CHOBHAM COMMON NNR

DRAFT MANAGEMENT PLAN

2007 – 2012

CONTENTS

Part 1 Description

1.1. LOCATION:

Chobham Common lies between one and three miles north of the village of Chobham in north-west Surrey.

County

Most of the area covered by this plan lies within the County of Surrey.
A small area (0.26 Ha) in the extreme north-west corner of the Common lies within the County of Berkshire

District

Most of the area covered within this plan lies within the Borough of Surrey Heath.
The Barrow Woods (Comp 21) lie within the Borough of Runnymede.
The small area in Berkshire lies within the Royal Borough of Windsor and Maidenhead.

Local Planning Authority

The local planning authority for most of the Common is Surrey Heath Borough Council.
The local planning authority for the Barrow Woods is Runnymede Borough Council.
The local planning authority for the small area of land in Berkshire is the Windsor and Maidenhead Royal Borough Unitary Authority.

National Grid Reference.

Staple Hill Car Park, which lies near the centre of the Common, is at Grid Reference 974 648 on OS sheet SU 175.

Map 1 - Site location and site boundaries.

1.2 LAND TENURE

1.2.1. Areas

Chobham Common National Nature Reserve	**513.36** Ha
Glovers Pond	3.85 Ha
Gracious Pond	12.4 Ha
Broomhall Heath	14.5 Ha
SSSI Unit 10 (Burma Road)	1.46 Ha
Total SSSI, SPA, SAC covered by plan	**545.57**
Barrow Woods (Comp 21)	6.44 Ha
Little Heath and Burrowhill (Comp 22)	6.11 Ha
Valley End and Brickhill Settlement (Comp 24)	32.55 Ha
Chobham Place Fields	5.43 Ha
West Wood and Valley Wood	18.75 Ha
Non-SSSI land east of Burma Road and Burma Road Dump.	1.54 Ha
Total area covered outside of SSSI	70.82 Ha
Total area covered by plan	**616.39 Ha**

1.2.2. Freehold

1. Chobham Common NNR, Little Heath, Burrowhill Green, Valley End, Brickhill Settlement, Burma Road Landfill Site ….**Surrey County Council**

Notes: Acquired freehold by Surrey County Council from Lord Onslow in 1968, under the Surrey County Council Act 1931 and the Local Government Act 1933.

2. Barrow Woods, Chobham Place Fields……..**Surrey County Council**

Notes: In the process of being acquired freehold from the Department for Transport as exchange land for land taken for the construction of the M3 Motorway in 1973. Chobham Place Fields has replaced Longcross Meadows (referred to in previous management plans) as proposed exchange land. The exchange has been agreed and will be formalised when SCC receives the exchange certificate.

3. Rangers Station……..**Surrey County Council**

4. Glovers Pond……..**Surrey Wildlife Trust**

Notes: Acquired freehold in 2004.

5. Gracious Pond……**Mr. Charles Good**

Notes: Managed by agreement and not part of stakeholder engagement process

6. Broomhall Heath, West Wood, Valley Wood……**Wentworth Golf Club Ltd.**

Notes: Managed by agreement and not part of stakeholder engagement process

7. Land East of Burma Road including SSSI Unit 10…Crest Nicholson

Notes: Agreement to be negotiated

1.2.3 Leasehold

1. Chobham Common NNR, Barrow Woods, Little Heath, Burrowhill Green, Valley End, Brickhill Settlement, Burma Road Landfill Site…**Surrey Wildlife Trust**

Notes: Surrey Wildlife Trust has a fifty-year lease on the Surrey County Council Countryside Estate, which expires in May 2052

2. Barrow Woods, Chobham Place Fields……..**Pending**

Notes: Once Surrey County Council has received the exchange certificate for these areas they will be included in a supplemental lease between Surrey County Council and Surrey Wildlife Trust.
3. Ranger station….Supplementary lease between Surrey County Council and Surrey Wildlife Trust to be agreed.

1.2.4. Section 35 Agreements

1.2.5. Other Agreements

Chobham Common NNR, Barrow Woods, Little Heath, Burrowhill Green, Valley End, Brickhill Settlement, Burma Road Landfill Site. These areas are part of Surrey County Council's Countryside Estate and are managed by the lessee Surrey Wildlife Trust in accordance with the Partnership Agreement and Service Delivery Specification signed between the two parties for the duration of the lease.

Barrow Woods, Chobham Place Fields – Surrey Wildlife Trust manages the Barrow Woods on a grace and favour basis until such time as the supplemental lease is agreed. While there is an agreed program of works for Chobham Place Fields this will not be implemented until Surrey County Council receives the exchange certificate for this land.

Gracious Pond – Managed by agreement with the landowner since 1982.

Broomhall Heath, West Wood, Valley Wood
Surrey Wildlife Trust signed a fifteen-year management agreement with Wentworth Golf Club in September 1989, with a clause that stated the agreement would roll on after the fifteen years (which passed in 2004) unless one of the parties terminates the agreement, giving twelve months notice. Under the agreement the Wildlife Trust is responsible for conservation management while the Golf Club is responsible or general estate management.

1.2.6 Legal rights of access

1. Chobham Common NNR, Little Heath, Burrowhill Green, Valley End, Brickhill Settlement, Burma Road Landfill Site, and Glovers Pond. These areas are Open Access areas under the Countryside and Rights of Way Act 2000.

2. The whole area covered by this Plan with the exception of Gracious Pond, Barrow Woods, Chobham Place Fields, the Rangers' Station and the land to the east of Burma Road is subject to a revocable Deed of Access made by Lord Onslow in 1936 under the Law of Property Act 1925.

3. Barrow Woods, Chobham Place Fields. The public are currently allowed access into the Barrow Woods on an informal basis, once Surrey County Council receives the exchange certificate for these areas access will be formalized for the Barrow Woods and provision for access will be made for Chobham Place Fields.

4. A plan showing the land available under the Countryside and Rights of Way Act 2000 is appended (Map 3)

1.2.7. Other rights and covenants

1. Chobham Common NNR, Little Heath, Burrowhill Green, Valley End, Brickhill Settlement, and the Burma Road Landfill Site are registered Common land. When the Barrow Woods and Chobham Place exchange certificate comes into effect these areas will become common land under section 147 of the Law of Property Act 1925. At present commoners rights are held by the owner of Stanners Hill Farm, Chobham to practice estovers and piscary over all the registered common land and by the owner of "Beesholme", Gracious Pond, Chobham to graze five goats and practice turbary and estovers over that part of the Common known as Old Slade.

2. Chobham Common NNR, Little Heath, Burrowhill Green, Valley End, Brickhill Settlement, and the Burma Road Landfill Site are covered by the County Council Byelaws (made under Sections12 and 15 of the Open Spaces Act 1906), which were confirmed by the Home Office on 23 March 1978. When the exchange certificate for the Barrow Woods and Chobham Place Fields comes into effect, these areas will also be covered by the Byelaws as part of Chobham Common. A copy of the Byelaws (Appendix 1) is attached.

3. There is a two-metre wide highway verge along the edges of the roads that cross the Common which was excluded from the common land designation and which is maintained by Surrey County Council and Windsor and Maidenhead Council under their Highway responsibilities.

4. Several important utilities cross the Common. There are easements for the National Grid pylon line, Esso oil pipelines, British Pipeline Association high-pressure oil pipeline and the two major British Gas pipelines, and way leaves for the Southern Electricity power lines. A plan showing these utilities and contact details are included in the Site Risk Assessment (Appendix 2)

5. There are numerous easements, way leaves, rights of access and rights of way relating to properties and utilities on the margins of the Common. Copies of some of these are held by Surrey County Council (Deed Package 2052 and File numbers 5972 and 5972/3).

6. The fishing rights for the Fishpool are currently leased to Chobham and District Angling Club until 28th September 2011

Maps

Map 2 – Tenure – Freehold, Leasehold, and Agreements

Map 3 – Access – Open access (CRoW), and Deed of Access
Map 4 – Common land – Common Land, Bylaw Coverage, and Highway Verges

Map 5 – Major Utilities

Appendixes

Appendix 1 – Chobham Common Bylaws

Appendix 2 – Site Risk Assessment

1.3. Status

SAC: 545.57 Ha
Most of the area covered by this plan is part of the Thursley, Ash, Pirbright and Chobham Special Area for Conservation, which was designated on 1st April 2005. The area covered represents 10.6 % of the total area of the SAC. The SAC citation is appended (appendix 3).

SPA: 545.57 Ha
Most of the area covered by the plan is part of the Thames Basin Heaths Special Protection Area, which was designated in March 2005. The area covered represents 6.5 % of the SPA. The SPA citation is appended (appendix 4)

NNR: 513.36 Ha
This plan covers the whole of the Chobham Common National Nature Reserve which was declared in 1994 under section 35 of the Wildlife and Countryside Act 1981.

SSSI: 545.57 Ha
The area covered in this plan takes in the greater part (65 %) of the Chobham Common Site of Special Scientific Interest. The SSSI was originally declared in 1973 under section 23 of the 1949 Act, as part of the Chobham Pirbright Group. Chobham Common SSSI was renotified in 1985 under section 28 of the Wildlife and Countryside Act 1981 and extended in 1986 and 1994. The Chobham Common SSSI designation is appended (appendix 5)

Other designations (site)

There are Sites of Nature Conservation Interest at Burrowhill Green and Little Heath (Comp 22)

There are three Scheduled Ancient Monuments
A Bronze Age round barrow at SU175 992 646
The Beegarden an earthwork of unknown date at SU175 974 644
The Rectangular Beegarden an earthwork of unknown date at SU175 993 639

Maps:

Map 6 – Status – Site, SAC, SPA, NNR, SSSI boundaries
Map 10 – Statutory Rights of Way and Scheduled Ancient Monuments

Appendixes

SAC citation
SPA citation
SSSI designation

1.4. Physical features

1.4.1. Geology

Chobham Common is an extensive open tract of lowland heath, which has developed over the tertiary deposits of the London Basin.

