

Three Rivers District Council

# Bishop's Wood and Batchworth Heath

Greenspace Action Plan

2023 – 2028



## OVERVIEW

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### Greenspace Action Plans

Greenspace Actions Plans (GAPs) are map-based management plans which specify activities that should take place on a site over a stated period of time; these activities will help to deliver the agreed aspirations which the site managers and stakeholders have identified for that site. The GAP is reviewed annually, in conjunction with the Countryside Management Service (CMS) and other relevant bodies, so that any outstanding tasks can be rescheduled as necessary.

### Public Engagement

Engagement with stakeholders is at the centre of effective management planning on any site. An initial engagement period was held in December 2022 and January 2023, to establish core aims and objectives for the site; these are reflected in Section 3. A second stage of engagement in May 2023 enabled stakeholders to comment on the proposed management actions for the site.

### Version Control

Version	Issue Date	Details	Author	Reviewed	Approved
Draft	03/05/23		RB	AT	KB
1	07/06/23		RB	AT	KB

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## 1.0 SUMMARY

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### 1.1 Site Summary

Site Name:	Bishop's Wood and Batchworth Heath
Site Address:	Bishop's Wood White Hill Rickmansworth Nearest postcode WD3 1PX  Batchworth Heath London Road Rickmansworth Nearest postcode WD3 1QB
Grid Reference:	Bishop's Wood – TQ069918 Batchworth Heath – TQ077924
Size:	Bishop's Wood – 38.5ha Batchworth Heath – 3.8ha Long Spring – 4ha White Hill Wood – 3.9ha
Designations:	Registered Common Land – Batchworth Heath (CL019) Conservation Area – Batchworth Heath Woodland Tree Preservation Order (1957) – Bishop's Wood Country Park – Bishop's Wood Metropolitan Green Belt Local Wildlife Site – Bishop's Wood (89/003), Batchworth Heath Common (89/001), Long Spring (89/011), White Hill Wood (89/030) Ancient Semi-natural Woodland – Bishop's Wood, Long Spring
Owner:	Three Rivers District Council (TRDC)

## 1.2 Vision Statement

This plan will build on the successes of the last ten years of management, which have brought the woodland back into positive conservation management and dramatically improved visitor facilities. As a former Site of Special Scientific Interest (SSSI) Bishop's Wood was once a site of national conservation importance and it remains one of the most ecologically important woodlands in Hertfordshire. Our aspiration is to restore and link together the valuable surviving fragments of ancient woodland and heathland habitats, working towards a site which has regained its previous conservation value. Alongside this we will continue to focus on public access and engagement to increase the number of visitors and build links between Bishop's Wood and Batchworth Heath.



## 2.0 SITE DESCRIPTION

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### 2.1 Introduction

Bishop's Wood is a 38.5 hectare woodland between Rickmansworth and Northwood in the south-western corner of Hertfordshire. It is largely ancient semi-natural woodland (ASNW) and the majority of this is considered to be plantation on ancient woodland sites (PAWS). It is a Local Wildlife Site (89/003), became a Country Park in 1988 and lies within the Green Belt. There are no public rights of way across Bishop's Wood, but there is unrestricted public access. The [London Outer Orbital Path \(LOOP\)](#) (see also [Ramblers Inner London Area](#)) passes through both this site and Batchworth Heath.

Batchworth Heath is a 3.8 hectare green space 300m east of Bishop's Wood. It is Registered Common Land (CL019), part of the Batchworth Heath Conservation Area, within the Green Belt and incorporates the Batchworth Heath Local Wildlife Site (89/001).

The plan will include Long Spring, a 4.0 hectare ASNW and Local Wildlife Site (89/011) north-west of Bishop's Wood. All three sites are owned by TRDC and managed by TRDC in partnership with CMS. A further section of land between Bishop's Wood and Batchworth Heath, a 3.9 hectare Local Wildlife Site (89/030) referred to as White Hill Wood, will also be considered; although this is not currently in the ownership of TRDC, it has proved impossible to identify the owner over a number of years.

Despite its location, Bishop's Wood lies within a rural wooded landscape, surrounded by agricultural land and other woodland and with no significant settlements in its immediate vicinity. Batchworth Heath has a more suburban feel, being dissected by the A404 between Rickmansworth and Northwood and several other minor roads, and located on the edge of Northwood.

Bishop's Wood comprises three contiguous woodlands: Park Wood to the north, Bishop's Wood to the west and Lockwell Wood to the east (Figure 3). It occupies the shallow valley of a stream flowing from east to west, which ends at a swallow hole within the woodland. The wood has a wide structural diversity, with both mature and more recent mixed plantation, much of which has been heavily thinned, and remnants of hornbeam and hazel coppice reflecting its historic character. Relic populations of heather on more acid soils reflect the likelihood that this area was once managed as wood pasture. There are several rides, which have been recently restored, and other open areas within the woodland created by thinning.

A car park at the southern end of the wood provides access to a network of mainly surfaced permissive paths and bridleways, including an easy access loop. Benches, interpretation boards and a picnic area can be found around the main walking routes. The LOOP provides the only pedestrian access to the site, from Harefield to the west and Moor Park to the east, via Batchworth Heath.

The main ecological interest of Batchworth Heath, an ancient common, is its unimproved acid grassland, which is complemented by neutral grassland, a pond with diverse marginal flora, scrub, and secondary woodland. Its recreational potential

is limited by the several roads which cross the common. Public access is unrestricted.

These sites are closely linked, with complementary habitats. A combined GAP provides a continuing opportunity to develop these links, to improve connectivity between the sites and to explore ways in which their management can be coordinated.

This GAP is written in the context of an ongoing woodland management plan for Bishop's Wood, approved by the Forestry Commission and covering the period from 2020-2030, and an ongoing Countryside Stewardship agreement for Bishop's Wood, covering the period from 2020-2024.



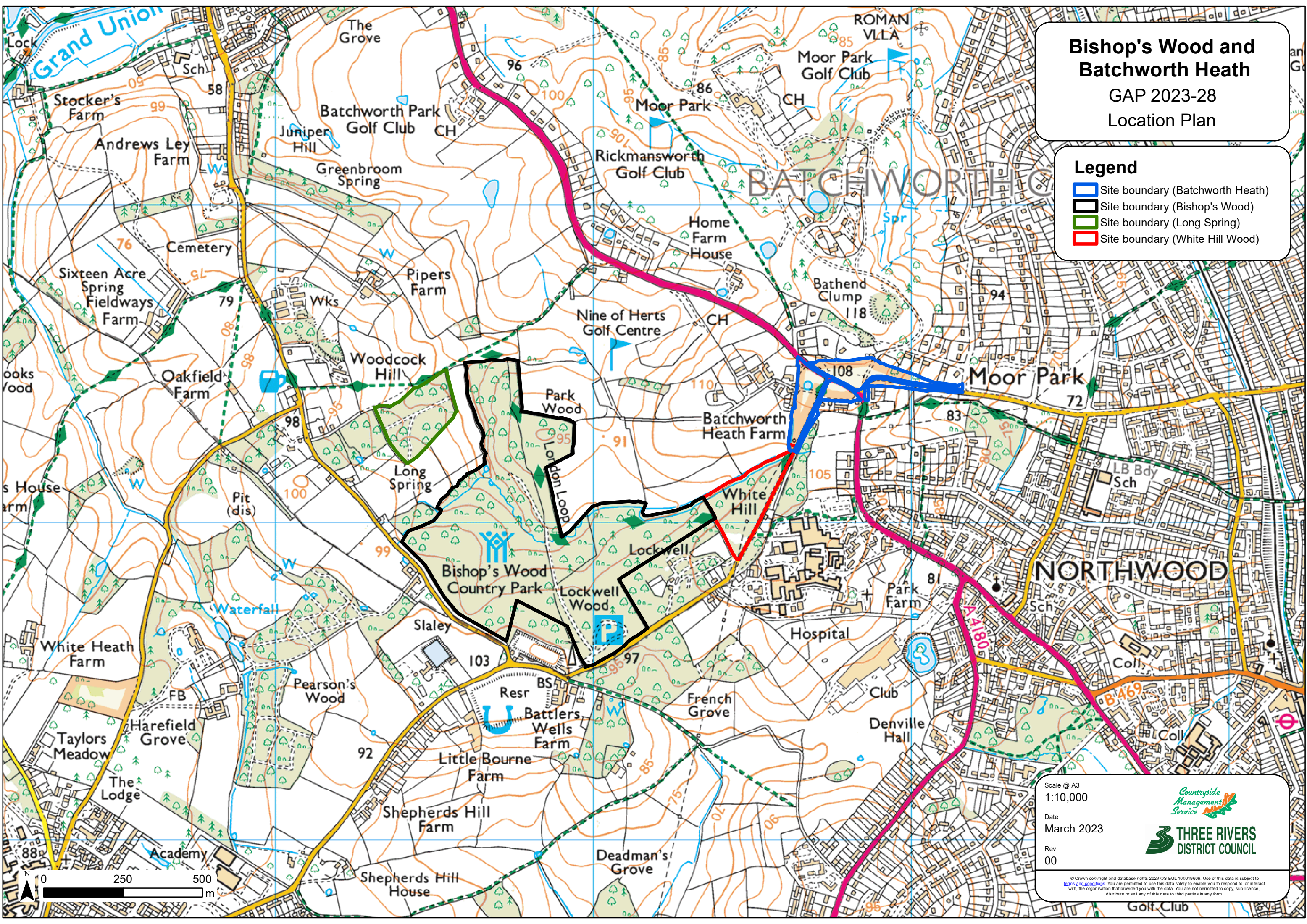
# Bishop's Wood and Batchworth Heath

## GAP 2023-28

### Location Plan

#### Legend

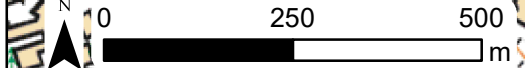
- ▭ Site boundary (Batchworth Heath)
- ▭ Site boundary (Bishop's Wood)
- ▭ Site boundary (Long Spring)
- ▭ Site boundary (White Hill Wood)



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

















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# Bishop's Wood and Batchworth Heath GAP 2023 - 28 Constraints Plan

## Legend

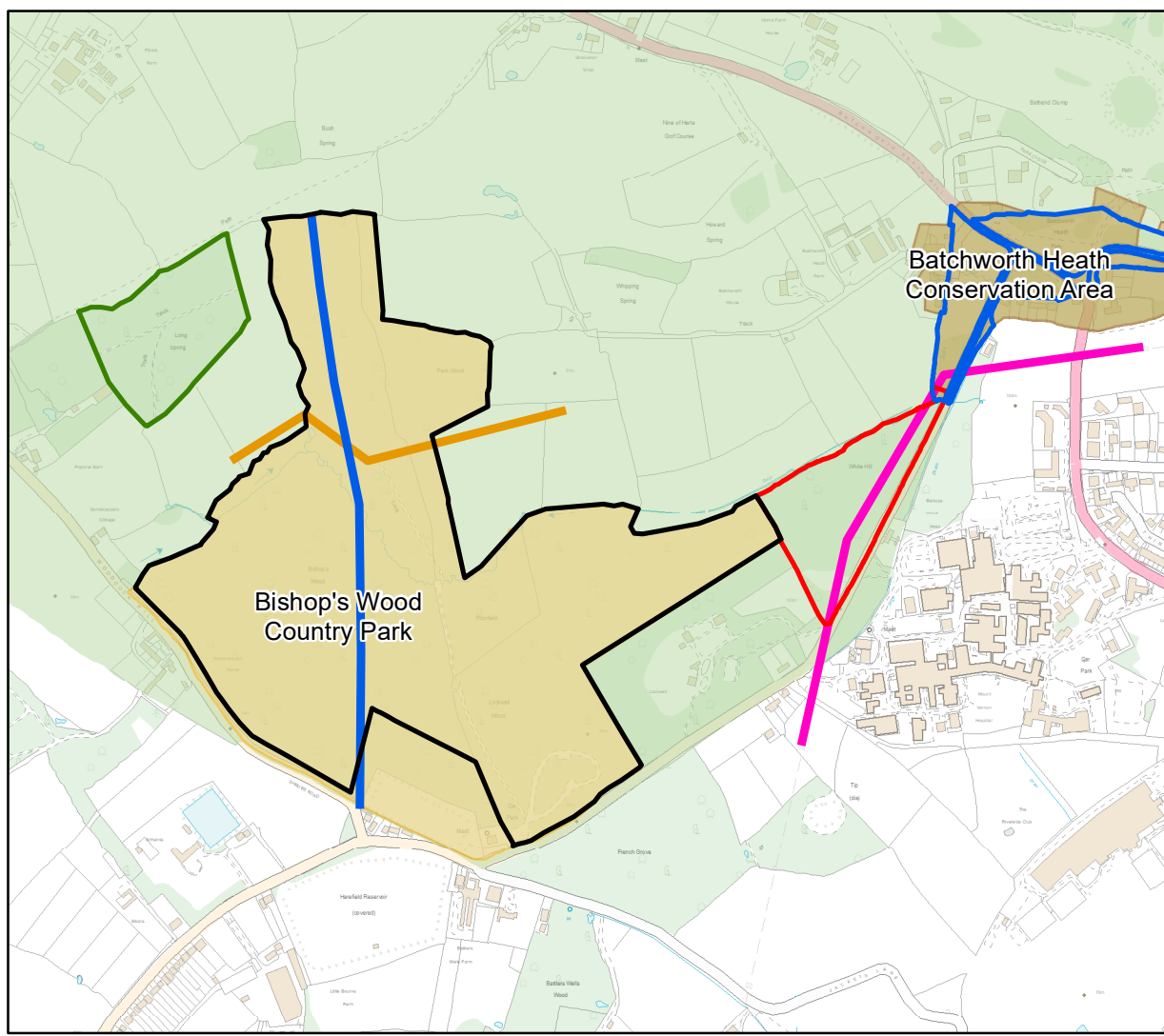
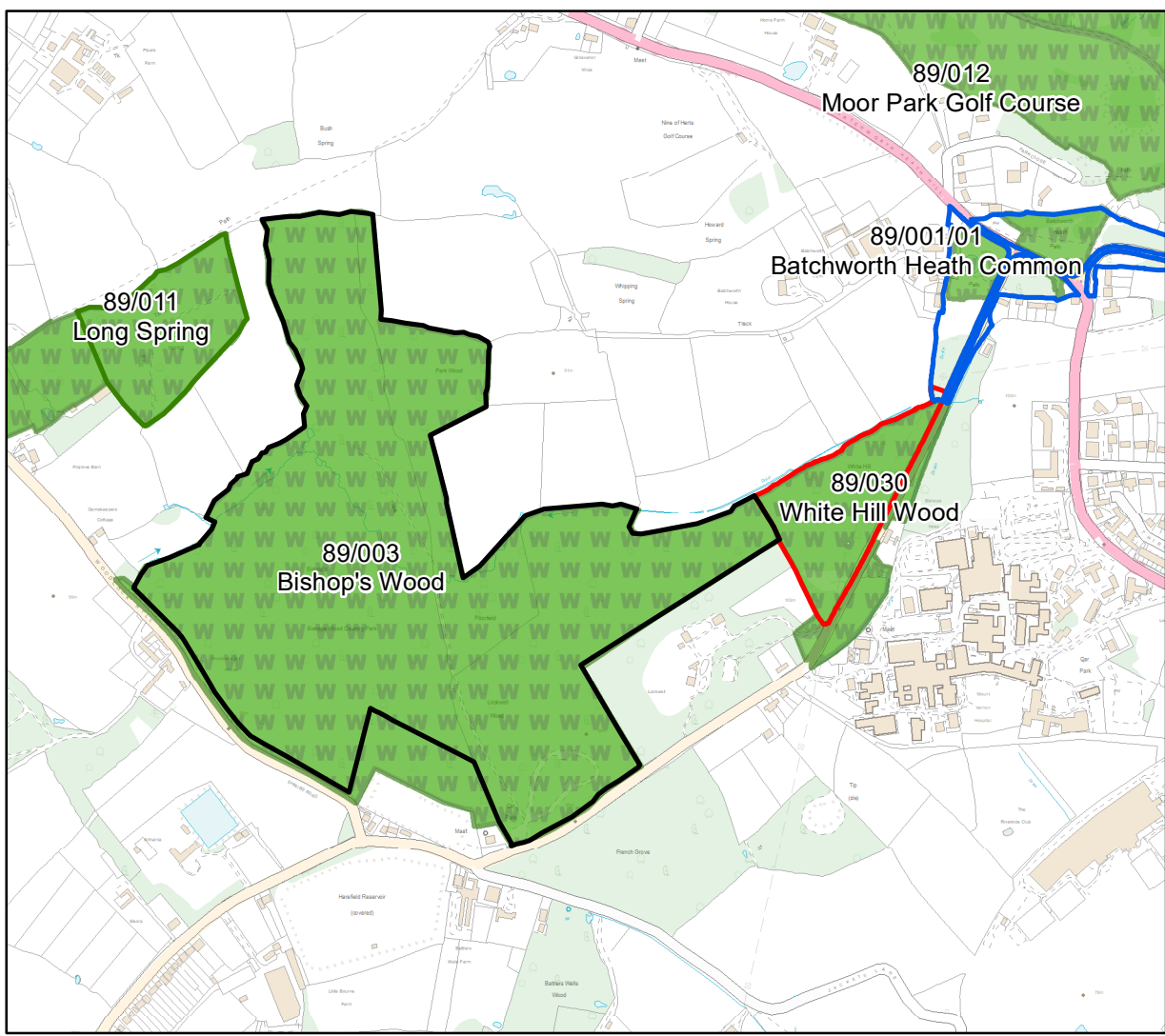
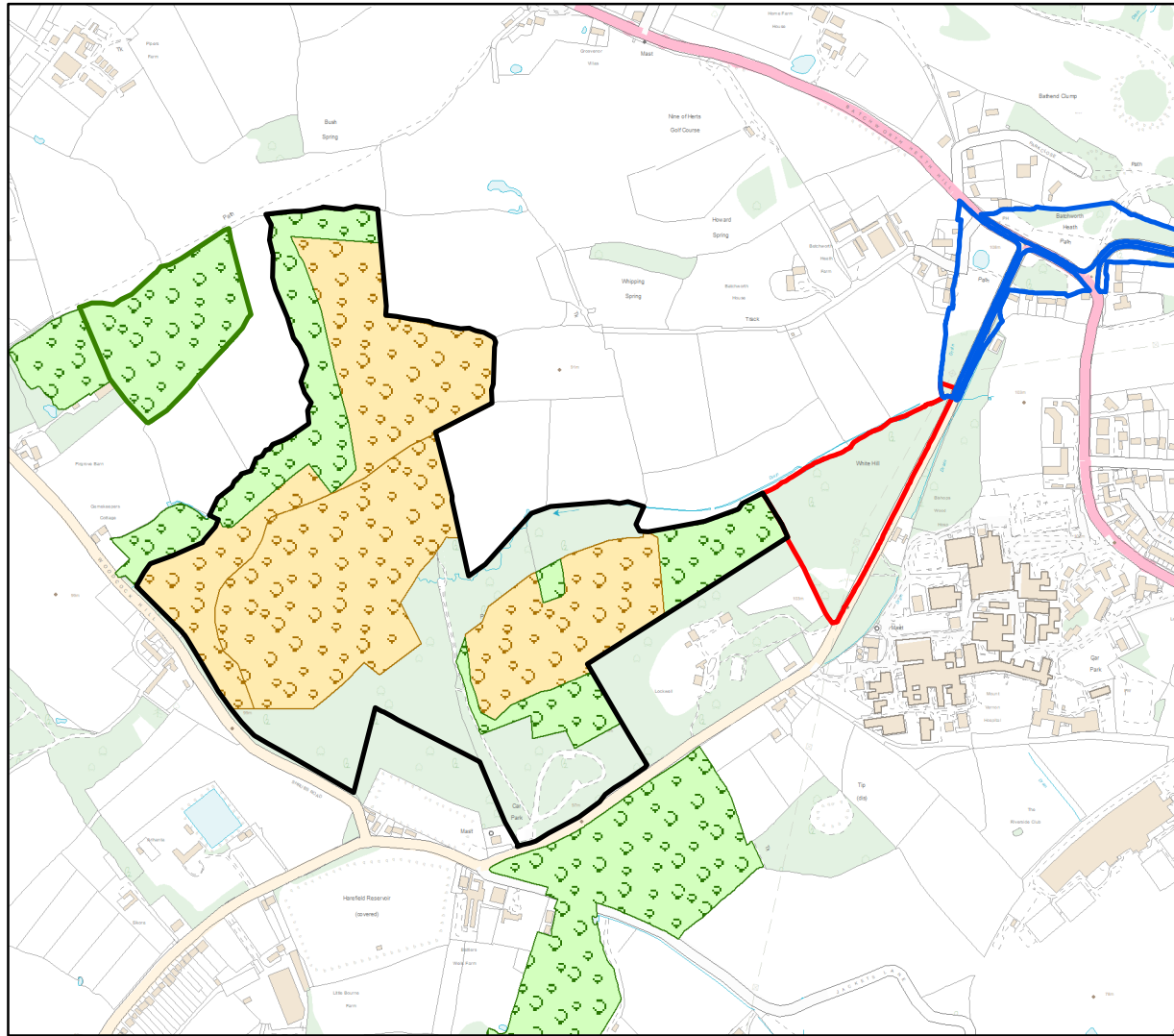
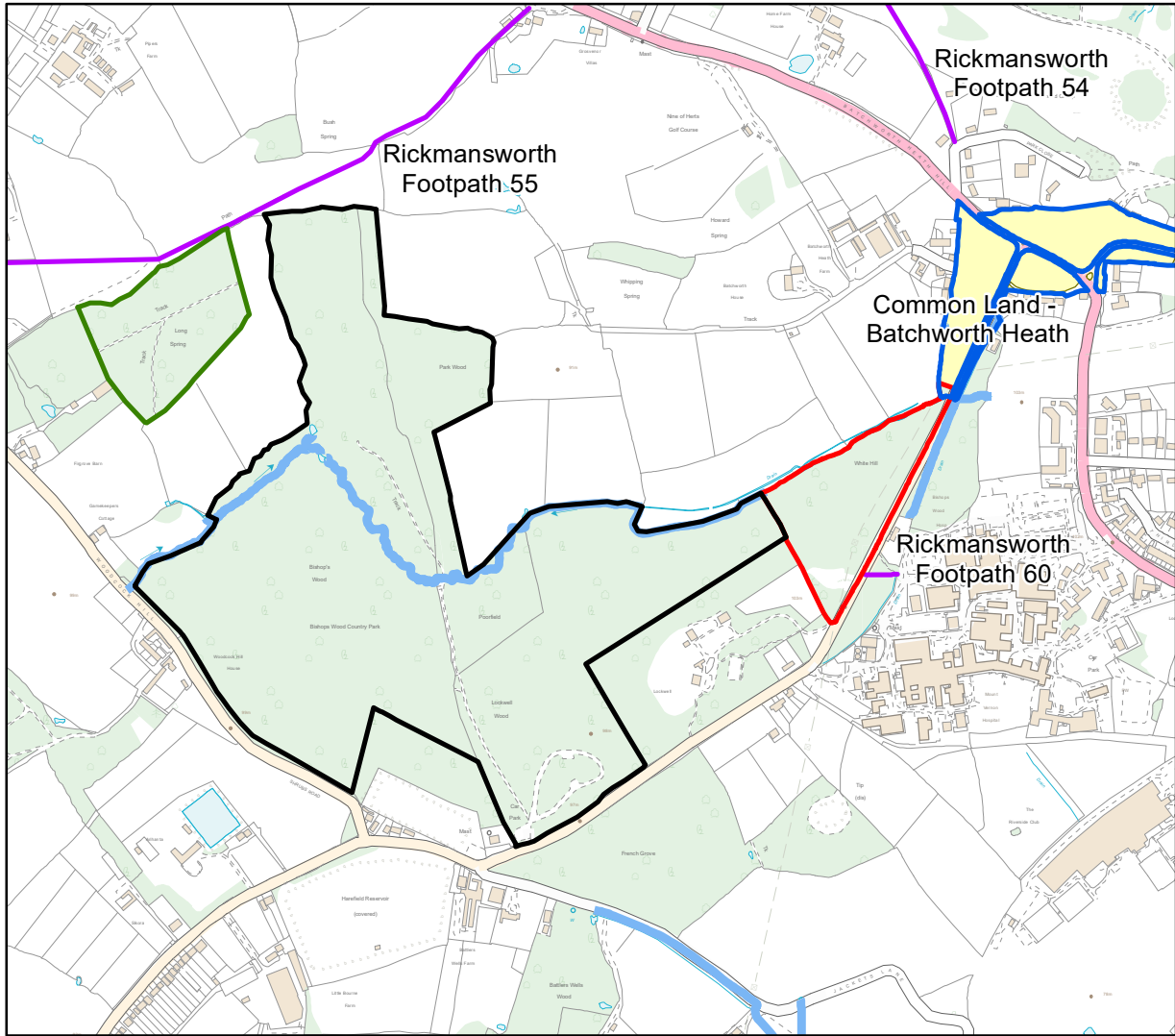
-  Site boundary (Batchworth Heath)
  -  Site boundary (Bishop's Wood)
  -  Site boundary (Long Spring)
  -  Site boundary (White Hill Wood)
  -  Footpath
  -  Ordinary watercourse
  -  Common Land
  -  Ancient & Semi-Natural Woodland (ASNW)
  -  Plantations on Ancient Woodland Sites (PAWS)
  -  Wildlife Site
  -  Greenbelt - November 2016
  -  Country Parks
  -  Conservation Areas
- Services**
-  High pressure gas pipeline
  -  High voltage powerline
  -  Water pipeline



