WOODLAND TRUST

Marden Park

Management Plan 2011-2016

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MAPS

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 Consequently this printed version may quickly become out of date, particularly in relation to the planned work programme and on-going monitoring observations.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 or contact the Woodland Trust (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.

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. Our woods are managed to the UK Woodland Assurance Standard (UKWAS) and are certified with the Forest Stewardship Council® (FSC®) under licence FSC-C009406 and through independent audit.

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

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

The following guidelines help to direct our woodland management:

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

SUMMARY

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

1.0 SITE DETAILS

Site name:	Marden Park
Location:	Woldingham
Grid reference:	TQ369539, OS 1:50,000 Sheet No. 187
Area:	67.77 hectares (167.46 acres)
Designations:	Ancient Semi Natural Woodland, Area of Outstanding Natural Beauty, Green Belt, Site of Special Scientific Interest

2.0 SITE DESCRIPTION

2.1 Summary Description

Marden Park is a 67.8ha site, situated on the edge of the North Downs National Character Area (NCA), in the Surrey Hills Area of Outstanding Natural Beauty (AONB), just to the south of the village of Woldingham in Surrey and 3 miles/4.8 kilometers north of junction 6 for Godstone of the M25. Immediately surrounding the site is the North Downs Golf course to the east, fields to the north and west, and pockets of woodland owned privately or by the National Trust.

From the chalk plateau at 244m, upon which Marden Park sits, there are expansive views through the trees over Godstone, Oxted and Tandridge as the plateau drops away steeply to the south into the mud- and sand-stones of the Low Weald NCA. This landscape of chalk downland and wooded hill tops is why the area around and including parts of Marden Park is designated as Woldingham and Oxted Downs Site of Special Scientific Interest (SSSI). The chalk-derived, nutrient poor soils give rise to the characteristic chalk grassland, scrub and mature secondary woodland with pockets of ancient semi-natural woodland (ASNW) – all of which can be found in Marden Park.

The woodland at Marden Park is predominately naturally established secondary broadleaf woodland (51.21ha – compartments 2a, 3a, 3d and 4a, including the area known locally as The Rumps), dominated by ash and beech with areas of dense hawthorn scrub. Approximately 10ha of Marden Park, including the areas of Great Church Wood and Stubbs Copse (compartments 1a and 3b respectively) are designated ASNW and within these areas the canopy is more diverse – oak, cherry, whitebeam, field maple and hazel coppice add to woodland structural and species composition. An area in the southern part of the site, including the area of Horse Shaw (4.9ha, compartment 4b) is planted secondary woodland and part of this planting is over a pocket of ASNW. Planted species include conifers – Scots pine, European larch and Norway spruce accounting for approximately 10% of the otherwise predominately beech, ash and oak planted woodland canopy. The remaining 2.04ha (compartments 2b and 3c) is open space, which has been extended under the management of the Trust and is gradually being restored to chalk grassland.

Marden Park is effectively spread over three blocks but managed as one unit. The most northern block is bisected by a strip of land owned by National Rail as a deep railway lines runs beneath the site, separating compartments 2 and 3. Meanwhile, compartment 4 is the most southern block separated from the larger block by an area of private woodland. Marden Park was acquired is stages by the Woodland Trust, in 1986 the Trust acquired Great Church Wood (compartment 1a) and then in 1994, with support from the local community, the Trust acquired the rest of the site.

The wood is particularly popular with locals and is served by a local authority car park off Gangers Hill. Visitors include horse riders and cyclists who use the public and permissive bridleways that transect the site. Public rights of way passing through the site includes the North Downs Way which runs through the southern block of Marden Park and along its southern boundary parallel to Gangers Hill. The most regular users are local residents from Woldingham and the surrounding area. The Surrey Hills AONB also promotes the Woldingham Countryside Walk, a 9km waymarked circuit that takes in part of Marden Park. It is possible to walk between the northern and southern blocks of Marden Park as there is a permissive footpath through the adjoining private woodland.

The wood has an active volunteer group who help manage the wood and monitor its wildlife. There are also dormouse boxes in areas of Marden Park, which have been regularly checked by volunteers from Surrey Dormouse Group since 2011. Records from this monitoring are submitted to PTES.

2.2 Extended Description

Marden Park is a 67.8ha site, situated on the edge of the North Downs National Character Area (NCA), in the Surrey Hills Area of Outstanding Natural Beauty (AONB), just to the south of the village of Woldingham in Surrey and 3 miles/4.8 kilometers north of junction 6 for Godstone of the M25. Immediately surrounding the site is the North Downs Golf course to the east, fields to the north and west, and pockets of woodland owned privately or by the National Trust.

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3.0 PUBLIC ACCESS INFORMATION

3.1 Getting there

By bus: The 540 bus service from Caterham to Woldingham station is operated by Buses 4U (01883 732791) and runs three times a day, Monday to Friday only.

By train: Woldingham railway station is about one mile (1.7km) from the site. Turn right out of the station and walk along Church Road to the Great Church part of the woods. There is a kissing gate entrance on the right side of the road. There is also a public footpath starting from a minor road that runs from the south-west of the station.

