



# Denge & Pennypot Wood

## Management Plan

# 2019-2024

## MANAGEMENT PLAN - CONTENTS PAGE

<b>ITEM</b>	<b>Page No.</b>
Introduction	
Plan review and updating	
Woodland Management Approach	
Summary	
1.0 Site details	
2.0 Site description	
2.1 Summary Description	
2.2 Extended Description	
3.0 Public access information	
3.1 Getting there	
3.2 Access / Walks	
4.0 Long term policy	
5.0 Key Features	
5.1 Ancient Semi Natural Woodland	
5.2 Semi Natural Open Ground Habitat	
5.3 Connecting People with woods & trees	
6.0 Work Programme	
Appendix 1: Compartment descriptions	
Appendix 2: Harvesting operations (20 years)	
Glossary	
<b>MAPS</b>	
Access	
Conservation Features	
Management	

## THE WOODLAND TRUST

### INTRODUCTION

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

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

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

### PLAN REVIEW AND UPDATING

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 Consequently this printed version may quickly become out of date, particularly in relation to the planned work programme and on-going monitoring observations.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

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

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## WOODLAND MANAGEMENT APPROACH

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

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

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

[www.woodlandtrust.org.uk](http://www.woodlandtrust.org.uk). Our woods are managed to the UK Woodland Assurance Standard (UKWAS) and are certified with the Forest Stewardship Council® (FSC®) under licence FSC-C009406 and through independent audit.

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

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

The following guidelines help to direct our woodland management:

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

## SUMMARY

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

## 1.0 SITE DETAILS

<b>Site name:</b>	Denge & Pennypot Wood
<b>Location:</b>	Garlinge Green, Chartham
<b>Grid reference:</b>	TR104523, OS 1:50,000 Sheet No. 179
<b>Area:</b>	49.73 hectares (122.89 acres)
<b>Designations:</b>	Ancient Semi Natural Woodland, Area of Outstanding Natural Beauty

## 2.0 SITE DESCRIPTION

### 2.1 Summary Description

Part of the ancient semi-natural woodland complex known as Denge Wood on the North Downs, Denge and Pennypot Wood is home to many invertebrates, including the rare Duke of Burgundy butterfly.

## 2.2 Extended Description

Denge and Pennypot Wood, (49.73ha) acquired by the Woodland Trust in 1977 is situated southwest of Canterbury and close to the village of Chartham and set within the Kent Downs Area of Outstanding Natural Beauty (AONB). This site is an ancient semi natural woodland (ASNW) and a Site of Nature Conservation Interest (SNCI) due to its ancient woodland habitat and areas of abandoned chalk grassland which now supports a scrub habitat. Denge and Pennypot Wood is part of the much larger Denge Wood complex covering 734ha which is mostly owned by the Forestry Commission, and is recognised as the UK's 38th largest ancient woodland complex. Due to its size, the Denge Wood complex forms a significant part of the local landscape that is important for a number of key species such as nightingale, Duke of Burgundy fritillary, fringe-horned mason bee and orchid species. These species and many more rely upon the maintenance of suitable habitat through coppicing of woodland and scrub habitats and other woodland management works.

Denge and Pennypot Wood is located on a flat plateau position on the North Downs and is dissected by several dry valleys. The soils are acidic clay with flints and gravels with more calcareous soils on the valley sides and particularly within The Warren area (sub compartment 1b). Most of the plateau positioned woodland was converted to sweet chestnut coppice with oak standards in the 18th century but small areas of native mixed broadleaved coppice containing hornbeam, field maple and ash have survived along with a small area of beech and yew woodland in sub compartment 1j. Many of the beech are veteran in age. An area of abandoned chalk grassland exists in the south east of the site called The Warren. This is managed for its scrub habitats benefiting dormouse and invertebrates and in particular rare species such as Duke of Burgundy fritillary, white-spotted sable moth and drab looper moth. This same area has some spectacular orchid species such as twayblade, lady and pyramidal.

In recognition of the site's importance for butterflies, wide ride habitats with short rotation coppiced margins were created in 1996-98 which circulate the site. This was extended further in 2010 to link and join up with wide ride habitats in neighbouring ownership within the Denge Wood complex.

An ancient wood bank passes through this woodland and marks the historical division between Denge Wood and Pennypot Wood, although these are now managed as one wood. Other old internal boundaries within this wood are indicated by old hornbeam pollards.

Denge and Pennypot Wood has a good path network for public access which links to public rights of way which pass through the Denge Wood complex. There is a small Woodland Trust car park off Pennypot Lane on the west side of the wood. A permissive horse route also passes through the site which is managed by Toll Rides Off-Road Trust (TROT) and links to similar permissive routes through the Denge Wood complex.

