for all our 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 natural and cultural heritage value of sites is taken into account in our management and in particular, our ancient trees are retained for as long as possible.
7. Land and woods can generate income both from the sustainable harvesting of wood products and the delivery of other services. We therefore consider the appropriateness of opportunities 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 encourage our woods to be used for 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. We maintain a network of sites for long-term monitoring and trials leading to reductions in plastics and pesticides.
10. Any activities we undertake are in line with our wider Conservation Principles, conform to sustainable forest management practices, are appropriate for the site and balanced with our primary objectives of enhancing the biodiversity and recreational value of our woods and the wider landscapes.

The Public Management Plan

This public management plan describes the site and sets out the long term aims for our management and lists the Key Features which drive our management actions. The Key Features are specific to this site – their significance is outlined together with our long, 50 years and beyond, and our short, the next 5 years, term objectives for the management and enhancement of these features. The short term objectives are complemented by an outline Work Programme for the period of this management plan aimed at delivering our management aims.

Detailed compartment descriptions are listed in the appendices which include any major management constraints and designations. Any legally confidential or sensitive species information about this site is not included in this version of the plan.

There is a formal review of this plan every 5 years and we continually monitor our sites to assess the success of our management, therefore this printed version may quickly become out of date, particularly in relation to the planned work programme.

Please either consult The Woodland Trust website

www.woodlandtrust.org.uk

or contact the Woodland Trust

operations@woodlandtrust.org.uk

to confirm details of the current management programme.

A short glossary of technical terms can be found at the end of the plan.

Location and Access

Location maps and directions for how to find and access our woods, including this site, can be found by using the following link to the Woodland Trust web-site which contains information on accessible woodlands across the UK

<https://www.woodlandtrust.org.uk/visiting-woods/find-woods/>

In Scotland access to our sites is in accordance with the Land Reform Act (of Scotland) 2003 and the Scottish Outdoor Access Code.

In England, Wales and NI, with the exception of designated Public Rights of Ways, all routes across our sites are permissive in nature and where we have specific access provision for horse riders and/or cyclists this will be noted in the management plan.

The Management Plan

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GLOSSARY

1. SITE DETAILS

Warren Farm

Location:	East Ewell Grid reference: TQ232629 OS 1:50,000 Sheet No. 187
Area:	21.55 hectares (53.25 acres)
External Designations:	Open Space Recreation 1 (Local Authority designation - Nov. 1994)
Internal Designations:	Click or tap here to enter text.

2. SITE DESCRIPTION

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

The land now known as Warren Farm was originally the main part of a 64-acre site acquired by a developer, Eagle Property, who then sold it to Cala Homes. The Woodland Trust was given 53 acres in 1994 following a public inquiry on the housing development proposal covering 11 acres on the west side of the development site. The developer Cala Homes, transferred the remaining 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 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 broadleaved trees, natural colonisation and some mature trees forming a wooded fringe to the site. The grassland, 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 can suppress native flora, 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. LONG TERM POLICY

In the long term, Warren Farm will continue to be a mosaic of approximately 55% neutral and calcareous grassland and 45% 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 areas will mature with scrub edges maintained as a wildlife buffer to the grassland. Oak will dominate the woodland canopy, with a mixed broadleaf understory including hazel and hawthorn. The decline in ash due to ash dieback will be met by an increase in other tree species such as sycamore, cherry and oak. Species such as cultivated apple and blackthorn 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 and garden escapes.

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.

4. KEY FEATURES

4.1 f1 Open Ground Habitat

Description

Open ground accounts for approximately 55% of Warren Farm (12ha - 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, lowland grassland, with areas of more alkaline soils showing characteristics of calcareous grassland, particularly in areas of subcompartment 2a and the northeastern portion of 2c. Unimproved grassland meadows have declined by up to 97% in the 20th century almost entirely due to changes in agricultural practice. While increasingly rare nationwide, this unimproved quality of the grasslands of Warren Farm – that is they have not been subject to any agricultural improvement by way of fertiliser, application of herbicide or re-seeding in the near past – means they have a significant conservation value, particularly in the urban context. Furthermore, the varied or patchiness of soil type from neutral to alkaline (chalk) makes this site all the more interesting for plants and wildlife.