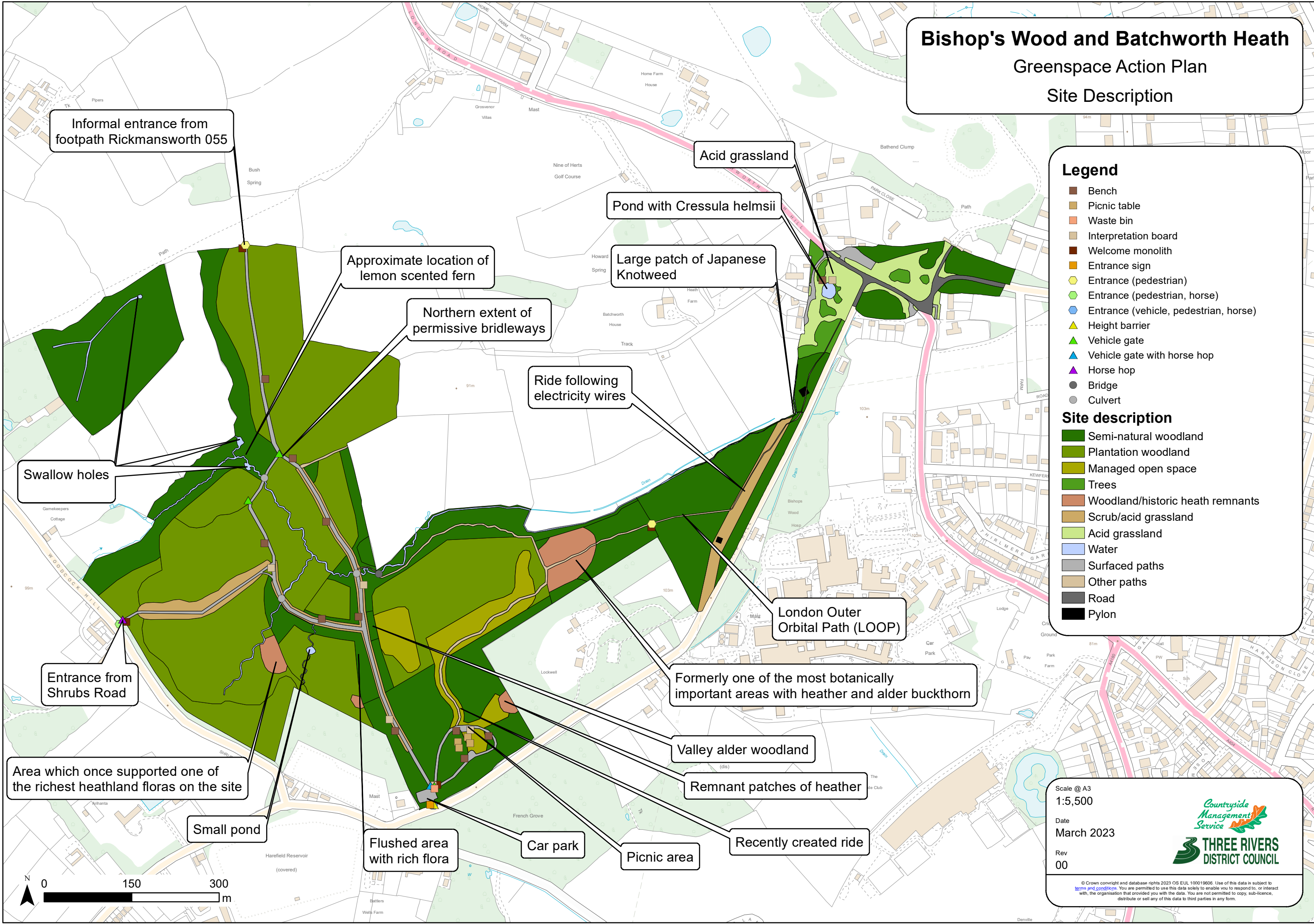
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# Bishop's Wood and Batchworth Heath Greenspace Action Plan Site Description



### Legend

- Bench
- Picnic table
- Waste bin
- Interpretation board
- Welcome monolith
- Entrance sign
- Entrance (pedestrian)
- Entrance (pedestrian, horse)
- Entrance (vehicle, pedestrian, horse)
- Height barrier
- Vehicle gate
- Vehicle gate with horse hop
- Horse hop
- Bridge
- Culvert

### Site description

- Semi-natural woodland
- Plantation woodland
- Managed open space
- Trees
- Woodland/historic heath remnants
- Scrub/acid grassland
- Acid grassland
- Water
- Surfaced paths
- Other paths
- Road
- Pylon

Informal entrance from footpath Rickmansworth 055

Acid grassland

Pond with *Cressula helmsii*

Large patch of Japanese Knotweed

Approximate location of lemon scented fern

Northern extent of permissive bridleways

Ride following electricity wires

Swallow holes

London Outer Orbital Path (LOOP)

Entrance from Shrubs Road

Formerly one of the most botanically important areas with heather and alder buckthorn

Area which once supported one of the richest heathland floras on the site

Valley alder woodland

Small pond

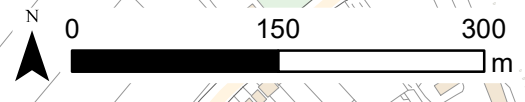
Remnant patches of heather

Flushed area with rich flora

Car park

Picnic area

Recently created ride



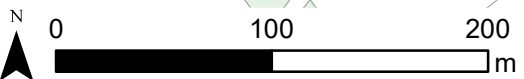
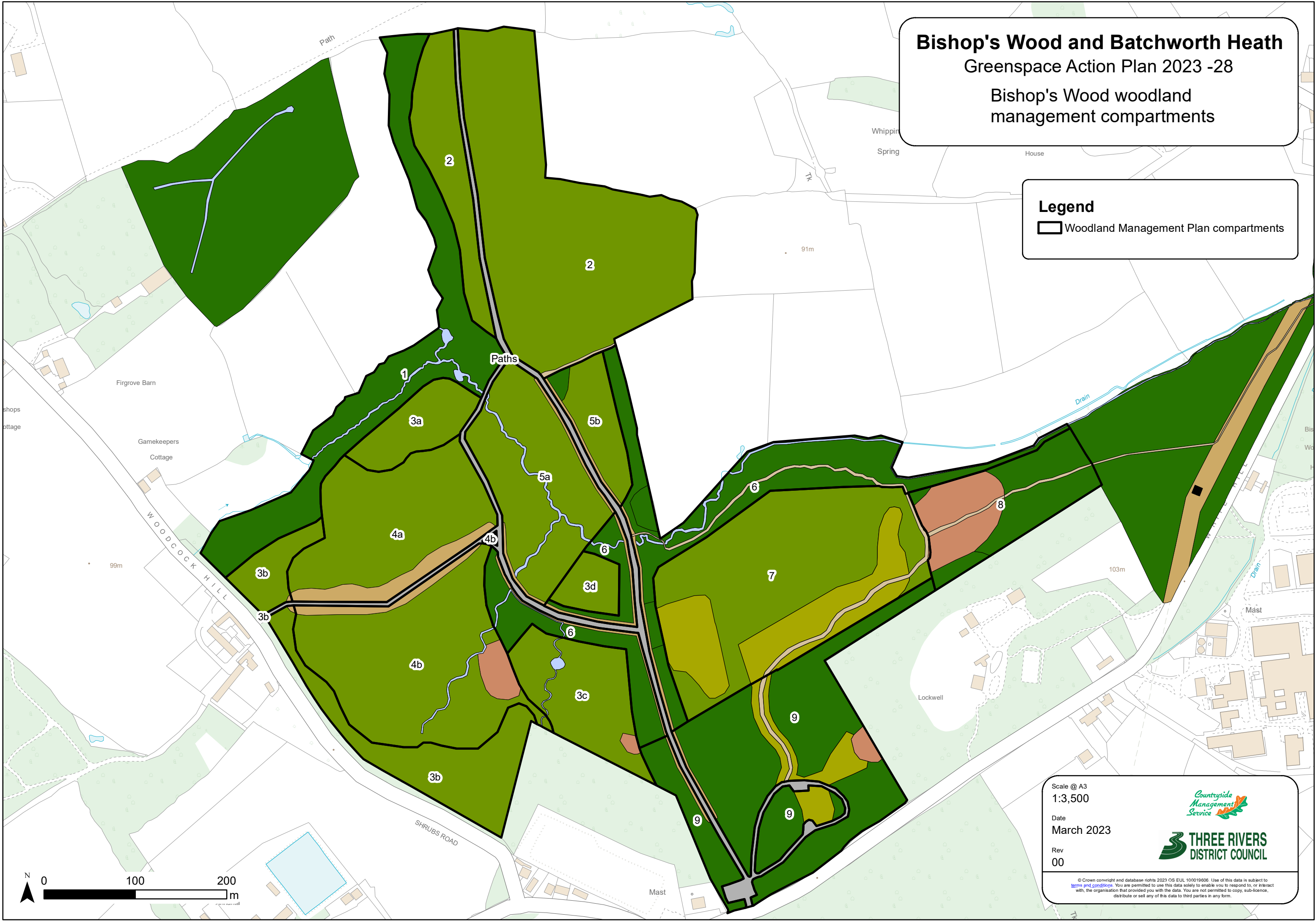
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**Bishop's Wood and Batchworth Heath**  
 Greenspace Action Plan 2023 -28  
 Bishop's Wood woodland  
 management compartments

**Legend**  
 Woodland Management Plan compartments



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## **2.2 Geography and Landscape**

### **2.2.1 Landscape**

Bishop's Wood is located between Rickmansworth, Northwood and Harefield in south-west Hertfordshire, and directly borders the Greater London boundary to the south. Despite its suburban location, it lies within a rural wooded landscape, with no significant settlements in its immediate vicinity. The landscape is gently undulating with numerous woods and farms.

The wood occupies both sides of a shallow valley. It is prominent from the minor roads that run down its south western and south eastern edges, but otherwise quite concealed. It is surrounded largely by agricultural land and other woodland, with the only exceptions being a reservoir to the immediate south and a large house and garden to the south east.

Batchworth Heath has a more suburban feel, being dissected by the A404 between Rickmansworth and Northwood and several other minor roads, and located on the edge of Northwood.

Both sites lie within the [Moor Park Slopes Landscape Character Area](#), where sloping and undulating landforms tumble down to the River Colne. The traditional pattern of horse pasture enclosed by tall and well-treed hedgerows is retained. Woodlands such as Bishop's Wood on the higher ground mark the horizon and combine with hedges to create a lush appearance. The mix of soil types support locally diverse flora as can be found at Bishop's Wood. The 'green' at Batchworth Heath is also a distinctive feature.

Landscape priorities align closely with habitat priorities, being to support the continued management of Bishop's Wood in order to establish a rich ground flora, including areas of heath and the distinction between different management systems such as high forest, coppice, coppice with standards and wood pasture and to encourage the replanting of conifers with native species.

### **2.2.2 Geology and soils**

The habitat diversity of Bishop's Wood stems from the range of geological deposits over which it lies, which have resulted in soils of varying drainage and acidity. The highest ground in the south and south-west is capped by glacial sands and gravels, forming freely draining acid clay/gravel soils. These deposits peter out northwards to expose an intermediate layer of London Clay, giving rise to heavy loam soils often mixed with flints and with impeded drainage. The mottled clays and pebbles of the Reading Beds come to the surface on the lowest ground in the extreme north-western edge of the wood.

### 2.2.3 Watercourses

Bishop's Wood contains several streams, some of which are classified as ordinary watercourses. These finish at two swallow holes in compartment 1, and do not flow out of the wood in normal circumstances. There are also numerous poorly drained and wet areas which support marshy indicator species, and the remains of a small pond in compartment 3c. There is a further swallow hole in Long Spring.

When flows in the watercourses exceed the capacity of the swallow holes, water flows overland down a normally-dry valley and can cause flooding along Harefield Road and Stockers Farm Road in Rickmansworth. A natural flood management project between 2018 and 2020 constructed a series of leaky woody dams along the watercourses, which aim to slow the flow through the wood and reduce the frequency of these flood events, although it is not possible to quantify the effect of these dams.



Figure 1 The same leaky woody dam during normal (left) and high (right) flow conditions.

### 2.2.4 Constraints

The designations which apply to Bishop's Wood and Batchworth Heath are listed in Section 1 and shown on the map in Section 2.3. In addition, there is a high pressure gas pipeline running west-east adjacent to the ride on the southern boundary of compartment 2, and a water main running north-south from the reservoir to the northern boundary of the wood. These are also both shown on the map in Section 2.3. Special precautions must be taken before crossing the gas pipeline with heavy forestry vehicles.

Steep slopes in places and frequently boggy terrain have the potential to impede forestry operations. Ground conditions also restrict the times of year when forestry operations can be carried out, to avoid damage to soil or archaeological features. It is important that any major forestry work is publicised in advance to secure public support, and well-signed on site for safety reasons.

### 2.3 History and Archaeology

The majority of Bishop's Wood is classified as ancient semi-natural woodland, which means it is likely there has been a wood in this location since Britain was afforested after the last ice age. The 1839 tithe map shows that the landscape has remained unchanged, apart from the construction of Lockwell, for at least 200 years. Whilst little is known of its early history, what remains of the broadleaved wood indicates that much was managed as coppice with standards. Long Spring is more typical of ancient semi-natural coppiced woodland, and may well reflect the former character of much of Bishop's Wood before the conifers were planted. There are also possible areas of wood pasture, where the soils are more acid and there are small relic heather populations.

Bishop's Wood is in fact four separate woods: Bishop's Wood, Lockwell Wood, Park Wood and Poorfield, which are likely to be historic management units, or areas of different ownership. The wood contains substantial woodland boundary banks, particularly in the south. For example, banks run north from the car park, along the boundary with White Hill Wood and along the southern roadside boundary. The last of these is particularly impressive, covered in moss with a deep ditch close to the road and a shallow ditch on the wood side. This is thought to represent the county boundary between Hertfordshire and Middlesex. The banks are noted in the Hertfordshire Historic Environment Record and may date to the medieval period. They are topped with hornbeam boundary stubbs in places, or other mature trees. On other boundaries of the wood there are ancient boundary trees, and some which reflect old hedgerows such as the beech pictured below.



Figure 2 Former beech hedgerow.

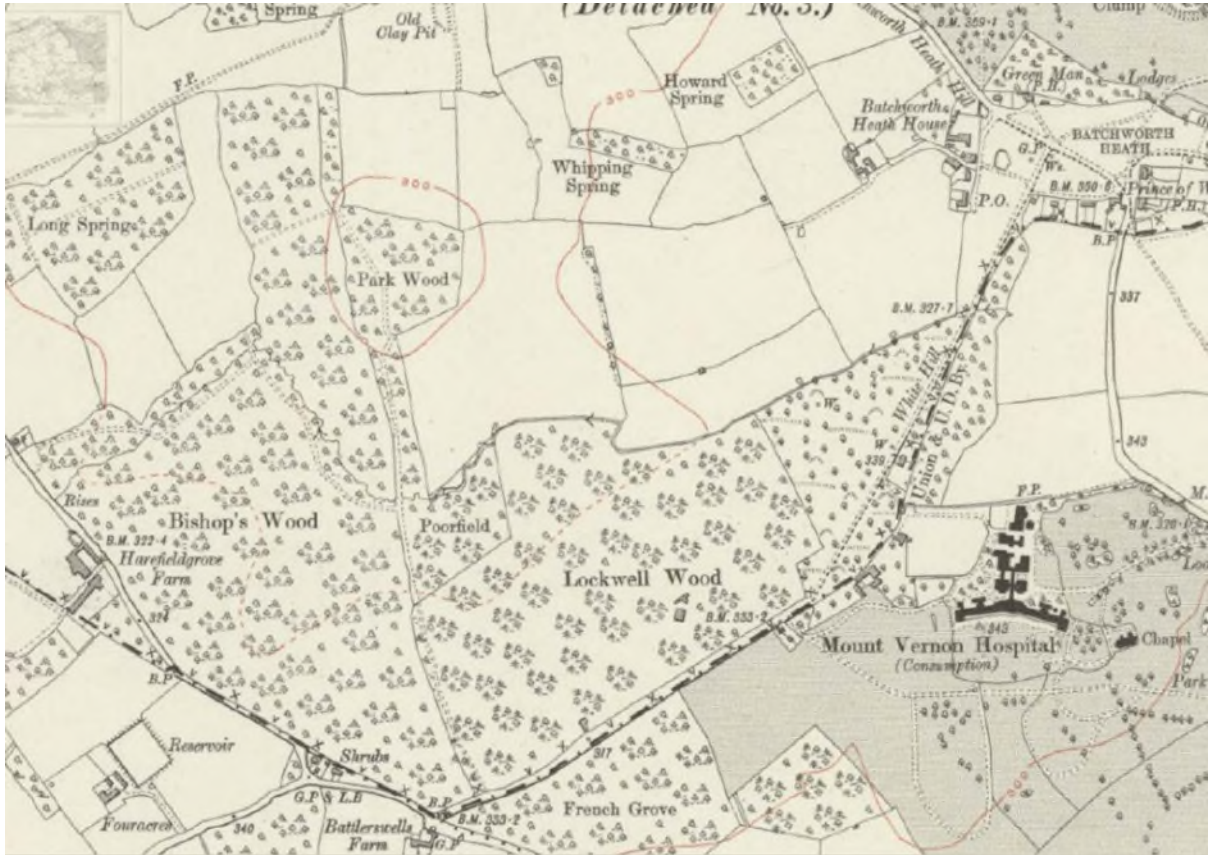


Figure 3 1920 OS Map showing Bishop's Wood's four separate woodlands; Bishop's Wood, Lockwell Wood, Park Wood and Poorfield.

Three other items are found in the Hertfordshire Historic Environment Record: Neolithic worked flints which were found in the 1970s in Lockwell Wood (at TQ06679177) and two Victorian coal duty markers on the boundary of the wood, only one of which remains. These marked the boundary of the area within which tax was due to the City of London on coal imports, and would have been installed in the 1860s.





Figure 4 London coal duty marker.

The primary historic interest of Batchworth Heath is the historic buildings which surround it, including five listed structures. These include a public house, Ye Olde Greene Manne, and another London coal duty marker. The entrance to Moor Park, a listed park and garden, is also located on the edge of the common. This comprises a pair of Portland stone and brick lodges on either side of an arched entrance, and was designed in the 1760s.

## 2.4 Management history

As noted above, it is thought that Bishop's Wood was historically managed as coppice with standards, with the likelihood of areas of wood pasture. However, its tree stock was devastated by the demands of two world wars. After the wood was purchased by Rickmansworth Urban District Council in 1960, their first plan of operations in 1962 aimed to bring the whole of the wood, bar small areas set aside for recreation, into full production. This involved extensive planting and coniferisation in accordance with forestry practice at the time.

After local government reorganisation in 1974 the wood's ownership passed to Three Rivers District Council, which continued the previous management regime by a programme of thinning and maintenance. In 1976 fire damaged several hectares of

young plantation, which were subsequently replanted between 1978 and 1980. Bishop's Wood had been notified as a Site of Special Scientific Interest (SSSI) in 1970 but was denotified in 1986 due to the reduction in floristic diversity which was a consequence of this coniferisation.

The site became a Country Park in 1988, with a car park, interpretation, picnic tables and seats installed. However, following the restocking in the late 1970s, little forestry work was done. Plantations were not thinned and in many cases hardwoods were shaded out by conifers, while scrub and birch became significant in other areas.

In 2010 and 2011 significant felling took place with many of the best conifers removed, especially from Lockwell and Park Wood. This left compartment 7 with little canopy cover, and it became dominated by bracken, bramble and dense birch regeneration. A project in 2019 aimed to bring this area back into active management by clearing abandoned timber and removing tree stumps. Scrapes were created to encourage regeneration of previous heathland vegetation such as heather and gorse, both of which have now been seen in the scrapes, and the area is maintained as a managed open space within the woodland.

As a result of this long history of management interventions, large sections of Bishop's Wood are now relatively young, with relic Ancient Semi-natural Woodland (ASNW) and some coppice around its fringes.

A major project with joint funding from TRDC and the Forestry Commission's English Woodland Grant Scheme brought an investment of almost £250,000 to Bishop's Wood between 2014 and 2017. This greatly improved the overall condition of the woodland through sensitive forestry works such as thinning and ride widening. It also dramatically improved facilities for visitors, including resurfacing the main paths, installing new benches, picnic tables and interpretation boards and enhancing the car park.

A further investment in the site is ongoing, with a Countryside Stewardship agreement in place between 2020 and 2024. This includes a range of woodland management actions similar to those in the previous grant scheme, including thinning and ride management.

Batchworth Heath is Registered Common Land, and as such would historically have been grazed, keeping the heath open and resulting in the development of the acid grassland habitat for which it is locally important. The cessation of grazing has resulted in the development of scrub and secondary woodland around the fringes of the common, and these changes are shown in Figure 1 below. The extent of the grassland is now maintained by mowing.

## 2.5 Habitats and Wildlife

### 2.5.1 Habitats

Bishop's Wood is a large area of ancient acid woodland situated on a varied geology, which supports a very rich and diverse flora. The site has been extensively replanted with conifers and broadleaved species, but there are relic stands of ancient woodland consisting predominantly of hazel coppice with pedunculate oak/ash standards on the clay soils and pedunculate oak/beech/silver birch high forest on the southern sands and gravels. Small stands of alder and coppiced hornbeam have also survived in places. The ground flora supports abundant ancient woodland indicator species. Acid grassland/heathland communities are also present, within the wider rides, with a varied flora. Heather is still present, primarily in compartment 9 but also with young regeneration in compartment 7. The presence of streams, swallowholes and a pond add to the habitat diversity.

The presence of a large number of plants more typically associated with open acidic grassland/heathland habitats is one of the most noticeable features of the site. The occurrence of commonly occurring species such as tormentil (*Potentilla erecta*), heath bedstraw (*Galium saxatile*) and heath speedwell (*Veronica officinalis*) within Bishop's Wood suggests that a large part of the southern half of the site must formerly have been very open in character. It could perhaps have been more aptly described as heathland with scattered trees, rather than woodland proper, managed as a form of wood pasture. Evidence of this character is visible in the aerial photo from 1948 in Figure 1 below, which also shows the changes which have taken place in the intervening period.



Figure 5 Aerial photos of Bishop's Wood and Batchworth Heath from 1948 and 2015.

The PAWS areas (Plantations on Ancient Woodland Sites), which cover just over 50% of Bishop's Wood, comprise a variety of soft and hardwoods, including Douglas-fir, Corsican and Scots pines, Norway spruce, European and Japanese larches, cherry, beech, ash, oak and hornbeam. They can be divided into two

categories: older well-established blocks, and areas which were repeatedly replanted following fires and rabbit damage up to the late 1970s and lacked maintenance from the 1980s onwards. These have now largely lost their former tree, shrub and ground flora communities, although recent restoration works may help elements of these communities to recover. The habitats of Bishop's Wood are described in more detail in Sections 2.5.1.1 to 2.5.1.9 below.

Batchworth Heath is a small ancient common situated on glacial sands, gravel and London Clay. Its ecological interest principally relates to its unimproved acid grassland, patches of marshy grassland and pond; complemented by areas of neutral grassland, scrub and secondary woodland. It supports a range of acid grassland indicators, including tormentil (*Potentilla erecta*), sheep's sorrel (*Rumex acetosella*), heath bedstraw (*Galium saxatile*) and oval sedge (*Carex leporina*). Where the grassland is more neutral in character, common bird's-foot trefoil (*Lotus corniculatus*), common knapweed (*Centaurea nigra*) and common sorrel (*Rumex acetosa*) can be found. The pond has a diverse marginal aquatic flora, including the Herts Rare species bladderwort (*Utricularia australis*), which was most recently recorded in 1992. However, it has become dominated by *Crassula helmsii*, an invasive non-native species. The pond was desilted in 2020, including removal of the *Crassula*, but eradication has not been attempted. The scrub and woodland reflect encroachment on the historic common which took place over a long period when it was neither grazed nor cut.



Figure 6 Batchworth Heath pond

Long Spring is an ancient semi-natural woodland, and it is likely that its character is similar to how much of Bishop's Wood would have been before the widespread planting of conifers. It is essentially neglected hazel coppice with oak standards, beside deep banks of a small stream leading to a swallow hole. It has a rich ground flora with 27 ancient woodland indicator species. White Hill Wood is similar to adjacent parts of Bishop's Wood and Batchworth Heath, as a damp scrubby woodland with heathy character. On Bryant's Map of Hertfordshire (1822) it was shown as part of Batchworth Heath.