## 3.0 PUBLIC ACCESS INFORMATION

### 3.1 Getting there

General location:

Denge and Pennypot Wood is situated approximately 1.75 miles south of Shalmsford Street village (which adjoins Chartham village), and approximately 7 miles south of the city of Canterbury. Denge Wood can be reached by road or by Public Footpath.

By road from Shalmsford Street: from the village centre, head east along Shalmsford Street passing the school. Turn right down Mystole Lane and then after 0.25 mile turn left up Pennypot Lane signposted to Thruxted. Continue up the hill until you reach a wooded area and The Woodland Trust car park for Denge and Pennypot Wood will shortly be found on the left hand side.

By Public Footpath (PRW): There are several PRW's which cross through Denge and Pennypot Wood.

PRW CB471 from Pennypot Lane south of Thruxted Farm, head south east into woodland. At the next footpath junction take PRW CB384 to the right which will lead you eventually into Denge and Pennypot Wood.

PRW CB392 from Garlinge Green village. From the central village "green", take the track west past Garlinge Court Farm and into the woodland. Having entered the woodland, keep straight on along the main track and after approximately 200 metres turn right and follow the track which leads down a slope - this is PRW CB392. At the bottom of the slope you will find The Woodland Trust entrance to Denge and Pennypot Wood on the right hand side.

Both footpaths have unmodified grass and earth surfaces, which can get slippery and muddy when wet.

For more information on PRW's in Kent, look at "Explore Kent" found on the main Kent County Council website.

General overview of paths & entrances:

Entrances: There are 3 main entrances to Denge and Pennypot Wood.

- 1 entrance (our main entrance) is from our car park off Pennypot Lane. This has 1 exit into the wood via an all access kissing gate suitable for pushchairs.
- 2 entrances are from Public Footpath CB392: both are via pedestrian squeeze gaps.

There are also numerous tracks (some along Public Footpaths) which enter Denge and Pennypot Wood from our neighbouring woodland owners. There are pedestrian squeeze gaps at some of these entrances.

All of the paths are unmodified grass and earth surfaces some with small ruts, which can get slippery and muddy when wet. There are some steep slopes in Denge and Pennypot Wood

A horse route goes through Denge and Pennypot Wood operated by Toll Rides (Off-Road) Trust - see their website for further details [www.tollrides.org.uk/](http://www.tollrides.org.uk/) or telephone 01622 735599, correct as of May 2019. Entrances to this are through locked gates from Pennypot Lane and off Public Footpath CB392.

Parking:

Parking is available for up to 3 cars at our car park off Pennypot Lane which is open 24 hours a day. There are no specific facilities for locking bikes to apart from the rustic post and rail fence which surrounds the car park.

There is no parking available in Garlinge Green village.

Public Transport:

The nearest bus stop: Shalmsford Bridge on the A28 at the west end of Shalmsford Street village. This is approximately 1.75 miles away from Denge and Pennypot Wood - see General Location above.

The nearest train station: Chartham station which is on the Canterbury - Ashford line. Chartham station is approximately 2.5 miles from our car park along public roads.

This information is from Traveline website as at May 2019. Further information about public transport is available from Traveline - [www.travelinesoutheast.org.uk](http://www.travelinesoutheast.org.uk) or phone 0871 200 2233.

### 3.2 Access / Walks

General overview of paths & entrances:

Entrances: There are 3 main entrances to Denge and Pennypot Wood.

- 1 entrance (our main entrance) is from our car park off Pennypot Lane. This has 1 exit into the wood via pedestrian squeeze gap.
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Parking:

Parking is available for up to 3 cars at our car park off Pennypot Lane which is open 24 hours a day. There are no specific facilities for locking bikes to apart from the rustic post and rail fence which surrounds the car park.

There is no parking available in Garlinge Green village.

## 4.0 LONG TERM POLICY

In fifty years' time, Denge and Pennypot Wood will be a part of a resilient landscape within the Denge Wood complex retaining its ancient woodland and former chalk grassland scrub habitat areas. The woodland will contain a diverse structure with areas of over mature sweet chestnut coppice and areas of yew woodland managed through minimal intervention, and areas of actively managed coppice which are cut on rotation leaving a scattering of standard trees of long lived species so providing a good range of different aged habitats. A managed wide ride network with pinch points will continue to link up the actively coppiced and managed scrub areas within Denge and Pennypot wood. This ride habitat network will also continue to link up to the extensive wide ride habitat network within the wider Denge Wood complex beyond the Woodland Trust ownership which contains actively coppiced woodland, so helping the flow of species around the complex. Through the active management of coppiced areas of woodland and scrub, habitat for a range of key BAP species of invertebrate, bird and mammal species, including woodland specialist species which rely on temporary open space, will be provided for. Due to predicted climate change pressures, being part of a large and resilient woodland complex with its diversity of habitats and ecological connectivity within the wider complex will help to ensure the biodiversity interest at Denge and Pennypot Wood has a good chance of surviving and adapting to the changing circumstances.