For up-to-date information on public transport, visit traveline.org.uk (0871 200 22 33 – calls cost 12p per minute), or the Sussex County Council website at surreycc.gov.uk/roads-and-transport/buses-and-trains.

By car: Marden Park Wood is close to the village of Woldingham in Surrey. The main access point is the car park off Gangers Hill, south of the village.

From the M25, exit at Junction 6, following the A22 southbound, then the A25 westbound. This will bring you to Flower Lane, which runs into Gangers Hill.

From Woldingham, take the Northdown Road, which runs south from Station Road (the road that runs through the village centre). Follow Northdown Road for 0.8 miles. At the end of the road, turn right onto Gangers Hill and drive for 0.6 miles. The main entrance is on the right-hand side.

3.2 Access / Walks

The site has an extensive network totalling almost seven miles (11km) of maintained footpaths. The wood’s two sections (east and west) are separated by Chaldon Farm but connected by common land and a permissive path. The North Downs Way and the six-mile (10 km) waymarked Woldingham Countryside Walk both run through the site.

Apart from the stone-surfaced bridleways, all paths are unsurfaced, and there are some steep slopes, especially on the minor paths. Five entrances have interpretation boards.

Access points:
The main access point is via a wide gate from the car park off Gangers Hill (to the south of Woldingham). This leads in to the larger eastern part of the woods. There is a stone surfaced public bridleway running north, and another surfaced permissive bridleway to the left of this. Some short sections of path from the main car park may be suitable for scooter users, but are not suitable for wheelchair access.

Other access points to the eastern section:
• the north end of the public bridleway which leads from the school
• the end of Church Road from St Agatha's Church (kissing gate)
• two wide horse gates off Gangers Hill (one of which links to a public footpath)
• pedestrian entrance at the north end, via a footpath (stile)
• pedestrian entrance off Gangers Hill, via a footpath.

Access points to the western section:
• a main entrance off Gangers Hill
• a smaller entrance off Gangers Hill, which links to the North Downs Way
• another entrance on the north-west side of the wood, also linking to the North Downs Way.

There are no surfaced paths through the western section of the woods and access is by either kissing gate or through a narrow gap.

Volunteer work in the wood
A group of enthusiastic volunteers undertake regular practical tasks throughout the year, including woodland thinning, coppicing of hazel, and clearing scrub.

4.0 LONG TERM POLICY

Over time, the mature trees will decline to form veteran trees or collapse opening up gaps in the canopy for other species (e.g. beech and sycamore) to fill and increasing the wood's standing and fallen dead wood habitat. The impact of ash dieback (Hymenoscyphus fraxineus) will result in the overall decline and death of ash trees, which currently account for approximately 80% of the overall woodland canopy. Crown dieback, tree death and increased windblow, will further create gaps in the canopy for other species such as sycamore, beech and woody shrubs to take advantage of, increasing the structural diversity and species composition of the wood. This will enhance its SSSI favourability for biodiversity. The naturally established and planted secondary woodland area will continue to develop and eventually be as rich as the adjoining ancient woodland areas, the boundaries between becoming increasingly less defined.

The grassland (compartment 2b and 3c) will continue to be maintained as open space through appropriate scrub management, enhancing the chalk grassland community.

On-going monitoring and maintenance will ensure the wood remains a safe wood to visit, with infrastructure appropriate for the wood's relatively high visitor numbers.

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 Ancient Semi Natural Woodland

Description

Compartments (cmpts) 1a, 3b and parts of 4a are considered to be ancient semi-natural woodland (ASNW) and account for approximately 17% of the site (11ha). Cmpts 1a and 3b are part of SSSI and are considered to be in favourable condition when last surveyed in 2013.

These areas of woodland are distinct from the neighbouring secondary woodland, cmpt 1a more so than cmpt 3b. In cmpt 1a the species composition of the canopy is more diverse with mature/veteran oaks abundant in the canopy with ash secondary and occasional beech. Similarly, the understorey is more diverse both structurally - with an abundance of hazel coppice throughout the cmpt, and other species including holly, field maple, willow, cherry, silver birch, rowan, sycamore, hawthorn, crab apple, elder and blackthorn. The hazel coppice has been actively managed in the past, most recently by volunteers whilst under Woodland Trust ownership. There is evidence of enrichment planting, likely to have occurred prior to the Trust's ownership of the wood, as small tree guards can be found throughout the compartment, however, very few (if any) trees survived. In cmpt 3b, mature and pole stage ash is dominant with beech, whitebeam and oak as rarer components. A defining difference between 3b and neighbouring 3a is the understorey, as hazel coppice, field maple, hawthorn and woody shrubs including box form a distinctive shrub layer. The area of ASNW in cmpt 4a is less distinctive, notably the maturity of the canopy-dominating ash trees is greater in the ASNW designated area compared to the adjoining secondary woodland. Veteran ash and beech can be found throughout the ASNW and secondary woodland. Ash dieback is prevalent throughout the wood and when surveyed in 2019 ash trees varied from showing no signs of the disease on a handful of trees to advanced stages of decline, especially in the younger, pole-staged trees. Within the woodland blocks there is noticeable an increasing number of limb drop or whole tree failures.