1.4.2. Geomorphology

The site is bisected by the M3 motorway, which cuts across the Common from south-west to north-east; approximately one third of the site lies to the north of the motorway.

To the north of the M3 the land undulates forming three ridges (Oystershell Hill and Brick Hill, Ship Hill, and Burnt Hill) with south-easterly and north-westerly aspects, separated by Long Arm and Little Arm Bogs. The land to the west of Burma Road falls gently to the west until it reaches Long Arm.

Immediately to the south of the M3 Valley End, Chickabiddy Hill and Staple Hill form a continuous ridge. Jubilee Mount and Tank Hill are southern spurs of Staple Hill, which form the western and eastern rims of the broad valley known as Albury

Bottom. South of these features the site falls away to its southern boundary on Gracious Pond Road, with low ridges at Butts Hill and Monks Walk.

The highest point on the site is The Clump on Staple Hill at just under 75 metres above sea level, while the lowest elevations are at about 30 metres.

1.4.3. Soils

The soils are formed from the Bagshot, Bracklesham and Barton Beds, and are typically stagnogley podzols, with stagnogley soils and some gleys in the more wooded margins of the site, peaty soils in the wetter low-lying areas and plateau gravels on the high ridges.

There is an extensive zone of disturbance on either side of the motorway (Comp 14). High levels of nitrogen deposition have been measured on the Common extending out from the motorway and this may in part explain the distribution of extensive areas of *Molina caerulea* dominated grassland that occur on the Common.

1.4.4. Hydrology

North of the M3 the Common is part of the Chertsey Bourne river catchment and is drained by three deep valley bogs (Long Arm, Little Arm, and the unnamed bog in the north west corner of the site) all of which flow from south-west to north-east.

South of the M3 the Common is part of the Addlestone Bourne river catchment. Most of this area drains southwards through a complex system of shallow valley bogs into the stream that flows south from Langshot Stables, there is a deep bog on the Common to the west of the stables. Willies Leap Bog, Old Slade Bog and the Fishpool complex flow southwest across the southeast spur of the site.

1.4.5. Climate

The climate is typical of central southern England, moist and temperate with mild winters (Koppens Cfb). Prevailing winds are from the south-west, and in most years rainfall ranges between 550 millimetres and 650 millimetres. Normal average temperatures are 17^{o}C in July and 5^{o}C in January. Sunshine levels are amongst the highest in Britain, while the number of snow days is comparatively low (Baxter-Brown A.I 1982).

It should be noted that recent analyses of climate trends by the Meteorological Office indicated the following changes in climate in south-east England[1];

- A mean temperature rise between 1914 and 2004 of 0.84C and an increase in the thermal growing season.
- A mean temperature rise of 0.84C during the winter months (1914-2004), an increase in winter precipitation and a strong decline in snow days (down 75% since 1975) and frost days (down 25-35% since 1961).
- A mean temperature rise of 0.9C during the summer months (1914-2004) with a decrease in summer precipitation and an increase in heavy rain events.

[1] Meteorological Office 2006. A special analysis of trends in the UK climate since 1914.

1.5 Biological Features

1.5.1. Vegetation communities

The citation for the Thursley, Ash, Pirbright and Chobham Special Area of Conservation states that the qualifying habitats for designation are European dry heath; North Atlantic wet heath with *Erica tetralix*; and depressions on peat substrates of the *Rhynchosporion.*

There are extensive areas of European dry heath on Chobham Common made up of NVC H1 heather-sheep's fescue *Calluna vulgaris- Festuca ovina* heath, NVC H2 heather-dwarf gorse *Calluna vulgaris- Ulex minor* heath, and NVC H3 *dwarf gorse-bristle bent grass Ulex minor- Agrostis curtisii* heath. Success in reducing fires on the site has meant that many C*alluna vulgaris* blocks have reached maturity; while there is age variation between *Calluna vulgaris* blocks, individual blocks tend to be of even age. Purple moor grass *Molinia caerulea* is a component of the H3 heath and can dominate where nutrient enrichment has occurred through nitrogen deposition, uncontrolled fires and lack of grazing. There appears to be a positive correlation between the frequency of *M. caerulea* and proximity to the M3 motorway and there are concerns that this species is supplanting heathland and mire habitats as a result of nutrient enrichment locally from the motorway and more generally, from aviation sources and atmospheric nitrogen deposition. Where grazing has occurred and the *Molinia caerulea* has been suppressed H3 heathland has successfully been restored. Where mowing has occurred and the *Molinia caerulea* has been suppressed H3 heathland has been restored, but it lacks the diversity and structure of the grazed areas.

Areas of undisturbed bare ground and early successional habitat, created by recreational activity or for conservation reasons, are an important component of the dry heath communities. The dry heath is interspersed with areas of bracken *Pteridium aquilinum,* European gorse *Ulex europeaus,* birch *Betula pendula - pubescens* and invasive Scots pine *Pinus sylvestris,* as well as isolated trees and bushes.

The North Atlantic wet heath is represented by NVC M16 cross-leaved heath-Sphagnum moss *Erica tetralix- Sphagnum compactum* wet heath, which occurs on the margins of most of the bog systems and of many areas of open water, in damp low lying areas and on higher areas where drainage is impeded, and it is quite extensive in some places.

NVC M21 bog asphodel-Sphagnum moss *Narthecium ossifragum- Sphagnum papillosum* valley mire occurs in the deeper valleys, low lying areas and wet hollows that are permanently water logged. Depressions in the peat substrates occur within this habitat and in the transition zone between mire and wet heath, and are found in and around seasonal bog pools, in flushes on the edges of mires and in areas that have been artificially disturbed especially where conservation management has occurred. Marsh club-moss *Lycopodiella inundata* occurs in this habitat.

Many mire areas are dominated by NVC M25 purple moor grass-tormentil *Molinia caerulea- Potentilla erecta* mire and there is evidence that over time it has supplanted the more bio-diverse M21 mire. Where grazing has occurred and the *Molinia caerulea* has been suppressed M21 habitats have been restored. In places the M25 extends into wet heath areas and where it has been grazed, lightly trampled or burnt it forms a herb rich acid meadow, which supports marsh gentian *Gentiana pneumonanthe* and saw-wort *Serratula tinctoria.*

There are some thirty-five ponds of varying size on the Common, which support a rich invertebrate fauna. The less acidic ponds on the margins of the site support amphibians. Most are of recent origin although the Fishpool complex was a medieval carp pond.

A variety of NVC MG5 crested dog's-tail grass-knapweed *Cynosurus cristatus-Centaurea nigra* type grasslands occur on the margins of the site including Little Heath and Burrowhill Green, on road verges and on areas of heathland verge along fire breaks and the edges of hardened fire tracks. They act as important nectaries for invertebrates and Deptford pink *Dianthus armeria* occurs in one of these areas.

Carr woodlands occur in several of the bog areas with NVC W5 alder-greater tussock sedge *Alnus glutinosa – Carex paniculata* type wet woodland at Monks Walk, Old Slade and Fishpool and with the more frequent NVC W1 grey willow-marsh bedstraw *Salix cinerea- Galium palustre* wet woodland elsewhere. In areas where little management has occurred this grades into NVC W4 silver birch-purple moor grass *Betula pendula-Molinia caerulea* woodland. *Betula pendula-Molinia caerulea* woodland is prevalent on many of the damp margins of the Common where it grades into NVC W10 pedunculate oak-bracken-bramble *Quercus robur- Pteridium aquilinum- Rubus fruticosus* woodland.
At Monks Walk and elsewhere there are dense stands of Scots Pine with no ground flora.

Most of the woodland in the area is of recent origin. The few areas of older secondary woodland that occur on and around the Common (including the Barrow Woods) are dominated in the canopy by sweet chestnut *(Castanea sativa)* with scattered beech *(Fagus sylvatica* and oak *(Quercus spp.)* and occasional stands of Scots pine, the shrub, field and ground layers are either absent or are composed entirely of *Rhododendron ponticum*. Although some interesting fungi are found in these areas, and the over-mature trees and lack of human visitors may benefit some of the shyer breeding birds, this climax has by far the lowest ecological value of any of the communities found on Chobham Common.

1.5.2. Plants

Three hundred and ninety vascular plant species have been recorded on the site.

The wet heath and mire communities support excellent assemblages of wetland plants including the nationally scarce marsh gentian *Gentiana pneumonanthe*, and the Surrey rarities hare's-tail cotton grass *Eriophorum vaginatum,* bogbean *Menyanthes trifoliata,* and royal fern *Osmunda regalis.* Other wetland species include round-leaved sundew *Drosera rotundifolia,* oblong-leaved sundew *Drosera intermedia,* bog asphodel *Narthecium ossifragum,* bog pimpernel *Anagallis tenella,* common cotton grass *Eriophorum angustifolium,* heath spotted orchid *Dactylorhiza maculata,* and saw-wort *Serratula tinctoria*. Of most note is the marsh club moss *Lycopodiella inundata*, which is classified as nationally scarce, is protected under schedule 8 of the Wildlife and Countryside Act 1981, and is a BAP priority species.

The dry grassland areas are quite diverse and support the nationally scarce mossy stonecrop *Crassula tillaea* and *Dianthus armeria* which is classified as nationally vulnerable, is protected under schedule 8 of the Wildlife and Countryside Act 1981.

The better areas of secondary woodland support a typical W10 woodland flora. Mistletoe *Viscum album* a Surrey rarity occurs on the site.

The Common has a rich bryophyte flora.

The systematic lists for vascular plants, mosses and liverworts are held SWT

1.5.3. Fungi

This group is well represented but under-recorded.

1.5.4. Animals

Some twenty-six species of mammal have been recorded on the site including colonies of water vole *Arvicola terrestris* (a BAP priority species), and five species of bat.

One hundred and seventeen species of bird have been recorded on the Common, which forms an important part of the Thames Basin Heaths Special Protection Area.