The minimal intervention areas of over mature coppice and yew woodland will see an increase in the age of the trees and will therefore accumulate dead wood and so will help to support a large range of invertebrates and fungi. In addition, as the trees senesce there will be an increasing prevalence of coppice stools splitting and falling apart. This will not only help to generate more dead and decaying wood but also allow the regeneration of an understory through increasing light levels. This is to be expected as a previously managed coppice woodland converts to a more semi natural woodland habitat through minimal intervention.

Deer numbers will have undoubtedly increased in 50 years' time but their numbers will be monitored and controlled if the deer population has become too high and is preventing the woodland from regenerating.

Although the site will retain its tranquil character, it will be visited by a moderate number of visitors each year who appreciate and respect walking in a wooded landscape with diverse habitats, along a well-maintained network of paths.

The management of our woods is based on our charitable purposes, and is therefore focused on improving woodland biodiversity and increasing people's understanding and enjoyment of woodland to help create a UK rich in native woods and trees, for people and wildlife.

Many of the Tree Charter principles are brought to life at Denge and Pennypot, such as "sustain landscapes rich in wildlife", "grow forests of opportunity and innovation", "protect irreplaceable trees and woods", "make trees accessible to all", "combat the threats to our habitats" and "strengthen our landscapes with trees".

## 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

Denge and Pennypot Wood is ancient semi natural woodland (ASNW) growing on clay with flints over chalk bedrock supporting a tree, shrub and ground flora vegetation community of NVC (National Vegetation Community) W10, oak woodland with bramble and W8, ash, field maple woodland with dog's mercury. There are small areas on the eastern fringes of cpts. 1f and 1i which contain NVC W13 (yew on the thinner chalk soils on steep slopes). Most of these areas were badly damaged in the 1987 and 1990 storms and still contain substantial numbers of fallen (and now decaying) trees and are being left to regenerate naturally. The ground flora within the ancient woodland is not especially "rich" although there are good displays of bluebell and wood anemone in spring from the W10 areas.

Substantial areas of Denge and Pennypot were planted up with sweet chestnut during the 18th century with a few retained oak standards growing amongst this coppice type. The coppice is cut on rotation and in recent years this has been set at 25-30 year rotation for the rustic fencing market. An area of approximately 32ha is under active coppice management.

Areas managed through minimal intervention covering approximately 4.7ha include coppice and also beech and yew woodland. These areas are being left to senesce and accumulate decaying wood. The coppice area in cpt. 1g contains pure sweet chestnut with a developing understorey of hornbeam and invading sycamore; the beech and yew woodland situated in cpts. 1j contains many over mature veteran beech trees many of which have collapsed or are in a high state of decline plus a small number of ash trees and areas of pure yew. This area was badly hit by the 1987 storm resulting in much windblow much of which was left as it fell with sycamore invading into the open gaps in the canopy plus ash.

Old hornbeam pollards, often seen as linear features through the wood mark old boundaries of previous ownership or boundaries of coppice cants. In the 1990's attempts at re pollarding some of these trees wasn't successful as many have declined in health due to fungal infections.

Up to 26 species of butterfly have been recorded at Denge and Pennypot Wood including 3 BAP species (Duke of Burgundy, dingy skipper and white admiral butterflies) which are reliant on the temporary open space habitat. This habitat is found within the recently coppiced areas, along the managed wide rides set up in 1996-98 and extended in 2010 and within The Warren area. The managed wide rides extend to approximately 6ha.

Marsh tit, nightingale, willow warbler and turtle dove have all been recorded on site. 100's of moth species have also been recorded including white-spotted sable moth, drab looper, Breckland Plume, Scarce Light Plume and Sub-angled Wave.

During 2007-10 through a Butterfly Conservation led project, there was a concerted effort within the

Denge Wood complex to encourage landowners to resume coppicing to provide the temporary open space habitat needed for woodland specialist invertebrates and birds. This project also encouraged creation of wide ride habitats, and enabled the Woodland Trust's ride system to be joined to a wider network of managed rides. This has particularly benefited the Duke or Burgundy which had been in decline within the Denge Wood complex before these works.

Ash dieback (*Hymenoscyphus fraxineus*) was discovered at Denge and Pennypot Wood in 2012 and most obviously seen affecting young natural regeneration at that time. By 2019, a significant proportion of mature ash trees were showing signs of crown reduction with some trees almost dead. The resulting increase in light levels to the woodland floor has seen an increase in bramble growth plus tree regeneration of ash, hazel and sycamore.

### Significance

Ancient semi-natural woodland (ASNW) is a dwindling and irreplaceable habitat and as such all remnants of ancient woodland needs to be protected from further loss. On the North Downs the ASNW areas are predominately situated within an intensive farmed (arable) landscape, with little habitat connectivity. Denge and Pennypot Wood is significant in being part of the much larger woodland complex of Denge Wood and is thus more secure in terms of habitat continuity and connectivity. Denge Wood has a high biodiversity interest associated with open habitat areas formed by coppicing, ride edge management and remnant chalk grassland areas which are important habitats for birds and invertebrates.