Bishop's Wood and Batchworth Heath are also part of a larger network of important habitat, which is of particular importance given the relatively urban context of the area. Bishop's Wood and Batchworth Heath are linked by White Hill Wood. Moor Park Golf Course, another Local Wildlife Site, provides a further link northward to the river Colne wildlife corridor. Ruislip Woods, a 305ha SSSI and National Nature Reserve in the London Borough of Hillingdon, is only one mile to the south of Bishop's Wood and has a similar combination of ancient woodland, acid grassland and wetland vegetation types.

### 2.5.1.1 *Compartment 1*

This compartment forms a wide belt running along the wood's north-western boundary. It contains the most extensive stands of hazel and ash coppice with oak standards in the wood. In Park Wood the compartment lies on a west facing slope and is fairly open in nature with hazel coppice, birch with some oak standards and occasional beech. In Bishop's Wood the compartment runs alongside a fairly steep stream valley. Here there are good stands of very over-stood hazel coppice with some ash and field maple coppice.

Ground flora in the northern section of the compartment on the Reading beds is less rich with more bramble and bracken, but on the clay soils further south is dominated by bluebells in spring and several ancient woodland indicator species have been recorded. Of particular interest is the area containing swallow holes where Bishop's Wood and Park Wood meet. Here there are more mature oak standards together with large grey poplar. Lemon-scented fern, a key species for the site, grows along the stream running towards the swallow holes and requires shelter and shade.



Figure 7 Stream running towards swallow hole

### 2.5.1.2 *Compartment 2*

This compartment is separated by a north-south ride which has recently been widened. It sits at the top of a gently sloping hill which was planted in 1964/5 with a mix of Scots pine, Douglas-fir, beech and oak. It was heavily line-thinned in 2010/11, and some further thinning took place within the rows in 2015/16. The ground is dominated by bramble with occasional bracken. The boundaries of the compartment which follow the wood's edge are lined with ancient oak, ash and field maple, and where this ancient woodland character extends to a narrow band along the boundary

there are bluebells in the ground layer. The majority of the wild service trees in the wood are found along the eastern and southern edges of this compartment.



Figure 8 Line thinned section of compartment 2

#### 2.5.1.3 *Compartments 3a, 3b, 3c and 3d*

These four blocks represent older mixed plantations planted in 1966 that have not been affected by fire or rabbits.

Compartment 3a lies south of compartment 1 on the north-west corner of Bishop's Wood and comprises a mature stand of Scots pine, Douglas-fir and both mature and younger oak. Ground flora is poor due to canopy closure.

Compartment 3b runs along Shrubs Road from the extreme western tip of the wood to the reservoir. The area north of the main ride seems less mature than 3a containing Scots pine, oak and birch. As 3b runs south along the road it is more mixed with birch, hazel and some mature oak but often less conifer. Nearer the reservoir there are rows of planted beech in very poor condition due to rabbit/squirrel damage. Boundary stubbs are also present against the road in this compartment.

Compartment 3c contains more scattered pine with beech, willow, poplar, hazel and birch and is generally in a fairly poor condition. In 1987 it contained a remnant area



of lowland heath with heather in a clearing, but this no longer seems to be present, and there is a small shaded pond. Again ground flora is poor. Compartment 3d is very like 3a with mature Scots pine, Douglas-fir and oak.



Figure 9 Mature Scots pine in compartment 3d

#### 2.5.1.4 *Compartments 4a and 4b*

These two compartments that form the bulk of Bishop's Wood were repeatedly damaged by fire and were eventually restocked with larch, beech and oak between 1978 and 1980. Establishment has had varied success and where the new plantings have taken they have not been maintained, with differing results.

Compartment 4a has been partially thinned leaving well-spaced larch. There is little or no ground flora though occasionally honeysuckle is present. Compartment 4b consists of areas of dense young larch with oak or beech which is increasingly suppressed. Honeysuckle and bramble are present as is birch. Other areas where the planting has failed have dense birch, willow, larch and oak in an often impenetrable mix with honeysuckle and occasional bramble where it is light. A former area of lowland heath which once supported some of the finest heathland floras on the site beneath relic semi-mature pedunculate oaks in the south east corner of 4b is no longer distinguishable. Lesser skullcap once grew locally in any wet depressions or flushes in this compartment.

A ride running east-west from Shrubs Road separates the two compartments and once supported a range of acid grassland plants. It had become increasingly shaded by surrounding vegetation, before being widened in 2014/15. Species found along the ride since this work was completed include devil's-bit scabious (*Succisa pratensis*).



Figure 10 Previously thinned section of compartment 4a

#### 2.5.1.5 *Compartments 5a and 5b*

These compartments follow the valley of the wood's main stream. They were replanted following fire damage in 1976 with larch and broadleaves, most noticeably oak. There is some good hazel and hawthorn in the understorey. Compartment 5a was very dense but has been recently thinned, and bramble is becoming more significant. Compartment 5b is more open and much more broadleaved in nature with the remains of hornbeam coppice and oak. A broad fringe of hawthorn and blackthorn forms the woodland edge. There is little ground flora due to shading, with the exception of along the ride that runs north-south separating 5a and 5b, which was widened in 2016/17.



Figure 11 Compartment 5a

#### 2.5.1.6 *Compartment 6*

Compartment 6 comprises irregular fragments of semi-natural broadleaved woodland retained between plantations, with a heterogeneous mixture of stand types including oak/hazel/ash, alder, oak/hornbeam and birch/sallow. Coppiced alder and hazel with oak standards above compartment 7 is in rotation; recent coppicing demonstrates that without protection coppice stools will suffer from deer browsing. There is also a small block of hornbeam coppice north of the stream.

The ground layer is variable, but there is an interesting flora in places, especially in the wetter areas. A linear flushed area at TQ06899180 supports a particularly rich flora, but this is thought to have declined due to shading in recent years.



Figure 12 New alder coppice in compartment 6

#### 2.5.1.7 *Compartment 7*

A plantation of Scots pine and Norway spruce established in 1970, with more recent planting including cherry and oak in the north-west and north-east corners. This was heavily felled in 2010/11 with many of the best conifers removed. This left a large proportion with little canopy cover, which became dominated by bracken and prolific birch regeneration. There is also occasional laurel and rhododendron. In 2019 this area was brought back into active management by clearing abandoned timber and removing tree stumps. Scrapes were created to encourage regeneration of previous heathland vegetation such as heather and gorse, both of which have now been seen in the scrapes, and the area is maintained as a managed open space within the woodland.



Figure 13 Managed open space in compartment 7

#### 2.5.1.8 *Compartment 8*

This compartment, on acid soils, comprises replanted ash, sycamore and cherry from 1978, amid scattered older blocks of conifers (larch, Douglas-fir) planted in 1965 and semi-natural oak/birch woodland. It was once of great importance for significant areas of heather with alder buckthorn and green-ribbed sedge, but heather has not been recorded here since 2003. Bracken and bramble are now significant, with bluebell occasional, and only one small alder buckthorn was found in 2013. As with compartment 7 there is occasional laurel and rhododendron. The eastern end of the compartment is marked by a significant ditch and bank which retains some old boundary stubbs.



Figure 14 Young birch-dominated woodland in compartment 8.

#### 2.5.1.9 *Compartment 9*

The most southerly compartment containing the car park and picnic area. Again on acid soils it is distinguished by large beech surrounded by, typically, young birch although sallow, hornbeam and holly are present as are oak and the occasional yew. It feels very much like overgrown heath, still retaining an open feel. Bracken is the dominant ground layer, and heather survives in the east of the compartment and within the picnic area. An internal wood bank running north from the car park has hornbeam stubbs. Japanese knotweed has occurred in two locations, next to the car park and along the southern boundary on White Hill.



Figure 15 Open, wood pasture-like character of compartment 9, with mature beech.

### 2.5.2 Protected species

Bishop's Wood undoubtedly provides habitat for foraging and roosting bats. While no bat survey work has been carried out, there are records of common pipistrelle and brown long-eared bat from 2001 around Bishop's Wood. There are no plans to fell mature trees with holes or cracks which could be used by bats. If any such felling were required for health and safety reasons, bat surveys may be required.

A protected species scoping survey carried out in 2010 indicated that several areas within Bishop's Wood have habitat potential for dormice. However, the wood was surveyed for dormice in the early 1990s and none were found. Dormice have been recorded within six miles of the site. The same survey considered that Bishop's Wood had moderately high habitat potential for reptiles and amphibians, but there are no records of great crested newt from either Bishop's Wood or Batchworth Heath. Slow worms are present at Bishop's Wood.

There is at least one active badger sett within Bishop's Wood. No work should be undertaken around a badger sett without first contacting Natural England for advice.

There is the potential for nesting birds within any dense vegetation, and habitat work on such vegetation should therefore be restricted to outside the bird breeding

season, which is normally considered to run between 1<sup>st</sup> March and 31<sup>st</sup> August. Even outside these dates, care should be taken, as birds may nest earlier or later.

### **2.5.3 Other notable species**

Floristically Bishop's Wood has long been known as one of the richest blocks of acid woodland in Hertfordshire. In the 1978 survey of ASNW in Hertfordshire it was ranked eleventh highest in terms of its value of nature conservation. However, some of its floristic diversity has been lost, particularly to shading and encroachment of scrub, in the decades since then. A long history of botanical surveying provides a means by which to measure past changes and the impacts of current and future habitat management.

A comprehensive ecological appraisal was written in 1987, which gave detailed descriptions of the nine compartments within the wood, together with notes on the uncommon species. A total of 215 vascular plant species were recorded at that time. Further surveys were conducted by the Herts Wildlife Sites Partnership in 2003 and 2013, recording 195 species on both occasions. In 2013, 45 ancient woodland indicator species were recorded, and 16 acid grassland indicator species were also recorded. The report from this most recent survey is included in Appendix 1. Notable flora can largely be divided into these two groups and are listed in Table 1. Not all have been recorded recently and some may have been lost. Bishop's Wood is also thought to contain one of the most interesting bryophyte floras of any acid woodland in Hertfordshire.

Most invertebrate groups are under-recorded, but the wood can be expected to be of entomological interest as a result of its diversity of habitats and vegetation types. Noteworthy butterflies include white admiral (*Limenitis camilla*), purple emperor (*Apatura iris*) and silver-washed fritillary (*Argynnis paphia*). White admiral is identified as a species of principal importance in Section 41 of the Natural Environment and Rural Communities (NERC) Act (2006) and its distribution in England has declined by 40% between 2010 and 2019.

Sympathetic management for these species will include ensuring that their food plants are considered in any woodland management work. For white admiral, honeysuckle (*Lonicera periclymenum*) in partial shade is important, and some mature woodland blocks should therefore see no active management. For purple emperor and silver-washed fritillary, willow (*Salix caprea*) and common dog-violet (*Viola riviniana*) respectively are required.

### **2.5.4 Southern wood ant**

Bishop's Wood is the only site in Hertfordshire with a historic record of the southern wood ant (*Formica rufa*). The record is undated, but given authority by the recorder,



the 20<sup>th</sup> century hymenopterist G.M. Spooner. The nearest surviving colonies were at Stanmore and Burnham Beeches, 10km and 14km away respectively.

Given this status, as part of the previous Greenspace Action Plan the Hertfordshire ant recorder initiated a translocation project which aims to re-establish a southern wood ant population at Bishop's Wood. Nests were translocated in 2019 and 2021 from donor populations at Burnham Beeches, Slough, and Pear Wood, Stanmore. Nest boosting was also undertaken in 2021 and 2022, bringing additional pupal-rich nest material to strengthen the new nest sites. By the end of the summer in 2022, three nests all appeared to be faring well. Nest translocations are expected to continue in 2023 and beyond.



Figure 16 Wood ant nest translocation and established nest at Bishop's Wood.

### **2.5.5 Oak processionary moth**

Three Rivers district is now within the Established zone for oak processionary moth (OPM). This means it is now the responsibility of landowners to manage OPM on their land, rather than the Forestry Commission. A risk-based approach to managing OPM is recommended for this zone.

Table 1: Notable flora of Bishop's Wood

Common name	Scientific name	Most recent record	Status/designations	Ancient woodland indicator	Acid grassland/heathland indicator
Velvet bent	<i>Agrostis canina</i>	1987			Y
Hard fern	<i>Blechnum spicant</i>	2002		Y	
Heather	<i>Calluna vulgaris</i>	2017			Y
Green-ribbed sedge	<i>Carex binervis</i>	2013			Y
Common yellow sedge	<i>Carex denissa</i>	1987			Y
Star sedge	<i>Carex echinata</i>	2002	Herts Rare		
Common sedge	<i>Carex nigra</i>	1987			Y
Pale sedge	<i>Carex pallescens</i>	2003		Y	
Thin-spiked wood sedge	<i>Carex strigosa</i>	2003		Y	
Narrow buckler-fern	<i>Dryopteris carthusiana</i>	2013		Y	
Violet helleborine	<i>Epipactis purpurata</i>	2017		Y	
Alder buckthorn	<i>Frangula alnus</i>	2013	Herts Rare	Y	Y
Pale-headed hawkweed	<i>Hieracium vulgatum</i>	1964	Herts Rare		
Bulbous rush	<i>Juncus bulbosus</i>	2003			Y
Southern wood-rush	<i>Luzula forsteri</i>	2002		Y	
Yellow loosestrife	<i>Lysimachia vulgaris</i>	1987	Herts Rare		
Lemon-scented fern	<i>Oreopteris limbosperma</i>	2008	Herts Rare	Y	
Herb-Paris	<i>Paris quadrifolia</i>	2003	Herts Vulnerable	Y	
Lesser skullcap	<i>Scutellaria minor</i>	1996	Herts Rare	Y	Y
Devil's bit scabious	<i>Succisa pratensis</i>	2013			Y

## 2.6 Access, Facilities and Infrastructure

There are no public rights of way in Bishop's Wood or Long Spring. Public footpath Rickmansworth 055 passes close to the northern boundary of both sites but there are currently no legal links to it. The London Outer Orbital Path (LOOP) provides a means of access to Bishop's Wood from Batchworth Heath through White Hill Wood. However, this section of the LOOP does not follow a public right of way.

As a result of the major access improvements carried out between 2014 and 2017, the infrastructure of Bishop's Wood is now in good condition. From the car park, which has recently been expanded and resurfaced, a network of permissive paths and permissive bridleways has been surfaced. These provide good access to the northern and western boundaries of the wood, around a central loop and onto a short easy access trail close to the car park. The permissive bridleways run from White Hill and Shrubs Road and around the central loop. Except for the path between the central loop and Shrubs Road, these tracks are suitable for forestry vehicles, allowing forestry work to take place with minimal damage to access routes. The paths and access points are shown below.



Figure 17 Detail from orientation board

There are also two unsurfaced permissive paths running to the east. These are waymarked in the same way as the main routes, and generally well defined, but can be very muddy for much of the year. Numerous desire lines are focused on the area immediately north and east of the car park.

Wooden seats are located along the paths, and there are picnic tables in the picnic area. Interpretation boards have been sited around the wood, and there is an orientation board at the entrance. A site leaflet has also been produced. There are wooden monoliths with TRDC logos marking the entrances, similar to those used at nearby sites such as Oxhey Woods.

There is a brown sign to Bishop's Wood Country Park at the entrance to the car park on White Hill, and a large wooden sign marking the entrance. The car park is accessed through a height barrier to prevent the entry of large vehicles. A further low barrier prevents vehicular access to the network of tracks while allowing easy access for horse riders.

As common land, Batchworth Heath has open public access throughout, with the LOOP passing through towards Bishop's Wood to the west and Moor Park to the east. There is an interpretation panel highlighting natural and historic features of the site and identifying it as owned and managed by TRDC, and a bench next to the pond.

## **2.7 Community and Events**

The location of Bishop's Wood, away from any significant settlement, means it is likely to remain a quiet site suited to low key recreational use and visited most often by car. Its car park is also a potential base for exploration of the wider countryside. The only current community involvement in its management is through a CMS volunteer group, which works here several times each year.

Batchworth Heath is at the heart of a small community and there is therefore more community interest in its management. The interpretation panel promotes its proximity to Bishop's Wood and the potential to explore along the LOOP to the west, and simple waymarking for the LOOP and to and from Bishop's Wood through White Hill Wood.

## **2.8 Site Management**

Bishop's Wood is owned and managed by TRDC in partnership with CMS. There is no ongoing vegetation management, but litter is collected from the bin in the car park and any fly tipping is removed. Regular tree safety surveys take place, and reactive tree works are carried out along the paths to address safety issues. Batchworth Heath has similar maintenance, along with a programme of grass cutting and removal of arisings. There is no ongoing management of any kind at Long Spring.

## **2.9 Policy Context**

This plan is set in the context of several Council policies and strategies which relate directly to site management.

### **2.9.1 Corporate Framework**

Each year, Three Rivers District Council updates its Strategic Plan. This is a document that brings together our high level, medium- to long-term objectives which, following consultation and analysis of data, the Council considers to be its priorities for the District.

It focuses on those areas where the Council has a lead role or can play a key part in delivering or influencing the outcomes. Its purpose is to guide the Council in its annual consultation, planning, resource allocation and performance management process. [Corporate Framework \(threerivers.gov.uk\)](https://www.threerivers.gov.uk/corporate-framework)

### **2.9.2 Tree Strategy**

The [Three Rivers District Council Tree Strategy](#) identifies the actions to be taken over the next five years to protect and sustainably manage existing trees and woodlands. It also sets out the council's plans to increase the number of trees by planting new ones, while ensuring the right trees are planted in the right places and are properly maintained.

### **2.9.3 Climate Emergency and Sustainability Strategy**

The council's [Climate Emergency and Sustainability Strategy](#) sets out how the council can improve and lead by example in our own operations. It also sets out how we will work with and assist the residents, businesses, and other stakeholders in our area to reduce their impact on the environment, improve sustainability and also adapt to and build resilience to a changing climate.

### **2.9.4 Local Plan**

The current [Local Plan](#) for the district was published in 2014. Three Rivers District Council is preparing a [new Local Plan](#) that will set out a vision and policy framework for the future levels of growth within the district until 2038. These documents include policies which relate to nature conservation.

### **2.9.5 Nature Recovery Strategy**

The Council have produced a Nature Recovery Strategy (currently at draft stage) to specifically address the Council's approach to protection of the natural world within the district. The strategy recognises the rich diversity of wildlife already present within the district, both within protected nature reserves as well as public open space, residential gardens, grass verges, and more.

At the heart of the strategy is a five-year Action Plan, which identifies and prioritises actions to be undertaken by the Council and others for the benefit of biodiversity. The full strategy will be published on the TRDC website shortly.

### **3.0 AIMS & OBJECTIVES**

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#### **A. A welcoming place**

To enhance the experience of using Bishop's Wood and Batchworth Heath for regular users and visitors.

- A1 Improve maintenance of surfaced and unsurfaced paths within Bishop's Wood and between Bishop's Wood and Batchworth Heath.
- A2 Explore the possibility of establishing TRDC ownership of White Hill Wood in order to bring it into positive management.
- A3 Improve visibility of the Bishop's Wood car park from the road.

#### **B. Healthy, safe and secure**

To ensure that visitors to Bishop's Wood and Batchworth Heath feel safe and able to enjoy the sites at all times.

- B1 Continue to increase visitor numbers through improved facilities, better promotion, and a wider range of attractions, thereby reducing antisocial behaviour.
- B2 Respond proactively to any misuse of the site.
- B3 Carry out reactive tree works to address safety issues.

#### **C. Clean and well maintained**

To ensure the standard of maintenance is upheld and relevant.

- C1 Manage and maintain the grassland, paths, interpretation and infrastructure.
- C2 Remove graffiti and fly-tipping.
- C3 Carry out regular litter picking and small-scale vegetation management.
- C4 Maintain the surface of car parks in good condition.

#### **D. Sustainability**

To ensure sustainability of all management operations on site.

- D1 Ensure ongoing maintenance costs are financially sustainable.
- D2 Secure external funding to ensure the viability of capital works.
- D3 Carry out management according to environmental best practice, avoiding the use of herbicides, and using sustainable woodland management practices.

- D4 Continue to finance agreed works with Countryside Stewardship funding, as set out in the agreement.
- D5 Market produce from forestry operations to increase the financial viability of woodland management.

### **E. Conservation and heritage**

To conserve and enhance the key habitats of Bishop's Wood and Batchworth Heath.

- E1 Continue to restore historic and iconic habitats and species to Bishop's Wood.
- E2 Continue woodland management to improve the ecological status of Bishop's Wood in line with the long-term woodland management plan.
- E3 Protect, restore, and aim to link together remnant patches of heathland.
- E4 Control invasion of open areas by bracken.
- E5 Monitor and control invasive non-native species and eradicate where possible.
- E6 Enhance the acid grassland on Batchworth Heath and prevent encroachment of scrub.
- E7 Maintain and enhance ponds across Bishop's Wood and Batchworth Heath.

### **F. Community involvement**

To develop and maintain an informed, involved and enthusiastic local community.

- F1 Encourage the local community to become involved in the management of the site in a structured and supported way and ensure all involved operate towards achievement of the objectives of the GAP.

### **G. Marketing**

To promote awareness and interest in Bishop's Wood and Batchworth Heath.

- G1 Make the Bishop's Wood leaflet easily accessible online.
- G2 Run occasional guided walks to showcase Bishop's Wood and its neighbouring sites.



## **4.0 MANAGEMENT PRESCRIPTIONS**

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### **4.1 A Welcoming Place**

Major improvements have been achieved to the welcome offered at Bishop's Wood in recent years. The site has excellent parking, a network of surfaced routes, waymarking, interpretation and furniture. The next step in this process, alongside improving promotion of the site, is to further develop links across the network of TRDC sites in the area and to improve visibility of the Bishop's Wood car park from the main road.

Some of the unsurfaced permissive paths marked on the orientation board at the entrance are currently unmaintained, including the route of the LOOP, which is also the route between Batchworth Heath and Bishop's Wood. Establishing a regular programme of vegetation management along these remaining paths would ensure these routes are kept open and well-defined through the year.

White Hill Wood is an unmanaged, unclaimed parcel of land, and the connection between Bishop's Wood and Batchworth Heath would be strengthened if it were brought into positive management. This will require TRDC to explore the possibility of establishing their ownership of this land.

If TRDC ownership were established, improving access would be an important first step in this area, and would include improving drainage and surfacing of a section of path in particularly poor condition close to Batchworth Heath. While Batchworth Heath is generally open, a short defined path does run across the heath just south-west of the pond.



Figure 18 Poor quality path surface between Batchworth Heath and Bishop's Wood

Waymarking has been improved around Bishop's Wood in recent years, however the current provision should be reviewed and improved where needed to ensure that all routes are clearly marked, and the more minor paths can be easily followed. An interpretation board by the pond at Batchworth Heath helps to identify the site as TRDC land. The interpretation board identifies the site and its key features, as well as promoting the opportunities to explore further along the path to Bishop's Wood.

The car park at Bishop's Wood provides an excellent facility for visitors to the site, however it would benefit from improved visibility and signage from the main road. At present, the entrance is easily overlooked and obscured by surrounding dense vegetation. Opening up the entrance by coppicing and selectively felling a small number of trees would make the car park more visible from the road. This would also have the added benefit of improving security around the car park area, which currently suffers from frequent antisocial behaviour. Updated entrance signage should be installed to make the car park more noticeable and add to the site's identity. The car park will also benefit from regrading and surface dressing to maintain a good quality surface.

The picnic area suffers significantly from littering, despite the provision of waste bins, and antisocial activities. The area does not feel welcoming, and picnic benches should be removed and ideally relocated to another Three Rivers site. Management

of this area should focus on the existing heather and extending the footprint of the heathland restoration area.

## **4.2 Healthy, Safe and Secure**

Visitors to Bishop's Wood should feel safe and able to enjoy the site at all times, and in all areas of the site. An increase in visitor numbers which is led by improved facilities, better promotion and a wider range of attractions should help deter anti-social activity. Visitors should be encouraged to report any illegal activity to the police.

Tree safety work is undertaken through a periodic tree safety survey, which recommends any necessary works. If issues with trees are encountered at other times by staff, or reported by the public, reactive tree works are carried out. Safety work is restricted to areas where there are relatively high levels of public use, and wherever possible trees are allowed to go through the natural cycle of decay.

Although the wood has a history of fires in its young conifer crops, the risk is dropping as it moves towards a broadleaved woodland. However, fire remains a risk during dry summers and with large areas of bracken. If a fire is discovered, the fire brigade should be called immediately, and it is important to ensure that they have an access key.

Batchworth Heath is a very public site, being crossed by several roads, and has no particular issues with misuse. The same approach to tree safety is taken.

## **4.3 Well Maintained and Clean**

Bishop's Wood and Batchworth Heath should be maintained to a good standard, with the level of maintenance proportional to need and to level of use.