The Thames Basin Heaths Special Protection Area site was declared under Article 4.1 of the Directive (79/409/EEC) as it supports populations of European importance of the Dartford Warbler *Sylvia undata,* Nightjar *Caprimulgus europaeus,* and Woodlark *Lullula arborea* all of which are listed on Annex I of the Directive and Schedule 1 of the Wildlife and Countryside Act 1981.

The Common supports in excess of ninety breeding pairs of Dartford warbler (4.7% of the British breeding population) and in excess of fifty pairs of European nightjar (1.5% of the British breeding population). Woodlark numbers vary between six and twelve pairs (0.4-0.8% of the British breeding population).

Non-qualifying species of interest that are listed in the SPA citation that breed on the common are hobby *Falco subbuteo,* woodcock *Scolopax rustica,* skylark *Alauda arvensis,* stonechat *Saxicola torquata,* tree pipit *Anthus trivialus,* and yellowhammer *Emberiza citrinella.* Merlin *Falco columbarius* and kingfisher *Alcedo atthis* are irregular winter visitors to the site.

Red list Birds of Conservation Concern that are resident breeding birds on the Common are reed bunting *Emberiza schoeniclus,* lesser spotted woodpecker *Dendrocopus minor,* linnet *Acanthis cannabina,* song thrush *Turdus philomelos,* starling *Sternus vulgaris,* and bullfinch *Pyrrhula pyrrhula.* Grey partridge *Perdix perdix,* grasshopper warbler *Locustella naevia,* spotted flycatcher *Ficedula hypoleuca,* and Lapwing *Vanellus vanellus* breed in some years.

The four common amphibian species and the four common reptile species occur on the site. Sand lizard *Lacerta agilis* a BAP priority species was successfully re-introduced to the site in 1987.

Six species of fish occur in the Fishpool complex, none of which are of any particular conservation interest.

The site ranger holds systematic species lists for all vertebrate groups

The Common is nationally important for its invertebrate fauna, in particular its Spiders *(Areneae)*; bees, wasps and ants *(Hymenoptera)*; aquatic beetles and ladybirds *(Coleoptera)*; true flies *(Diptera)*; and butterflies and moths *(Lepidoptera)*.

The invertebrate site register for the Chobham Common SSSI lists 467 notable invertebrate species; of these, 9 species are listed as endangered (one ant, 3 wasps and 5 bees), 6 species are listed as vulnerable (one hoverfly, 2 spiders, 2 wasps and one bee), 28 species are listed as rare (5 *Hemiptera* bugs, one sawfly, 7 wasps, 9 bees, 4 *Diptera* and 2 spiders), 29 species are listed as nationally scarce notable A, 96 species are listed as nationally scarce, 2 species are listed as regionally scarce, 286 species are listed as local, one species is listed as insufficiently known, 2 species are listed as requiring confirmation, and one species is listed as extinct on the site "site possibly now obliterated by M3".

Some 281 species of spider have been recorded of which 39 species are classified as rare and 8 as very rare. This gives Chobham Common the largest known fauna in Britain with 47% of all British species. Of most note is the BAP priority species *Uloborus walckenaerius.*

389 species of bees and wasps *(Hymenoptera aculeata)* have been recorded on the Common together with 21 species of ant *(Formicidae)*. Of most note is the BAP priority species the red bearded ant *Formica rufibarbis* which only occurs on Chobham Common in the mainland UK.

106 species of *Diptera* have been recorded most notably the BAP priority bee fly *Thyridanthrax fenestratus.*

Some 122 beetle species have been recorded, including 21 of the 24 extant native British ladybird species.

33 species of butterfly have been recorded of which 28 breed on the site. Of most note are silver studded blue and the grayling *(Hipparchia semele)*. 322 species of moth have been recorded.

22 dragonfly *(Odonata)* species been recorded.

Species lists for spiders, *Hymenoptera, Coleoptera, Odonata, Orthoptera, Diptera, Lepidoptera*, and notable invertebrates are held by SWT.
At present systematic species lists are not available for the remaining invertebrate groups.

Map 7 – extent of habitats (2002)

1.6 CULTURAL FEATURES

1.6.1. Landscape

Regional landscape character

Chobham Common falls within the Thames Basin Heaths Character Area, (Character Area 129) which is characterised as –

> A particularly diverse landscape unified by the high incidence of heathland and coniferous forestry, the open unenclosed nature of which is unusual within the context of the south-east region.
> A heavily populated and developed area characterised by large towns plus numerous smaller settlements along transport corridors interspersed by open land.

Fragmented but often connected blocks of largely neglected remnant heathland as a result of early agricultural clearances and widespread development, with most heath retained on large commons or as Ministry of Defence training areas.
Cultivated farmland and pasture is typically enclosed within small and irregularly shaped fields divided by hedgerows with small areas of wood and heath heavily used for horse grazing.
Large tracts of coniferous plantations or mixed wood with beech and birch are typical of much of the area, with significant areas of ancient woodland in the west.

The Character Area description notes that Chobham Common is the only large heather dominated heathland within the Area that does not have restricted access.

Local landscape character

As the only accessible example of an extensive open heathland landscape in the area Chobham Common is of considerable local importance both historically as a fine example of an ancient landscape and as an important local amenity. Visitors appreciate the "open, natural and wild" character of the site. A landscape feature of great importance to local communities is the Clump where a fine stand of ancient Scots pines stood until the early nineteen sixties, the area was replanted in the mid-nineteen seventies and there are long term plans to restore it to it's former prominence.

There are a number of factors that detract from the landscape value of the site, the M3 Motorway crosses the site and although it is not visible from most parts of the site both the motorway and aircraft from Heathrow cause considerable noise pollution. The pylon lines that cross the Common and the BAT tower in Woking detract from the otherwise fine views looking south from the Staple Hill Ridge across the open heath to the North Downs.

1.6.2. Archaeological and historical features

There are three Scheduled Ancient Monuments on the Common:-

The fine Bronze Age round barrow, complete with ditch located in the Barrow Woods.

The Bee Garden, which is situated in Albury Bottom, is a roughly circular earthwork approximately one hundred metres in diameter with an enclosure at it's southern end. It has yet to be dated and it's original purpose is unknown. It may well prove to be a prehistoric farmstead; it has also been suggested that it could be a mediaeval stock enclosure although the Anglo-Saxon place name Albury ("the old burgh or earthwork") would indicate it was regarded as ancient in the early mediaeval period.

The Rectangular Bee Garden situated at Old Slade is a triple-moated enclosure fifty metres across on its longest side. Its purpose and date of origin have yet to be ascertained although it is clearly more recent than the Bee Garden. Local people believe that the bailiff for the nearby fish pools lived here, it has also been suggested it was a stock enclosure although this seems unlikely.

The Victoria Memorial Cross, which stands at the western end of Ship Hill within a circular earthwork, believed to be a 19th Century gun battery, was erected in 1901 to commemorate Queen Victoria's review of troops encamped on the Common in 1853, prior to their departure to the Crimea. The Cross is a Listed Building Grade II (DoE number: Chobham 2/59)

A detailed account of all the archaeological and historic features on the site can be found in - An Archaeological and Historical Survey of Chobham Common proposed Area of Historic Landscape Value (Currie C. 2002), copies of which are held by the Surrey county archaeologists and the site ranger.

1.6.3. Land use history

It is believed that in common with other inland heaths Chobham Common was created when early farmers cleared the primary woodland that once cloaked the country. This exposed and degraded the fragile soils that underlie the site, creating the conditions favoured by heathland. After the initial clearance the area would have been kept free of trees by grazing and fuel gathering. There is evidence that the area was occupied during the Neolithic period and the Bronze Age; analysis of peat cores from areas with similar geology and patterns of settlement elsewhere in southern Britain would suggest the heathland on Chobham Common was created at some time during these periods.

Over 80% of the heathlands that once covered extensive areas of southern Britain have been lost, with similar losses on the near continent where the remaining lowland heathland of oceanic temperate regions occurs. This dramatic decline began during the eighteenth century and early nineteenth century as changes in agriculture, which resulted in the loss of grazing on heaths, and as the growing availability of cheap coal as an alternative to other fuels, brought traditional heathland management to an end in many areas. Large areas of heathland were lost to neglect or subjected to agricultural “improvement” and enclosure as arable farming methods advanced. During the Twentieth Century fifty percent of the heathland that remained in 1919 was converted to commercial forestry and substantial areas have been lost to development and invading scrub.

The survival of Chobham Common as an extensive area of lowland heath is largely due to the historic isolation of the Chobham area where traditional heathland management continued until the early Twentieth Century. While turbary (turf-cutting) was still practised on a small scale at the beginning of the Twentieth Century it had ceased to be an important factor in the management of the Common by that time. Rough grazing and the cutting of heather, gorse and small trees began to decline after 1914 and had almost completely ended by the time of the Second World War. Photographic evidence and verbal reports indicate that during the early part of the Twentieth Century large tracts of *Calluna vulgaris* with extensive areas of wet heath and open bog dominated the Common. There was little scrub and the only trees of any great size were at the Clump on Staple Hill and the Lone Pine to the south of the Beegarden.

The Common was used by the military during the 1920’s and 1930’s, and throughout the Second World War, when it was severely damaged by tanks. Immediately after the Second World War the southern part of the Common was ploughed and seeded with an annual grass to allow the natural vegetation to re-establish, while the area north of Staple Hill, which was not as heavily damaged, was allowed to recover naturally. By the 1950’s the Common was recovering well with large tracts of open heath. At this time the Common was heavily rabbit grazed with little scrub and large areas of close cropped heather and gorse. Myxomatosis reached the area in 1955 and consequently the heather and gorse on the Common grew on and scrub began to develop. By the 1960’s scrub was starting to become a problem.