Protection of ASNW is a key objective of The Woodland Trust.

### Opportunities & Constraints

#### Opportunity:

There is a significant opportunity to link habitats within the wider Denge Wood complex through cooperation between different ownerships across boundaries.

To use this site as a demonstration site linked to landscape scale management/restoration and resilient wooded landscapes.

Coppice woodlands are traditionally low on deadwood habitats, with well-spaced standards trees perhaps supplying the only deadwood within the wood along with the hornbeam pollards. By allowing some of our stands of coppice to senesce, this will provide old growth characteristics which are never fully represented in traditionally active coppice woodlands. Species diversity and abundance will in the long term increase by allowing natural succession to take place.

#### Constraints:

Pure sweet chestnut coppice is relatively "species poor" compared to mixed native broadleaved coppice and will take decades to diversify.

Ash dieback fungus identified on site in 2012 will have a long term effect on the wood through killing ash trees, although ash forms a very minor component within the canopy.

The clay soils which become wet in winter time and the European Protected Species status of dormouse which are present, restricts the seasons in which active management work can be accomplished.

### Factors Causing Change

**Plant health:**

Ash dieback fungus identified on site in 2012 will have a long term effect on the wood through the killing of ash trees, although ash forms a minor component within the canopy. Retain ash trees as long as possible so that resilient trees can be identified and kept. Sycamore is to be accepted as a component of the resulting woodland as ash dies out.

**Deer:**

Fallow deer present but in low numbers. Deer impact assessments to be carried out and culling to start when ancient woodland components are being damaged and threatened.

**Invasive plants:**

A small amount of rhododendron has been present within the ancient woodland. The presence of threatening invasive species to be absent or minor with containment and eradication work carried out as is necessary.

**Climate Change:**

This will bring negative affects to ancient woodland habitats. Connectivity within the landscape to allow for species migration between woodlands will be an important feature to help combat the negative effects of climate change.

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

Woodland biodiversity tends to be greater in wooded areas which are structurally diverse in terms of their age, species, edge habitat potential, understory and dead and decaying wood component. The long term objective is to develop varied and robust native woodland with diverse and complex structure within the different woodland habitat types such as managed high forest, coppice, standards, rides, dead and decaying wood, areas left to develop by natural processes and all well represented within this woodland. This will be achieved through coppicing and retaining standards and recruiting more standards as each cant is coppiced and other interventions such as ride side management.

Areas to coppice during particular plan periods will be dictated by their rotation age and their condition as a result of windblow and tree disease. The aim is to achieve a diverse age range of actively coppiced areas covering approximately 32ha set within a mosaic of minimal intervention areas of beech and yew woodland and over mature coppice and all connected by a maintained wide ride habitat of approximately 3km in length which links out to the wider Denge Wood complex. The minimal intervention areas formed of collapsing coppice stools will be where natural processes are allowed to shape the habitat. This will allow the development of more naturalised woodland characteristics with a broader age range of trees through increasing amounts of regeneration, a developing woody shrub layer and the proportion of standing and fallen deadwood will be increasing.

To maintain this diverse habitat to ensure survival of a healthy and secure ground flora with appropriate deer numbers. The presence of threatening invasive species to be absent or minor with containment and eradication work as necessary.

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

The short term objective is to contribute towards the creation/ maintenance of structurally diverse woodland through coppicing, ride management and the removal of invasive non-native species if any reappear. This will be achieved through:

- Coppicing

Approximately 8.5ha of sweet chestnut dominated coppice to be felled through the plan period felling one cant each year averaging 1.4ha coppice within compartments 1a and 1d. Standards will be retained within the areas coppiced and the recruitment of “new” standards will occur to create (in the long term) a density of approximately 8-12 trees per acre (20-30 per ha), with additional standards recruited where necessary each time the areas are coppiced. Standards are to be a mixture of long term species (oak, hornbeam, wild cherry) where possible, but more likely to be of stored sweet chestnut. Adjacent cants will not be cut until the coppice regrowth has reached a minimum of 2m in height with successful regrowth of cut stools, supplemented with natural regeneration of tree species to maintain an adequate stocking density where coppice stools have died of no less than 1100 stems per hectare. To re-cut hornbeam pollards with less than 20 years’ regrowth if they are adjacent to the areas being felled particularly along ride edges and if the light levels from adjacent coppice are sufficient to allow good regrowth.

- Ride edge management

During the plan period a 3 zone wide ride habitat with short rotation coppiced edges is to be maintained along approximately 3km of rides, maintaining pinch points where designated. There will be an annual programme of works to cut the vegetation within the 3 zones with zone 1 cut annually, zone 2 areas cut on a rotation of 3-5 years, and zone 3 areas cut on a rotation of 7-10 years, and all cut in a piecemeal fashion. This will accentuate the woodland edge habitat providing valuable temporary open space coppice habitat.