The ANSW approximates to National Vegetation Classification (NVC) W12a – beech/oak/ash with a dog's mercury sub-community.

Like in the canopy, the ground flora is distinctively most diverse in the areas of ASNW. Dog's mercury and bluebells dominate alongside wood sorrel, wood anemone, cleavers, hedge wound wort, toothwort, forget-me-not, yellow archangel, lesser celandine, wood spurge, herb Robert, dog violet, docks and hard fern – many species typically associated with ancient woodland; with nettles and species of mosses under dense canopy and grasses alongside the paths . In the small glades, bramble, nettles and red current can be found. The regenerating tree species amongst the ground flora are dominated by ash seedlings along with beech, sycamore hawthorn, holly and elder.

There is a small patch of cherry laurel in cmpt 3b.

Significance

Marden Park is situated in London's Green Belt within the North Downs NCA. Woodland, especially ASNW - an irreplaceable habitat, is becoming increasingly fragmented in the South East- a region which supports 40% of the UK ASNW. The site is designated a SSSI partly for its woodland value.

Opportunities & Constraints

Factors Causing Change

Decline of ash due to ash dieback (Hymenoscyphus fraxineus)
Decline of overstood hazel coppice
Mammal damage (deer, rabbits, grey squirrels)
Invasive non-native species (laurel)

Long term Objective (50 years+)

Marden Park will be managed to increase the wood's resilience to pests and diseases and maximise the wood's biodiversity. As ash and mature beech trees decline, the abundance of sycamore may increase and the understorey will become more diverse with hazel, rowan, silver birch and field maple, as will the overall structure of the wood (enhancing the condition of the SSSI). The boundaries between the secondary woodland and the ancient woodland will become indistinguishable. The dieback of ash and mature trees will increase the overall deadwood habitat in the wood. The wood will also be free from invasive non-native species e.g. laurel and garden escapes and redundant planting material i.e. tree guards.

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

During the plan period (2019-24), management will be undertaken to control non-native species e.g. cherry laurel, old tree guards will be cleared, a number of hazel overstood coppicing stools will be re-coppiced and the decline of ash trees will be monitored and selectively felled where posing a risk to site visitors, neighbouring properties and roads.

- Alongside approximately 11km of footpaths across the site (tree safety Zone B), ash trees will be selectively felled, partly due to tree risk management but also to increase light levels. Work will begin in 2019 and be ongoing throughout the plan period.

- Cherry laurel (less than 0.05ha) in cmpt 3b will be cut and uprooted where possible, beginning 2019 with on-going monitoring.

- Redundant tree guards in cmpt 1a will be removed and disposed of. Work starting in 2019 by volunteers and be ongoing until cleared.

- Overstood hazel coppicing will be selectively re-coppiced, up to 40 stools over 5 years across cmpt 1a and 3b with the aim of creating a checkerboard effect.

- Deer impact assessment will be undertaken in 2020.

5.2 Natural Secondary Woodland

Description

Approximately 70% (47ha) of Marden Park is secondary woodland – cmpts 2a, 3a, 3d and 4a. All of which, excluding a fraction of cmpt 4a, is within the SSSI. At the point of the last assessment in 2013, cmpt 2a and areas of 4a were in an unfavourable recovering condition as they feature areas of chalk grassland which have a greater than desirable scrub and coarse vegetation component. Cmpts 3a and 3d were considered to be in favourable condition with “a good mix of tree species, age classes and varied structure with shrub layer over 30%”.

The canopy in all cmpts are dominated by ash high forest with frequent mature/veteran beech trees (there is significant, notable avenue of veteran beech pollards in cmpt 4a); and pockets of dense, mature hawthorn scrub, typically found on the slopes. Other secondary, more occasional or rarely occurring species include whitebeam, oak, yew, cherry and along the public right of way in 3a near the boundary with cmpt 3b, there are a handful of horse chestnut and a dozen or so Corsican pine. The understorey is dominated by hawthorn with rarer species including hazel, elder, holly, field maple, blackthorn, yew and crab apple. Ash dieback is prevalent throughout the wood. When surveyed in 2019, trees varied in their decline, younger trees were increasingly in stages of advanced decline whilst other, mature and more isolated tree appeared to show no signs of the disease. Within the ash dominated woodland blocks there is noticeable increase in the number of limbs drop and whole tree failures.

Similar to the ANSW, the natural secondary woodland approximates to National Vegetation Classification (NVC) W12a – beech/oak/ash with a dog’s mercury sub-community.

The ground flora is limited under the beech canopy, however, under the ash canopy dog’s mercury dominates with the occasional occurrence of ground ivy, buttercup, cleavers, dog violet, ferns, a small patch of yellow Himalayan balsam along the permission bridleway in cmpt 3a and a patch of wild garlic alongside the North Downs Way in cmpt 4a. Nettles can be found in areas of past disturbance, grasses alongside paths and mosses under dense shade i.e. under the hawthorn scrub. The dominant regenerating tree species is usually ash under ash canopies and beech under beech canopies. Other regenerating species include holly, hawthorn, elder, field maple and suckering coppiced hazel. Within cmpt 2a and 4a there are areas of chalk grassland, the largest of which is no greater than 30m2. The areas are unfenced, maintained through rabbit grazing and an end of summer cut and collect regime. For full habitat description see KF3: Semi Natural Open Ground Habitat.