Under the National Vegetation Classification (NVC), two types of grassland can be identified:-

On the western side (subcompartments 2b, 2c and 2d) 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 this area, the sub-community of common knapweed (MG1e) is 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.

On the eastern side (subcompartment 2a) the soil is more calcareous, with exposed chalk evident in places. pH measurements carried out in subcompartment 2a ranged from 6.6 to 8 confirming this change from neutral to more alkaline soils. Downy oat-grass has spread in this area following the suppression of most of the Canadian goldenrod, and is now the dominant species. Under the National Vegetation Classification this area can be classed as the downy oat-grass community (CG6) of calcareous grassland. Whilst some calcareous species normally associated with CG6, such as rough hawkbit, glaucous sedge, salad burnet and stemless thistle, are absent from this subcompartment, indicators of a chalky soil including marjoram, greater knapweed, blue fleabane, traveller's joy and kidney vetch, the foodplant of the small blue butterfly are all present. In addition, rough hawkbit (discovered 2019), glaucous sedge (discovered 2022) and other calcareous indicators, including long-stalked cranesbill (discovered 2016), are found in parts of subcompartments 2b, 2c and 2d, while corn spurrey, a species indicative of acidic soil, has been noted on the extreme western side of subcompartment 2d. Other notable grassland species include abundant pyramidal orchid and occasional bee orchid extending into the secondary woodland areas.

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 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. When prolific the plant suppresses 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 a volunteer working group and 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 collect' regime on the grassland also helps to curb the spread as the plant is prevented from setting seed and nutrient is stripped from it and the soils. The density of Canadian goldenrod varies across the site. Effective management has had a major impact on areas, particularly towards the east of the site where Canadian goldenrod is now almost absent as well as in compartments 2d & 2c, and grassland species have increased in these areas.

Among the Canadian goldenrod there are also patches of early goldenrod and Michaelmas daisy, two other North American plants that largely resemble the Canadian species when not in flower, and which are being controlled in the same way. Other alien species in the grassland are fox and cubs, broad-leaved everlasting pea, and peach-leaved bellflower.

The IUCN Red List now categorises half of Britain's remaining butterfly species as threatened with extinction. Annual butterfly transect surveys have revealed 29 of the 42 resident or regular migrant species in Surrey are present at Warren Farm, including marbled white, common blue and purple hairstreak, as well as brown hairstreak and white letter hairstreak which are listed as 'vulnerable' on the Red List. Warren Farm has been something of a stronghold for small blue butterflies with 545 records noted its peak in 2016, recent years have yielded significantly lower records which is particularly disappointing as the site represents an important Surrey site for this species. It is also surprising as its larval food plant, Kidney Vetch, has been thriving at Warren Farm in recent years.

Bird surveys undertaken in 2015/16 recorded up to 38 bird species at Warren Farm including skylarks, house sparrow, linnet, song thrush and starling. Skylarks have been nesting in the meadow at Warren Farm for a number of years but success is often limited due to high levels of disturbance from people and dogs.

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 grasslands are in national decline and are UK priority habitats. Bee orchids (*Ophrys apifera*) were first recorded in several places across the site in the summer of 2016. This was 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; dunnoek; 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. The populations of small blue has since declined, despite an abundance of it's larval foodplant, but the small copper continues to increase.