- Timber lorry access

During 2019 to seek planning permission to create a hard standing area in 2020 (approximately 25m x 12m in area) at the management gateway from the car park; to provide space for safe parking of a timber wagon off the car park.

- Minimal intervention areas

To ensure 3 fallen lying trees per ha and 4 trees per ha allowed to die standing, all greater than 20 cm diameter.

## 5.2 Semi Natural Open Ground Habitat

### Description

The semi natural open ground habitat is found in The Warren (cpt.1b, 5.83ha). This area contains remnants of chalk grassland, but is mostly covered in scrub habitat over thin chalky soils. The 1813 Ordnance Survey map indicates that The Warren area was open ground and presumably grazed, but this ceased during the mid-20th century. Since grazing ceased substantial parts of The Warren reverted to woody scrub species with species such as dog wood, hawthorn, wayfaring tree, blackthorn, privet, spindle and birch.

The small remnant of species rich chalk grassland is found along the rides and in an area in the middle of The Warren which still contains a sward dominated by tor-grass with viper's bugloss, orchid species such as twayblade, lady, butterfly, common spotted, pyramidal and fly orchids along with primrose which the Duke of Burgundy relies upon as a food source. Other plants to be found include common rockrose (*Helianthemum nummularium*), wild thyme (*Thymus drucei*), mouse-ear hawkweed (*Pilosella officinarum*), wild marjoram (*Origanum vulgare*) common milkwort (*Polygala vulgaris*), goldenrod (*Solidago virgaurea*) fed on by the white-spotted sable moth, fly orchid (*Ophrys insectifera*) and others characteristic of chalk grassland.

The Warren provides an important habitat within Denge and Pennypot of chalk grassland (along the rides) which is a BAP priority habitat with successional scrub habitat grading into woodland. Other species of importance found in this habitat are white-spotted sable moth (*Anania funebris*) and drab looper moth (*Minoa murinata*) both BAP species, fringe-horned mason bee (*Osmia bicolor*) whose status is a national notable species, dingy skipper, and green hairstreak. Other BAP species, nightingale and dormouse are present within the scrub habitat.

The Warren is linked by wide ride habitats within Denge and Pennypot Wood and also beyond the Woodland Trust's boundary to the Denge Forest complex and its landscape scale coppicing.

### Significance

Loss of the majority of chalk grassland in this part of the wood during the mid 20th century would have been a significant loss of habitat. Now that The Warren has become scrub, managing it so that it is maintained as scrub and prevented from forming true woodland, forms an important woodland edge habitat. The species richness of the remnant chalk grassland along the rides provides a contrasting habitat to coppice managed woodland as the majority of Denge and Pennypot Wood is sweet chestnut coppice. It also provides a visual feature within the wood.

### Opportunities & Constraints

**Opportunity:**

To perpetuate a scrub habitat and remnant chalk grassland area growing on thin chalky soils which provide habitat for dormouse and invertebrates including colonies of the Duke of Burgundy and other BAP species. The wide ride habitat is able to link this area to other parts of Denge and Pennypot Wood and to the wider Denge Wood complex.

**Constraints:**

The limits or boundaries of The Warren are defined by areas of ancient semi-natural woodland and so cannot be enlarged. (A wide ride habitat link was created in 2004/05 between The Warren and Bonsai Bank owned by the Forestry Commission with the agreement of the owner of the privately owned woodland situated in between the 2 sites).

**Factors Causing Change**

Natural succession to scrubby woodland which would be a negative effect for this habitat;

Deer damage - too high a population could reduce the richness of the ground flora preferentially feeding on flowers. (See Key Feature f1 above for further information).

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

The long term objective is to achieve structural diversity of different age classes within the scrub habitat (5.0ha) and along the ride edges and rides with the remnant chalk grassland (0.8ha). This diversity should be well represented within this part of Denge and Pennypot Wood.

Areas of scrub to coppice during particular plan periods will be dictated by their rotation age. The aim is to achieve a diverse age range from 0 to at least 8-10 year old scrub in any one year retaining a scattering of birch standards and connected by a maintained wide ride habitat containing the remnant chalk grassland area. This latter habitat along with the rides will be maintained as chalk grassland and prevented from scrubbing over to maintain some floristic interest. Mature scrub coppice particularly containing hazel will be retained around the edge of The Warren as a stable food source and habitat for dormouse.

To maintain this diverse habitat to ensure survival of a healthy and secure ground flora with low deer numbers.

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

The short term objective is to contribute towards the maintenance of structurally diverse woodland, open and scrub habitats through coppicing of scrub, and ride edge management and mowing.