Significance

The naturally arising secondary woodland increases the site's overall structure and resilience to threats such as ash dieback and climate change. It connects the areas of ASNW, increasing the core area of woodland as well as extending the habitat across the landscape. The scrub element provides valuable woodland edge habitat - a rich ecotone between the mature woodland and chalk grassland.

Opportunities & Constraints

Factors Causing Change

Decline of ash due to ash dieback (Hymenoscyphus fraxineus)
Mammal damage (deer, rabbits, grey squirrels)

Long term Objective (50 years+)

The natural secondary woodland will be maintained and enhanced to increase the site's overall resilience to biotic and abiotic threats and maximise the site's biodiversity. As ash trees decline, opening up the canopy, other species will be able to fill the gaps resulting in an increase in the wood's overall species composition and structural diversity. The dieback of ash will increase the overall deadwood habitat in the wood. Over time, tree species, such as beech and sycamore, colonising from the neighbouring ancient woodland, will form the high forest canopy over a diverse understorey. Ancient woodland ground flora will also have the opportunity to further colonise the secondary woodland and in the very long term the boundaries between the secondary woodland and the ancient woodland will begin to become indistinguishable.

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

During the plan period (2019-24), the main management focus will be on monitoring and managing the declining ash tree. Annual monitoring of ash trees will identify trees to be selectively felled where they pose a risk to site visitors, neighbouring properties and roads. Ridings and glades will be maintained through annual cutting.

- Alongside approximately 11km of footpaths across the site (tree safety Zone B), and along the 2km of road and boundary along a well-used track to a local school (525m) ash trees will be selectively felled, partly due to tree risk management but also to increase light levels. Work will begin in 2019 and be ongoing throughout the plan period.

- The areas of unfenced grassland in cmpt 2a and 4a will be cut annually in late summer with arisings cleared to one side.

- 200m glade opposite the hedgerow along the public bridleway on the boundary of cmpt 2b and 1a will be maintained annually at the same time as the second path cut. Scallop to be back to the mature tree line.

- Deer impact assessment will be undertaken in 2020.

5.3 Secondary Woodland

Description

Cmpt 4b (4.94ha) is an area of planted secondary woodland, partly on an area of ancient semi-natural woodland. Cmpt 4b and the area of 4a north and east of the 4b are not included in the SSSI. The north and east boundary of the compartment follows the line of an earth bank.

There are two distinct blocks of planting (not reflecting the area of ASNW and non-ANSW). As with the rest of the wooded component of Marden Park, the secondary woodland approximates to National Vegetation Classification (NVC) W12a – beech/oak/ash with a dog's mercury sub-community.

The northern block of 4b is dominated by mature beech (50%) forming a closed-canopy high forest, interspersed Corsican pine (15%), larch (<1%) and Norway spruce (5%). The conifers are concentrated along the northern west and east boundaries of the compartment – contouring the path and earth bank. The edge conifers are mature, timber-sized trees; whereas the conifers within the block (possibly used as a nursery crop for the beech) have been less successful and have largely failed. Towards the south-west corner of the beech-dominated block (alongside the North Downs Way), mature ash dominates the canopy, accounting for 30% of the canopy of the block. Under the beech canopy, there is no understorey and ground flora is sparse with pockets of bramble, nettles and ferns occurring where mature beech or the interspersed ash have collapsed. Under the lighter ash canopy, there is an understorey of hawthorn, hazel, sycamore, holly, field maple and elder saplings. The regenerating seedlings (less than 1m tall) found in the canopy gaps, is dominated by ash, however, all are failing as a result of browsing and effects of ash dieback. The dominate ground flora under the ash canopy is dog's mercury and towards the block edges wood sedge, common dog violet, red current, lords and ladies, wild garlic, bluebell, archangel, cleavers, primrose and wood speedwell can be found.

In this block, features of ancient woodland ground flora are present and a key factor causing change – declining of ash – is gradually opening up the closed beech canopy. The gaps created as the ash collapses are being filled by ground flora. As this continues the understorey species from under the ash and surrounding naturally secondary woodland, will increasingly colonise the gaps. However, the impacts of browsing may impede this.

The block to the south, is a significantly younger plantation. The drawn-up, even-aged, pole-stage canopy of beech (61%), oak (1%), ash (35%), Corsican pine and Norway spruce (3% combined), has seen little evidence of intervention, save one operation to whittle out some of the conifer. As such the oak and conifer component have failed and surviving trees have poor timber structures and beech in particular suffering from deer/squirrel damage. Under the dense canopy there is no understorey, however, within the block runs the ASNW and the ground flora partly reflects this. The flora is noticeably more abundant compared to the beech block and includes dog's mercury, bluebells (abundant), ground ivy, archangel, lords and ladies, lesser celandine, wild garlic, common dog violet, wood speedwell and mosses.