Furniture around Bishop's Wood, including seats and interpretation boards should be maintained as and when required. The site requires annual scheduled vegetation management along all paths and around benches, to maintain the width of the surfaced paths and to fulfil the terms of the Countryside Stewardship agreement as part of ride maintenance. Scheduled scrub management is required along the site's rides to maintain the valuable varied habitat structure comprised of bare ground, short and tall grasses, scrub and woodland edge.

Vegetation has encroached significantly on the surfaced paths since their construction during the last iteration of the GAP. The standard of maintenance must proactively be improved to ensure that the significant investment in this aspect of the site is not lost.



Figure 19 Example of vegetation encroachment on path through compartment 2, which was surfaced to a width suitable for forestry vehicles.

The condition of Bishop's Wood's leaky woody dams should be monitored, and maintenance adjusted as appropriate. Since their construction by CMS volunteers between 2018 and 2020, they appear to be having a positive effect on slowing the flow of the watercourse and as such, should be managed correctly.

Fly-tipping is a regular problem along the roadside, at Bishop's Wood car park and around Batchworth Heath. Any instances of fly-tipping should be collected promptly. The bins provided at the car parks at Bishop's Wood and Batchworth Heath should be emptied regularly to prevent waste accumulating around them. Litter is most noticeable around the car park and the picnic area at Bishop's Wood and extends along the roadside to Batchworth Heath.

Establishing a programme of regular litter picking on both sites would help keep the sites clean and give an appearance of good maintenance, as will any necessary small scale vegetation management.

#### **4.4 Sustainability**

TRDC has a strong commitment to the environment and environmental sustainability and recognises the impacts its operations have on the environment. This is reflected in Council policies, including:

- A presumption against the use of peat.
- Pesticides will not be used by the council unless there are no alternative means of control. Glyphosate will only be used for the control of Japanese knotweed. Bracken control is undertaken by rolling, which crushes the stems and progressively reduces its vitality, rather than chemical control.
- Only FSC timber is used across the district

Natural regeneration should be utilised for restocking wherever appropriate; it is low cost, dynamic, it adapts to local conditions, and reduces the risk of importing pests & diseases to the woodland. Replanting should be considered if natural regeneration does not achieve the required stocking levels, presenting an opportunity for some species diversification, with the aim of improving the resilience of the woodland against pressures from a changing climate and pests & diseases.

Bishop's Wood has a current Countryside Stewardship agreement which will provide funding to support woodland management until 2025. In 2025 a further application should be made to the new Countryside Stewardship Plus scheme to ensure ongoing funding. Separate external funding should be sought to ensure the viability of other capital works, for example grazing.

Some of the actions under consideration within this plan have the potential to increase ongoing maintenance costs, simply because it is more expensive to maintain open areas than it is to maintain woodland. The scale of actions proposed should be balanced with the future cost of maintenance to ensure that those costs remain financially sustainable, and that capital work which cannot be maintained in the long term is not undertaken. The produce from forestry operations should be marketed, to increase the viability of woodland management by subsidising the cost of work. It should be remembered that the primary purpose for woodland management is to benefit the woodland rather than to generate income.

## **4.5 Biodiversity, Landscape and Heritage**

### **4.5.1 Habitats**

The priority for woodland management in Bishop's Wood is to continue the restoration of its diverse woodland habitats: wood pasture, lowland heath, glades, wet flushes, high forest, coppice, and conifer plantation. This restoration will continue across both PAWS and ASNW parts of the wood.

#### **4.5.1.1 Wood Pasture**

Compartment 9 is closest to retaining a wood pasture character under the mature beech trees and is the only area in which mature heather survived, prior to the restoration of compartment 7. This area is well-suited to a wood pasture restoration project, which would seek to re-establish a landscape with a more open character similar to that shown in the aerial photo from 1948 (Figure 1), where animals graze under widely spaced mature trees.

Completion of the new ride creation in 2023 has made a positive impact on the restoration of open space, whereby semi-mature birch and other trees were cleared within compartment 9 to create a linear ride, extending into the southern part of compartment 7. Management to open this area up further, leaving only mature trees, would be beneficial in restoring wood pasture habitat. Removal of stumps and the consequent ground disturbance would make future management more practical and encourage regeneration of heathland species. Annual mechanical bracken control is required across the wood pasture restoration area to prevent bracken encroachment.

Significant external funding would be required to initiate a grazing project, and it would also increase ongoing maintenance costs for Bishop's Wood. However, this has been a long-term objective for the site and should now be initiated. Funding opportunities should also be explored in more detail. An indicative grazing area is shown in the map below.



Figure 20 Indicative grazing area

#### 4.5.1.2 Lowland Heath

Former areas of lowland heath are identified on the map in 2.1, in particular the western part of compartment 8 and the south-eastern corner of compartment 4b. While these were reported to be of considerable botanical interest in 1987, much of that interest has since been lost.

The creation of the new ride, undertaken in 2023, which links the wood pasture restoration in compartment 9 with compartments 7 and 8, will help to link former areas of lowland heath. The topsoil along the ride sides should now be scraped off in places to encourage the regeneration of healthy elements of the flora from the natural seed bank. This new ride should be added to a programme of ride maintenance as described below.

In recent years, soil scrapes have been successfully trialled within compartment 7, prompting the regeneration of heather and gorse among other species. Given their success, further suitable locations in target areas should be identified and soil scrapes created.



Figure 21 Heather regeneration in a soil scrape in compartment 7

Surviving patches of heather in compartment 9 were included in two linked glades established in 2017 by volunteers. This work has been continued through the creation of an additional glade centred around the picnic area, where more heather survives. The work was carried out at the same time as the ride creation works described above and should promote regeneration of heather from the seed bank. Including the picnic area in the area managed for heathland restoration will further improve the chances of heather regeneration. In the absence of a grazing project, the glades require long term maintenance by volunteers to prevent the establishment of bracken, bramble, trees or scrub, which will outcompete the heather if left unmanaged.

#### 4.5.1.3 Glades and rides

Two locations in the wood would particularly benefit from the creation and subsequent maintenance of glades, as a result of their known botanical interest. These are in the southeast corner of compartment 4b and on the west side of the main ride in compartment 6 just south of the fork in the track. In both cases, semi-mature trees and scrub should be removed while any mature trees should be retained. The glades would require long term maintenance by volunteers to prevent the establishment of bracken, bramble, trees and scrub.



Ride widening has taken place along many of the main paths since 2014. The programme of ride maintenance must be continued. A classic woodland ride provides a graded edge from mature trees through scrub and tall herbs to short grassland. To achieve this, a two- or three-zone ride management regime is followed, depending on the width of the ride. On a three-zone regime the central zone is cut annually, the middle zone is cut every three years and the outer zone is to be cut every 15 years. On a two-zone regime the central zone is cut annually and the outer zone is cut every 15 years. Cutting is staggered around the woodland to provide a full range of stages of woodland succession. This frequency allows for the development of mature honeysuckle and willow, important for purple emperor and white admiral butterflies, and these species should continue to be favoured in any management work that takes place along the rides.



Figure 22 Looking east along ride from Woodcock Hill after recent ride maintenance

#### 4.5.1.4 Streams and ponds

Light thinning was carried out along the main stream through compartment 5a in 2016/17 to let in some dappled light. Similar work could take place elsewhere on the site where appropriate, creating small scallops and glades along the streams to let in dappled light and favour the field layer of vegetation.

Full shade should be retained closer to the swallow holes to favour the rare lemon-scented fern.

Ponds are a valuable habitat to many species, including bats, amphibians, and dragonflies. The existing pond in compartment 4b should be restored by desilting and removing overshadowing vegetation. The opportunity to create more ponds along this and neighbouring watercourses should be explored further and external funding identified and secured.

#### 4.5.1.5 Ancient semi-natural woodland

All existing veteran trees should be retained, as there are a limited number across the site. Standing and fallen dead wood should also be retained wherever possible to increase this valuable resource.

Some parts of the wood should continue to be left as non-intervention zones, which are left without interference and where access is not actively encouraged. This applies to two sections of ASNW; compartment 1 and Long Spring.

#### 4.5.1.6 Coppice with standards

Compartment 6 has areas of hazel, alder and hornbeam coppice which are actively managed on rotation. There is also scattered hazel and hornbeam coppice in compartment 5b. The maximum coupe size should be 0.5ha and two coupes should be cut over the period of this plan. Coppice can be cut to waste by volunteers to increase the availability of dead wood habitat, or cut to product such as stakes and bean poles. Coppice coupes require protection with temporary deer fencing to protect stools from grazing and ensure that they regenerate. Where coppice stools are less dense, replanting should take place when coupes are cut. Consideration should also be given to planting new oak standards to recruit a new age class.

#### 4.5.1.7 Plantations

The best remaining conifers, in compartments such as 3d, should be maintained as features which reflect the recent history of Bishop's Wood. All plantation areas which are not subject to more targeted management should be progressively thinned to leave the best stems, favouring broadleaves to develop mature mixed or broadleaved stands. Given the extent of thinning which has taken place in recent years, further large scale thinning is not a priority during the period covered by this plan.

However, some targeted thinning would be beneficial and can be delivered through the existing Countryside Stewardship agreement. The northern boundary of compartment 7 is particularly dense and would benefit from thinning, retaining the best broadleaved stems and removing elements of plantation such as larch and douglas-fir to move towards a semi-natural character. Targeted halo thinning to favour the most important trees within the compartment should be considered. This area of the woodland is often very wet, so trees should be felled in the winter and extracted the following summer. At least 10% of trees felled should be left as dead

wood. Woodland management works are likely to involve soil disturbance which may encourage the regeneration of some of Bishop's Wood's characteristic flora.

Similarly the central part of compartment 4b south of the main ride should be thinned, following the same principles described above.

To address the lack of standing dead wood in the woodland, some mature broadleaved trees in plantation areas, particularly non-native species, should be 'veteranised'. As a minimum this involves ring barking to kill the tree, and can also include damaging or cutting off larger branches. Such trees would then provide valuable habitat for species including bats, woodpeckers and invertebrates. This approach is most appropriate where access for extraction is difficult and the trees cannot be felled and extracted from the wood, but veteranisation of a small number of trees should be incorporated into all woodland management operations.

Glade creation is beneficial as a means to improve the structural diversity of the wood by establishing trees of a different age class and broadening the range of species in the plantations. Glades will be left to natural regeneration.

Non intervention zones should continue to be upheld in the plantations. This includes the southern parts of compartments 3b and 4b, and all of 3c, with the exception of priority habitat areas identified in 3c and 4b. Throughout the plantations, standing and fallen dead wood should be retained wherever possible and safe to do so.

#### 4.5.1.8 Invasive non-native species

Laurel and rhododendron are both occasional through compartments 7 and 8, and rhododendron is also present in compartment 3c. It would be valuable to eradicate both from the woodland. Most bushes appear to be regrowing from stumps which have been cut in the past. The programme of eradication should be completed, with seedlings being hand pulled by volunteers who can also monitor the success of eradication.

Japanese Knotweed has previously been recorded in compartment 9 but appears to have been successfully eradicated. There is a larger area of Japanese Knotweed in White Hill Wood in the area not currently managed by TRDC, which should also be eradicated. Much of the western red cedar within the wood was felled in 2016/17, but some remains around the northern side of the central loop and should be removed. Red oak, another non-native species that featured strongly in plantations, has been targeted for removal in recent years, however some still remains and should be considered for removal or veteranisation during woodland management operations. Non-native grey poplars are present in compartment 1 close to the swallow holes. Ideally these should be felled and regeneration actively managed, but their location makes this very difficult.

#### 4.5.1.9 Batchworth Heath

The grassland at Batchworth Heath has been managed since 1998 by cutting twice annually with arisings left on site. Site biodiversity could be enhanced further by adjusting the grass cutting regime. Areas of Batchworth Heath should be identified for meadow management, reducing the frequency of cutting to once annually and removing all arisings. Marginal areas along roadsides and at junctions should continue to be cut regularly to maintain visibility of highways. Reducing the frequency of cutting in meadow areas will afford less competitive wildflower species the best chance to establish. Wildflowers need nutrient poor soil to grow, and removal of arisings after cutting will help to prevent nutrients from re-entering the soil.

Encroachment of scrub and woodland, significant in the past, has largely halted in recent times, and the woodland should not be allowed to extend further into the grassland. Where there has been minor encroachment of brambles and small trees around the fringes, these should be cut back, and fallen or low-hanging trees removed to minimise any restrictions to grass cutting.

The primary threat to the health of the pond is the presence of the invasive non-native species, *Crassula helmsii*. It is very difficult and costly to eradicate the species, and any attempt would also have a serious negative impact on native species in the pond, so attempted eradication is not recommended. Annual control would be necessary to keep the population of *Crassula* in the pond low and brings with it a risk of spreading the plant to other sites, so is not an appropriate action.

#### 4.5.2 Species

The southern wood ant (*Formica rufa*) translocation project initiated in the previous GAP is showing signs of success, with wood ants now occurring at two focal points within the woodland. The translocation takes place at two points in the year: early spring, when ants mass at the top of their nests, and mid-summer, when pupal-rich booster material can be collected. Translocation efforts will continue over the next five years, including boosting existing nests and establishing new nests.

#### 4.6 Community Involvement

The absence of a nearby community means that Bishop's Wood is unlikely to see major community involvement in its management. CMS volunteer tasks will continue to take place here several times a year and will work towards achievement of the objectives of this GAP.

The wood ant translocation scheme has been and continues to be volunteer-led. If grazing were considered to be a viable proposition, it would be vital to build a team of enthusiastic local people to get involved in stock checking.

Batchworth Heath has an active residents' association, which takes an interest in the management of the common and is well placed to draw management issues to the attention of TRDC and CMS.

#### **4.7 Marketing and Communication**

A leaflet was produced for Bishop's Wood in 2016 and should be utilised in its digital format to promote the site. The leaflet should be reviewed within the timeframe of this GAP with the view to update it for use in digital format if needed.

Occasional guided walks could be organised as a tool to showcase the links between Bishop's Wood and Batchworth Heath. Bishop's Wood is also suited to a range of special interest walks, which could focus on woodland management, the wood ant translocation projects, botany, fungi or archaeology among other things.

Sustainable Hertfordshire at HCC produce monthly e-newsletters, which include promotion of planned management activities and achievements across greenspaces, delivered by CMS. Opportunities to engage with the development of new management plans are promoted online and through site notices. Significant projects to improve the site and engage the community will be shared with local Councillors and celebrated as appropriate.

## 5.0 ACTION PLANS AND MAPS

### 5.1 ANNUAL AND REGULAR ACTIONS

Ref no.	Action	Obj. Ref	When	Lead	Delivery	Funding	Est. Cost	Spec . Ref.	Status
0.1	Carry out small scale vegetation management along paths	A1	Ongoing	TRDC	TRDC GM	Site budget			
0.2	Undertake periodic tree safety surveys and carry out reactive works if required.	B3	Oct - Feb	TRDC	External contractor	Site budget			
0.3	Maintain infrastructure as required	C1	Ongoing	TRDC	TRDC	Site budget			
0.4	Remove any graffiti or fly tipping	C2	Ongoing	TRDC	TRDC GM	Site budget			
0.5	Carry out regular litter picking	C3	Ongoing	TRDC	TRDC GM	Site budget			
0.6	Empty bins at increased frequency	C3	Ongoing	TRDC	TRDC GM	Site budget			
0.7	Maintain vegetation along path edges and around furniture	A1	Sep	TRDC	TRDC GM	Site budget			
0.8	Undertake annual ride management: cut central zone.	E1	Sep	TRDC	TRDC GM	Site budget			
0.9	Undertake annual ride management: rotationally manage middle and outer zones.	E1	Oct-Feb	CMS	Volunteers	Volunteers			
0.10	Continue reintroduction of southern wood ant	E1	Ongoing	CMS	Volunteers	Volunteers			
0.11	Carry out mechanical bracken control and birch regeneration management in all accessible	E4	Ongoing	CMS	Volunteers	Volunteers			

Ref no.	Action	Obj. Ref	When	Lead	Delivery	Funding	Est. Cost	Spec . Ref.	Status
	open areas								
0.12	Maintain grassland at Batchworth Heath by cutting and removing arisings twice annually	E6	Jul	TRDC	TRDC GM	Site budget			
0.13	Engage CMS volunteer group to work on the site whenever possible	F1	Ongoing	TRDC	CMS	Officer time			

## 5.2 YEAR 1 2023 - 24

Ref no.	Action	Obj. Ref	When	Lead	Delivery	Funding	Est. Cost	Spec. Ref.	Status
1.1	Review the possibility of establishing TRDC ownership of White Hill Wood (further actions in this area subject to the outcome of this review)	A2	Ongoing	TRDC	TRDC	Officer time			
1.2	Open up car park entrance by coppicing and selectively felling a small number of trees	A3	Oct – Feb	CMS	External contractor		£2000		
1.3	Design and install car park entrance sign	A3	Oct – Feb	CMS	External contractor		£2000		
1.4	Review leaky woody dam structures and maintain if necessary	C1	April – Sept	CMS	CMS/ volunteers	Officer time			
1.5	Review condition and location of all waymarking posts, including London LOOP	C1	Ongoing	CMS	CMS	Officer time			
1.6	Update waymarking as necessary	C1	Ongoing	CMS	External contractor/ volunteers		£2000		
1.7	Explore grant funding opportunities for a wood pasture restoration project including grazing	D2	April - Sept	TRDC/CMS	CMS	Officer time			
1.8	Seek funding for all other potentially eligible capital work	D2	April – Sept	TRDC/CMS	CMS	Officer time			
1.9	Remove benches from picnic area	E1	Oct – Feb	TRDC	External contractor		£500		



Ref no.	Action	Obj. Ref	When	Lead	Delivery	Funding	Est. Cost	Spec. Ref.	Status
1.10	Establish programme of vegetation management within former picnic area for heathland restoration	E1	April	CMS	Volunteers	Volunteers			
1.11	Plant hazel and oak within coppice coupe as required to fill gaps and recruit new standards (C6)	E2	Oct - Dec	CMS	Volunteers	Countryside Stewardship	£500		
1.12	Create soil scrapes in heathland glades and wood pasture restoration area to promote heathland regeneration (C7/9)	E3	Oct - Feb	TRDC/CMS	External contractor		£2000		
1.13	Continue eradication of rhododendron and laurel at Bishop's Wood (C3c/7/8)	E5	Oct - Feb	TRDC/ CMS	External contractor	Countryside Stewardship	£5000		
1.14	Investigate pond creation opportunities	E6	April – Sept	CMS	External contractor		£2000		
1.15	Initiate change in grassland cutting regime at Batchworth Heath, establishing areas for conservation meadow	E6	April – June	TRDC	TRDC	Officer time			

### 5.3 YEAR 2 2024-25

Ref no.	Action	Obj. Ref	When	Lead	Delivery	Funding	Est. Cost	Spec. Ref.	Status
2.1	Establish programme of vegetation management on path from Batchworth Heath towards Bishop's Wood	A1	April	TRDC	TRDC	GM budget			
2.2	Investigate feasibility of restoring grazing to the site e.g. identifying fencing and water supply requirements, grazier availability, public support etc.	E1	April-July	CMS/TRDC	CMS	Officer time			
2.3	Create two permanent glades (C4b/6)	E1	Oct - Feb	CMS	External contractor	Countryside Stewardship	£10000		
2.4	Carry out targeted thinning (C2/4b)	E2	Oct - Feb	CMS	External contractor				
2.5	Fell remaining western red cedar (C3a)	E2	Oct - Feb	CMS	External contractor				
2.6	Halo thin around important pre-plantation trees and wild service trees (C2/5b)	E2	Oct - Feb	CMS	External contractor				
2.7	Create glades within plantations for natural regeneration (maximum size 0.2ha, maximum total 1ha) (C2/4a/5a)	E2	Oct - Feb	CMS	External contractor				
2.8	Protect 50% of glades left for natural regeneration with temporary deer fencing (C2/4a/5a)	E2	Oct - Feb	CMS	Volunteers	Countryside Stewardship	£500		
2.9	Coppice coupe of up to 0.5ha	E2	Oct -	CMS	Volunteers	Countryside			

Ref no.	Action	Obj. Ref	When	Lead	Delivery	Funding	Est. Cost	Spec. Ref.	Status
	(C6)		Feb			Stewardship			
2.10	Temporary deer fence around coppice coupe (C6)	E2	Oct - Feb	CMS	Volunteers	Countryside Stewardship	£500		
2.11	Plant hazel and oak within coppice coupe as required to fill gaps and recruit new standards (C6)	E2	Oct - Feb	CMS	Volunteers	Countryside Stewardship	£500		
2.12	Restore pond by desilting and de-shading	E6	Oct-Feb	CMS	External contractor		£2000		

#### 5.4 YEAR 3 2025-26

Ref no.	Action	Obj. Ref	When	Lead	Delivery	Funding	Est. Cost	Spec. Ref.	Status
3.1	Undertake botanical survey of proposed grazing compartment to establish pre-grazing baseline data.	E1	April – June	CMS	External contractor		£1500		
3.2	Subject to grazing feasibility, undertake further birch felling in compartment 9	E1	Oct - Feb	CMS	External contractor	External	£10000		
3.3	Install grazing infrastructure (subject to feasibility) within area identified through compartments 7, 8 and 9	E1	Oct - Feb	CMS	External contractor	External	£40000		
3.4	Recruit grazing stock checkers (subject to feasibility)	E1	Oct – Feb	CMS	CMS	Officer time			
3.5	Monitor regrowth in coppice compartments	E2	Ongoing	CMS	CMS	Officer time			
3.6	Monitor condition of deer fencing across the site and maintain as required	E2	Ongoing	CMS	Volunteers	Volunteers			
3.7	Apply for new Countryside Stewardship agreement 2026-30	D2	Jun	CMS	CMS	Officer time			

## 5.5 YEAR 4 2026-27

Ref no.	Action	Obj. Ref	When	Lead	Delivery	Funding	Est. Cost	Spec. Ref.	Status
4.1	Initiate grazing (subject to feasibility) within wood pasture restoration area	E1	May – Oct	CMS	External contractor	External	£3000		
4.2	Review leaky woody dam structures and maintain if necessary	C1	April – Sept	CMS	CMS/volunteers	Officer time			
4.3	Monitor regrowth in coppice compartments	E2	Ongoing	CMS	CMS	Officer time			
4.4	Monitor condition of deer fencing across the site and maintain as required	E2	Ongoing	CMS	CMS/volunteers	Officer time			
4.5	Run 'meet the cows' event (subject to grazing feasibility)	G2	Aug	CMS	CMS	Officer time			
4.6	Regrade/top up surface material in Bishop's Wood car park	C4	Jul	CMS	External contractor		£5000		

## 5.5 YEAR 5 2027-28

Ref no.	Action	Obj. Ref	When	Lead	Delivery	Funding	Est. Cost	Spec. Ref.	Status
5.1	Monitor regrowth in coppice compartments	E2	Ongoing	CMS	CMS	Officer time			
5.2	Monitor condition of deer fencing across the site and maintain as required	E2	Ongoing	CMS	CMS/ volunteers	Officer time			
5.3	Carry out targeted thinning (C7)	E2	Oct - Feb	CMS	External contractor	External	£10000		
5.4	Monitor regeneration of rhododendron and laurel and continue eradication if necessary	E5	Oct - Feb	CMS	External contractor	External	£2000		
5.5	Review leaflet for update	G1	Apr	CMS	CMS	Officer time			

# Bishop's Wood and Batchworth Heath

## Greenspace Action Plan 2023 - 28

### Annual and regular actions

**Task Responsibility**

Blue square	TRDC led	} Officer/Contractor delivered
Red square	CMS led	
Yellow square	TRDC led	} Volunteer delivered
Orange square	CMS led	

**Legend**

- Bench
- Picnic table
- Waste bin
- Interpretation board
- Welcome monolith
- Entrance sign
- Entrance (pedestrian)
- Entrance (pedestrian, horse)
- Entrance (vehicle, pedestrian, horse)
- Height barrier
- Vehicle gate
- Vehicle gate with horse hop
- Horse hop
- Bridge
- Culvert
- Semi-natural woodland
- Plantation woodland
- Managed open space
- Trees
- Woodland/historic heath remnants
- Scrub/acid grassland
- Acid grassland
- Water
- Surfaced paths
- Other paths
- Road
- Pylon

Maintain grassland at Batchworth Heath □

Mechanical bracken rolling and birch regeneration control ■

Undertake annual ride management ■ □

Empty litter bins at increased frequency □



**Annual Management**

- Continue reintroduction of southern wood ant ■
- Small scale vegetation management along paths □
- Regular tree safety inspections □
- Maintain infrastructure □
- Litter picking □
- Removal of graffiti and fly tipping □
- Engage CMS volunteers ■
- Maintain vegetation along path edges and around furniture □