- Coppicing of scrub on a 8-10 year rotation to prevent the scrubby areas reverting completely to woodland:

To create a patchwork of newly cut scrub areas across The Warren by cutting up to 3 areas each year either by machine or by hand, each area being between 0.08ha to 0.58ha in size and all adjoining the wide ride habitat. Arisings to be removed and placed around the edge of the cut areas. Birch trees (standards) are to be left at a spacing of 10-15m apart within each worked area to provide dappled shade conditions and shelter. Over this plan period approximately 3.89ha of scrub is to be cut in total as indicated in the map in the Appendix.

- Mowing of chalk grassland:

Annual mowing of approximately 880m of rides to 2.5-3.0m width; 14no. short rotation coppiced edges up to 5m wide are to be maintained along these rides through The Warren by an annual programme of works to cut the vegetation in a piecemeal fashion on a rotation of 3-5 years. This will help to maintain the chalk grassland sward where present and accentuate the woodland scrubby edge providing valuable temporary open space coppice habitat.

## 5.3 Connecting People with woods & trees

### Description

Denge and Pennypot Wood is classified by The Woodland Trust as a category B site, where we are expecting a moderate level of public access (5-15 people using one entrance per day) and a site which is important for demonstrating our corporate objectives. The public have access to the wood from the car park off Pennypot Lane, from the village of Garlinge Green via a public right of way and from the wider Denge Wood complex via a public right of way. The permissive path and public rights of way total approximately 3.6km/2.25miles throughout the wood.

Horse riders have access along a permissive route operated through Toll Rides Off-Road Trust. Denge and Pennypot Wood along with the rest of the Denge Wood complex suffers periodically from illegal motorbike and quad access, which at Denge and Pennypot Wood has concentrated mainly at the highly sensitive semi natural open ground habitat. Fly tipping along Pennypot Lane can also be an occasional problem.

Visitor information boards are located at 2 major entrance points into Denge and Pennypot Wood. Other open access land within the Denge Wood complex is provided by the Forestry Commission which includes the small nature reserve of Bonsai Bank approximately 500m due south of Denge and Pennypot Wood along the public right of way.

Denge and Pennypot is used by mainly dog walkers during the daytime and serves the many small village communities within the area such as Chartham (1.8 miles, pop. 4260), Chilham (3 miles, pop. 1124), Petham (4.5miles, pop. 708) and Waltham (2.9 miles, pop. 436). Canterbury (5 miles pop. 55240) and Ashford (9.3 miles pop. 74204) are the largest cities and towns near to Denge and Pennypot Wood.

Other Woodland Trust sites nearby are Earley Wood near Petham, Park Wood near Chilham and Victory Wood near Whitstable.

Within a short distance (less than 10 miles) there are a number of other attractions and areas for outdoor recreation including the historic city of Canterbury, Broadham Down a 16-hectare nature reserve east of Chilham managed by the Kent Wildlife Trust, Chartham Vineyard (CT4 7HU) and Chilham one of the top 10 prettiest villages in Kent.

### Significance

Public access to this woodland helps fulfil one of the Woodland Trust's corporate objectives which is 'Life's better with trees: Strengthening the role of trees and woods in our landscapes and communities and rekindling our love of them'; and also fulfilled in one of the 10 Tree Charter Principles: to "make trees accessible to all".

Denge and Pennypot Wood enables access to a large ASNW and gives an opportunity for the Woodland Trust to promote the message of ancient woodland habitats and the importance of its protection.

### Opportunities & Constraints

**Opportunities:**

Denge and Pennypot Wood is a large wood with a good network of paths to enjoy along with its fantastic display of spring flowers; It is also part of the more extensive Denge Wood which is mostly owned by Forestry Commission (FC), and there are good links out of the Woodland Trust area to reach FC land; to demonstrate conservation management by Woodland Trust.

**Constraints:**

The clay with flint soil tends to make winter walking muddy and slippery on well used paths. Some parts of the permissive path network contain steep parts to them into and out of the dry valleys.

None of the permissive paths have any surfacing which makes wheel chair access difficult.

Illegal motorbike and quad access can be an occasional problem in The Warren area which can blight the public enjoyment of this wood as well as doing environmental harm.

**Factors Causing Change**

Fly tipping; motorbike access

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

A well established and safe network of paths for informal public access throughout Dering Wood where responsible visitors can appreciate and respect this wood with its different habitats and wildlife interest without causing disturbances. The visitor numbers to be in line with its category B status with provision for parking on site in a car park if required. The provision of information boards to be available on site if required.

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

During this plan period, the short term objective is to continue to provide public access at Denge and Pennypot Wood which is safe and enjoyable. How this will be achieved:

- Path mowing

3.6km (2.25 miles) of paths will be maintained to allow continued access across the whole site for pedestrians by mowing as appropriate during the summer months. A horse route along 1.7km (1.1 miles) of permissive access along the same path network will also be maintained during the plan period.