Like in the beech block, the declining ash is opening up the canopy. However, the impact from browsing and lack of understorey gives greater reason for intervention in the block to secure the ancient/natural woodland elements and improve the structure and composition of the stand.

Significance

The conifer, as a minor component in the canopy, increases the wood's structure and diversity. The planted woodland, when restored to resemble the natural secondary woodland, will enhance the site's structure and resilience to biotic and abiotic threats such as ash dieback and climate change. Within the landscape, the planted woodland increases the core area of wooded habitat and extends the habitat in the Downs.

Opportunities & Constraints

Factors Causing Change

Decline of ash due to ash dieback (Hymenoscyphus fraxineus)
Mammal damage (deer, rabbits, grey squirrels)

Long term Objective (50 years+)

The planted secondary woodland will increasingly merge into and become indistinguishable from the natural secondary woodland around it. The declining ash and conifer components will enable other species such as sycamore, hazel, hawthorn and field maple to colonise, increasing the wood's species and structural diversity. The dying trees also will increase the overall deadwood habitat in the wood. Ancient woodland ground flora will also have the opportunity to colonise the new woodland and in the very long term the boundaries between the secondary woodland and the ancient woodland will begin to become indistinguishable.

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

During the plan period (2019-24), management will be undertaken to thin the canopy in the younger planted block and conifers around the edge of the block thinned to further enable the blocks transition to resemble the natural secondary wood. Deer will be controlled to allow regenerating saplings to establish.

- In the young block, a 30% thin will target conifers and defected trees e.g. those will significant basal rot. Operation to occur once in the 5 year plan in 2020/2021 and then again in the subsequent plan.

- Around the edge of the compartment, mature conifers will be thinned targeting suitable timber trees. Operation to occur once in the 5 year plan in 2020/2021 and then again in the subsequent plan.

- Deer impact assessment will be undertaken in 2020 to inform appropriate deer control across the site.

5.4 Semi Natural Open Ground Habitat

Description

There are two chalk grassland areas (cmpts 2b and 3c) accounting for 3% of the site (2.04ha). The larger, more established area (cmpt 2b) is 1.43ha on a west facing slope. Along the east edge of the cmpt is a laid hedge, created by the wood's volunteer group in 2012. These areas have been managed through a cut and collect regime and/or grazing by sheep and goats. In 2016, the grassland area was extended to include cmpt 3c, previously a relatively unmanaged area of open ground. Now both grassland areas are fenced and connected by a fenced "link" across the land owned by National Rail with the intention of allowing both areas being managed partly through grazing.

The area is dominated by grass species (mostly upright broome with glaucous sedge and quaking grass frequent), bramble, old man's beard and woody vegetation (predominantly dogwood and thorn). Other flora includes common salad burnet, dwarf thistle, fairy flax, mouse-ear hawkweed, bird's foot trefoil, wild strawberry, milkwort, primroses, hairy violet, bright eye, marjoram, hedge bedstraw, a small population of common spotted orchids and round headed rampion. The habitat approximates to National Vegetation Classification (NVC) type of CG2/3 (a further survey is needed to fully determine the community). The two cmpts are included in the SSSI and were considered to be in an unfavourable-recovering condition when surveyed in 2013 due to the levels of woody scrub, wild clementis and false broome in the grassland.

Significance

Chalk grassland is a key habitat listed in the UK Biodiversity Action Plan. Chalk grassland supports an extremely diverse and unique range of plant and invertebrate species and is one of the richest habitats found in the UK. Besides its biological importance, chalk grassland is also a defining landscape feature of the North Downs, which Marden Park is a part of, and is of significant cultural and historical importance.

Opportunities & Constraints

Constraints
- Steep slope
- Continued incidents of vandalism and dog attacks
- Relatively small area for grazing management

Factors Causing Change

Scrub encroachment
Invasive species (e.g. old man's beard, false broome)

Long term Objective (50 years+)

The chalk grassland will be maintained at its current size, approximately 2ha, including up to 0.1ha of scrub around the grassland edge. Key indicator species for this habitat should be present including pyramidal orchid, wild marjoram, cowslip, chalk milkwort and yellow wort.

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

To establish a grazing programme in both grassland areas, maintaining approximately 20% scrub and 80% of grassland on all 2ha.

- The scrub in the link between cmpt 2b and 3c will be cut and collected every autumn, starting in 2019.

- Grazers, likely to include sheep and goats, will be on site almost all year round with the exception of mid-June to mid-July and January to March. Stocking rates will vary throughout the year, (e.g. 20-25 animals in the winter months and 6-12 in the spring and summer months), and with the possibility of concentrating the grazing in particular areas as informed by regular monitoring by volunteers and grazier. Grazier to produce a yearly grazing report.

- Cut and collect operation may be required, depending on success of grazing in mid-summer, post flowering and before animals return, subject to monitoring.

5.5 Connecting People with woods & trees

Description

Marden Park is part of the Welcoming Sites Programme (WSP), which aims to improve the visitor experience to this site. 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 the wood. An attractive and serviceable network of tracks and paths will further encourage the appreciation of the woodland 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. Access will better facilitate use by a wider range of visitors.