In 1984 Surrey County Council produced the first management plan for the Common which acknowledged invading scrub, fire and erosion as the main threats to the site. The Surrey Trust for Nature Conservation had carried out small-scale scrub clearance work from 1974 onwards and Surrey County Council began clearing scrub on the Common from the 1970's onwards; however despite their best efforts the scrub continued to advance. While describing birch and pine invasion on the Common as "Possibly the most serious problem for nature conservation" the 1984 Management Plan states, "Widespread invasion control is difficult to justify financially. Intervention management will therefore be limited to the more significant open habitats and places where an acceptable level of tree cover can be maintained at low cost". From the late 1980's a more aggressive approach to scrub management was adopted together with more active conservation management starting with the large scale annual events for schools and volunteers such as "Purge the Pine" and "Free Christmas Tree" events. While these events, which involved over 1,500 volunteers in some years, dramatically reduced the threat to the Common from pine invasion, birch remained a major threat to the site.

The 1992 Management Plan took a much more positive approach to conservation management of the Common. In the same year the site was proposed as a National Nature Reserve (NNR) and a substantial grant covering a ten-year period was awarded to Surrey County Council under the Countryside Stewardship Scheme for the management of 280 hectares of the Common. The Scheme was extended to cover the whole NNR for a further ten years in October 2002. A plan showing the areas covered by Countryside Stewardship is appended (Map 8). At the time of writing at least 17 Ha of scrub management takes place each year together with at least 20 Ha of conservation mowing, and bracken control. Bare ground creation is carried out in conjunction with Queenwood Golf Club; and heather cutting, pond, scrape and pool creation are carried out on a ad-hoc basis

Fires occurred fairly regularly during the 1950's and 1960's and the whole Common was seriously damaged by major fires in the early and mid 1970's which caused the loss of smooth snake *(Coronella austriaca)* and sand lizard from the site and allowed extensive areas of purple moor grass and bracken to establish. Many of the blocks of purple moor grass on the Common date from this period. Since 1976 a network of fire tracks and firebreaks has been created and progressively upgraded. Since 1990 rangers and volunteers have fire watched during periods of high risk and in 2006 the rangers were equipped with a fire fighting system. These measures together with close liaison with the Surrey Fire Service have served to reduce both the frequency and scale of fires on the site. A copy of the Chobham Common Fire Plan is appended (Map 9).

The major utilities which cross the Common were constructed during the 1950's and early 1960's. The M3 motorway was completed in 1974 cutting the site in half. Some attempts were made at mitigation work at the time, but with hindsight they were both inappropriate and inadequate and large blocks of gorse (*Ulex europeaus)* developed in the zone of disturbance on either side of the Motorway creating further fragmentation of the site and causing serious fire risks. Following serious fires in 2001 and 2002 the Department for Transport provided funding for clearance of the gorse in the zone of disturbance and this area is mown annually to suppress any gorse re-growth.

The first car parks on the Common were created in 1936 at Staple Hill and south of the Monument. After the Second World War the recreational use of the Common grew dramatically. This recreational use developed in an ad-hoc manner with walkers

and horse riders creating tracks then abandoning them for new routes as they gullied and became impassable, causing wide scale erosion on the site. It is also reported that during the 1950's and 1960's visitors regularly took vehicles onto the Common further adding to the problem. An aerial photograph dated 1964 clearly shows severe erosion problems on Tank Hill and Staple Hill. By the time the County Council acquired the Common in 1968 there were nine car parks on the area covered by this plan. Initially the Council wished to develop a country park but these plans were soon dropped in favour of informal recreation and nature conservation. Erosion and disturbance continued to be serious problems through the nineteen seventies and eighties. By the late nineteen-eighties both walkers and riders were showing a marked preference for the growing network of high quality fire tracks. In 1992 a consultative process began to resolve long running conflicts of interest between horse riders and other users, and to rationalise the rights of way networks in order to meet the needs of visitors while protecting sensitive habitats and species. Following a public enquiry in 1996 the present network of rights of way and agreed horse rides which incorporates the fire track network was installed. Since then there have been few serious erosion problems and disturbance has been greatly reduced.

Grazing was carried out using temporary fencing on five areas totalling 30 Ha between 1994 and 2000, with excellent results. There were plans to carry out extensive grazing on the Common, however the Secretary of State turned down an application to fence the northern section of the Common following a public inquiry in 1998, as there were public concerns about permanent perimeter fencing and the inspector felt other options for establishing grazing had not been fully explored.

There is a more detailed history of the Common in the 1998 Chobham Common Management Plan.

1.6.4. Socio-economic use

The Common is managed for nature conservation and informal recreation. Local shops, restaurants and public houses benefit from visitor use of the Common. Local stables benefit from their use of the Common. Heather turves from the Common are used by Queenwood Golf Course, who carry out works on the NNR in exchange for material.

The Common has been used for filming since 1914. In the nineteen-fifties there was a semi-permanent film set at Tank Hill and as late as 1979 ten film units used the site in one year. Since the mid-nineteen-eighties filming has only been allowed where it does not interfere with the enjoyment of the Common by visitors and where it can be shown it will not damage the ecology or fabric of the site. At the time of writing the Common is used two or three times a year for television dramas, adverts or minor scenes for feature films.

The possibility of brash from scrub management being utilised at the Slough Combined Heat and Power Station is currently being investigated.

Approximately twenty-five per cent of visitors to the Common come from the surrounding villages. There is considerable local interest in the management of the Common. From 1879 to 1968 the Common was managed by the Chobham Common Preservation Committee, initially this was a committee elected by the Commoners to protect their interest but as the number of active commoners declined it became a committee of interested villagers. From 1968 until 1986 the Chobham Common Preservation Committee assisted Surrey County Council "as a consultative body rather than with any management responsibility" (Chobham Common Management

Plan 1984). In 1986 Surrey County Council set up the Chobham Common Consultative Group as a more representative consultative body. In 2002 Surrey Wildlife Trust replaced the Consultative Group with the current Chobham Common Liaison Group. The group includes representatives of Surrey Wildlife Trust, Surrey County Council, Natural England, Surrey Heath Borough Council, Runnymede Borough Council, Windsor and Maidenhead Unitary Authority, Chobham Parish Council, West End Parish Council, Windlesham Parish Council, Virginia Water Community Association, the Surrey Heathland Project, RSPB, Chobham Society, Chobham Common Preservation Committee, the Ramblers Association, Chobham Common Riders Association, Chobham Common Model Fliers Association and Chobham and District Anglers Club. The role of the Group is to "positively assist Surrey Wildlife Trust in managing Chobham Common". There are two indoor and on-site meetings of the Liaison Group each year.

Chobham Common is an important amenity for local people and visitors from other parts of Surrey, the Windsor and Maidenhead area, and from Middlesex and West London. Annual visitor numbers are estimated at between 250,000-300,000, by site managers, with approximately 25% coming from the surrounding villages (Jenkins, 1994), and 63% come from within 5 miles[2]. The Common is used for informal recreation with walking, dog walking, model aircraft flying, quiet relaxation, horse riding, cycling, and fishing being the main activities (94% of visitors, (Jenkins, 1994). The majority of visitors and local people have expressed the wish that the present 'open, natural and wild' character of the Common is retained[3]. Dog walkers make up 49% of all visitors (WSP Environmental 2004), this shows an increase from 34% in 1994 (Jenkins, 1994). Model aircraft flying accounts for 11% of visits, horse riding just under 5% and cycling 2% (Jenkins, 1994)

1.6.5. Education, research and demonstration

The Common is an excellent outdoor classroom and is used by schools, colleges, Universities and field studies groups for educational activities ranging from pre-school 'acclimatisation' to post graduate research on a fairly regular basis. As ranger time is limited it is suggested that one way to enhance the educational value of the Common is to produce teacher and student packs.
Research has occurred on the site in an ad hoc manner. Research has tended to focus on erosion, the effects of fire, scrub invasion, and visitor use consequently there has been much replication of work and much work that is of little benefit to the site managers. Students have undertaken most of the work and there is little continuity and little scope for long-term work. A research wish list has been produced and supplied to local universities and colleges in order to encourage students to carry out worthwhile projects such as the work undertaken by Kent University on nitrogen deposition. The possible re-introduction of grazing onto Chobham Common could provide a good focus for future research.

Map 8 – Countryside Stewardship
Map 9 – Fire plan

1.7 Access and visitor facilities

1.7.1. Visitor appeal and suitability for access

[2] WSP Environmental 2004. Chobham Common Visitor Survey
[3] Surrey County Council Management Plan 1984

The open heathland landscape attracts visitors to the site throughout the year. The site is easily accessible by car and is accessible on foot from Chobham and Sunningdale, 93% of visitors come by car and roughly 5% on horseback. Roughly 25% of visitors come from neighbouring villages and 63% come from within a five-mile radius including the towns of Woking, Addlestone, Chertsey, Bagshot and Camberley, with most of the remainder coming from other parts of Surrey and Berkshire, and from south-west London. Visitors with an interest in natural history often come from further afield the site attracts ornithologists for the heathland birds (particularly Dartford warbler and nightjar), entomologists, and botanists as well as amateur photographers and astronomers.

There is an excellent network of public bridleways, public footpaths, horse rides and informal tracks, which most visitors stick to. The steep slopes on the site make access for visitors with limited mobility difficult. Deep heather, *Molinia* tussocks, hidden trip hazards and boggy ground can make going off track hazardous.

Many visitors come to the Common, as it is a convenient place to walk their dog, and have little appreciation of the sensitivity of the site; consequently there are problems with dog fouling in and around the car parking areas, and serious concerns regarding the disturbance of ground nesting birds by dogs. While education and the enforcement of relevant byelaws have served to reduce these problems, the provision of dog bins and alternative sites for dog walking in the area are both being considered at the time of writing. The provision of a good quality track network and restricting off-road cyclists to public bridleways, have ensured that erosion is no longer a serious problem on site and have served to reduce disturbance to wildlife, however it is essential that this network is maintained in good condition in order to ensure this remains the case. The over collection of edible fungi has been a concern in recent years and in order to reduce it's impact a one kilo limit per visitor has been imposed, together with interpretive signs in English, Polish and Italian.