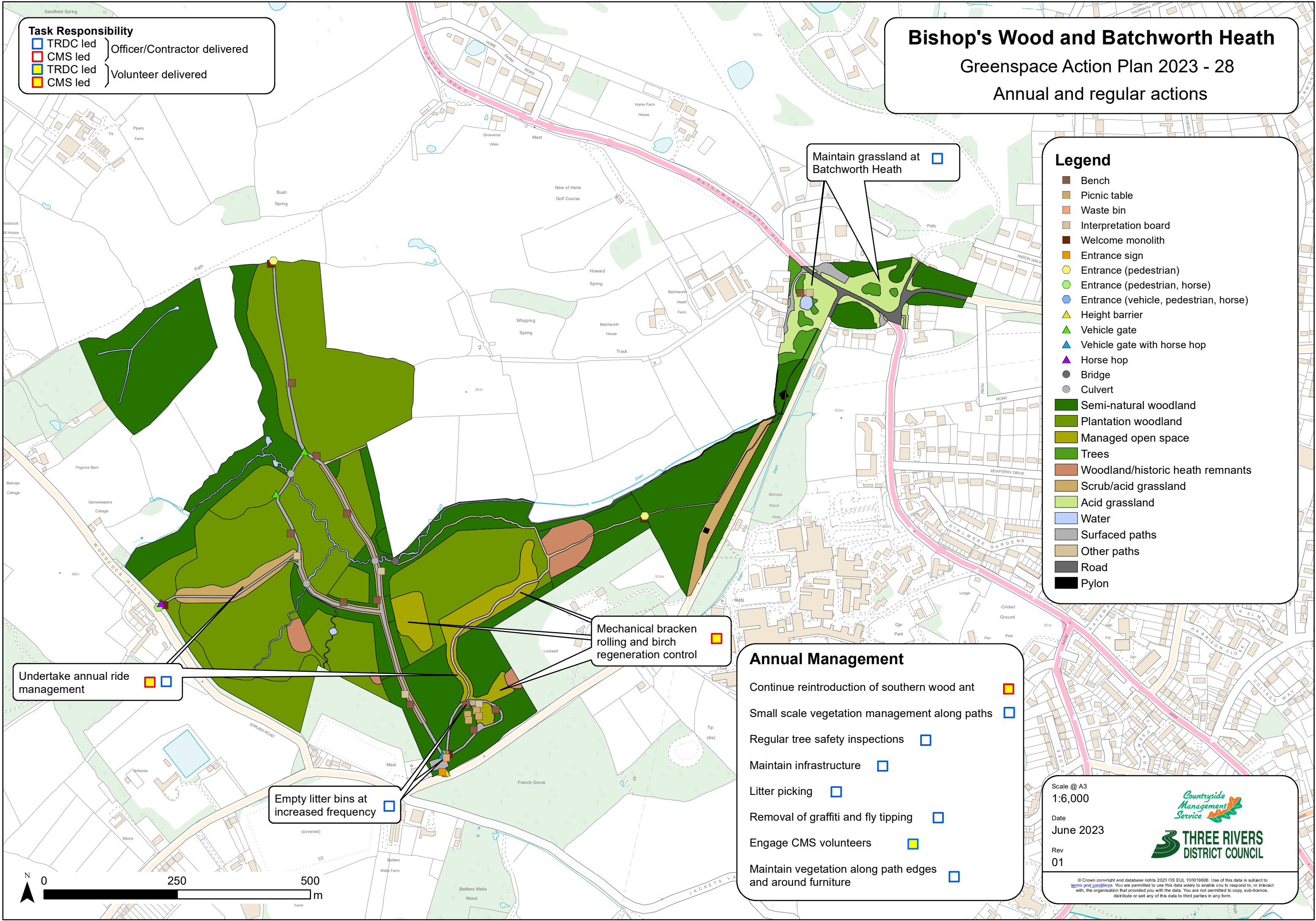
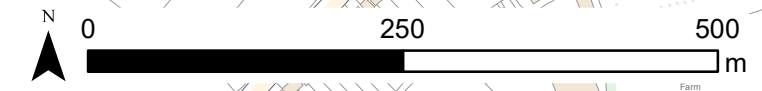
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# Bishop's Wood and Batchworth Heath

## Greenspace Action Plan 2023 - 28

### Year 1 actions

**Task Responsibility**

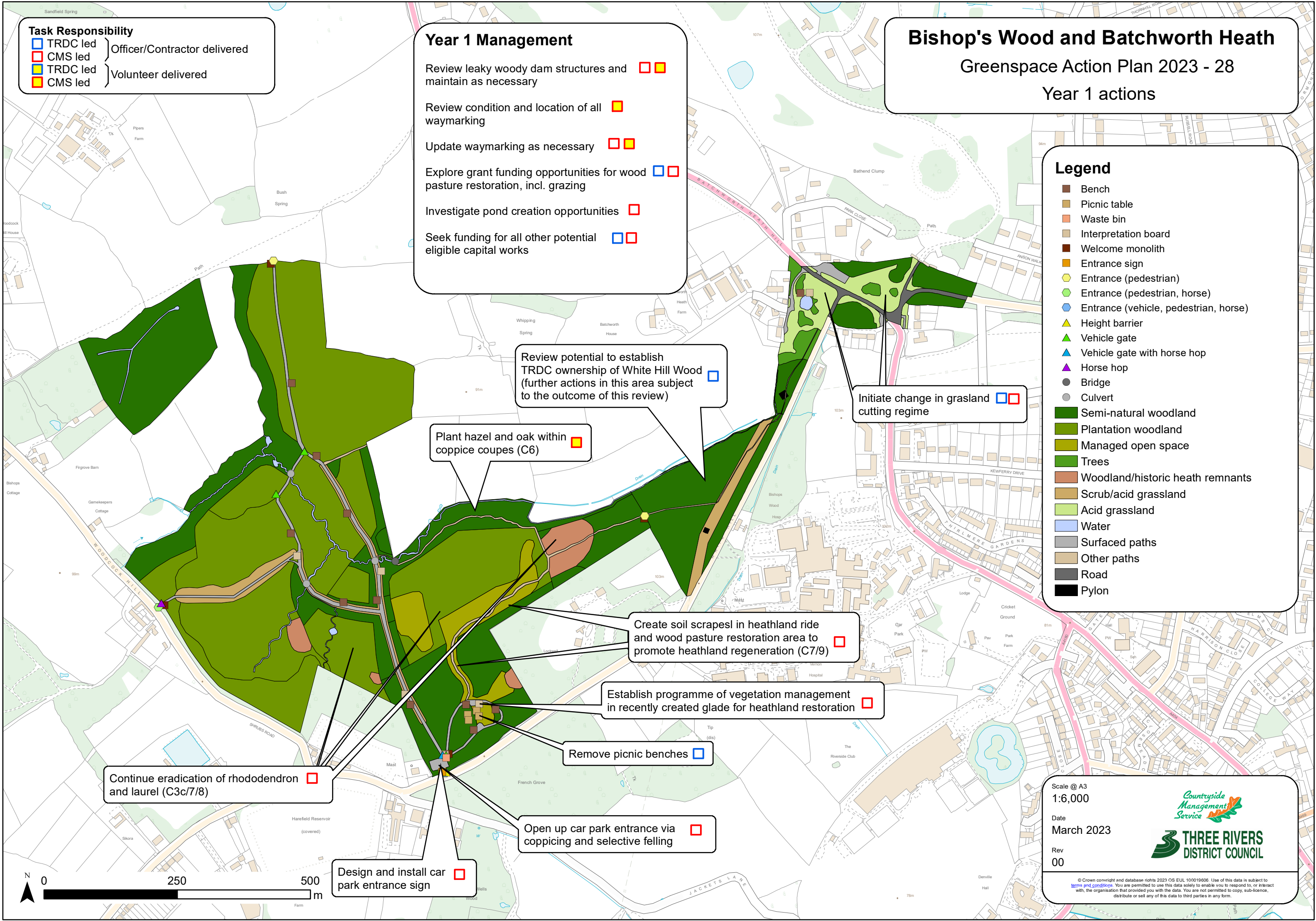
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CMS led	
TRDC led	} Volunteer delivered
CMS led	

**Year 1 Management**

- Review leaky woody dam structures and maintain as necessary □ □
- Review condition and location of all waymarking □
- Update waymarking as necessary □ □
- Explore grant funding opportunities for wood pasture restoration, incl. grazing □ □
- Investigate pond creation opportunities □
- Seek funding for all other potential eligible capital works □ □

**Legend**

- Bench
- Picnic table
- Waste bin
- Interpretation board
- Welcome monolith
- Entrance sign
- Entrance (pedestrian)
- Entrance (pedestrian, horse)
- Entrance (vehicle, pedestrian, horse)
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- Horse hop
- Bridge
- Culvert
- Semi-natural woodland
- Plantation woodland
- Managed open space
- Trees
- Woodland/historic heath remnants
- Scrub/acid grassland
- Acid grassland
- Water
- Surfaced paths
- Other paths
- Road
- Pylon



Review potential to establish TRDC ownership of White Hill Wood (further actions in this area subject to the outcome of this review) □

Plant hazel and oak within coppice coupes (C6) □

Initiate change in grasland cutting regime □ □

Create soil scrapes in heathland ride and wood pasture restoration area to promote heathland regeneration (C7/9) □

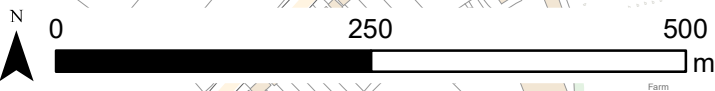
Establish programme of vegetation management in recently created glade for heathland restoration □

Remove picnic benches □

Continue eradication of rhododendron and laurel (C3c/7/8) □

Open up car park entrance via coppicing and selective felling □

Design and install car park entrance sign □



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**THREE RIVERS DISTRICT COUNCIL**

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# Bishop's Wood and Batchworth Heath

## Greenspace Action Plan 2023 - 28

### Year 2 actions

**Task Responsibility**

TRDC led	} Officer/Contractor delivered
CMS led	
TRDC led	} Volunteer delivered
CMS led	

**Legend**

- Bench
- Picnic table
- Waste bin
- Interpretation board
- Welcome monolith
- Entrance sign
- Entrance (pedestrian)
- Entrance (pedestrian, horse)
- Entrance (vehicle, pedestrian, horse)
- Height barrier
- Vehicle gate
- Vehicle gate with horse hop
- Horse hop
- Bridge
- Culvert
- Semi-natural woodland
- Plantation woodland
- Managed open space
- Trees
- Woodland/historic heath remnants
- Scrub/acid grassland
- Acid grassland
- Water
- Surfaced paths
- Other paths
- Road
- Pylon

**Year 2 Management**

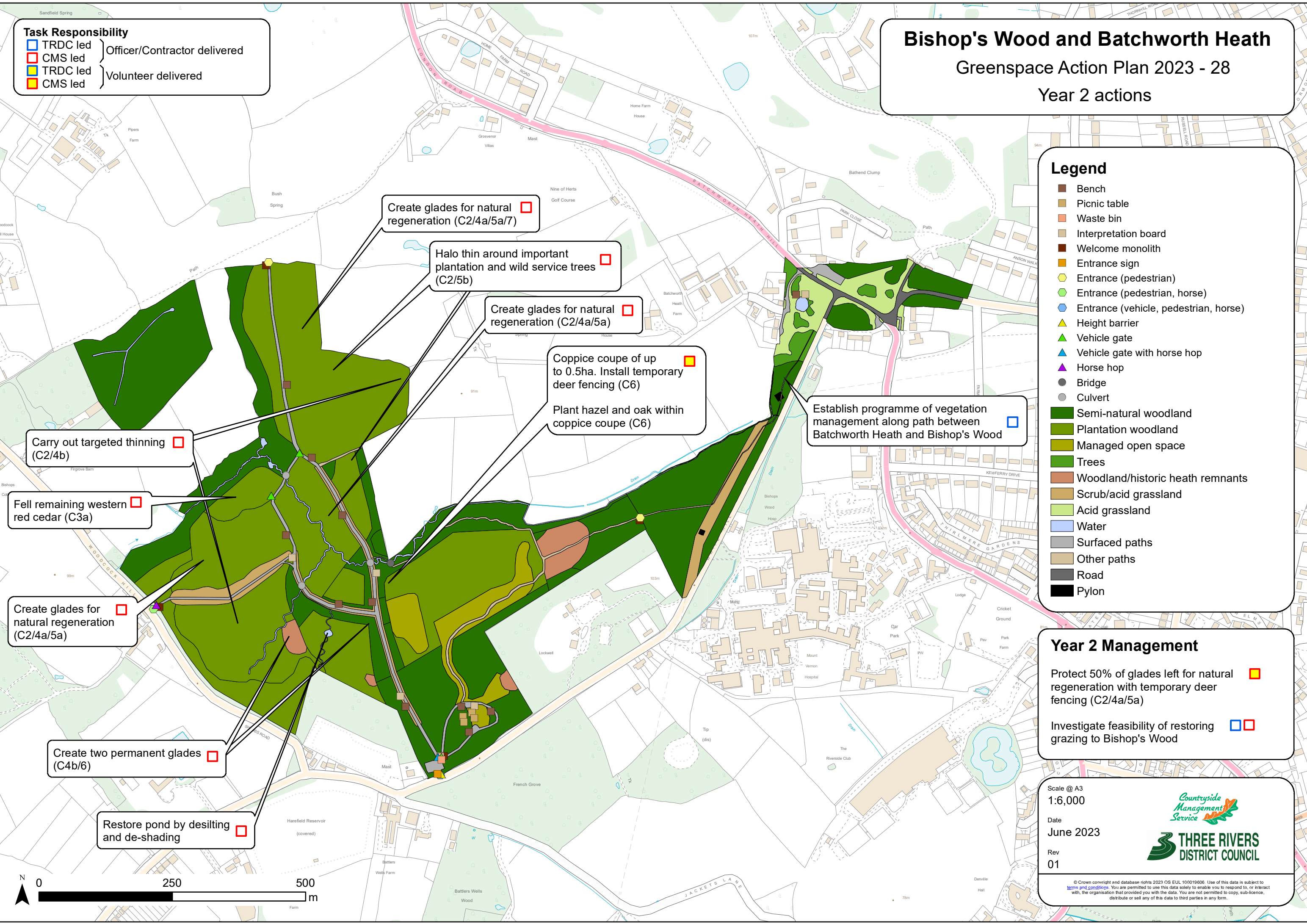
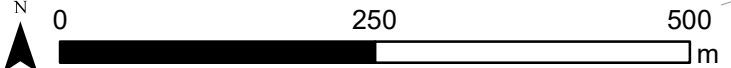
- Protect 50% of glades left for natural regeneration with temporary deer fencing (C2/4a/5a) ■
- Investigate feasibility of restoring grazing to Bishop's Wood ■ ■

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Create glades for natural regeneration (C2/4a/5a/7) ■

Halo thin around important plantation and wild service trees (C2/5b) ■

Create glades for natural regeneration (C2/4a/5a) ■

Coppice coupe of up to 0.5ha. Install temporary deer fencing (C6) ■

Plant hazel and oak within coppice coupe (C6)

Establish programme of vegetation management along path between Batchworth Heath and Bishop's Wood ■

Carry out targeted thinning (C2/4b) ■

Fell remaining western red cedar (C3a) ■

Create glades for natural regeneration (C2/4a/5a) ■

Create two permanent glades (C4b/6) ■

Restore pond by desilting and de-shading ■

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# Bishop's Wood and Batchworth Heath

## Greenspace Action Plan 2023 - 28

### Year 3 actions

**Task Responsibility**

Blue square	TRDC led	} Officer/Contractor delivered
Red square	CMS led	
Yellow square	TRDC led	} Volunteer delivered
Orange square	CMS led	

**Legend**

- Bench
- Picnic table
- Waste bin
- Interpretation board
- Welcome monolith
- Entrance sign
- Entrance (pedestrian)
- Entrance (pedestrian, horse)
- Entrance (vehicle, pedestrian, horse)
- Height barrier
- Vehicle gate
- Vehicle gate with horse hop
- Horse hop
- Bridge
- Culvert
- Semi-natural woodland
- Plantation woodland
- Managed open space
- Trees
- Woodland/historic heath remnants
- Scrub/acid grassland
- Acid grassland
- Water
- Surfaced paths
- Other paths
- Road
- Pylon



**Year 3 Management**

- Monitor regrowth in coppice compartments
- Monitor condition of deer fencing across the site and maintain as needed
- Apply for new Countryside Stewardship agreement 2026 - 30

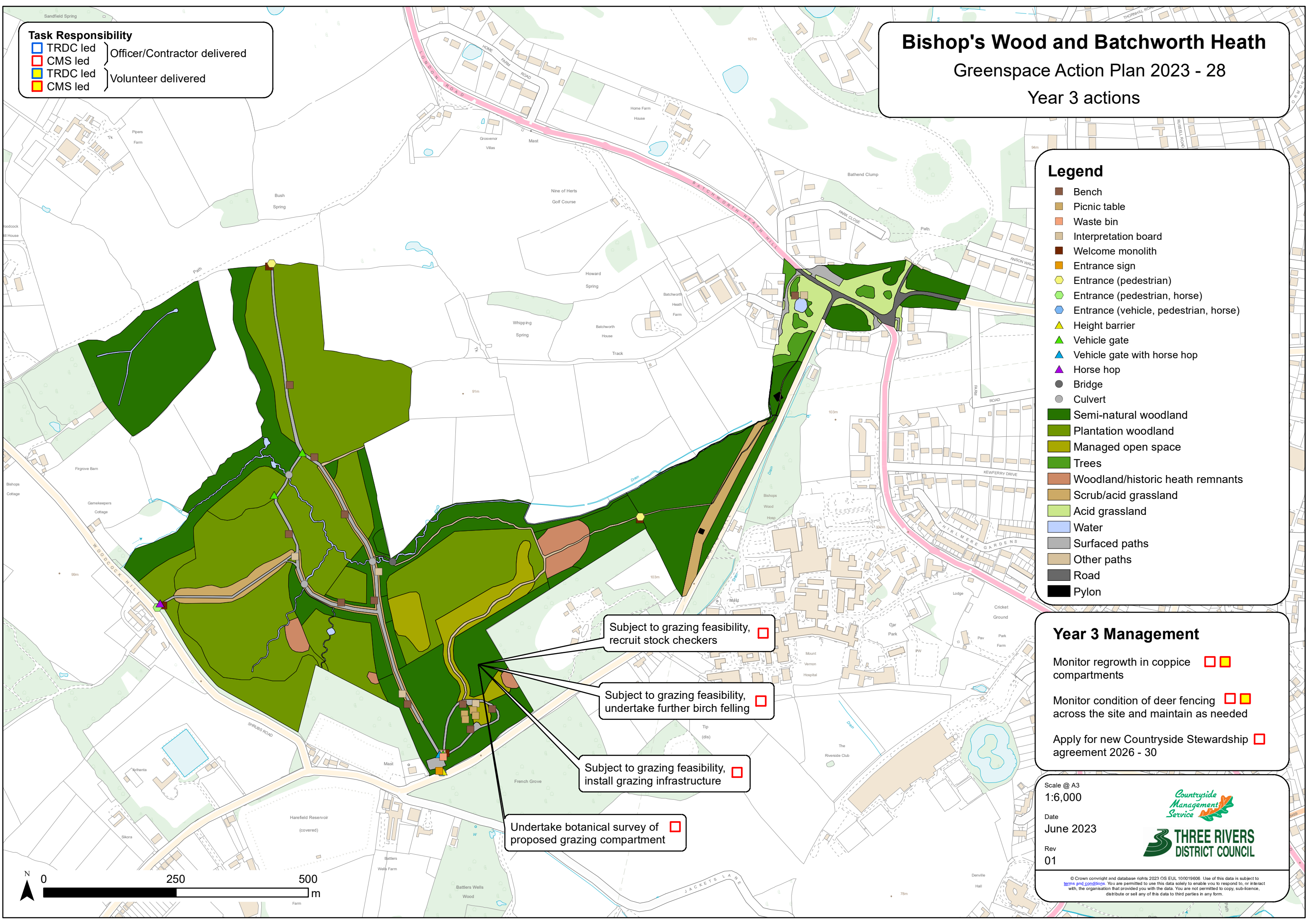
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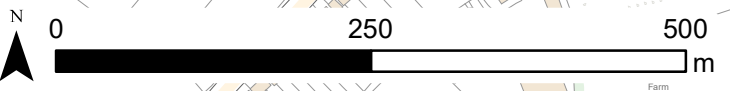


Subject to grazing feasibility, recruit stock checkers

Subject to grazing feasibility, undertake further birch felling

Subject to grazing feasibility, install grazing infrastructure

Undertake botanical survey of proposed grazing compartment



# Bishop's Wood and Batchworth Heath

## Greenspace Action Plan 2023 - 28

### Year 4 actions

**Task Responsibility**

Blue square	TRDC led	} Officer/Contractor delivered
Red square	CMS led	
Yellow square	TRDC led	} Volunteer delivered
Orange square	CMS led	

**Legend**

- Bench
- Picnic table
- Waste bin
- Interpretation board
- Welcome monolith
- Entrance sign
- Entrance (pedestrian)
- Entrance (pedestrian, horse)
- Entrance (vehicle, pedestrian, horse)
- Height barrier
- Vehicle gate
- Vehicle gate with horse hop
- Horse hop
- Bridge
- Culvert
- Semi-natural woodland
- Plantation woodland
- Managed open space
- Trees
- Woodland/historic heath remnants
- Scrub/acid grassland
- Acid grassland
- Water
- Surfaced paths
- Other paths
- Road
- Pylon



**Year 4 Management**

- Review leaky woody dam structures and maintain if necessary □ □
- Monitor regrowth in coppice compartments □ □
- Monitor condition of deer fencing across the site and maintain as needed □ □

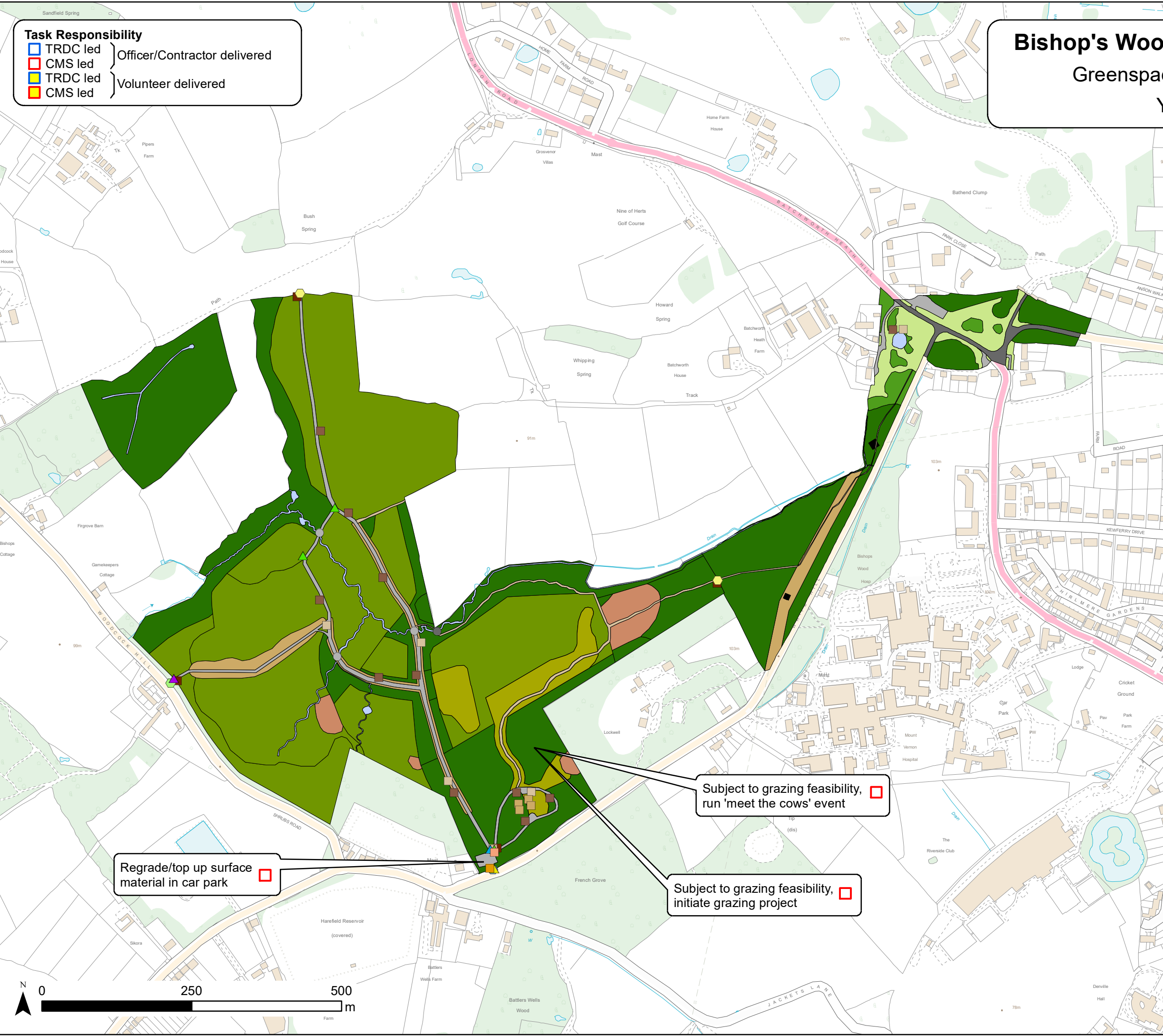
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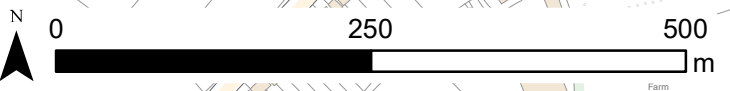
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Regrade/top up surface material in car park □

Subject to grazing feasibility, run 'meet the cows' event □

Subject to grazing feasibility, initiate grazing project □



# Bishop's Wood and Batchworth Heath

## Greenspace Action Plan 2023 - 28

### Year 5 actions

**Task Responsibility**

TRDC led	} Officer/Contractor delivered
CMS led	
TRDC led	} Volunteer delivered
CMS led	

**Year 5 Management**

- Monitor regrowth in coppice compartments □ □
- Monitor condition of deer fencing across the site and maintain as needed □ □
- Monitor regeneration of rhododendron and laurel and continue eradication if necessary □
- Review leaflet for update □

**Legend**

- Bench
- Picnic table
- Waste bin
- Interpretation board
- Welcome monolith
- Entrance sign
- Entrance (pedestrian)
- Entrance (pedestrian, horse)
- Entrance (vehicle, pedestrian, horse)
- ▲ Height barrier
- ▲ Vehicle gate
- ▲ Vehicle gate with horse hop
- ▲ Horse hop
- Bridge
- Culvert
- Semi-natural woodland
- Plantation woodland
- Managed open space
- Trees
- Woodland/historic heath remnants
- Scrub/acid grassland
- Acid grassland
- Water
- Surfaced paths
- Other paths
- Road
- Pylon

Carry out targeted thinning (C7) □



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Date  
June 2023

Rev  
01

**THREE RIVERS DISTRICT COUNCIL**

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## 6.0 SPECIFICATIONS

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1. Widen path between Bishop's Wood and Batchworth Heath/path maintenance
  - a. Establish a wider path between Bishop's Wood and Batchworth Heath, indicated on the action plan map (700m), by clearing all vegetation according to a minimum standard.
  - b. Establish an additional path linking this new path with the footpath from Mount Vernon Hospital (100m), by clearing all vegetation according to a minimum standard.
  - c. The path should have a minimum of 4m height and 1m on either side of the path free from encroaching vegetation.
  - d. The path itself, while unsurfaced, should be 1.5m wide, allowing a total clear width of 3.5m.
  - e. This path and all other marked paths around Bishop's Wood, both surfaced and unsurfaced, should be maintained to this minimum standard.
  - f. All timber and brash generated to be removed from the route of the path. Timber to be extracted or stacked as dead wood habitat, brash to be spread thinly on the woodland floor.