Marden Park is part of the North Downs and is located next to Woldingham (population c.2,100), an affluent village in Surrey. The wood is situated just off the M25 and is surrounded by a number of villages and towns including Oxted (population c.11,000) and Caterham (population c.21,000), and has an access A category designation (high usage with more than 20 people using one entrance per day). There is a main car-park on Gangers Hill which can hold up to 12 vehicles, and several parking lay-bys along the road.

There are 11km for footpaths through the wood, including a dedicated public bridleway, two public footpaths including part of the North Downs Way and a permissive bridleway, allowing horse riders an off-road route beside Gangers Hill. There is a waymarked trail, The Woldingham Countryside Walk, and four interpretation boards at the main entrances to the site, situated at the car park, the entrance close to Gangers Hill and Tandridge Hill Lane junction, southern stretch of Gangers Hill and the entrance off Church Road Although close to urban populations, the site is in a rural area and access is via a single track lane.

There are no current visitor numbers available, but the woodland and car park are generally used throughout the day. Visitors are primarily dog walkers, but the wood also appeals to young and older families.

The site is adjacent to private girls' school Woldingham School and to a riding school. There are also a large number of nursery, prep and primary schools in the local area.

An established volunteer group carry out practical tasks once per month through the winter, which includes coppicing and keeping paths open. Between 10 and 15 people usually attend the volunteer task days.

There are several Woodland Trust sites within a 25km radius of Marden Park, but none in its immediate vicinity. Neighbouring woodland in managed by the National Trust.

As the site sits within the North Downs, and the North Downs Way passes through it, this presents opportunities for promoting the woodland to hikers and ramblers, and for cross promotion of the site via relevant organisations and websites.

Significance

Marden Park provides an extensive area for quiet, informal recreation in an area of high scenic value which is appreciated by many pedestrian and equestrian visitors alike. Marden Park's location within the M25, within 30km of London and surrounded by towns and villages presents potential opportunities for activity in the site that ties in with the Woodland Trust's urban agenda and urban campaigns.

Opportunities & Constraints

Constraints
- Carpark is not owned by the Woodland Trust

Opportunities
- Educating the many users of the wood about how woodlands are managed by putting up informative signs whenever operations and grazing are happening, to explain the reason for management.

- Potential for activities linked to WT's Urban programme

Factors Causing Change

An increase in visitor numbers could cause a detrimental impact on the wood. A recent increase in bike use and anti-social behaviour in the wood could worsen. Marden Park is popular with dog walkers and dog walking companies - if this was to increase significantly it could have a detrimental effect on the visitor experience and localised path-side ecology.

Long term Objective (50 years+)

Marden Park woods should continue to offer a high quality visitor experience in line with a category A access designation. The woodland will provide an extensive area of quiet informal recreation to a wide range of users both from the local community and from further afield. The use of the site by visitors will be promoted through positive relationships with neighbouring tourist destination sites, with good signage and interpretation.

Entrances and signage will have a welcoming appearance and there will be a network of well-maintained paths providing a range of routes suitable for walkers with viewpoints over a range of varied habitat types, integrated with woodland management and wherever possible linking to the surrounding path network. Interpretation and waymarking that is fully integrated with and/or complements existing routes will provide visitors with information on routes and points of interest. Horse riding routes should be clear and well signed.

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

Public access will be maintained and enhanced over the plan period with the view to enable greater public engagement.

- Approximately 11km of path and 11 entrances will be maintained annually to allow continued access across the site. This will include strimming path edges and entrances, and appropriate tree safety work identified by Zone B safety inspections.

- Entrance infrastructure and signage will be refreshed and updated in 2019.

- Update orientation boards and replace waymarker and permissive bridleway posts in 2020.

- Hold a number of informative public guided walks in summer 2019, raising awareness of ash dieback management in the local community.

- Recruit a volunteer surveyor to help monitor grassland communities, ideally in 2019.

- Recruit a number of livestock monitors to help check on the livestock through grazing months, ideally in 2019 ready for when animals arrive on site early 2020.

- Recruit woodland wardens to walk the site on a regular basis noting things such as: interesting wildlife, maintenance issues or site problems/damaging activities, ideally in 2019.

- Build and encourage the work of the woodland working group throughout plan period. Site Manager to meet with the group at least twice a year and agree the group’s work programme for the year.