1.7.2. Access provision

With the exception of Broomhall Heath, West Wood, Valley Wood, the land east of Burma Road, Chobham Place Fields, the Barrow Woods and Gracious Pond, the whole site is Access land under the Countryside and Rights of Way Act and is covered by a Deed of Access under the Law of Property Act 1925. There is informal access on Broomhall Heath, West Wood, Valley Wood and the Barrow Woods. Chobham Place Fields will be made accessible to the public once Surrey County Council receives the exchange land certificate formalising its ownership of the fields.

There are three self-guided trails on the Common together with a short easy access trail around Roundabout Car Park.

There is an extensive rights of way network with links to neighbouring Access land at Chobham Place Woods, Round Pond Woods and Stanner's Hills and west of Chobham Road, and to Chobham, Sunningdale, Horsell Common and Woking.

There are hourly buses from Woking to Chobham, which stop at Bowling Green Road just south of the Common, during the day, and regular daytime bus services to Sunningdale from Ascot, Windsor, Camberley and Staines, from Monday to Saturday. There are no bus services to Chobham or Sunningdale on Sundays, bank holidays or during the evening.

Sunningdale Railway Station, which is 600 metres from the north-west corner of the Common, is well served by trains, including weekend, bank holiday and evening

services, from London Waterloo and Reading, and can be reached from Guildford via Ascot.

Improvements to pedestrian access from Chobham and Sunningdale and provision of a footpath from Windlesham to the Common could reduce some of the vehicular traffic to the site. A trail from Sunningdale station to Woking station could also be considered as a green link. As there are currently proposals for a 3,000 space car park at the former DERA site and a major housing development on the former DERA test track site, the creation of pedestrian access to the Common from these sites or Virginia Water would be undesirable.

1.7.3. Visitor facilities

There are six car parks on the Common with a total capacity of 200 cars with overspill areas at Roundabout Car Park, Staple Hill Car Park and the old Clump Car Park. There is also informal roadside parking on Burma Road, Burrowhill Green and Gracious Pond Road.

There is an easy access trail around Roundabout Car Park, while the main routes from Roundabout and Longcross Car Parks are accessible to off road wheelchairs the many slopes on the Common deter most users. Benches are placed at intervals on the main routes to allow those with limited mobility to rest.

There are information boards in each of the car parks with interpretive maps, information about the NNR and quarterly Ranger's reports. There are habitat beds and interpretive panels explaining the history, ecology and natural history of heathlands and the Roundabout easy access trail. There is a site leaflet, which is an available from the ranger and in local shops together with information on guided walks and volunteer events. Chobham Common has its own pages on Surrey Wildlife Trust and Natural England websites and an entry in Wikipedia.

Map 10 – Access and visitor facilities – Rights of Way, agreed horse rides, other major access routes, car parks, self guided trails, model flying areas, fishing.

1.8 Site Features

1.8.1 Biological Features

Feature number	BAP Habitat type	Specific feature	Explanation/ ranking	SAC	SPA	SSSI	Nat BAP	Nat rare	Euro Sp.	Nat scarce	WCA Sp.	JCA
1.	Dwarf scrub heath	H1/H2 Calluna heaths		*		*	*					*
2		H3 Agrostis heaths		*		*	*					*
3		Dartford warbler	4.7% UK breeding population		*	*					*	
4		Nightjar	1.5% UK breeding population		*	*	*				*	
5		Woodlark			*	*	*				*	
6		Outstanding heathland bird assemblage	BTO index assemblage score of 22			*	*					
7.		Bryophyte Dicranum spurium				*						
8		Sand lizard					*		*		*	
9		Formica rufibarbis	Red barded ant			*	*					
10		Silver studded blue				*	*			*		
11		Uloborus walckenaerius	A spider			*	*	*				
12		Outstanding invertebrate assemblage: heathland scrub				*						
13		Outstanding invertebrate assemblage Early successional heathland, including:				*						
		Thyridanthrax Fenestratus	Mottled bee fly				*	*				
		Anisodactylus nemorivagus	A ground beetle				*			*		
14	Bogs*	M16 Wet heath		*		*	*					*
15	Fen marsh swamp*	M21 Mire				*						*
16		Depressions in the peat substrates of the Rhynchosporion		*		*	*					
17		Marsh club moss				*	*			*	*	
18		Wetland plant assemblage				*						

19		Invertebrate assemblage	1 RDB rare, 1 notable A, 15 nationally rare species			*		*		*		
20		Water vole					*				*	
21		M25 mire				*						*
22		Marsh gentian				*				*		
23	Neutral grasslands	MG5 grassland										
24		Deptford pink				*	*				*	
25	Broadleaved mixed yew woodland	W1, W4, W5, W10										*
26		Bats	5 species recorded, including pipestrelle*				**		*		*	
27		Badger									*	
28		Invertebrate assemblage Old growth open canopy woodland	1RDB nationally rare, 1 notable A, 15 nationally rare species			*		*		*		
29		Formica rufa					*					
30		BAP priority birds/BTO red list species	Bullfinch, song thrush, spotted flycatcher, lesser spotted woodpecker				*					
31	Open standing water											*
32		Nationally rare or scarce dragonflies	Small red damselfly			*		*		*		
33		Dragonfly assemblages	22 breeding species			*						

1.8.2 Landscape features

Feature number	Specific feature	Status
34	Open heathland landscape	Joint Character Area
35	Broadleaved, mixed and conifer woodland	Joint Character Area
36	The Clump	A locally important landscape feature

1.8.3 Historic features

Feature number	Specific feature	Status
37	Bronze Age round barrow	Scheduled Ancient Monument
38	The Bee Garden earthwork	Scheduled Ancient Monument
39	Rectangular Bee Garden earthwork	Scheduled Ancient Monument
40	The Victoria Memorial Cross	Listed Building Grade II

1.8.4 Socio-economic use

Feature number		Very Important	Important	Insignificant
41	Economic use		*	
42	Community involvement	*		

1.8.5 Demonstration, education and research

Feature number		Very Important	Important	Insignificant
43	Education		*	
44	Research		*	
45	Demonstration		*	

1.8.6 Public access

Feature number		Very Important	Important	Insignificant
46	Public Access	*		

1.8.7 Other estate assets

Feature number	Asset Description	Notes
47	Leasehold on Surrey County Council Land	Expires May 2052
48	Terms of Partnership Agreement and Service Delivery Specification	On SCC land for duration of lease
49	Freehold Glovers Pond	
50	Management Agreement Broomhall, West Wood, Valley Wood	
51	Management Agreement Gracious Pond	
52	Management Agreement land east of	Subject to negotiation of agreement

	Burma Road	
53	Open Access under Countryside and Rights of Way Act 2000	See Map 3 Access
54	Deed of Access under Law of Property Act 1925	Revocable See Map 3 Access
55	Statutory Rights of Way	See Map 10 – Access and Visitor facilities
56	Fishing rights Fishpool	Current lease expires 28th September 2011
57	Wayleaves/ Easements	
58	Commoners Rights	
59	Consultation with Chobham Common Liaison Group	
60	Section 35 Agreement	NNR
61	Obligation under Wildlife and Countryside Act 1981 (as amended under CRoW 2000)	SSSI
62	Operations requiring consent under section 28, Wildlife and Countryside Act 1981	SSSI

63	Special Protection Area status under European Birds Directive	SSSI
64	Special Area for Conservation Status under European Habitats Directive	SSSI
65	Ancient Monuments and Archaeological Areas Act 1979	Scheduled Ancient Monuments
66	Countryside Stewardship Scheme Agreement	Expires October 2012
67	Woodland Grant Scheme Agreement	
68	SITA funding for works at Glovers Pond	Ends 2009
69	Funding to suppress gorse re-growth M3 corridor	
70	Health and Safety at Work Act 1974	
71	Occupiers Liability Act 1957	Duty of care for all visitors to site
72	Disability	

	Discrimination Act 1995	
73	Dog Fouling of Land Act 1996	
74	Surrey County Council Bye-Laws	SCC land
75	Rangers Station	
76	Vehicles	
77	Tools and equipment	
78	Site security	Barriers, gates, height restrictors, bunds, ditches, stumps
79	Encroachments and Incursions	
80	Fire plan	

Part 2 Evaluation

2.1. Site analysis

2.1.1. Site strengths

Size – Chobham Common is an extensive area of lowland heath

Diversity – Chobham Common has the full range of heathland and associated habitats found on Thames Basin Heaths and a very diverse flora and fauna

Rarity - Lowland heath is a globally rare and threatened habitat, which has declined dramatically throughout its range during the last two hundred years. This in turn makes many species, which are heathland specialists rare and vulnerable. The large number of rare species that occur on the Common is indicated in the biological description.

Populations – Robust populations of Annex 1/Schedule 1 birds, nationally important invertebrate assemblage, diverse wetland and heathland verge plant communities.

Tenure – Both the freeholder and the leaseholder are fully committed to the conservation, landscape, historic and archaeological, and amenity objectives for the NNR, other Surrey County Council owned land and Glovers Pond.

Access – There are six car parks and an excellent network of fire tracks, rights of way, agreed horse rides and other access routes, which allow public access and access for management and fire fighting, while minimizing erosion and disturbance

Visitor appeal – The greatest appeal of the Common is its 'open, wild and natural' character and landscape. The colours of the Common attract many visitors especially during periods when gorse or heathers are in flower. Many enjoy seeing larger mammals, birds, butterflies, dragonflies and wildflowers.
Small numbers of naturalists and photographers visit the site specifically to see wildlife

Community involvement – Strong links with local communities and high levels of community 'ownership'.

Interpretation – Good on and off site interpretation

2.1.2. Site weaknesses

Fragility - Lowland heath is a fragile habitat, which in the absence of management is extremely vulnerable to succession, nutrient enrichment and the effects of uncontrolled fire and erosion. Wetland communities are vulnerable to changes in the water table.

Management issues – The management of succession, control of nutrient levels from atmospheric pollution, wild fire prevention and provision of access tracks to prevent erosion and allow access for fire fighters and management require on-going intensive management.