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
<p>Constraints: Dominance of Canadian goldenrod in areas, threat of other invasive plants (e.g. Japanese knotweed) and over-encroachment of scrub suppressing native species-rich grassland from establishing. Low quality of hay & high dog pressure means flail collect is the only practical way to cut and collect the meadow. The mulching action is likely more disruptive to invertebrate communities than hay or grazing methods.</p> <p>Opportunity: To create a species-rich lowland grassland supporting a diverse community of fauna including priority bird and butterfly species. To create hay & potentially supply green hay to diversify the sward in other nearby sites such as Langley Vale Wood.</p>
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 Canopy closure & colonisation in woodland areas likely to shade out orchid and grassland species over time.
Long term Objective (50 years+)
Warren Farm will remain a mosaic community of approximately 55% neutral and calcareous grasslands 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)
<p>During the plan period, management will focus on the control of Canadian goldenrod by undertaking the following:</p> <ul style="list-style-type: none"> - 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. Margins along the main paths to be left to provide refuge for invertebrates & encourage visitors not to stray from the paths. - Annual hand pulling of Canadian goldenrod across all grassland areas from April to August. Greatest focus in subcompartments 2c and 2d (combined area of 5.5ha) before tackling 2b. 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.

4.2 f2 Secondary Woodland

Description
<p>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 'is dominated by oak and sycamore with an understorey of hazel and scrub edge of hawthorn, suckering elm and blackthorn.</p> <p>In 1995, around the northern and western boundary of the site, the Woodland Trust planted oak, ash, wild cherry, 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 dominated by Canadian goldenrod and grasses and is lacking in diversity except in open glades where goldenrod has been cleared and bee orchids and other wild flowers can now 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.</p> <p>Several significant tree pests and diseases are currently affecting the site. Ash dieback (caused by the fungus <i>Hymenoscyphus fraxineus</i>) was first noted in 2018 but was almost certainly present before then. Oak processionary moth (<i>Thaumetopoea processionea</i>) has been present on the site annually since 2018. As well as defoliating oak trees, the caterpillars have irritating hairs that can cause health problems in humans. Elm suckers are affected by Dutch elm disease (caused by the fungus <i>Ophiostoma novo-ulmi</i>).</p>
Significance
<p>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.</p>
Opportunities & Constraints
<p>Constraints: Canadian goldenrod suppressing woodland flora establishment. Lack of woodland flora seed source due to history as grassland.</p> <p>Opportunities: Diversify woodland structure through coppicing or scalloping the path edges</p>
Factors Causing Change
<p>Invasive species (Canadian goldenrod, buddleia, bamboo) Multiple Christmas trees are also often planted out where houses border the site following the festive season.</p> <p>Pests and diseases (oak processionary moth [OPM]; ash dieback; Dutch elm disease[DED]).</p> <p>Grey squirrel damage.</p>

Long term Objective (50 years+)
Warren Farm will remain around 45% of combined woodland and shrub/scrub. Edge areas will be managed to maintain a soft scrub fringe between mature broadleaf woodland and neutral and characteristically calcareous 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)
<p>In the plan period 2023-28, the woodland areas will continue to develop into mature woodland and be monitored for tree health.</p> <ul style="list-style-type: none"> - Annually, Canadian goldenrod will be pulled by volunteers from April-Sept and plants not pulled will then be cut by volunteers or strimmed by contractors before setting seed. These works will focus on the areas with the greatest densities of goldenrod, pulling efforts will have extended to all the woodland by 2023. - Buddleia, currently one or two bushes outgrown from neighbouring gardens along the west boundary will be cut by volunteers as necessary. - Two areas of bamboo escapes in the Seymour Avenue area will be cut and prevented from spreading further by volunteers. - Signs of OPM, ash dieback and DED will be monitored annually as part of tree safety inspections. OPM nests will continue to be removed on a risk based approach. - 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. - Non native tree species (inc. red oak & turkey oak & Norway maple) will be thinned from the planted and naturally colonised areas during the pla period. - Carry out annual tree inspections in Zone A woodland areas (beside railway and behind houses at Seymour Avenue), alternating summer/autumn inspections. - Garden boundaries will be monitored for fly-tipping and garden escapes (deliberate or accidental) will be removed.