6.0 WORK PROGRAMME

Year	Type of Work	Description	Due By

APPENDIX 1: COMPARTMENT DESCRIPTIONS

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Key Features Present	Designations
1a	5.02	Oak (pedunculate)	1970	High forest	Very steep slope/cliff/quarry/mine shafts/sink holes etc		Ancient Semi Natural Woodland, Area of Outstanding Natural Beauty, Green Belt, Site of Special Scientific Interest
This compartment is known as Great Church Wood, and is the highest point of the site and includes a steep west facing bank dominated by beech trees and young ash. The cmpt is considered to be ancient woodland and is comprises of mixed broadleaves including oak, beech, ash, cherry, and an understorey of field maple, hazel coppice, rowan, holly, hawthorn, silver birch, elder, blackthorn sycamore and crab apple. The mature dominate trees date largely from two periods; the 1930's and 1970's. Ash and oak is dominant in the canopy and hazel coppice predominates in the understorey. Oak occurs more commonly in the north. The hazel coppice has been actively managed in the past, mostly by volunteers. There is evidence of enrichment planting, likely to have occurred prior to the Trust's ownership. The ground flora reflects the ancient woodland designation. Bluebells dominate alongside wood sorrel, wood anemone, cleavers, hedge wound wort, toothwort, forget-me-not, yellow archangel, lesser celandine, wood spurge, herb Robert, dog violet, docks, hard fern, nettle and species of mosses under dense canopy and grasses alongside the paths. In the small glades, bramble, nettles and red current can be found. The regenerating tree species amongst the ground flora are dominated by ash seedlings along with beech, sycamore hawthorn, holly and elder. Cmpt 1a is part of the SSSI (unit 005) and is considered to be in favourable condition when last surveyed in 2013.							
2a	9.96	Hawthorn species	1960	Min-intervention	Very steep slope/cliff/quarry/mine shafts/sink holes etc		Area of Outstanding Natural Beauty, Green Belt, Site of Special Scientific Interest

This compartment is dominated by ash to the east, with a greater coverage of blackthorn and hawthorn mixed with the ash in the west. There are occasional sycamore, beech, silver birch and yew in the northern part of the cmpt and whitebeam in the southern area. The understorey is mainly hawthorn and blackthorn, alongside occasional dogwood, elder and hazel. There are extensive carpets of mosses under the denser hawthorn and dog's mercury in particular is frequent throughout, especially in the more open areas to the west. Other species include bramble, clematis and ground ivy.

Also included in this cmpt are 2 glades, with viewpoints across to the western part of the northern block of woodland. These are maintained through an annual cut and collect regime.

Note: to south-west boundary of the compartment is a strip of woodland owned by National Rail and there are tall air vents for the railway tunnel (cylinder structure).

2b	1.43	NULL		Non-wood habitat	Management factors (eg grazing etc), Very steep slope/cliff/quarry/ mine shafts/sink holes etc		Area of Outstanding Natural Beauty, Green Belt, Site of Special Scientific Interest

This compartment is the main chalk grassland area of the site. Along the east edge of the cmpt is a laid hedge, established by the wood's volunteer group in 2012. This area has been managed through a cut and collect regime and a grazed by sheep and goats. It has a mixture of ash, blackthorn, hawthorn and dogwood scrub and other coarse vegetation e.g. bramble common throughout the grassland but with a concentration of scrub in the northern end of the cmpt, old man's beard along the north western edge and bramble in the southern west edge. In the western part of the cmpt there are some standing dead semi-mature ash trees that were thinned in 2008.

The area is dominated by grass species (mostly upright broome with glaucous sedge and quaking grass frequent), bramble, old man's beard and woody vegetation (dogwood). Other flora includes common salad burnet, dwarf thistle, fairy flax, mouse-ear hawkweed, bird's foot trefoil, wild strawberry, milkwort, primroses, hairy violet, bright eye, marjoram, hedge bedstraw, a population of common spotted orchids and round headed rampion. The habitat approximates to National Vegetation Classification (NVC) type of CG2/3 (a further survey is needed to fully determine the community).

The cmpt is included in the SSSI (unit 006) and is considered to be in an unfavourable-recovering condition when surveyed in 2013 due to the levels of woody scrub, wild clementis and false broome in the grassland.

This area was enlarged in 2017 by connecting with a second area of grassland (cmpt 3c) and fencing the whole as one unit, so grazing management can be introduced across the grassland areas.

3a	23.85	Ash	1950	High forest	Very steep slope/cliff/quarry/ mine shafts/sink holes etc		Area of Outstanding Natural Beauty, Green Belt, Site of Special Scientific Interest
Large quarry pits can be found in the western area of the cmpt. 3a is dominated by semi-mature/mature/veteran ash and beech with a strip of dense hawthorn scrub in the middle of the cmpt running from the southern boundary of the neighbouring field stretching to the permissive bridleway. Other secondary occasional or rare species include whitebeam, oak, yew, cherry and along the public right of way near the boundary with cmpt 3b there are a handful of horse chestnut and a dozen or so Corsican pine. The understorey is dominated by hawthorn or young ash with rarer species including hazel, elder, holly, field maple, blackthorn, yew and crab apple. The ground flora is limited under the beech canopy but dominated by dog's mercury under the ash canopy with the occasional ground ivy, buttercup, cleavers, dog violet, ferns, red current and a small yellow Himalayan balsam along the permission bridleway. Nettles can be found in patches of disturbance, grasses alongside paths and mosses under dense shade. Cmpt 3a is included in the SSSI (unit 006 and 009) and at point of the last assessment in 2013. Areas of the cmpt were unfavourable recovering (unit 009) as they feature areas of chalk grassland which have a greater than desirable scrub and coarse vegetation component. However, the majority of the cmpt (unit 006) is considered to be in favourable condition.							
3b	4.55	Ash	1970	High forest	Very steep slope/cliff/quarry/ mine shafts/sink holes etc		Ancient Semi Natural Woodland, Area of Outstanding Natural Beauty, Green Belt, Site of Special Scientific Interest