The future management practices on Chobham must address its unfavourable condition. Currently, a large area of the common is in unfavourable condition due to

poor structural diversity of the sward and increased abundance of purple moor grass. Historically, active management played a significant part in shaping and developing the habitat in a way considered to be highly beneficial to the heathland ecosystem. However, a range of management practices will be required to establish favourable condition of the heathland. These might include grazing, flail cutting, controlled burns, scrub removal, gorse coppicing and bare ground creation or combinations of these. The full range of possible management practices must be considered in a public engagement and dialogue process which will address both continued public access to, and enjoyment of, the area, whilst also achieving favourable condition for the site

Fragmentation – The site is fragmented by the M3 motorway and other roads that cross it and by roadside strips of gorse and other vegetation.

Uncertainty over management agreements – Uncertainty over the continuation and nature of management agreements for Broomhall Heath, West Wood, Valley Wood, Gracious Pond and the land east of Burma Road is a cause for concern.

Vulnerable species – The location of *Formica rufibarbis* and sand lizard on single locations makes them vulnerable to fire, disturbance and habitat change.

Inappropriate uses –Uncontrolled dogs are a threat to ground nesting birds, a nuisance to visitors and a potential health risk. Regular problems with litter, fly tipping and vandalism, and less frequent incursions by travellers, and motorcyclists and arson attacks are a serious drain on limited available resources. Horse riding and cycling off appropriate routes can cause erosion, disturbance and safety risks. Over collection of fungi in the autumn months is also a cause for concern.

2.1.3. External opportunities

Neighbouring land – To link the management of the remaining areas of the Chobham Common SSSI (west of Chobham Road, and Round Pond Woods) and of newly restored heathland areas at Stanner's Hill with that of the NNR.

SANGs – The provision of appropriate Suitable Accessible Natural Greenspaces as mitigation for developments in the area to act as alternative sites for dog walking and off-road cycling.

Sustainable use of materials – The sustainable disposal of timber, turves, heather and other materials for income, in exchange for works or as an alternative to more labour or cost intensive forms of disposal.

Filming – Income from filming where it does not impact on the nature conservation or visitor use of the site.

Pedestrian access - To improve pedestrian access from Sunningdale and Windlesham.

Re-introductions – To investigate re-introducing or introducing smooth snake, natterjack toad *(Bufo calamita)*, and white-faced darter *(Leucorrhinia dubia)*.

2.1.4. External challenges

Nitrogen and sulphur deposition – High levels of nitrogen and sulphur deposition are a threat to the low nutrient N-limited habitats on the sites and nutrient build up will favour competitor species such as *Molinia caerulea* and *Pteridium aquilinum*.

Development – Housing and other developments in the area could increase visitor use and pressure on the site – especially an increase in dog walking. Housing developments within 1,000 metres of the site could make ground-nesting birds, water vole and sand lizard vulnerable to predation from domestic cats.

Invasive introduced species – The accidental or deliberate introduction of invasive introduced species such as *Crassula helmsii* would be a serious threat to bio-diversity on the site.

Climate change – Associated periods of drought are a threat to wetland communities; can severely stress *Calluna vulgaris* and increase the risk of damaging uncontrolled fires. Heavy rain events cause serious erosion and can seriously damage fire tracks, rights of way and other access routes.

2.2 SITE MANAGEMENT

2.2.1 Introduction

"Lowland heathland is characterised by the presence of plants such as heather, dwarf gorses, and cross-leaved heath and is generally found below 300 metres in altitude. Areas of good quality heathland should consist of an ericaceous layer of varying heights and structures, some areas of scattered trees and scrub, areas of bare ground, gorse, wet heaths, bogs and open water.

Lowland heathland is a priority for nature conservation because it is a rare and threatened habitat. In England only one sixth of the heathland present in 1800 now remains. The UK has an important proportion (about 20%) of the international total of this habitat.

In the past heathland was lost primarily to agriculture, forestry, mineral extraction and development. Uncontrolled wild fires have also been a particular threat to bryophyte and lichen-rich heathland. The main factors affecting the habitat at present are the encroachment of trees and scrub and the simplification of vegetation structure due to a lack of conservation management such as light grazing, controlled burning and cutting. Nutrient enrichment, particularly deposition of nitrogen compounds, fragmentation and disturbance from developments such as housing and road constructions[4].

2.2.2 Scrub and Woodland encroachment

Without regular management most heathlands will rapidly be lost to either bracken dominated communities or to encroaching trees and scrub, mostly birch *Betula* ssp. and Scots pine *Pinus sylvestris* (Gimingham, 1972;Power pers. comm.; Marrs, Hicks & Fuller, 1986),. Most European heathlands including those in the UK were originally derived from woodland (e.g.Dimbleby, 1962; Kaland, 1986; Odgaard, 1994) but following the clearance of trees, human activities such as farming, grazing, cutting and turf-stripping have kept the heaths open. Although the resulting heathland soils have lost their bases and some of their nutrients from the leaching effects of rainwater, these nutrient poor and acid soils are still capable of supporting trees particularly when there are nearby seed sources and adequate phosphorus availability in the soils (Manning, Putwain & Webb, 2005). Invasion by trees and scrub has been seen as one of the main threats to heathland in recent years and was one of the mainsprings for the successful European bid for funding for 38 projects across the southern counties under `The Tomorrows Heathland Heritage' initiative led by English Nature.

2.2.3 Atmospheric nutrient inputs

Airborne nitrogen (as ammonia and nitrous oxides) from burning fossil fuels by industry, traffic, aviation, shipping and agriculture pose one of the greatest threats to heathland in Europe. Heathland systems are generally poor in nutrients and many of the plant species can only survive and compete successfully on soils with low nitrogen availability (Bobbink et al., 2002). Nitrogen compounds also increase acidification in soils. The addition of nitrogen in rain or dust particles, results in an increase in the nitrogen in the vegetation, litter and upper soil layers, and this builds up over time. Heather growth can initially benefit from inputs of nitrogen, but where

[4] (Habitat Action Plan – Lowland Heath, Biodiversity: UK Steering Group Report, 1995)

the heather is removed for example by fire, then grasses gain a competitive advantage both from the higher nutrient levels and from the increase in light, and this triggers a conversion from heather to grass dominated communities. Where there is no sudden event such as fire, the enhanced nutrient levels in the heather plants can speed up the growth cycle so that aging occurs more rapidly, the plants become more vulnerable to cold weather effects or drought and higher nutrient levels can encourage more frequent attacks by insects, particularly heather beetle (Carroll et al., 1999; Kristensen, 1999; Lee & Caporn, 1998; Lee et al., 2000; Power et al., 1998). All these factors can lead to a weakening of the heather, and the replacement of heather by grasses, as the increased light penetration through weakened or dead heather canopies and higher levels of nitrogen in the soil from a build-up of airborne nitrogen deposition, both encourage the growth of grasses.

A range of grass species can be involved in this process, and one of these, purple moor grass (*Molinea caerulea*) has displaced heathland vegetation on many heaths across North-west Europe. Molinia is a tussock forming species forming extensive beds with a thick thatch of undecayed vegetation making this a habitat which is difficult to access on foot and poses a high fire risk when dry. On wet heaths, purple moor grass can oust the typical heathland shrubs under high nitrogen conditions (Aerts & Berendse, 1988; Berendse & Aerts, 1984; Milligan et al., 2004; Uren et al., 1997). In a review of the evidence, Bobbink et al. (2002) concluded that the critical load[5] for nitrogen in wet heathland should be 10-25 kilograms of nitrogen deposition per hectare per year (kg ha^{-1} $yr^{-1)}$ with the lower end of this range applied to sites with low intensity management.

A number of studies have shown a decline in heather and an increase in the dominance of purple moor grass on a range of heaths, mires and moors in Norway, Denmark, Holland, Belgium and the UK (Chambers, Mauquoy & Todd, 1999; Tybirk, Bak & Henriksen, 1995). In the UK, there is evidence of grass invasion of some dry heaths, while others remain heather dominated. These changes involve a variety of heathland grasses including purple moor grass, sheep's fescue *Festuca ovina* and wavy hair grass *Deschampsia flexuosa* (Marrs, 1993; Todd et al., 2000). Bobbink et al. (2002) suggest that the critical load for dry heath be set at 10-20kg N ha^{-1} yr^{-1}.

At Chobham Common, the main grass species are Molinia caerulea on wet and humid heath, and Agrostis curtisii on dry heath.

The deposition of nitrogen has fallen in Europe since 1990, and levels are expected to fall further (NEGTAP., 2001) although world levels are predicted to go on rising for some time. However, increasing traffic levels on the nearby motorway and more flights from Heathrow may result in increasing levels of nutrient deposition locally . However, past depositions remain in the vegetation, litter and upper soil layers and modelling suggests that it may take between 20 and 50 years to restore Calluna dominance depending on the intensity of management (Terry et al., 2004).

The lower critical level for wet and dry heath have both been set at 10 kg N ha^{-1} yr^{-1}, which are below the estimated annual deposition level of about 16 Kg ha^{-1} yr^{-1} at Chobham Common (Power pers. comm.).

[5] Critical loads are defined as the rate of pollutant deposition below which adverse effects do not appear in the ecosystem Cunha, A., Power, S.A., Ashmore, M.R., Green, P.R.S., Haworth, B.J. & Bobbink, R. (2002). Whole ecosystem nitrogen manipulation: An updated review. In. JNCC Report No. 331., Peterborough.

Fire prevention

Uncontrolled fires are a serious threat to public safety and the high conservation value of Chobham Common.

Uncontrolled fires are a potentially serious risk to visitors to the Common, fire fighters and road users, particularly on the busy M3 Motorway (Surrey Community Risk Register 2005).

Frequent and extensive fires can lead to under representation of mature stands of dwarf shrubs and the loss of species dependent on old growth including specialized invertebrates (Bell, Wheater & Cullen, 2001), sand lizards (Corbett, 1994) and Dartford warbler (Bibby, 1977; Bibby, 1979). Frequent extensive fires result in large areas of even age vegetation, loss of structural mosaic, and fragmentation of old growth stands (Moore, 1962).