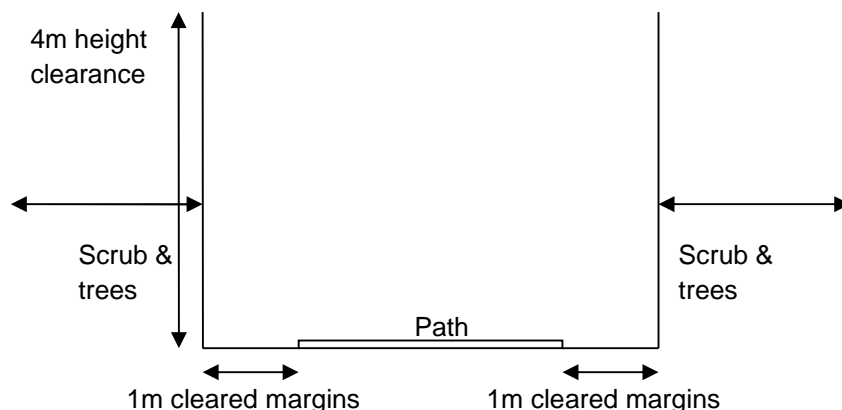


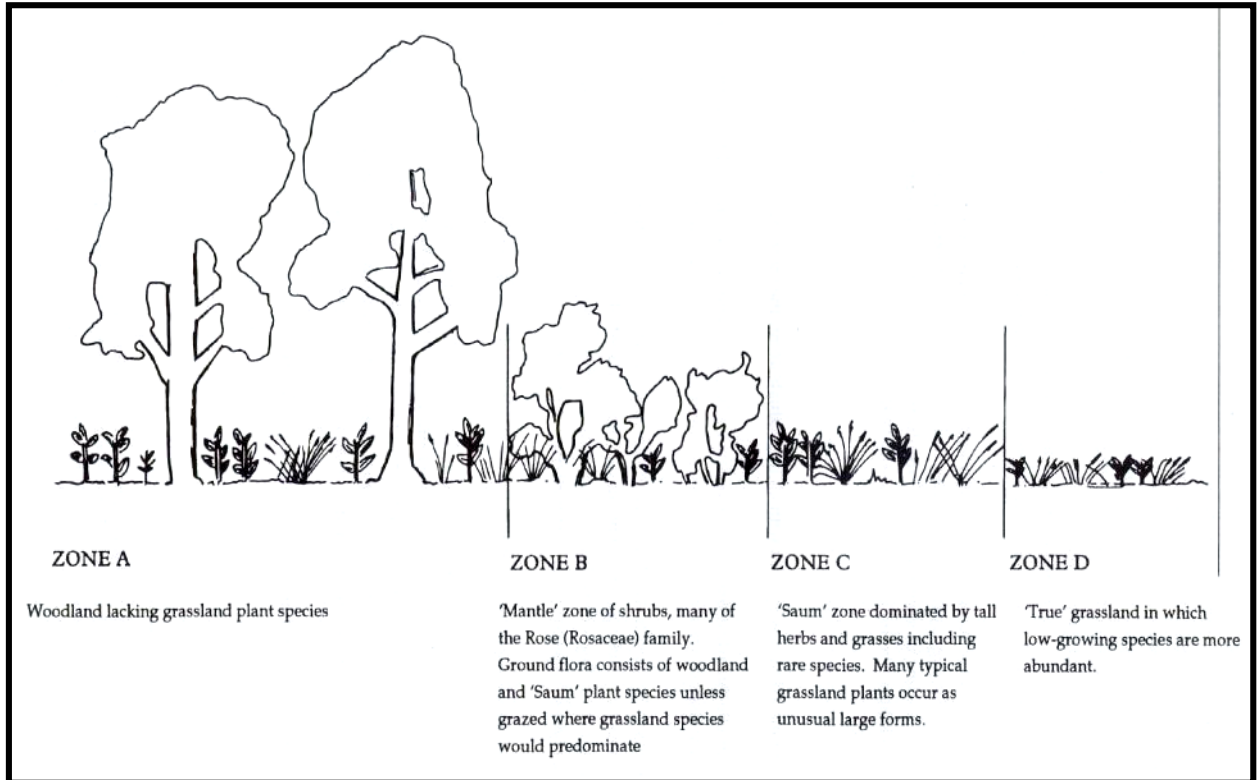
Diagram: Minimum width along the route.

2. Wood pasture restoration
  - a. The proposed wood pasture restoration area covers a 3.2ha section of compartments 7 and 9, and is indicated on the action plan map.
  - b. This item is subject to grant funding and further feasibility assessment.
  - c. Clear fell all young trees within the defined area unless specifically identified, retaining all mature trees unless specifically identified (primarily beech to be retained in compartment 9 and Scots pine in compartment 7).
  - d. Chip all lop & top and brash directly into transport and remove from site.

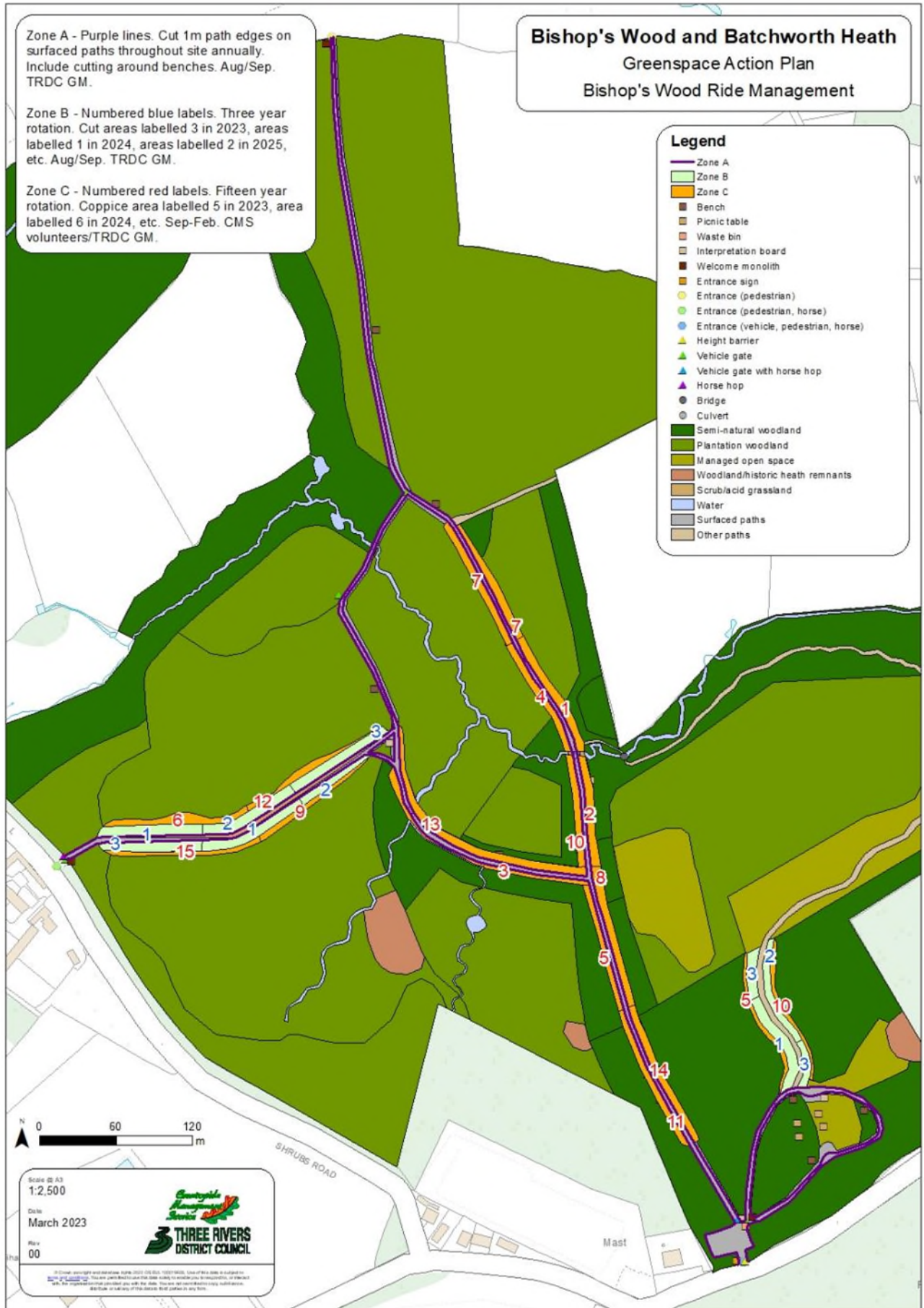
- e. Extract all timber & chip along route shown on accompanying map. Roundwood to be stacked in designated timber stacking area along main ride. Stack it safely and in a safe and suitable manner for extraction.
  - f. Mulch the same area.
    - i. Mulch all stumps and ground layer to a minimum depth of 50mm, so that there is no regrowth from stumps or roots.
    - ii. Mulching is to be carried out around existing mature conifers, mainly Scots pine. To avoid causing damage to these trees, no mulching is to be done within a 3m radius of any mature tree or tree group.
    - iii. Where wet flushes occur, mulching is not required – to be identified & agreed on the ground with the supervising officer prior to commencement.
    - iv. Area to be rolled after mulching to leave flat with no obstacles for future management such as ruts or stumps.
  - g. Install stock-proof fencing, livestock handling area, water supply and trough, gates and squeezes.
  - h. Engage a grazier and establish a grazing agreement.
  - i. Implement summer and autumn grazing by cattle.
3. Removal of topsoil from glades and rides
- a. Establish 20 scrapes along the new heathland ride, comprising 10 where the litter (50mm) layer is removed, 10 where the litter and topsoil (150mm) layers are removed.
  - b. These plots to be 5m square, on both sides of the ride, and to be distributed along the full length of the ride.
  - c. Soil removed to be spread thinly on the woodland floor adjacent to the ride.
  - d. Three additional scrapes to be created in the heathland glades.
  - e. Establishment of heathland and acid grassland specific species to be monitored annually for five years following plot creation, and results to inform future management.
4. Glade creation and maintenance
- a. Create three permanent glades in compartments 4b and 6, each to be no more than 0.2ha.
  - b. Remove semi-mature trees and scrub while retaining any mature trees which are more than around 60 years old.
  - c. Take care to minimise ground disturbance within the glades.
  - d. All timber and brash generated to be removed from the glade. Timber to be extracted or stacked as dead wood habitat, brash to be spread thinly on the woodland floor.

- e. These glades and existing glades in compartment 9 to be maintained by volunteers by clearing regenerating bracken, bramble, scrub and small trees once every five years.
5. Glade creation for natural regeneration
- a. Cut 1ha of small glades within compartments 2, 4a, 5a and 7, each to be no more than 0.2ha.
  - b. In 50% of glades, install temporary deer fencing for four years to protect natural regeneration.
  - c. Leave 50% of glades unfenced.
  - d. All timber and brash generated to be removed from the glade. Timber to be extracted or stacked as dead wood habitat, brash to be spread thinly on the woodland floor.
  - e. Compare natural regeneration in fenced and unfenced glades after four years to assess the impact of temporary deer fencing.
6. Coppicing
- a. In compartments 5b and 6, coppice trees within areas which are currently in active coppice up to a maximum coupe size of 0.5ha.
  - b. No more than two coupes of this size should be cut between 2023 and 2028.
  - c. Coppice trees close to ground level, with a cut sloping away from the centre of the tree.
  - d. Coupes may be cut to waste by volunteers to increase dead wood habitat or cut to product by a coppice worker.
  - e. Restock the coupes if required, in areas where the hazel stool density is less than 1500 per ha/greater than 3 metre spacing between stools. This will be achieved by planting hazel whips to achieve a stool density of 1500-2000 per ha/2-3m spacing between stools. Plants to be 30-50cm bare rooted whips from native seed zone 405.
  - f. Protect coupes with temporary plastic deer fencing for four years after cutting.
7. Ride management
- a. The aim of ride management is to produce the graded edge and mixture of lateral habitats shown in the diagram below.
  - b. The 2m wide central zone (zone D in the diagram) is cut annually in June.
  - c. The 3m wide middle zones (zone C) are cut on alternate sides every 3 years in September.
  - d. The outer zones (zone B), which are up to 15m wide, are divided into 15 sections. One section is cut each year in September, in order that all of the outer zones are cut every 15 years.
  - e. This ride management regime should be established on the recently-created heathland ride through compartments 7,8 and 9, and on the ride between compartments 4a and 4b.

- f. On the narrower rides in compartments 5a/5b, 6 and 9 (points C to D, D to E and D to F), a three-zone maintenance regime will not be possible and instead a two-zone regime should be established, incorporating prescriptions for zones B and D only.







## 8. Thinning

- a. Carry out targeted thinning to the middle part of compartment 4b and the northern side of compartment 7 to move towards a semi-natural character. Areas indicated on the action plan map.
- b. Fell non-native plantation trees (Scots pine, larch, Douglas-fir and red oak), removing no more than 30% of tree cover in any area.
- c. Cut commercially unviable brash to 1-2m lengths and scatter across the woodland floor, clear of any footpaths or rides.
- d. Timber to be retained by the contractor – its expected value should be accounted for in the tender submission.
- e. Forward timber from the felling compartment to the agreed stacking area using the agreed route(s) as shown at initial site visit. Stack it safely and in a safe and suitable manner for extraction.
- f. If extraction is not possible this should be agreed with the supervising officer during the tender process. Timber should be stacked neatly and safely on the woodland floor to provide dead wood habitat.

## 9. Halo thinning important trees

- a. Carry out selective felling to achieve up to 7m of open canopy adjacent to trees which are identified as valuable, including ancient boundary stubs and larger wild service trees.
- b. Care should be taken not to damage these important trees during the work.
- c. Where there are sufficient quantities and extraction is viable, timber should be forwarded to the agreed stacking area using the agreed route(s) as shown at initial site visit. Stack it safely and in a safe and suitable manner for extraction.
- d. If extraction is not possible, timber should be stacked neatly and safely on the woodland floor to provide dead wood habitat.
- e. Cut commercially unviable brash to 1-2m lengths and scatter across the woodland floor, clear of any footpaths or rides.

## 10. Bracken control in compartments 7 and 9

- a. Roll bracken in the areas of managed open space in compartments 7 and 9, using a bracken roller.
- b. Extend bracken rolling to other open areas as considered necessary, including any rides and glades which are free from stumps or other obstructions.
- c. Carry out bracken rolling annually in late June.

## 11. Eradication of Japanese knotweed

- a. Eradicate Japanese knotweed from its known locations in White Hill Wood.
- b. Selectively apply herbicide containing Glyphosate between August and the first frost, as foliar spray.

- c. Monitor regrowth in years 2 and 3 and carry out similar chemical treatment of any regrowth.
12. Eradication of rhododendron and laurel
- a. Rhododendron and laurel control has previously taken place in compartments 3c, 7 and 8, and there is now occasional small regrowth from previously cut stumps, which should be cleared.
  - b. Where regrowth from stumps is occurring, a tracked or wheeled 360 degree excavator with a root rake or similar should be used to carry out the work. All plants should have all roots grubbed up, and areas of disturbed ground should be left level with any hollows filled.
  - c. Disposal of the cleared rhododendron and laurel may be either by chipping all material directly into a trailer, removing and disposing of the chipping off site, or burning all cut material on site, removing and disposing of the resulting ash from the fire sites.
13. Prevent scrub encroachment into grassland at Batchworth Heath
- a. Remove fallen and lower branches from trees within the mown grassland area, to maintain access for mowing.
  - b. Clear brambles and small trees from the fringes of the woodland adjacent to the grassland.
  - c. Stack arisings in agreed locations on the woodland edge.
  - d. Re-establish mowing in these cleared areas.
14. De-shade pond at Bishop's Wood
- a. Fell selected and specifically marked trees around the pond in compartment 3c to reduce shade on the pond.
  - b. This work should be carried out in conjunction with glade creation nearby in compartment 4b.
  - c. Timber to be extracted or stacked as dead wood habitat, brash to be spread thinly on the woodland floor.

## **7.0 APPENDICES**

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### **7.1 Appendix 1: Wildlife Site Survey Report for Bishop's Wood**

## Wildlife Site Survey Report for: Bishop's Wood (nr Mount Vernon Hospital)

<b>Site Ref:</b>	89/003	<b>Site size (ha):</b>	40.7		
<b>District:</b>	Three Rivers	<b>Central Grid Ref:</b>	TQ067918		
<b>Surveyors:</b>	Ruth Graham, Jean Williamson, Andrew Harris, Carol Lodge, Carol Smith, Janet Lowndes, Brenda Harold, Judith Cox, Margaret Harris				
<b>Spp list by:</b>	J Williamson, J Lowndes, B Harold, C Smith, A Harris, J Evans	<b>Form by:</b>	BH, CL, JC, JL	<b>Map by:</b>	AH, JW, CS
<b>Date of survey:</b>	30/05/13 27/6/13 18/07/13	<b>Weather:</b>	Visit 1: Overcast, chilly Visit 2: Sunny, hot Visit 3: overcast, warm	<b>Duration on site:</b>	8 hrs 6 ½ hrs

<b>Geology:</b>	<b>Bedrock:</b>	London clay formation – clay, silt and sand
	<b>Superficial Deposits:</b>	No info available - urban

<b>Original criteria:</b>	H.1.1.1 Woodland on the AWI	<b>Habitat:</b>	Birch-Quercus robur woodland, Fagus sylvatica woodland, Broadleaved, semi-natural, coppice with standards, Woodland: plantation, Grassland: acid, Scrub, Open water: pond, Open water: streams.
<b>Criteria met:</b>	H.1 (AWI's 45); H.2.2.b (neutral 10); H.2.2.c (acid 16); H.2.2.d (wet 9); H.2.2.e (mixed 32)		
<b>Recommended changes to boundary</b>	none.		
<b>Original Site Description:</b>	<p>A large area of ancient acid woodland situated on a varied geology, which supports a very rich and diverse flora. The site has been extensively replanted with conifers and broadleaved species, but there are relic stands of ancient woodland consisting predominantly of Hazel (<i>Corylus avellana</i>) coppice with Pedunculate Oak (<i>Quercus robur</i>)/Ash (<i>Fraxinus excelsior</i>) standards on the clay soils and Pedunculate Oak (<i>Quercus robur</i>)/Beech (<i>Fagus sylvatica</i>)/Silver Birch (<i>Betula pendula</i>) high forest on the southern sands and gravels. Small stands of Alder (<i>Alnus glutinosa</i>) and coppiced Hornbeam (<i>Carpinus betulus</i>) persist locally. The ground flora supports abundant ancient woodland indicator species with many notable species recorded including Violet Helleborine (<i>Epipactis purpurata</i>), Herb Paris (<i>Paris quadrifolia</i>), Narrow Buckler-fern (<i>Dryopteris carthusiana</i>), Pale Sedge (<i>Carex pallescens</i>), Thin-spiked Wood Sedge (<i>C. strigosa</i>) and Lemon-scented Fern (<i>Oreopteris limbosperma</i>). Acid grassland/heathland communities are present, particularly within the glades, with a varied heathland type flora recorded including Heather (<i>Calluna vulgaris</i>); which suggests that historically part of the wood may once been open and heathy in character. The presence of streams, swallowholes and a pond add to the habitat diversity. Wildlife Site criteria: Ancient Woodland Inventory site with restorable elements of its previous semi-natural character including some semi-natural canopy and ancient features; species.</p>		

<p><b>Overall General Site Description:</b></p>	<p>A large area of ancient acid woodland situated on a varied geology, which supports a very rich and diverse flora. The site has been extensively replanted with conifers and broadleaved species, but there are relic stands of ancient woodland consisting predominantly of Hazel (<i>Corylus avellana</i>) coppice with Pedunculate Oak (<i>Quercus robur</i>)/Ash (<i>Fraxinus excelsior</i>) standards on the clay soils and Pedunculate Oak (<i>Quercus robur</i>)/Beech (<i>Fagus sylvatica</i>)/Silver Birch (<i>Betula pendula</i>) high forest on the southern sands and gravels. Small stands of Alder (<i>Alnus glutinosa</i>) and coppiced Hornbeam (<i>Carpinus betulus</i>) persist locally. The ground flora supports abundant ancient woodland indicator species with 45 ancient woodland indicators recorded including Wood Spurge (<i>Euphorbia amygdaloides</i>), Alder Buckthorn (<i>Frangula alnus</i>), Slender St John's Wort (<i>Hypericum pulchrum</i>), Yellow Pimpernel (<i>Lysimachia nemorum</i>), Wild Service Tree (<i>Sorbus torminalis</i>), Soft Shield Fern (<i>Polystichum setiferum</i>), Narrow Buckler-fern (<i>Dryopteris carthusiana</i>), Lady Fern (<i>Athyrium filix-femina</i>), and Scaly Male Fern (<i>Dryopteris affinis</i> agg.). Acid grassland/heathland communities are present, within the wider rides, with a varied heathland type flora. Heather (<i>Calluna vulgaris</i>) is still present but only in Compartment 9. The presence of streams, swallowholes and a pond add to the habitat diversity.</p> <p>Wildlife Site criteria: Ancient Woodland Inventory site with restorable elements of its previous semi-natural character including some semi-natural canopy and ancient features; species.</p>
<p><b>Supplementary information</b></p> <p>Bishops Wood has been well known to botanists for many years. It used to be a SSSI but was de-designated following clear-felling of large parts of the wood and replanting with conifers, although scattered fragments of the former vegetation remained. In a 1978 Survey of Ancient Semi-natural Woodland in Hertfordshire, Bishops Wood was ranked the eleventh highest in the county in terms of its value for nature conservation and second behind Oxhey Woods within Three Rivers District. A very comprehensive Ecological Appraisal of Bishops Wood was written by Ian Marshall of Herts County Council's Countryside Group in 1987. This gave detailed descriptions of the 9 compartments within the wood together with notes on the uncommon species. A total of 215 plant species were recorded at that time. A survey conducted by the Herts Wildlife Sites Partnership in 2003 recorded 195 vascular plant species and followed similar Compartment boundaries</p> <p>Recorded in 2003 but not in 2013: Violet Helleborine (<i>Epipactis purpurata</i>), Herb Paris (<i>Paris quadrifolia</i>), Pale Sedge (<i>Carex pallescens</i>), Thin-spiked Wood Sedge (<i>C. strigosa</i>) and Lemon-scented Fern (<i>Oreopteris limbosperma</i>).</p>	
<p>Compartment 1: 6-fig central Grid Ref: TQ066922</p> <p><i>Surveyed 29/5/13</i></p>	<p>This is a strip of woodland along the west/north-west boundary of the site. The west-facing boundary has some large Ash and veteran coppiced Field Maple. There is a mixture of broadleaf trees throughout, of a variety of ages including saplings and semi-mature with occasional conifers. At the northern end there is an old Hazel coppice and an open glade covered in a dense patch of Bluebell with Bracken, and a badger sett that was noted as being active in 2003.</p> <p>There is a large swallow hole near the southern end of compartment 2, with bare ground and a nearby stream, all enclosed by a tall canopy. This section's ground flora is mainly <i>Dryopteris</i> spp, bracken, sedges and bramble.</p>
<p>Compartment 2: 6-fig central Grid Ref: TQ067922</p> <p><i>Surveyed 29/5/13</i></p>	<p>Park Wood is a mixed woodland with Beech, Pedunculate Oak and some Scot's Pine, also Hazel, Ash and Field Maple mainly on the boundary and as saplings in the understorey. The northern boundary contains a very large veteran layered Beech. The field layer is best towards the north and includes some AWIs such as Bluebell, Dog's Mercury, Bugle, Yellow</p>