Cmpt 3b (also known as Stubbs Copse) is considered to be ancient semi-natural woodland. Large quarry pits are found in the western part of the cmpt – beech and yew trees are more abundant around the edge of the quarry. Mature and pole stage ash is dominant with beech, whitebeam, yew and oak as rare components. A defining difference between 3b and neighbouring 3a is the understorey, as hazel coppice, field maple, hawthorn and woody shrubs including box form a distinctive shrub layer. Ground flora is also more diverse than in the adjoining cmpt 3a, species include dog's mercury, bluebell, bramble, fern, foxglove, primroses and wood avens. Cmpt 3b is part of the SSSI (unit 006) and is considered to be in favourable condition when last surveyed in 2013.							
3c	0.61	NULL		Non-wood habitat	Management factors (eg grazing etc)		Area of Outstanding Natural Beauty, Green Belt, Site of Special Scientific Interest
This cmpt is dominated largely by scrub following the extension to the grassland area in 2017. Scrub is predominantly ash, hawthorn and willow. In the southern area of the cmpt bramble and coarse vegetation dominates while in the north grassland species can be found including grasses, common salad burnet, dwarf thistle, fairy flax, mouse-ear hawkweed, bird's foot trefoil, wild strawberry, milkwort, primroses, hairy violet, bright eye, marjoram, hedge bedstraw, a population of common spotted and other ochids. The habitat approximates to National Vegetation Classification (NVC) type of CG2/3 (a further survey is needed to fully determine the community). The cmpt is included in the SSSI (unit 006) and is considered to be in an unfavourable-recovering condition when surveyed in 2013 due to the levels of woody scrub, wild clementis and false broome in the grassland.							
3d	0.32	Ash	1960	High forest	No/poor vehicular access to the site		Area of Outstanding Natural Beauty, Green Belt, Site of Special Scientific Interest

Cmpt 3d has the same structure and composition as cmpt 3a, only separated by the road. A thin strip between the road and earth bank. Canopy dominated by ash – young to mature trees. Rare hazel coppice forms an understorey in places towards the southern end of the cmpt. Ground flora dominated by dog's mercury. Cmpt 3d is art of the SSSI (unit 012) is considered to be in favourable condition when last surveyed in 2013.							
4a	17.08	Ash	1950	High forest			Area of Outstanding Natural Beauty, Green Belt, Site of Special Scientific Interest
This compartment is secondary woodland. The west of this compartment on a west facing slope is dominated by hawthorn and blackthorn, with beech and ash dominating the central, northern and eastern parts of the cmpt. Understorey and occasional species include hazel coppice, whitebeam, sycamore, yew, field maple, and elder. Around the northern boundary are planted lines of Douglas fir and Scots pine. The area of ASNW in cmpt 4a is not very distinctive, notably the maturity of the canopy dominating ash trees is greater in the area designated ASNW compared to the adjoining secondary woodland. Ground flora is dominated by dog's mercury with a patch of wild garlic and wood avens. The cmpt includes an area of grassland with good calcareous grassland is dominated by upright brome, with scattered wood false brome. Frequent wild parsnip, marjoram and salad burnet, with hairy violet, hedge bedstraw, rough hawkbit, dwarf thistle eyebright and wild basil. Little bare ground, except at margins of track. The part of cmpt 4a to the west of cmpt 4b part of the SSSI. Unit 013 includes the glades and is considered to be in an unfavourable recovering condition (unit 013 and 010) and is considered to be in favourable condition when last surveyed in 2013.							
4b	4.94	Beech	1950	PAWS restoration			Area of Outstanding Natural Beauty, Green Belt

Cmpt 4b is considered to be PAWS. It is divided into two blocks. The northern block is predominately mature beech (50%) and semi-mature ash (30%) with occasional scattered individual Corsican pine (15%), European larch (<1%) and Norway spruce (5%). The ash is more abundance in the western area of the cmpt under which there is more ground flora predominately dog's mercury, with ferns, bramble and nettles dominating under the lighter canopy. Other ground flora includes red current, lords and ladies, wild garlic, wood speedwell, tormentil, yellow archangel, cleavers, primrose and bluebells – most diverse along path edge. Rare understorey species found under the ash canopy include hazel, field maple, holly and elder. No conifer regen found. Possible pre-plantation species include mature ash and beech trees on the edge of the cmpt.

The southern part of the cmpt is younger, denser and more evenly mixed. Planted species include beech (64%), oak (1%), ash (35%), and Corsican pine and Norway spruce accounting for <1% - most of the conifer component is dead. No understorey. Ground flora dominated by bluebells with dog's mercury, ground ivy, mosses, lords and ladies, common violet, wood speedwell, wild garlic, lesser celandine, archangel and ash seedlings.

Appendix 2: Harvesting operations (20 years)

Forecast Year	Cpt	Operation Type	Work Area (ha)	Estimated vol/ha	Estimated total vol.
2020	4b	Thin	0.00		0

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.