Uncontrolled fires can lead to an increase in scrub and bracken invasion (Bullock & Webb, 1995). Severe fires destroy viable *Calluna* seed banks and kill stem bases (Legg, Maltby & Proctor, 1992) and may cause slow or incomplete vegetation recovery (Maltby, Legg & Proctor, 1990). Grass and moss cover that develops after uncontrolled fires may delay or inhibit restoration of heathland (Clement & Touffet, 1990; Gloaguen, 1990); this is a particular concern given the increase in *Molinia caerulea* that can be caused by nitrogen deposition (Tomassen et al., 2004). Large and intensive fires and frequent fires can increase the invasive spread and frequency of *Molina caerulea* on dry heaths and the presence of *Molinia caerulea* can increase the probability of more frequent fires (Brys, Jacquemyn & De Blust, 2005).

Ensuring that the frequency and scale of uncontrolled fires is kept to a minimum should be a high priority. The presence of rangers and trained volunteers on site during periods of high fire risk acts as a deterrent to the arsonists that, rangers and the Surrey Fire Service believe, are responsible for most uncontrolled fires. This on-site presence also ensures that the fire service is contacted promptly and given accurate information when fires occur, that appliances can be lead to the fire site and that small fires can be contained until the fire service arrives. It is therefore important that rangers or trained volunteers are on site during periods of high fire risk and that rangers are trained and equipped to contain small fires and in the use of the Fire Fogging System. Close liaison with Surrey Fire Service is important, in order to make them aware of the importance of Chobham Common and familiar with the site and to allow them to advise SWT on fire prevention and fire access issues.

The maintenance, improvement and extension of the existing network of fire access routes, internal fire breaks and fire access points is a key part of fire prevention as is the breaking up of large blocks of European gorse. Roadside firebreaks are of great importance as fires often start from the roadside, these can either be mown roadside breaks where roads cross the more open parts of the Common or roadside strips of broad-leaved woodland in other areas. The railway line that forms the northern boundary of the NNR is also an area where fires have started in the past and the maintenance of the firebreak that runs parallel with the railway should continue. Controlled fires and grazing are also potential mechanisms to help reduce fire risk by suppressing *Molinia* and bracken thatch.

2.2.5. Heathland and mire habitat management

Scrub management

The cutting and removal of birch, pine and other scrub species is essential if the open heathland is to be retained and its succession to woodland prevented. This need to be sensitively done to retain sufficient scattered trees and scrub to enhance the biodiversity and landscape value of the site and to meet the habitat needs of key species, including managed scrub blocks to provide feeding areas for nightjar.

European gorse is an important component of the heathland communities, (particularly as foraging and breeding habitat for Dartford warblers) but large blocks of this species can create a significant fire risk and should be suppressed or reduced by mowing as part of the fire plan. Elsewhere gorse can be coppiced as part of the normal cycle of scrub management in order to maintain structural diversity.

Both cutting and treatment with Asulam are effective means of controlling bracken (Marrs, Johnson & LeDuc, 1998), however cutting can damage areas of heather and causes more disturbance than herbicide treatment, so on-going foliar treatment with Asulam has been the favoured method of bracken control on Chobham Common.

In the mire and heathland habitats, in order to maintain and enhance present levels of bio-diversity it will be necessary to create good botanical and structural diversity and to carry out management which will favour the growth of ericaceous shrubs and suppress competition from purple moor grass. There are a number of ways of managing heathland (which are not mutually exclusive), each of which has a number of advantages and disadvantages.

Grazing

Grazing creates botanical and structural diversity (Gimingham, 1972; Gimingham, 1992a; Lake, 2002; Lake, Bullock & Hartley, 2001; Webb, 1986), and enhances species richness (Bokdam & Gleichman, 2000; Byfield & Pearman, 1994) . Grazing has also been shown to be effective at mitigating the effects of atmospheric nitrogen and phosphorus deposition through the removal of vegetation, and is also generally considered an appropriate tool to reduce purple moor-grass cover and studies have generally shown declines in the abundance of purple moor-grass after grazing (Clarke, 1988; Diemont & de Smidt, 1987; Edwards, 1985; Fottner et al., 2007; Hulme et al., 2002; Tubbs, 1986). This is supported by observational information from 11 site managers interviewed by Lake, Bullock and Hartley (2001) who all considered that purple moor grass was being controlled through grazing on their sites. Grazing has proved effective in suppressing *Molinia caerulea* when used in the past in enclosures on Chobham Common. Grazing can also play a role in suppressing scrub and bracken, creating bare ground and reducing litter (Bullock & Pakeman, 1997).

Research has shown that structural diversity is maximised on dry heath by light grazing as it stimulates young growth while not adversely affecting mature or degenerate plants (Demopoulos, 1996; Welch, 1984). Absence of grazing may eventually lead to heather degeneration. *Erica* spp. tend to be grazed only lightly or avoided altogether. In general, intermediate grazing is likely to favour *Erica* spp. in a mixed sward, while heavier grazing will decrease both *Erica* spp. and *Calluna*. Grazing also affects the relative proportions of dwarf shrubs (heather and Erica ssp.) and grasses in heathland swards. Generally, on dry heath in the uplands light grazing leads to an increase in dwarf shrub cover and heavy grazing leads to the replacement of heather with grassland species (Alonso, Hartley & Thurlow, 2001; Hartley, 1997).

Light grazing can compensate for annual nitrogen in/outs (Fottner et al., 2007). On heathland in south east England, grazing might approximately balance the annual input of nitrogen but further action would be needed to reduce the stored nitrogen from previous inputs

A decrease in plant richness in wet heath and valley mires has been correlated with an increase in *Molinia* cover following cessation of grazing (and vice versa) over time scales varying between three and 40 years in Pembrokeshire, the New Forest and Dorset (Byfield & Pearman, 1994; Chatters, 1996; Clarke, 1988; Cox, 1998; Evans, 1989; Lake, 2002). For example, Cox (1998) and Lake (2002) showed an increase in characteristic mire species such as bog asphodel *Narthecium ossifragum,* oblong-leaved sundew *Drosera intermedia,* round-leaved sundew *Drosera rotundifolia*, cotton grass *Eriophorum angustifolium* and some *Sphagnum* species, together with a decrease in purple moor grass and dwarf gorse *Ulex minor,* after three years of moderate grazing. This is corroborated by (Clarke, 1988) and (Sanderson, 1994) where higher diversity in grazed areas was seen in the bryophyte, sedge and herb communities.

The use of grazing requires the control of stock. If sheep are used, then control may be through shepherding or fencing, but cattle or ponies will require fencing.

Sheep

The continental sites grazed by shepherds consist of a mixture of heathland, grassland and arable. The sheep are taken onto the heaths by a shepherd, who stays with them all day and controls them with trained dogs. Dogs are usually large, intelligent and can be well trained, and can guard against other dogs chasing sheep. In the late afternoon the sheep are taken off the heath and folded for the night into a barn. This system operates for 365 days pa, except during lambing in early spring when the sheep are kept on lay-back grassland. The shepherds and their flock are an attraction to both the local people and tourists, but tend to operate in areas where the numbers of other users are low, where dog walkers have to keep their dogs on leads, and where there are very large open spaces. Each shepherd looks after a flock of about 400 ewes, with 50 wethers, 6-8 rams and 350 lambs. Sheep are ineffective graziers of tall vegetation such a *Molinia* but could be used after controlled fires or cutting. On sites where *Molinia* is dominant, as it is green only during the summer, (or where only summer grazing is required) this type of shepherded system would not be appropriate. If sheep are fenced in, then sheep netting must be used which is more expensive to install than normal stock fencing, and some protection against dogs is essential.

Goats

Goats are unsuitable for large areas as they are the most difficult stock type to contain and would be vulnerable to attack by dogs. Where contained in small enclosures for a specific task, goats can be a useful way of managing vegetation, particularly growth of young trees and shrubs as they are browsers rather than grazers. Large scale use of goats on Chobham Common as a management mechanism would not be practical.

Cattle and ponies

Cattle and ponies require fencing and breeds must be carefully chosen. Traditional breeds are generally docile and ignore dogs and people. Cattle grazing takes place on many heavily visited sites, but despite this, many visitors are understandably

nervous about visiting areas with stock, especially when accompanied by dogs. Ideally, some areas should be free of stock at any one time.

Bulls, young cattle and cows with young calves are not suitable on sites visited by the public. Horse riders are generally wary of free grazing ponies, particularly stallions, and where there are gates, riders and their mounts have special requirements.

If grazing is considered as a suitable management tool at Chobham Common, it will be necessary to gain public support and confidence, especially in local communities. The effect of any proposed grazing regime on site users must be minimised and a range of potential options will need to be discussed with site users and interest groups to identify as close a consensus as possible.

Burning

Managed burning will help to remove atmospheric nitrogen stored in the vegetation by destroying the above ground biomass and releasing much of the nitrogen, in one study, about 53% of the above ground nitrogen was removed (Hardtle et al., 2006). However, 60% or more of the nitrogen is stored in the top layers of the soil, so managed burning will only remove 10-15% of the stored nitrogen, the equivalent of 4-5 years input. However, managed burning at intervals of ten or fifteen years (the time it takes for vegetation to recover and be suitable for burning again) are not enough to compensate for the inputs of atmospheric nitrogen during the intervening years, so while burning slows nitrogen build up, it does not stop it (Hardtle et al., 2007; Niemeyer et al., 2005 Power pers comm.). Furthermore, although heathland vegetation may be suitable for burning after 15 years, the burning cycle adopted when managing for wildlife would be much longer than this, 25-35 years depending on conditions, so as to include an appropriate proportion of older heathland vegetation in any burning programme. In addition, a number of studies have found increasing leaching rates after burning, threatening nitrogen pollution of heathland watercourses (Niemeyer et al., 2005; Pilkington et al., 2007). Leaching of bases such as calcium and magnesium can also increase after fire leading to increased acidity (Mohamed et al., 2007). Burning alone can increase the dominance of Molinia and reduce the frequency and dominance of Calluna, (as can be seen at Albury Bottom), although post burn grazing can increase plant species richness and structural diversity (Brys, Jacquemyn & De Blust, 2005; Ross, Adamson & Moon, 2003; Vandvik et al., 2005).