	<p>Archangel, Wood Spurge and Wood Sedge. Towards the south it is mainly bramble but, very rarely, remnant acid grassland species remain: Sheep's Sorrel, Slender St John's-wort, Wood Sage and Heath Speedwell were recorded.</p> <p>The lower part of the steep west facing slope, continuing into compartment 1, has a rich diversity of herbs with several AWIs including Bluebell, Primrose, Dog's Mercury, Enchanter's Nightshade and Wood Speedwell.</p> <p>The 1987 report stated that the ride through compartment 2 used to contain much floral interest, but the path is now heavily shaded and edged by Pendulous Sedge with a few other herbs.</p> <p>One of the three specimens of Wild Service-tree, <i>Sorbus torminalis</i>, recorded on the site is at the southern boundary of this compartment, near the path but crowded by surrounding trees.</p>
<p>Compartment 3: 6-fig central Grid Ref: see individual areas 3a, 3b, 3c, 3d</p> <p><i>Surveyed 18/7/13</i></p>	<p>3a: (TQ066920) This is an area of mixed broadleaf trees with mature, young and saplings of many species present including Pedunculate Oak, Ash, and some Wild Cherry, Scot's Pine and Birch. There is a bank of old Hazel coppice. The field layer is mainly bramble although the ferns <i>Dryopteris filix-mas</i>, <i>D.affinis</i>, <i>D.dilatata</i> and <i>D.carthusiana</i> were all recorded as well as Bluebell, various grass species and a clearing with many large Foxgloves attracting butterflies.</p> <p>3b: (TQ065917) A narrow strip following the remnants of fence-line. Most of the fence has fallen and there are just posts left meaning that the ditched tree lined area up against the road has become part of the wildlife site – see map.</p> <p>Some large boundary coppiced Hornbeam remains. This area is very varied in plant species and density depending on the amount of light entering. Heavily shaded areas have a ground cover of mainly leaf litter, a carpet of <i>Vinca minor</i> in one patch, bramble, Ash saplings and Bluebell. A dappled shaded spot at the NW corner has Wood Dock, Red Campion, and Garlic Mustard. The sunlit glades near the track include regenerating tree stumps, sapling and mature Pedunculate Oak, Heath Speedwell, Wood Spurge and Enchanter's Nightshade. Other sunlit areas have species such as Rough Meadow-grass, Figwort, Violet spp, Red Currant, Wood Sage, and some Common Spotted-orchid. There has been some rubbish dumping with a satchel, tyres, and a large oil drum, amongst other objects seen.</p> <p>3c: (TQ068917) The tree canopy is dense and very varied with young Beech and Pedunculate Oak trees, dead standing Birch, mature Aspen, Douglas Fir and young Ash, with one large mature coppiced Ash tree. These generate a dense shade with ground cover including Enchanter's Nightshade, Violets, <i>Dryopteris</i> spp. and many tree seedlings. There is also a large amount of bare ground and dead fallen and cut branches and logs – mainly Silver Birch. A much damper shaded area running adjacent to the fence-line has a dense stand of Pendulous Sedge and a large boundary Oak.</p> <p>3d: (TQ068919) This is a plantation of Corsican Pine with some Douglas Fir, Oak and Beech. There is little apart from bramble, Bracken and Honeysuckle under the dense canopy.</p>

<p>Compartment 4: 6-fig central Grid Ref: see individual areas 4a, 4b</p> <p><i>Surveyed 18/7/13</i></p>	<p>4a: (TQ066920) Mixed woodland with young and mature Ash, Silver Birch, Larch spp, Beech, Cherry and young Oak. Oak, Ash and Cherry are regenerating vigorously. Dead wood is not very plentiful and consists mainly of stumps and branches. There is a large clearing with only a few pines left standing. The field layer is quite heathy, with Bracken and Honeysuckle, Wood Sage, Foxglove, Bluebell, Heath Wood-rush (<i>Luzula multiflora</i>), Brown Bent (<i>Agrostis vinealis</i>), Wavy Hair-grass (<i>Deschampsia flexuosa</i>) and Wood Meadow-grass (<i>Poa nemoralis</i>).</p> <p>4b: (TQ066918) This area is similar to section A, but has a less dense canopy. The tree species include Silver Birch, Beech, Larch, Cherry and young Oak with Hawthorn, Elder, Holly and Honeysuckle in the understorey. Part of this area has been cleared but the remaining stumps are regenerating. The field layer contains much Bracken, Foxglove, Wall Lettuce, <i>Mycelis muralis</i>, Wavy hair-grass and Brown bent. A clearing to one side of the area had large numbers of tall Foxgloves, Bracken, Soft Rush, Pendulous Sedge, Bird's-foot-trefoil and Wood Meadow-grass, with many visiting butterflies. There was a small patch of much denser mixed broad-leaf and pine plantation.</p> <p>A wide, damp ride separates compartments 4a and 4b, which was recorded in 1987 and 2003 as having a rich acidic grassland flora. The ride has narrowed somewhat as branches, mainly of Birch, overhang further. It still supports a good flora however. Bugle, Common Centaury, Marsh Thistle, Marsh Bedstraw, Slender St John's-wort, Greater Bird's-foot-trefoil, Heath Wood-rush, Yellow Pimpernel, Creeping-Jenny, Corn Mint, Tormentil, Bog Stitchwort, Lesser Stitchwort, Devil's-bit Scabious, and Wood Sage are all still present, along with various grasses, rushes, and Oval and Pendulous Sedge. Trailing St John's-wort, <i>Hypericum humifusum</i>, was present in 2003 but could no longer be found and the number of Devil's-bit Scabious plants was much reduced. This used to be relatively common on the site, recorded from several compartments, but the present survey only recorded it from this one location.</p> <p>Towards the western end the track becomes very wet and churned up by horses and the ride is narrower and heavily shaded by the canopy. The wet mud is colonised by Water-pepper, Water Starwort and Toad Rush.</p>
<p>Compartment 5 (a &amp; b) 6 fig central Grid Ref: TQ067920</p> <p><i>Surveyed 29/5/13</i></p>	<p>This is a damp, densely wooded area with a Larch plantation in 5a, relic coppiced Hornbeam in 5b, and some mature Oak. Downy Birch is dominant in the wetter areas with Alder. There is a field layer of bramble and various saplings.</p> <p>In 2003 a good flora was present beside the rides, but the path between 5a and 5b is now very heavily shaded with the canopy from either side meeting in some places to form a tunnel. The majority of species recorded beside the paths in 2003 are still present, mostly to the west of 5a. These include Wood Spurge, Yellow Pimpernel, Brooklime, Common Dog Violet, Bugle, Angelica, Marsh Thistle, Wood Sage and Common Spotted-orchid. At the northern end, where compartments 5 and 2 meet, there is a more open area which still contains Glaucous Sedge (its only observed location on the site) and Heath Wood-rush.</p>
<p>Compartment 6: 6-fig central Grid Ref: TQ069919</p> <p><i>Surveyed 27/6/13</i></p>	<p>This consists of strips of woodland along the site boundary and either side of the main ride, with a heterogeneous mixture of broadleaf trees. Marshall (1987) noted a flushed area at TQ 06899180 that contained a very rich flora. In 2003 this was still very impressive with Sphagnum moss, Narrow Buckler Fern, Lady Fern, Bulbous Rush, Remote and Pendulous Sedge, Wood</p>



	<p>Sorrel, Creeping Jenny, Ragged Robin, Lesser spearwort, Bog Stitchwort, Marsh Bedstraw and a wonderful population of Common Spotted-orchids with about 300 flower spikes. This area is now heavily shaded. Most of the above species were re-found, including both ferns, but Bulbous Rush, Ragged Robin and Sphagnum were not found and the number of orchids was very much reduced.</p> <p>Compartment 6 includes a stream that runs along the site boundary north of compartment 7. Coppiced Hazel and Midland Hawthorn are present along the boundary. A number of AWIs grew on the stream banks in 2003, when Soft Shield-fern, <i>Polystichum setiferum</i>, was present at the western end. The stream banks are now heavily shaded and largely devoid of vegetation and the Soft Shield-fern was not re-found. The largest of the 3 Wild Service-trees on site is in this area (see map). Its trunk is leaning, but it appears healthy and is not too severely shaded by the surrounding trees.</p>
<p>Compartment 7 6-fig central Grid Ref: TQ070919</p> <p><i>Surveyed 27/6/13</i></p>	<p>This compartment is largely an old conifer plantation with some mature Beech, Ash and Oak. The remaining conifers, mainly Scot's Pine and Larch, are now widely spaced and cast little shadow so that much of this compartment is quite open. A tall, dense layer of bracken and bramble with prolific Birch regeneration has developed. The path that runs along the south-west edge is only about 1m wide over much of its length. Where there is space alongside the path, a heathy flora is present with Wood Sage, Heath speedwell, Foxglove, Common Bent-grass, Wavy Hair-grass, Yorkshire Fog and sedges. Green-ribbed Sedge, <i>Carex binervis</i>, has spread along the path from its former location in compartment 8, and Pill Sedge, <i>C.pilulifera</i>, Oval Sedge, <i>C.leporina</i>, and Pendulous Sedge are all present.</p>
<p>Compartment 8 6-fig central Grid Ref: TQ072919</p> <p><i>Surveyed 27/6/13</i></p>	<p>This is an area of mixed, mainly broadleaf, woodland. Where the canopy is broken, especially in the southern part, there is a tall dense cover of bramble and bracken, suppressing any other field layer. A single Alder Buckthorn, <i>Frangula alnus</i>, bush is located near the southern boundary, rising above the surrounding brambles. This is the last remaining trace of what was formerly one of the most important botanical areas in the whole site. Marshall (1987) recorded sizeable stands of Heather and a large population of Green-ribbed Sedge, along with Tormentil, Wavy Hair-grass, Heath Bedstraw, Pill Sedge, rushes and the Alder Buckthorn. In 2003 the Green-ribbed Sedge was still flourishing in one wet patch beside the path but bracken had colonised most of the surrounding area apart from a 5m<sup>2</sup> plot that had been surface-scraped by the Countryside Management Service a couple of years previously. A large number of Heather plants had appeared and there was a single Gorse shoot which was striking since Gorse was not recorded anywhere else on the site. Green-ribbed Sedge had invaded the plot extensively and there was also Wavy Hair-grass, Birch, Bramble, Sallow, Common Bent-grass, Creeping Soft-grass and Tormentil. Subsequent to the 2003 survey Star Sedge, <i>Carex echinata</i>, was confirmed in the wet patch beside the Green-ribbed Sedge. This area is no longer discernible as the path has been widened and churned up by horses. However, the Green-ribbed Sedge has migrated south-west, along the path and into compartment 7 and is now more abundant than in 2003.</p> <p>Towards the north-east, where the site joins White Hill, the canopy is very dense and there is virtually no field layer apart from bracken and bramble. There is some invasive Rhododendron beside the path. Note that although not found during this survey, A Harris reports finding <i>Polystichum setiferum</i> in Comp 6 in 2011.</p>
<p>Compartment 9</p>	<p>The soil here is glacial sand and gravels, in contrast to the heavier clay on</p>

6-fig central Grid Ref: TQ070917  <i>Surveyed 27/6/13</i>	<p>most of the site. Fine mature Beech trees are well spaced throughout the woodland, with some mature Oak and Hornbeam. Younger trees, mainly Oak and Birch, have filled the spaces between the Beech but there is still a significant heathy field layer beside the paths that traverse this area. Heather is still present in this compartment (probably its last remaining location in the wood) and it seems to be more abundant than it was in 2003. There is also Wavy Hair-grass, Heath Bedstraw, Heath Speedwell, Wood Sage, Heath Wood-rush and Creeping Soft-grass.</p> <p>This compartment includes a narrow strip on the south-west side of the main ride. A Wild Service-tree, previously unrecorded, was found here (see map).</p>
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<b>Fauna:</b>	<b>Birds:</b>	Blackbird, wren, Great tit, chaffinch, magpie, buzzard, chiffchaff, jackdaw, blue tit, pigeon, robin
	<b>Mammals:</b>	Deer
	<b>Invertebrates:</b>	Snails (x3 sp.), slug, lacewing, beetle, spiders (x4 sp.) cardinal bee, bumblebee, grasshopper, speckled wood butterfly. Large white butterfly, marbled white butterfly, white admiral butterfly, harvestman, dragonfly
<b>Invasive species:</b>	Laurel, Vinca minor, Rhododendron, Cotoneaster, Buddleia	
<b>Current Management:</b>	CMS currently manage the site and are in the process of updating the management plan. Copy of existing plan available.	
<b>Recommended Management:</b>		
General	<p>This site is important for its field layer which used to be open and heathy, rather than the trees. The rarer species listed in the original description (Herb-Paris, Violet Helleborine, Lemon-scented Fern) were not found in 1987 and have not been seen since, but many other species of county-level importance were present then. Most of these still remain although they have declined in abundance due to increasing shade and bracken/bracken encroachment. Green-ribbed Sedge is a notable exception as it seems to have extended its range. Heather now seems to be confined to one compartment although it appears to be more abundant there than in 2003 – so compartment 9 should be managed to protect and encourage the heather survival here.</p> <p>Although widening the paths and rides throughout the site could be very beneficial to the flora and might prevent the loss of some species – they are also likely to be trampled by walkers and horses, therefore minimising the benefits. Consider undertaking scallops, thinning or glade creation instead. <b>Please consult the Wildlife Sites Programme Manager when planning this so that botanical experts with knowledge of the site may comment.</b> Thinning the trees and removing the dense understorey would also be beneficial, especially in or adjacent to the areas where numbers of important wetland or heath species still remain (eg compartments 4a and 4b, and the ride between them, and part of compartment 6 with now-rare Common Spotted Orchid). However, complete removal of the canopy would be counter-productive since it would lead to rapid tree regeneration and the growth of bracken and bramble, smothering the vulnerable small species, as shown by compartment 7's current dominance of Bracken/Bramble and Birch.</p> <p>The conflict of interests between walkers and horse riders needs to be addressed. At present (and in 2003) horse riding was evident on virtually every path throughout the site. Wherever the paths are wet, and especially where they cross streams, they are severely churned up and become</p>	

	<p>completely impassable to walkers in wetter weather. The widening of the paths that generally happens at these points also damages the flora. The site map on the display panels only shows a bridleway from the Woodcock Hill entrance to the car park in White Hill and another from the White Hill car park to the southern entrance to Park Wood (compartment 2) where there is a gate with a notice saying that horse riding is not permitted. This is completely disregarded, as it was in 2003. It is, in fact, unrealistic to provide a dead-end bridleway like this, especially as the path through Park Wood leads to the grassland to the north which is much used by horse riders.</p> <p>Invasive alien species are not a serious issue on this site although there is some Rhododendron that should be removed and also a single patch of Japanese Knotweed in the White Hill car park.</p> <p>The wooden bridge in compartment 6 (TQ069919) is in urgent need of repair.</p>
<p><b>Surrounding landuse</b> (briefly describe):</p>	<p>A covered reservoir in the south-west corner. Woodland, gardens and a few buildings on the opposite side of the lanes to the south-east and south-west. Grassland, improved/semi-improved, to the north and west, horse or cattle grazed, part of a golf course, horse paddocks. Horse riding is a very popular activity. To the north-east the site continues into the woodland of White Hill, which links it to Batchworth Heath, both Wildlife Sites.</p>



29/05/2013

### BISHOP'S WOOD

**LEGEND**

- 89/003 Boundary
- Compartment boundary
- Track/ride/path
- MW Mixed plantation

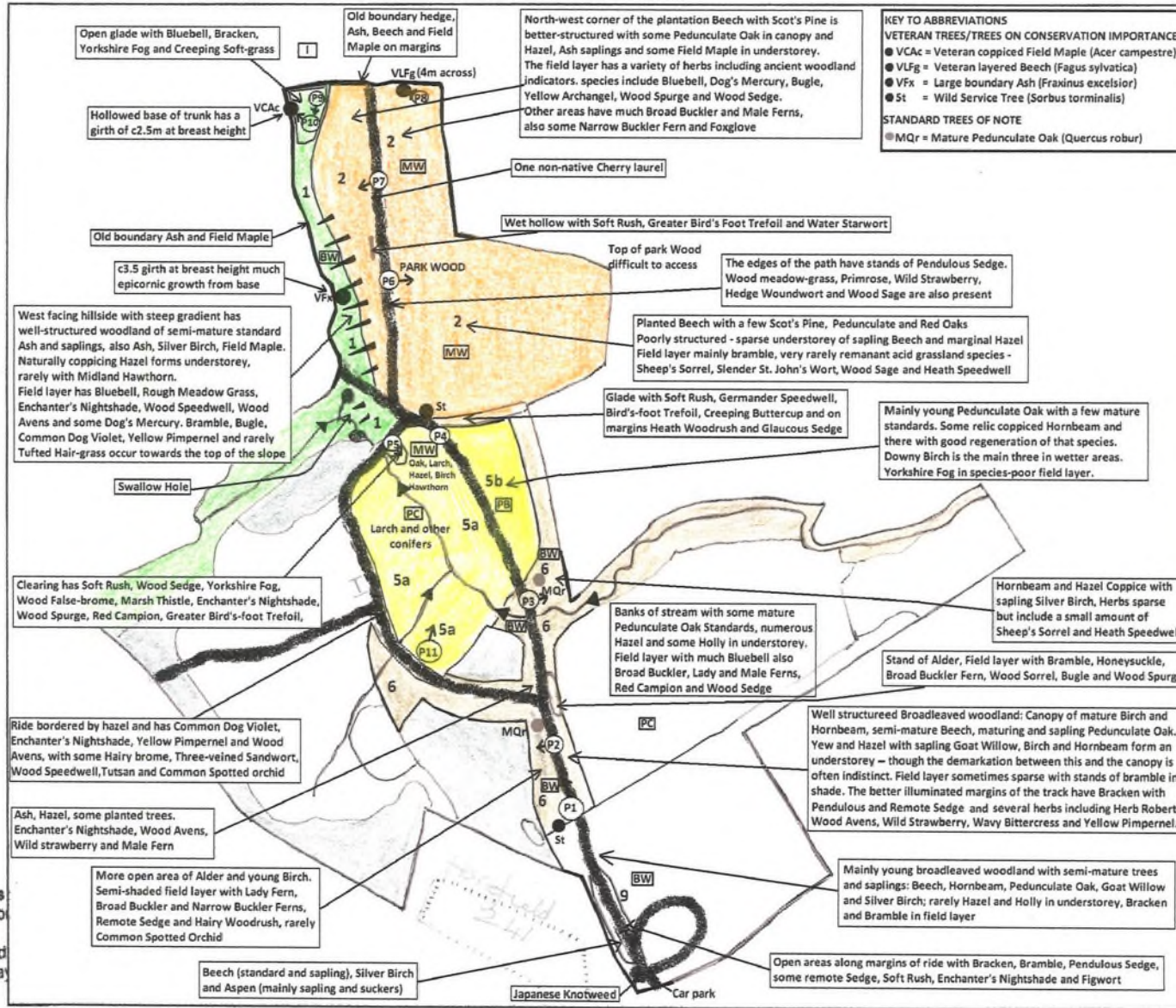


Seat 2, no view →

Surveyor Name: Map by Andrew Harris

Survey Date: 1st visit: 30/05/2013

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Bishops Wood.

WS. 89/003



29/05/2013

Compartment Boundary

Comps. 3 and 4



Herts & Middlesex

standard oak + ash,  
copp. hazel. Some Scots pine,  
cherry, birch. Little  
understorey ground -  
bramble, ferns (male,  
narrow + broad buckler,  
scaly male), bluebell,  
bugle, wood sorrel, Ench.  
nightshade, honeysuckle.

standard oak + ash,  
y. oak, copp. hazel,  
bramble, bugle, wood  
avens, herb robert,  
Ench. nightshade,  
bluebell, wood dock,  
ferns.

PC - Douglas fir,  
copp. pine, cypress,  
edges stand. oak,  
birch, beech, aspen,  
ground - bramble,  
bracken, br. buckler

standard - ash,  
beech, aspen, oak,  
Scots pine, hawthorn,  
copp. hazel, holly,  
low bare ground,  
bracken, bluebell,  
broad buckler +  
common spotted orchid.

pasivinkle, bramble,  
honeysuckle

damp - pendulous  
Sedge.

young ash, s. birch, beech, goat willow, larch x  
in parts - dense saplings of oak, hawthorn,  
cherry, ground-wood sage, foxglove, bluebell,  
honeysuckle, bracken, br. buckler, heath wood  
rushes, brown bent, wavy hair grass,  
wood meadow grass.

felled area, conifers remain

shaded,  
damp ride, 1/3 to 1/2 narrow, rest wider +  
more open. Much greater birds foot trefoil,  
tormentil, heath bedstraw, bog stitchwort,  
corn mint, soft rush, some self heal,  
centaury, St. John's wort, willow herbs,  
figwort, creeping + common bent,  
yks. fog, rough meadow grass, little  
heath wood rush, yellow pimpernel, marsh  
thistle, gypsywort, wood spurge, Ench.  
nightshade, bugle, bush vetch.

standard larches,  
cherry, young oak,  
silver-birch, beech,  
w. hawthorn, alder,  
holly, honeysuckle,  
ferns, wavy hair  
grass, bramble,  
bracken, parts  
with dense saplings.

KEY: - == rides  
MQR mature oak  
⊖ invasive laurel  
⊖ felled broadleaf trees  
⊖ road edge with bank,  
ditch, old layered  
horbeam.

map NW,  
Surveyor Name: J.C. M.H. A.H.