- Car park

To maintain the car park and its perimeter fencing in a serviceable condition during the plan period.

- Site based information and enjoyment

To continue to provide information boards at 2 main entrances and replace if they become damaged or illegible.

- Monitoring of antisocial behaviour

To monitor the antisocial use of the woodland by motorbikes, quads and fly tipping along Pennypot Lane during this plan period and prevent access where possible into the wood. Liaise with Kent Police if antisocial behaviour occurs.

Annual inspection of all gates and constant monitoring of path surfaces.

- Tree safety

Annual Zone A tree safety inspection. Fungal survey to be carried out once in every 24 month period in the autumn with a summer survey in between to check trees' crowns.

Zone B tree safety inspections are to be carried out annually due to ash dieback fungus.

Arboricultural work to be carried out as appropriate.

- Site boundary management

The woodland vegetation along the public road is to be flailed in November/December each year to ensure there is no interference with users of the highway year; where applicable that there is a minimum height clearance above the full width of the highway to 5.1m.

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## 6.0 WORK PROGRAMME

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

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Key Features Present	Designations
1a	6.77	Sweet chestnut	1800	Coppice		Ancient Semi Natural Woodland, Connecting People with woods & trees	Ancient Semi Natural Woodland, Area of Outstanding Natural Beauty
<p>Formed predominately of sweet chestnut coppice with a scattering of birch and oak standards. All the areas of coppice have been cut over since the 1980's with the last felling taking place in 2001. Hornbeam pollards exist along many of the track boundaries and internally within the old worked coppice areas. The majority of the woodland is typical of a W10 National Vegetation Classification. The following coppice cants are contained within this sub compartment: 1a1, 1a2, 1a3, 1a4, 1a5.</p>							
1b	5.83	Woody shrubs	1950	Non-wood habitat	Sensitive habitats/species on or adjacent to site	Ancient Semi Natural Woodland, Connecting People with woods & trees	Area of Outstanding Natural Beauty
<p>Area of former chalk grassland known as The Warren and now contains successional chalk scrub species such as privet, dogwood, hawthorn, birch, wayfaring tree, spindle and yew. This compartment is situated in a dry valley with gentle slopes down to the east and south. Public Footpath from Garlinge Green skirts along the eastern edge which is the property boundary. Several permissive paths cross this compartment linking into the circular ride of cpt. 1c. For scrub management purposes the area is split into 18 units (1b1 - 1b18).</p>							
1c	6.24	Woody shrubs	1998	Coppice		Ancient Semi Natural Woodland, Connecting People with woods & trees	Ancient Semi Natural Woodland, Area of Outstanding Natural Beauty
<p>This sub-compartment is formed by the wide ride habitat created through Denge and Pennypot Wood in 1998 and extended in 2010 situated either side of the existing circular track and permissive path through the centre of the wood. This compartment crosses between the 2 dry valleys. It is typically 25-30m wide throughout, with the permissive path at the centre of this strip.</p>							

1d	5.81	Sweet chestnut	1800	Coppice		Ancient Semi Natural Woodland, Connecting People with woods & trees	Ancient Semi Natural Woodland, Area of Outstanding Natural Beauty
<p>Formed predominately of sweet chestnut coppice with a scattering of oak standards. The eastern side of this sub-compartment descends into a dry valley. All the areas of coppice have been cut over since the 1980's with the last felling taking place in 2013. Hornbeam pollards exist along many of the track boundaries and internally within the old worked coppice areas. The majority of the woodland is typical of a W10 National Vegetation Classification.</p> <p>The following coppice cants are contained within this sub compartment: 1d1, 1d2, 1d3, 1d4.</p>							
1e	3.25	Sweet chestnut	1800	Coppice		Ancient Semi Natural Woodland, Connecting People with woods & trees	Ancient Semi Natural Woodland, Area of Outstanding Natural Beauty
<p>Formed predominately of sweet chestnut coppice with a scattering of oak standards and a line of mature beech trees along or close to The Woodland Trust's boundary. The western side of this sub-compartment descends into a dry valley and an old trackway passes diagonally through this part from southwest to northeast direction. All the areas of coppice have been cut over since the 1980's with the last felling taking place in 1998. Hornbeam pollards exist along many of the track boundaries and internally within the old worked coppice areas. The majority of the woodland is typical of a W10 National Vegetation Classification.</p> <p>The following coppice cants are contained within this sub compartment: 1e1, 1e2.</p>							
1f	12.23	Sweet chestnut	1800	Coppice		Ancient Semi Natural Woodland, Connecting People with woods & trees	Ancient Semi Natural Woodland, Area of Outstanding Natural Beauty

Formed predominately of in rotation sweet chestnut coppice with a scattering of oak standards and some areas of hornbeam and mixed broadleaved coppice. The western side of this sub-compartment descends into a dry valley and a small area fringes The Warren area of chalk grassland. All the areas of coppice have been cut over since the 1980's with the last felling taking place in 2009. Hornbeam pollards exist along many of the track boundaries and internally within the old worked coppice areas. A major woodbank passes through the middle of the wood in a northeast to southwest direction. This formally separated 2 different ownerships in the past. Old chalk workings or holes can be found in the central southern part.