4.3 f3 Connecting People with woods & trees

Description
<p>Warren Farm is an important landscape feature and amenity for local residents. The site is an area of countryside in an otherwise largely suburban part of Greater London - with a backdrop of mature trees in Nonsuch and Cheam Parks to the north and north-east. 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.</p>
<p>Warren Farm is located between East Ewell and Cheam, in the District of Epsom and Ewell within the county of Surrey. It lies adjacent to the boundary of the London Borough of Sutton. Approximately 75,000 people live in the locality. The site is located in a generally affluent area with good transport links and adjoins Nonsuch Park, which is jointly managed by the London Borough of Sutton and the Epsom and Ewell Council. It has visitor facilities including a car park, café and toilets, and welcomes a high number of daily visitors and significantly more on weekends. Warren Farm currently receives very high usage from local visitors.</p>
<p>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.</p>
<p>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.</p>
<p>Volunteering is the main people engagement focus at Warren Farm, and the site has a dedicated team of volunteers who undertake activities throughout the year primarily focused on goldenrod pulling and collecting. During the summer the prevalence of Canadian goldenrod requires mass goldenrod pulling volunteering opportunities to make an impact, which is achieved through public and corporate volunteering.</p>
<p>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 smaller sites.</p>
Significance
<p>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.</p> <p>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).</p> <p>Warren Farm's location close to London and good public transport links, also provides a number of corporate</p>

volunteering/partnership opportunities not afforded by many other WT SE sites.
Opportunities & Constraints
<p>Constraints Anti-social behaviour/illegal activities - motor cycles, dog fouling, arson and vandalism to signs and trees detracts from the value of this site for informal public access. Uncontrolled dogs and the sheer number of dogwalkers (both private and commercial) impacts on ground nesting bird success.</p> <p>Opportunities The site provides an area for local people and for people mainly from London to use the site due to the public transport links in place close to the site. The nearest train station is in East Ewell which is around 1km away. The local area has many community groups and fairs etc which could be used for promotion of mass volunteering opportunities. High usage of the site could hold opportunities for the membership team, particularly 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.</p>
Factors Causing Change
<p>Fly tipping, anti-social behaviour and fires. Increased usage resulting in increased likelihood of damage to the site.</p>
Long term Objective (50 years+)
Warren Farm should continue to offer the local residents and surrounding area with a well maintained, attractive and wildlife-rich site. The path network, entrances and on site interpretation regarding management of the site will be maintained to a high standard.
Short term management Objectives for the plan period (5 years)
<p>During the plan period 2023-28 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 volunteering capacity.</p> <ul style="list-style-type: none"> - 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 Zone B safety inspections every 2 years. - Infrastructure such as gates, signs and information boards will be inspected annually and maintained or replaced as necessary. - Continue to permit access for the licenced forest school group. - Continue to promote the volunteering sessions lead by a volunteer leader which run weekly throughout the summer.

5. WORK PROGRAMME

Year	Type Of Work	Description	Due Date
2023	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	August
2023	PC - Other Pest / Animal Control	Works associated with wildlife control outside of deer / rabbits / squirrel	August
2023	NWH - Invasive Plant Control	Works associated with the control of invasive plants within non-woodland habitats to maintain their conservation value and/or the necessary control of noxious weeds	September
2023	WMM - Invasive Plant Control	Works associated with the on-going management of invasive plants–such a repeat cutting and control treatments	September
2023	NWH - Invasive Plant Control	Works associated with the control of invasive plants within non-woodland habitats to maintain their conservation value and/or the necessary control of noxious weeds	September
2023	WMM - General Site Management	Works associated with maintaining conservation and physical features within the sites such as boundary ditches, fences and walls, hedges,	December
2024	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	May
2024	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	August
2024	NWH - Invasive Plant Control	Works associated with the control of invasive plants within non-woodland habitats to maintain their conservation value and/or the necessary control of noxious weeds	September
2024	WMM - Invasive Plant Control	Works associated with the on-going management of invasive plants–such a repeat cutting and control treatments	September
2024	NWH - Invasive Plant Control	Works associated with the control of invasive plants within non-woodland habitats to maintain their conservation value and/or the necessary control of noxious weeds	September