Survey Date: 18. 7. 2013



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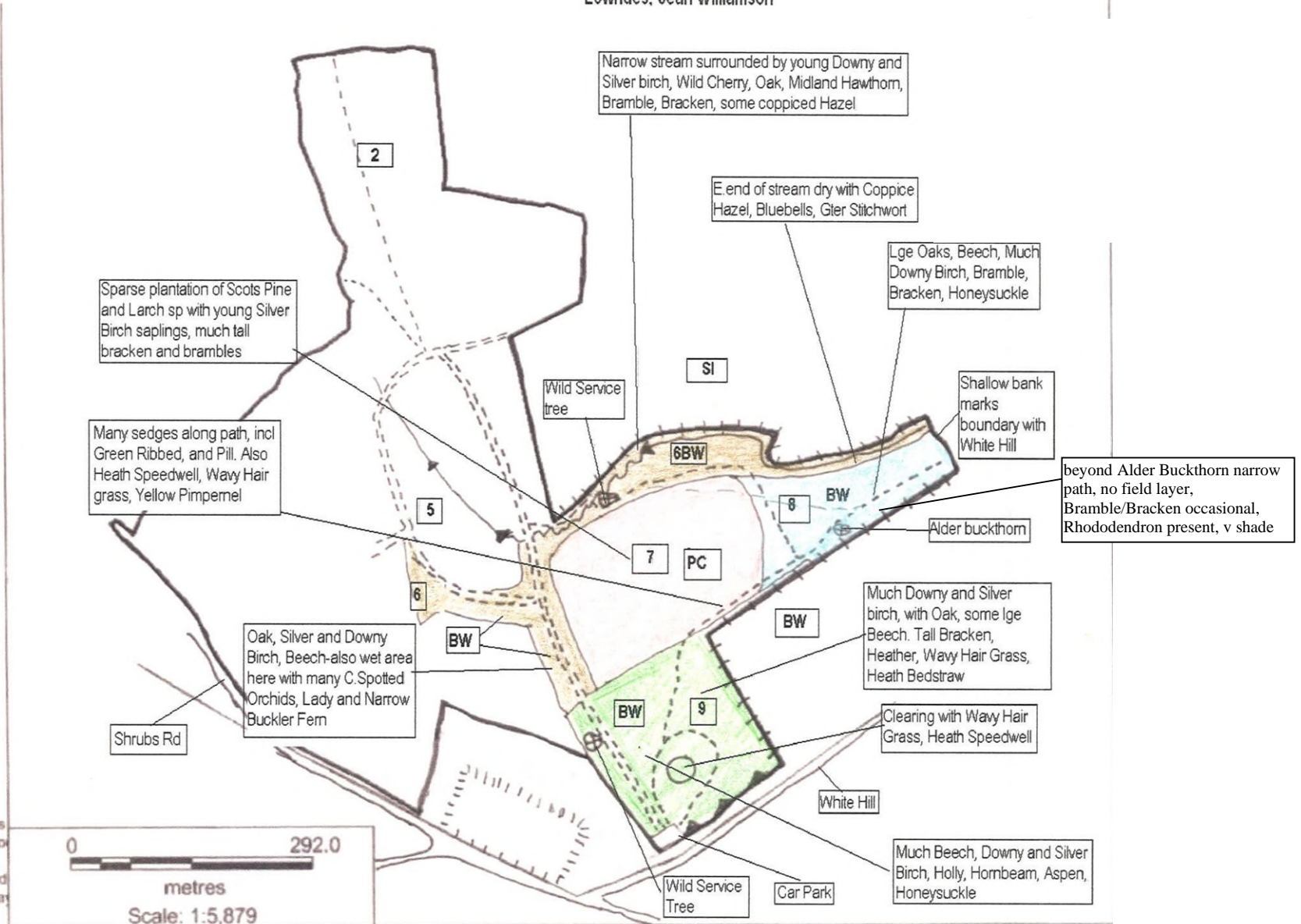
**Bishops Wood Ref:89/003 Map for compartments 6,7,8 and 9**

Date 27/6/2013 Surveyors: Carol Smith, Brenda Harold, Janet Lowndes, Jean Williamson



21/05/2013

**District Boundary**  
  
**Selected Wildlife Site**  


















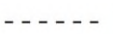
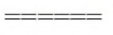



























Surveyor Name: Carol Smith

Survey Date: 27/6/13

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		<b>WS boundary</b> (NB use a red line to denote anywhere boundary changes should be made)	
W O O D L A N D & S C R U B		Semi-natural broadleaved woodland	 Coppiced broadleaved woodland
		Plantation broadleaved woodland	 Relict coppiced broadleaved woodland
		Plantation coniferous woodland	
		Mixed woodland	
		Dense-continuous scrub	
		Scattered scrub (NB: notate grassland type beneath)	
		Broadleaved Parkland/scattered trees (NB: notate grassland type beneath)	
		Coniferous Parkland/scattered trees (NB: notate grassland type beneath)	
		Mixed Parkland/scattered trees (NB: notate grassland type beneath)	
		Broadleaved recently felled woodland	
	Coniferous recently felled woodland		
	Mixed recently felled woodland		
G R A S S L A N D		Unimproved acid grassland	 Path  Track/lane/road  Hedgerow  Ditch  Bank  Feature (annotate)  Stream  Fence
		Semi-improved acid grassland	
		Unimproved calcareous grassland	
		Semi-improved calcareous grassland	
		Unimproved neutral grassland	
		Semi-improved neutral grassland	
		Improved grassland	
		Marsh/marshy grassland	
	Species-poor semi-improved grassland		
Tall herb and fen		Continuous bracken	
		Scattered bracken (NB: notate grassland type beneath)	
		Tall ruderal vegetation	
		Non-ruderal vegetation (fen, e.g. reed/sweetgrass dominant stands)	
WATER		Standing water	
		Running water	
C U L T I V A T E D		Arable land	
		Amenity grassland	 Urban
		Ephemeral/short (e.g. herbal pioneer communities/weedy species)	
		Perennial introduced shrub (eg snowberry, rhododendron, laurel, cotoneaster, bamboo etc)	

89/003 Bishop's Wood. Survey Dates: A (29.5.13), B (27.6.13), C (18.7.13) JW, JL, BH, CS		WS inds (*a/n/c/w/f ) & neg inds ('-')	Comp1 (A)	Comp2 (A)	Comp3 (C)	Comp 4 (C)	Comp 4 Ride (C)	Comp5 (A)	Comp6 (B)	Comp7 (B)	Comp8 (B)	Comp9 (B)
Scientific Name	Common Name		DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R
<i>Acer campestre</i>	Maple, Field	*	R	R	+			R		+		
<i>Acer platanoides</i>	Maple, Norway*								+		+	
<i>Acer pseudoplatanus</i>	Sycamore			+	+					+	+	+
<i>Aesculus hippocastanum</i>	Chestnut, Horse*				+							+
<i>Agrostis capillaris</i>	Bent, Common	a/n				R	R			R		R
<i>Agrostis stolonifera</i>	Bent, Creeping						R	R				R
<i>Agrostis vinealis</i>	Bent, Brown~	a				R						
<i>Ajuga reptans</i>	Bugle	*/n	R	R	R	R	R	R	R			R
<i>Alliaria petiolata</i>	Mustard, Garlic			R	R			R	R		R	+
<i>Alnus glutinosa</i>	Alder, Common							R	R			
<i>Angelica sylvestris</i>	Angelica	f/w	R					R	R			
<i>Anthoxanthum odoratum</i>	Grass, Sweet Vernal	n							+		+	
<i>Anthriscus sylvestris</i>	Parsley, Cow	- c/n/w			+		+	R	+			
<i>Arctium minus</i>	Burdock, Lesser							R	R			R
<i>Arrhenatherum elatius</i>	Oat-grass, False	- a/c/n/w						R	R			
<i>Arum maculatum</i>	Lords-and-Ladies											R
<i>Athyrium filix-femina</i>	Fern, Lady	*	+						R			
<i>Bellis perennis</i>	Daisy	- a/c										R
<i>Betula pendula</i>	Birch, Silver		O		O	R			R	O	R	F
<i>Betula pubescens</i>	Birch, Downy				R	R			O	O	O	F
<i>Brachypodium sylvaticum</i>	Brome, False				R		+		R			R
<i>Bromopsis ramosa</i>	Brome, Hairy	*		R				R				
<i>Buddleia davidii</i>	Butterfly Bush*											+
<i>Callitriche sp.</i>	Water-starwort, sp.						R			R		+
<i>Callitriche stagnalis</i>	Water-starwort, Com'n			R								
<i>Calluna vulgaris</i>	Heather	a										R



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Scientific Name	Common Name		DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R
<i>Calystegia sepium</i>	Bindweed, Hedge			+								
<i>Cardamine flexuosa</i>	Bitter-cress, Wavy	*	+				R	R	R		R	R
<i>Carex binervis</i>	Sedge, Green-ribbed~	a								R	R	
<i>Carex flacca</i>	Sedge, Glaucous	c/n/w						R				
<i>Carex leporina</i>	Sedge, Oval	a					+			R		R
<i>Carex otrubae</i>	Sedge, False Fox								+			
<i>Carex pendula</i>	Sedge, Pendulous	*	O	O	R		R	R	R	R	R	R
<i>Carex pilulifera</i>	Sedge, Pill	a		+						R		+
<i>Carex remota</i>	Sedge, Remote	*	R		R				R			R
<i>Carex sylvatica</i>	Sedge, Wood	*	R	R	R		R		R		R	R
<i>Carpinus betulus</i>	Hornbeam	*		R	R				+		+	R
<i>Castanea sativa</i>	Chestnut, Sweet			R					R		+	+
<i>Centaurium erythraea</i>	Centaury, Common	n					+					
<i>Cerastium fontanum</i>	Mouse-ear, Common	- a										+
<i>Chamaecyparis lawsoniana</i>	Cypress, Lawson's								+			
<i>Chamerion angustifolium</i>	Willowherb, Rosebay	- a/c	R	R		R			R	R	R	R
<i>Circaea lutetiana</i>	Enchanter's-nightshade	*	R	R	R	R	R	R	R	R		R
<i>Cirsium arvense</i>	Thistle, Creeping	- a/c/n/w	R						R			+
<i>Cirsium palustre</i>	Thistle, Marsh	f/w					R	R				
<i>Cirsium vulgare</i>	Thistle, Spear	- a/c/n/w			+	+						+
<i>Cornus sanguinea</i>	Dogwood				R							
<i>Corylus avellana</i>	Hazel	*	O	R	R	R			O			R
<i>Cotoneaster sp.</i>	Cotoneaster sp.*											+
<i>Crataegus laevigata</i>	Hawthorn, Midland	*		+					R			
<i>Crataegus laevigata x monogyna</i>	Hawthorn, hybrid							+				
<i>Crataegus monogyna</i>	Hawthorn		R	R	R	R			+	R		R

89/003 Bishop's Wood. Survey Dates: A (29.5.13), B (27.6.13), C (18.7.13) JW, JL, BH, CS			Comp1 (A)	Comp2 (A)	Comp3 (C)	Comp4 (C)	Comp4 Ride (C)	Comp5 (A)	Comp6 (B)	Comp7 (B)	Comp8 (B)	Comp9 (B)
Scientific Name	Common Name	WS inds (*a/n/c/wff ) & neg inds (-)	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R
<i>Crepis vesicaria</i>	Hawk's-beard, Beaked											+
<i>Crocsmia sp.</i>	Crocsmia sp *								R			
<i>Cynosurus cristatus</i>	Dog's-tail, Crested	n										R
<i>Dactylis glomerata</i>	Cocksfoot	- a/c/n/w						R	R			R
<i>Dactylorhiza fuchsii</i>	Orchid, Common Spotted	c			R			+	R			
<i>Deschampsia cespitosa</i>	Hair-grass, Tufted	- n/w	R					R	+			
<i>Deschampsia flexuosa</i>	Hair-grass, Wavy	a				R				R		R
<i>Digitalis purpurea</i>	Foxglove	*		R	R	R			R	R		
<i>Dipsacus fullonum</i>	Teasel, Wild			+				R	R			+
<i>Dryopteris affinis agg.</i>	Fern, Scaly Male, agg.~	*	+		+							
<i>Dryopteris carthusiana</i>	Fern, Narrow Buckler~	*		+	R	+		R	+			
<i>Dryopteris dilatata</i>	Fern, Broad Buckler	*	R	R	R	R			R		R	
<i>Dryopteris filix-mas</i>	Fern, Male		O	O	R	R			R	R		+
<i>Epilobium hirsutum</i>	Willowherb, Great			R				R	R	+		R
<i>Epilobium montanum</i>	Willowherb, Broad-leaved		R	R			R		R			R
<i>Epilobium parviflorum</i>	Willowherb, Hoary									R		R
<i>Epilobium tetragonum</i>	Willowherb, Sq-stemmed						R					R
<i>Epilobium sp.</i>	Willowherb, unknown sp.								R			
<i>Euphorbia amygdaloides</i>	Spurge, Wood	*		R	R	R	R	R	R		R	R
<i>Fagus sylvatica</i>	Beech			O		R			R	+		F
<i>Fagus sylvatica 'Purpurea'</i>	Beech, Copper*							+				
<i>Festuca rubra agg.</i>	Fescue, Red (family)								R			R
<i>Ficaria verna subsp. verna</i>	Celandine, Lesser (subsp. verna)		R	R					R			
<i>Fragaria vesca</i>	Strawberry, Wild			R				R	R			R
<i>Frangula alnus</i>	Buckthorn, Alder (natural, TQ07249194)	*									+	
<i>Fraxinus excelsior</i>	Ash		F	R	O	R			+	+		R

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Scientific Name	Common Name		DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R
<i>Galium aparine</i>	Cleavers	- c/n	R		R	+		R	R	R		R
<i>Galium odoratum</i>	Woodruff, Sweet	*						R				
<i>Galium palustre</i>	Bedstraw, Marsh	f				R			R			
<i>Galium saxatile</i>	Bedstraw, Heath	a										R
<i>Geranium dissectum</i>	Cranesbill, Cut-leaved							R				
<i>Geranium robertianum</i>	Herb Robert		R	R	R		R	R	R	R		R
<i>Geum urbanum</i>	Wood Avens		R	R	R			R	R			R
<i>Glechoma hederacea</i>	Ground Ivy		R		R		+					
<i>Hedera helix</i>	Ivy		R		R	+						R
<i>Heracleum sphondylium</i>	Hogweed		R	R				R	R			R
<i>Holcus lanatus</i>	Yorkshire Fog	- a/c/n/w	+	R	R	R	O	R	R	R	R	R
<i>Holcus mollis</i>	Soft-grass, Creeping	a	R				R					R
<i>Humulus lupulus</i>	Hop		+									
<i>Hyacinthoides non-scripta</i>	Bluebell	*	O	R	R		R		R	R		R
<i>Hypericum androsaemum</i>	Tutsan (probably natural)	*						+				
<i>Hypericum hirsutum</i>	St John's-wort, Hairy			+	+							
<i>Hypericum pulchrum</i>	St John's-wort, Slender	*		+		R	+	+				
<i>Hypericum tetrapterum</i>	St John's-wort, Sq-stalked	w					R					
<i>Hypochaeris radicata</i>	Cat's-ear, Common											+
<i>Ilex aquifolium</i>	Holly	*		R	R	R			+	R		R
<i>Juncus acutiflorus</i>	Rush, Sharp Flowered~					R						R
<i>Juncus bufonius</i>	Rush, Toad						R				+	
<i>Juncus conglomeratus</i>	Rush, Compact~						+			+		
<i>Juncus effusus</i>	Rush, Soft			R			R	R	R	R	R	R
<i>Lamium galeobdolon ssp montanum</i>	Archangel, Yellow	*		R								
<i>Lapsana communis</i>	Nipplewort				+		+	R	R			+

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Scientific Name	Common Name		DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R
<i>Larix decidua</i>	Larch, European*				+	O			R	R	R	
<i>Larix decidua x kaempferi</i> = <i>L. x marschlinsii</i>	Larch, hybrid*									R		
<i>Lolium perenne</i>	Rye-grass, Perennial	- a/c/n/w										+
<i>Lonicera periclymenum</i>	Honeysuckle		O	O	R	R	R		R	R	R	R
<i>Lotus pedunculatus</i>	Bird's-foot-trefoil, Greater	f/w		+			R					R
<i>Luzula multiflora</i>	Wood-rush, Heath	a				+	+	R				
<i>Luzula multiflora ssp congesta</i>	Wood-rush, Heath ssp congesta	a						+				+
<i>Luzula pilosa</i>	Wood-rush, Hairy	*		R	R				R	+		R
<i>Lycopus europaeus</i>	Gipsywort						R					
<i>Lysimachia nemorum</i>	Pimpernel, Yellow	*		R	R	R	R	R	R	+		R
<i>Lysimachia nummularia</i>	Creeping Jenny (probably natural)	w				+			+			
<i>Malus sylvestris</i>	Apple, Crab	*						+				
<i>Medicago lupulina</i>	Medick, Black											+
<i>Mentha arvensis</i>	Mint, Corn						R					
<i>Mercurialis perennis</i>	Dog's Mercury	*		R								
<i>Milium effusum</i>	Millet, Wood	*							+			
<i>Moehringia trinervia</i>	Sandwort, Three-veined	*	R			+		R				
<i>Mycelis muralis</i> ,	Lettuce, Wall					+						
<i>Myosotis arvensis</i>	Forget-me-not, Field			+								R
<i>Myosotis sylvatica</i>	Forget-me-not, Wood, cultivated*							+				+
<i>Oxalis acetosella</i>	Wood-sorrel	*	R		R	R		R	R		R	
<i>Persicaria hydropiper</i>	Water-pepper						R				R	R
<i>Phleum bertolonii</i>	Catstail, Smaller						+					+
<i>Picea abies</i>	Spruce, Norway*			+	+					R		
<i>Pinus nigra subsp. laricio</i>	Pine, Corsican*				O							
<i>Pinus sylvestris</i>	Pine, Scots			O	R					O		

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Scientific Name	Common Name	WS inds (*a/n/c/wff ) & neg inds (-)	Comp1 (A)	Comp2 (A)	Comp3 (C)	Comp 4 (C)	Comp 4 Ride (C)	Comp5 (A)	Comp6 (B)	Comp7 (B)	Comp8 (B)	Comp9 (B)	
			DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R
<i>Plantago lanceolata</i>	Plantain, Ribwort											+	
<i>Poa annua</i>	Meadow-grass, Annual							R	R	R		R	
<i>Poa nemoralis</i>	Meadow-grass, Wood	*		R	R	+		R	R		R	R	
<i>Poa trivialis</i>	Meadow-grass, Rough	- w		R	R		O		R	R		R	
<i>Polystichum setiferum</i>	Fern, Soft Shield~	*			+								
<i>Populus tremula</i>	Aspen	*			O	R			+			+	
<i>Potentilla erecta</i>	Tormentil	a		+		R	R						
<i>Potentilla reptans</i>	Cinquefoil, Creeping			R			R	R	R			R	
<i>Potentilla hybrid</i>	Cinquefoil, hybrid							+					
<i>Primula veris</i>	Cowslip	c/n			+								
<i>Primula vulgaris</i>	Primrose	*	R	R									
<i>Prunella vulgaris</i>	Selfheal			R	+		R	R				R	
<i>Prunus avium</i>	Cherry, Wild	*	R	R	R	R			+		+		
<i>Prunus laurocerasus</i>	Laurel, Cherry*		+	+									
<i>Prunus spinosa</i>	Blackthorn		R		R							+	
<i>Pseudotsuga menziesii</i>	Douglas Fir				R					+			
<i>Pteridium aquilinum</i>	Bracken				R	R			R	F	F	F	
<i>Pulicaria dysenterica</i>	Fleabane, Common	w										+	
<i>Quercus robur</i>	Oak, Pedunculate		O	O	F	O			R	R		R	
<i>Quercus rubra</i>	Oak, Red*			R							+		
<i>Ranunculus acris</i>	Buttercup, Meadow	n			R			+					
<i>Ranunculus flammula</i>	Spearwort, Lesser								R				
<i>Ranunculus repens</i>	Buttercup, Creeping	- w	R	R	R		R	R	R	R		R	
<i>Rhododendron ponticum</i>	Rhododendron*								R	R	R	+	
<i>Ribes rubrum</i>	Currant, Red				+			R	R				
<i>Ribes uva-crispa</i>	Gooseberry		R									+	

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Scientific Name	Common Name		DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R
<i>Rosa arvensis</i>	Rose, Field	*			+			R				R
<i>Rosa canina</i> agg.	Rose, Dog, agg.				+			R				
<i>Rubus fruticosus</i> agg.	Bramble		R	F	F				R	F	A	R
<i>Rubus idaeus</i>	Raspberry				+			R	R	R	R	
<i>Rumex acetosella</i>	Sorrel, Sheep's	a		R								
<i>Rumex obtusifolius</i>	Dock, Broad-leaved	- c/n/w		R								
<i>Rumex sanguineus</i>	Dock, Wood		R	R	R		R	R	R			R
<i>Sagina apetala</i>	Pearlwort, Annual						+					
<i>Sagina procumbens</i>	Pearlwort, Procumbent									+		
<i>Salix caprea</i>	Willow, Goat			R	R	R			R	R		R
<i>Sambucus nigra</i>	Elder		R	R	R				R	+	R	+
<i>Schedonorus giganteus</i>	Fescue, Giant	*					+					
<i>Scrophularia nodosa</i>	Figwort	*		R	R		R	R	R	R		R
<i>Senecio jacobaea</i>	Ragwort, Common	- a/c/n		+			R		R			R
<i>Silene dioica</i>	Campion, Red		R		R			R	R		R	R
<i>Solanum dulcamara</i>	Bittersweet							R				
<i>Sorbus aucuparia</i>	Rowan / Mountain Ash			+				R	+	+	+	
<i>Sorbus torminalis</i>	Wild Service-tree (probably natural)	*		+					+			+
<i>Stachys sylvatica</i>	Woundwort, Hedge			R	R		+	R	+			R
<i>Stellaria alsine</i>	Stitchwort, Bog	w					O		+			
<i>Stellaria graminea</i>	Stitchwort, Lesser	a/n					R					
<i>Stellaria holostea</i>	Stitchwort, Greater								R			
<i>Succisa pratensis</i>	Scabious, Devil's-bit	c/n/w				R						
<i>Tamus communis</i>	Bryony, Black				+							
<i>Taraxacum officinale</i> agg.	Dandelion family		R				+	R				+
<i>Taxus baccata</i>	Yew										+	+

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Scientific Name	Common Name	WS inds (*a/n/c/w/f ) & neg inds (*-)	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R	DAFO R				
<i>Teucrium scorodonia</i>	Wood Sage	*/a		R	R	R	R	R	R	R	R	R				
<i>Thuja plicata</i>	Cedar, Western Red*								+							
<i>Trifolium repens</i>	Clover, White	- a/c/n/w					R					R				
<i>Urtica dioica</i>	Nettle, Stinging	- a/c/n/w	R	R	R		R		R	R		R				
<i>Veronica beccabunga</i>	Speedwell, Brooklime						+	R								
<i>Veronica montana</i>	Speedwell, Wood	*	R	R	R		R		+							
<i>Veronica officinalis</i>	Speedwell, Heath	a		+	+	+				R		R				
<i>Veronica persica</i>	Speedwell, Com'n Field											+				
<i>Veronica serpyllifolia</i>	Speedwell, Thyme-leaved			R	+			R				R				
<i>Viburnum opulus</i>	Guelder-rose (probably natural)	*										+				
<i>Vicia sepium</i>	Vetch, Bush						R									
<i>Vinca minor</i>	Periwinkle, Lesser*				R											
<i>Viola reichenbachiana</i>	Violet, Early Dog	*			R											
<i>Viola riviniana</i>	Violet, Common Dog	*	R	R	R	R	R	R	+		+					
*=planted/introduced/escape			<b>per compartment totals:</b>				<b>49</b>	<b>75</b>	<b>77</b>	<b>44</b>	<b>56</b>	<b>65</b>	<b>65</b>	<b>65</b>	<b>65</b>	<b>104</b>

Total species (all comp.s)		total indicators					
	195			76			
Comp1 (A)	AWI	Neut	Acid	Calc	Wet	Fen	c/a/n/w
	18	1	1	0	1	1	3
Comp2 (A)	AWI	Neut	Acid	Calc	Wet	Fen	c/a/n/w
	28	1	5	0	1	1	7
Comp3 (C)	AWI	Neut	Acid	Calc	Wet	Fen	c/a/n/w
	28	3	2	2	0	0	6
Comp 4 Ride (C)	AWI	Neut	Acid	Calc	Wet	Fen	c/a/n/w
	14	4	7	0	4	2	13
Comp5 (A)	AWI	Neut	Acid	Calc	Wet	Fen	c/a/n/w
	20	3	3	2	3	2	9
Comp6 (B)	AWI	Neut	Acid	Calc	Wet	Fen	c/a/n/w
	28	2	1	1	3	2	7
Comp7 (B)	AWI	Neut	Acid	Calc	Wet	Fen	c/a/n/w
	10	1	7	0	0	0	7
Comp8 (B)	AWI	Neut	Acid	Calc	Wet	Fen	c/a/n/w
	12	1	2	0	0	0	3
Comp9 (B)	AWI	Neut	Acid	Calc	Wet	Fen	c/a/n/w
	20	3	10	0	2	1	14
All Compartments:	AWI	Neut	Acid	Calc	Wet	Fen	c/a/n/w
	45	10	16	4	9	4	32
Thresholds:	AWI	Neut	Acid	Calc	Wet	Fen	c/a/n/w
	min size (ha)	1	0.25	0.25	0.25	0.25	0.25
	min indicators	10	8	5	8	5	12
Criteria met	Met	Met	Met		Met		Met

#### DAFOR Scale:

D	Dominant	>75% cover
A	Abundant	51-75% cover
F	Frequent	26-50% cover
O	Occasional	11-25% cover
R	Rare	<11% cover, >=5 individual plants
+	Very Rare	<5 individual plants



**Photos:**



**P1 – Compartment 6: Vegetation on the edge of the track**



**P2 – Compartment 6: Wet area (area of Common Spotted Orchids) with Pendulous and Remote Sedges and Ferns**



**P3 – Oak, Hornbeam Woodland with Hazel coppice**



**Track/ride becoming overshadowed in Compartment 5**



**P5 Glade at northern end of Compartment 5 has a variety of herbs and ferns**



**P6 - Beech/Scot's Pine plantation of Compartment 2 with a rather species-poor field layer mainly of Bramble**



**P7: The better woodland structure of the north-western corner of Compartment 2 with ancient woodland indicators and ferns.**



**P8 - Compartment 1: Veteran layered Beech in hedgebank at northern end**



**P9 – Compartment 1: Glade at northern end**



**P10 – Compartment 1 Veteran Field Maple on boundary at north-western corner**



**P11 Compartment 5 mixed plantation**