The majority of the woodland is typical of a W10 National Vegetation Classification, although fringing The Warren area W13 prevails and nearer the open ground habitat of The Warren it changes again into a W8 woodland type. Here there are scattered mature beech trees, ash and sycamore dominate the canopy along with thickets of yew.

The following coppice cants are contained within this sub compartment: 1f1, 1f2, 1f3, 1f4, 1f5, 1f6, 1f7, 1f8.

1g	2.08	Sweet chestnut	1800	Min-intervention		Ancient Semi Natural Woodland, Connecting People with woods & trees	Ancient Semi Natural Woodland, Area of Outstanding Natural Beauty
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Formed predominately of sweet chestnut coppice with a scattering of oak standards and some areas of hornbeam and mixed broadleaved coppice. The western side of this sub-compartment descends into a dry valley. The coppice was last felled in 1970's. An obvious line of hornbeam pollards exist along the western boundary of The Woodland Trust's land and other pollards are found within the old worked coppice areas.

The majority of the woodland is typical of a W10 National Vegetation Classification with W8 appearing in the dry valley section on the western side.

1h	1.68	Sweet chestnut	1800	Coppice		Ancient Semi Natural Woodland, Connecting People with woods & trees	Ancient Semi Natural Woodland, Area of Outstanding Natural Beauty
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Formed of hornbeam mostly with some sweet chestnut and previously cut for coppice with the last felling occurring in 1999. The ground drops sharply away on the eastern side into the neighbouring ownership within the Denge Forest complex.

The following coppice cant is contained within this sub compartment: 1h1.

1i	1.27	Sweet chestnut	1800	Coppice		Ancient Semi Natural Woodland, Connecting People with woods & trees	Ancient Semi Natural Woodland, Area of Outstanding Natural Beauty
<p>Formed predominately of sweet chestnut coppice with a scattering of oak standards in the north and south of this sub-compartment. All the areas of coppice have been cut over since the 1980's with the last felling taking place in 1996. The eastern side merges into The Warren area with more mixed broadleaves and less sweet chestnut.</p> <p>The following coppice cant is contained within this sub compartment: 1i1.</p>							
1j	2.66	Yew	1700	Min-intervention	Very steep slope/cliff/quarry/mine shafts/sink holes etc	Ancient Semi Natural Woodland, Connecting People with woods & trees	Ancient Semi Natural Woodland, Area of Outstanding Natural Beauty
<p>An area of semi natural woodland mostly perched on the top of the dry valley which forms sub compartment 1b (The Warren), but there is a steep drop at the southern end of 1j into the dry valley. W8 woodland characteristics with areas of W13 dominated by yew. Some fine yew specimens, but also windblown sections with yew from 1987/1990 storms. W8a woodland dominated by ash with invasive sycamore with scattered mature beech trees. The southern boundary (Woodland Trust external boundary) is formed by a line of veteran hornbeam pollard trees.</p>							
1k	1.48	Sweet chestnut	1800	Coppice		Ancient Semi Natural Woodland, Connecting People with woods & trees	Ancient Semi Natural Woodland, Area of Outstanding Natural Beauty
<p>Formed predominately of sweet chestnut coppice with a scattering of oak standards. The western side of this sub-compartment descends into a dry valley. The coppice was last felled in 1999. An obvious line of hornbeam pollards exist along the western boundary of The Woodland Trust's land and other pollards are found within the old worked coppice areas.</p> <p>The majority of the woodland is typical of a W10 National Vegetation Classification with W8 appearing in the dry valley section on the western side.</p> <p>The following coppice cant is contained within this sub compartment: 1k1.</p>							

## Appendix 2: Harvesting operations (20 years)

Forecast Year	Cpt	Operation Type	Work Area (ha)	Estimated vol/ha	Estimated total vol.
2020	1a	Coppice	1.26	148	186
2020	1a	Coppice	1.72	148	254
2020	1a	Coppice	1.27	148	188
2021	1a	Coppice	1.18	148	175
2022	1d	Coppice	1.13	148	167
2023	1f	Coppice	2.01	148	297
2025	1i	Coppice	1.26	99	125
2026	1f	Coppice	1.83	137	250
2027	1g	Coppice	1.48	135	200
2028	1d	Coppice	0.82	124	102
2029	1f	Coppice	1.44	110	158
2030	1a	Coppice	0.87	138	120
2032	1e	Coppice	2.37	148	350
2034	1e	Coppice	1.20	148	177
2036	1f	Coppice	0.94	149	140

## 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.