Year	Type Of Work	Description	Due Date
2025	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	May
2025	PC - Other Pest / Animal Control	Works associated with wildlife control outside of deer / rabbits / squirrel	July
2025	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	August
2025	NWH - Invasive Plant Control	Works associated with the control of invasive plants within non-woodland habitats to maintain their conservation value and/or the necessary control of noxious weeds	September
2025	WMM - Invasive Plant Control	Works associated with the on-going management of invasive plants—such a repeat cutting and control treatments	September
2025	NWH - Invasive Plant Control	Works associated with the control of invasive plants within non-woodland habitats to maintain their conservation value and/or the necessary control of noxious weeds	September
2026	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	May
2026	PC - Other Pest / Animal Control	Works associated with wildlife control outside of deer / rabbits / squirrel	July
2026	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	August
2026	NWH - Invasive Plant Control	Works associated with the control of invasive plants within non-woodland habitats to maintain their conservation value and/or the necessary control of noxious weeds	September
2026	WMM - Invasive Plant Control	Works associated with the on-going management of invasive plants—such a repeat cutting and control treatments	September
2026	NWH - Invasive Plant Control	Works associated with the control of invasive plants within non-woodland habitats to maintain their conservation value and/or the necessary control of noxious weeds	September

Year	Type Of Work	Description	Due Date
2027	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	May
2027	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	August
2027	NWH - Invasive Plant Control	Works associated with the control of invasive plants within non-woodland habitats to maintain their conservation value and/or the necessary control of noxious weeds	September
2027	WMM - Invasive Plant Control	Works associated with the on-going management of invasive plants—such a repeat cutting and control treatments	September
2027	NWH - Invasive Plant Control	Works associated with the control of invasive plants within non-woodland habitats to maintain their conservation value and/or the necessary control of noxious weeds	September
2028	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	May

APPENDIX 1 : COMPARTMENT DESCRIPTIONS

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
1a	6.6	Ash	1995	Min-intervention	Diseases	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 often in clumps of one or just a few species such as ash, wild cherry, field maple, oak, and hazel. The scrub contains oak, hawthorn and sycamore together with suckering elm and blackthorn.						
1b	1.26	Ash	1988	Min-intervention		
The western and southern edges have screens of scrub and trees that are gradually spreading into the compartment. The main species composition includes ash, wild cherry, sycamore, young elm, and hazel.						
1c	2.03	Sycamore	1860	High forest		
There is a small clump of mature woodland towards the east side which has developed from an outgrown hedgerow. There are several examples of mature sycamore and horse chestnut along with oak, ash, wild cherry, hawthorn, and hazel.						
2a	3.63	Open ground	1731	Non-wood habitat	People issues (+tve & -tve), Sensitive habitats/species on or adjacent to site, Services & wayleaves	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.						

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
To the volunteer group, this area is known as Sleepy field and Thin field.						
2b	2.54	Open ground	1731	Non-wood habitat		
<p>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.</p> <p>To the volunteer group, this area includes Top field.</p>						
2c	2.58	Open ground	1731	Non-wood habitat		
<p>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.</p> <p>To the volunteer group, this area includes McDonalds and Parkrun field.</p>						
2d	2.92	Open ground	1731	Non-wood habitat		
<p>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.</p> <p>To the volunteer group, this area includes Guiding meadow and DofE corner.</p>						

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.

Windblow/Windthrow

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

Registered Office:

The Woodland Trust, Kempton Way, Grantham, Lincolnshire NG31 6LL.

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