Results of managed burning can be variable (Lake, 2001; Ross, Adamson & Moon, 2003); and burning of old stands of *Calluna* reduces diversity (Stewart, Coles & Pullin, 2004) and can cause loss of bryophyte and lichen diversity (Gimingham, 1992b).

The presence of the M3 motorway, other roads and power-lines on the site would restrict any areas of potential burning, and there could also be health and safety issues and concerns that controlled burning (in winter) might encourage wild fire raisers at other times. There are always risks associated with managed burning and even managed fires can sometimes get out of control. Nevertheless, managed burning was used historically, as a form of heathland management following the cessation of the traditional practice of extensive turf stripping, although if adopted as appropriate at Chobham Common would need careful consideration and preparation.

Mowing

Regular mowing creates an even sward and can favour grass dominance over dwarf shrubs. As mowing removes only the taller parts of plants, leaving the lower layers of vegetation and litter layer intact, the effect on the accumulated nutrient stores is modest. Mown material must be removed off site to reduce nutrients. In one study the amount of nitrogen removed from the system was equivalent to about five years of atmospheric input with 44% of the above ground nitrogen removed (Hardtle et al., 2006) and calculations from inputs and stored nitrogen levels in south east England suggest that mowing and litter removal could remove about 22% of stored nitrogen or 6-7 years of inputs (Power pers. comm.). Mowing and removal of cut material is impractical on many parts of Chobham Common, especially on low lying areas and steep and uneven ground. Mowing uses machinery which is less sustainable than grazing and burning, and also risks the possibility of soil compaction and possible erosion, particularly on wetter ground.

Turf stripping

Turf stripping removes the remaining vegetation, the litter and organic layers and depending how low the machinery is set, part of the A horizon of the underlying soil. This is an extremely effective way of reducing nutrients, as high levels of nitrogen are stored in the organic layer and soil A horizon and so the removal of these, as well as above ground vegetation constitutes a substantial removal of nutrients. This has been calculated as the equivalent of between 37 and 176 years of nitrogen input. (Hardtle et al., 2006). Turf stripping can increase species richness and reduce the cover of Molinia (Backx, El-Kahloun & Meire, 2005). However it can also result in restoration of a species poor heathland, due to depletion of seed banks from the stripping process, acidification of groundwater and increases in soil ammonium concentrations which can inhibit seed germination and reduce seedling survival

There is strong historical evidence that extensive turf stripping was one of the main traditional practices on Chobham Common (Letter from Bisley churchwardens to the Poor Law Commissioners, 1838; Agriculture in Surrey, Stevenson W. 1809).

Turf stripping creates bare ground, early successional habitats and areas of open water which are important components of heathland communities and support a range of species including woodlark, *Formica rufibarbis,* water vole, sand lizard, marsh club moss and the communities found in depressions in the substrates of the *Rhynchosporion.* The creation of new areas of bare ground, scrapes pools and ponds as part of the cycle of management will benefit and maintain biodiversity. Turf stripping is expensive and produces large volumes of material for disposal, although this can be offset if turves are used in restoration projects. If carried out on a large scale or in an insensitive manner turf stripping can be unsightly. There are also indications that in the long term, use of mowing and turf stripping can lead to loss of phosphorus and that P limited areas may favour *Molinia,* but that phosphorus loss is limited when burning is used. as more P is retained in the ash (Hardtle et al., 2006). All donor turf sites must also be carefully checked for potential sites of historic environment value, including Mesolithic flint deposits.

From the point of view of nutrient stripping only, management by occasional burning or cutting followed by grazing, and a long term programme of turf stripping are probably the best options for heathland restoration and maintenance.

Approximate figures suggest that to remove the existing stock of nutrients it would be necessary to turf strip about 8ha of heathland each year for 50 years. However this would not prevent further inputs. Burning and cutting would remove about half the inputs over a twelve year cycle, that is on a managed area of about 35 ha pa. The addition of extensive grazing could remove the remaining nutrient inputs so that a combination of cutting, burning and grazing could prevent further nutrient accumulations.

If the creation of a diversity of age and structure within heath blocks is the aim, then selective cutting and removal of heather should occur from old stands, from bryophyte and lichen rich areas, and from areas where burning is not practical because of safety concerns. This should be accompanied by small, controlled burns on areas where it is safe to do so within building/mature stands. This strategy, followed by maintenance grazing would be the best way to retain and enhance structural diversity.

Away from amenity areas ponds will allowed to undergo succession to mire and bog habitats if they are not maintained as fully open water. These natural processes maximise the diversity of open water and wetland habitats across the site.

Wherever possible materials generated from heathland management such as heather cuttings, turf, brash, woodchip and timber should be removed from site (to reduce nutrients) and sold, exchanged or utilised in a sustainable manner.

Uncontrolled fires are a serious threat to the bio-diversity and integrity of heathland communities and measures to reduce fire risks are discussed in the fire plan policy. It should be noted that methods to suppress *Molinia caerulea* and bracken (such as grazing, spraying and litter stripping) significantly reduce potential fire risks

Conclusion – There are a range of management tools available to the heathland manager, including cutting, burning, grazing and turf stripping. Each of these has advantages and disadvantages in relation to nutrient removal, prevention of succession to woodland, creation of structural diversity and species biodiversity, financial costs, landscape considerations and public access. A balance between all these considerations will need to be struck which meets the need to reach and maintain favourable condition status of the site whilst attracting a wide measure of public understanding and support.

2.2.6. Neutral grassland habitats

These grasslands occur in four contexts on the site –

Heathland verges on the sides of fire-tracks and on firebreaks. These are managed as part of the fire plan and are cut between September and January with the option of a second cut in June if they have become rank or in order to implement the fire plan. Where practical a forage harvester or flail collector should be used.

Road verges. These fall within the highway verge and are managed by the highway authority however SWT should encourage the local highway authority (Surrey County Council) to carry out an appropriate mowing regime and appropriate restoration works after road works.

More extensive areas of grassland such as those at Burrowhill Green, Little Heath, and Brickhill Parade Ground. These should be cut between September and January

with an additional June cut on high amenity areas (as identified in the mowing plan) and where they have become rank. Where possible a forage harvester or flail collector should be used. The conversion of the improved meadows at Chobham Place fields to MG5 grassland by using hay cuts to impoverish the soils and the introduction of seeds (including yellow rattle *Rhinanthus angustifolius*) from grasslands on other parts of the site would help to restore a species rich grassland.

Grassland to the east of Burma Road. This grassland is of high conservation importance. Gaining tenure of this land or a formal management agreement in order to ensure the ongoing appropriate management of this area is a high priority and a plan for the management of this area will be appended.

2.2.7. Woodlands

The woodlands on Chobham Common are of less conservation value than the internationally important heathland and mire habitats, although they do contribute to the overall biodiversity of the site and have locally important landscape and amenity value. There is also an important assemblage of invertebrates associated with the dead wood on site. The first priorities in woodland management should be to ensure that those areas to be retained, as woodland or as managed scrub habitats are identified, and managed for long term retention.

The W1 and W5 carr woodlands support a good range of species but they are sub-climaxes and if left unmanaged would be replaced by W4 *Betula pendula – Molinia caerulea* woodland then by secondary climax woodland. Those areas identified as carr woodland should be managed on a coppice cycle that creates a mixture of mire and carr habitats if W4 woodland is to be prevented from establishing.

W4 *Betula pendula – Molinia caerulea* woodland also has some limited wildlife value and is also a sub-climax. Areas of coppiced birch enhance bio-diversity and provide feeding areas for nightjar. The Plan needs to identify those areas to be retained as managed scrub blocks maintained by coppicing; and those small areas that will be allowed to undergo managed succession to W10 *Quercus rober – Pteridium aquilinum – Rubus fruticosus* woodland.

W10 *Quercus rober – Pteridium aquilinum – Rubus fruticosus* woodland occurs on the margins of the NNR and outside of the NNR at Little Heath, Valley End and Brick Hill. It is the semi-natural climax in the area and is more bio-diverse than the exotic dominated climaxes that also occur in the area. Native deciduous woodland is important for landscape and amenity reasons, is an important feeding habitat for nightjar and enhances the overall bio-diversity of the site, and is important culturally. To maintain these interests, management of this habitat should include the retention of mature and over mature trees and dead wood, the removal of exotic tree and shrub species, and where necessary the creation of woodland glades and rides to encourage woodland herbs and invertebrates.

There are a number of self-seeded pine plantations on the site, most notably at Monks Walk and the Clump. Where they have been unmanaged they form dense stands with little ecological or amenity value. Where areas of pine woodland are to be retained they should be thinned in order to allow a heathland ground flora to develop and to allow well-spaced trees to develop to maturity in order to create a more naturalistic appearance to these areas and to increase their biodiversity. The exception is the Clump, which will be managed as a landscape feature.

The Barrow Wood is dominated by sweet chestnut *(Castanea sativa)* with scattered

beech *(Fagus sylvatica) and* oak *(Quercus spp.* and stands of Scots pine; the shrub, field and ground layers are either absent or are composed entirely of *Rhododendron ponticum* . This climax woodland has by far the lowest ecological value of any of the communities found on Chobham Common. Ideally long term management of this area should seek to replace exotic species with native broadleaf species and to open up the structure of the woods while retaining veteran trees – however the management of this area from a conservation viewpoint is a lower priority than that of other communities.

2.2.8. Historic features

The three Scheduled Ancient Monuments on the Common should be managed in accordance with English Heritage advice by keeping them clear of scrub, bramble and bracken to ensure that underground features are not damaged and that above ground features are visible, and by ensuring that no inappropriate recreational activities such as horse riding or off road cycling occurs on them and that no vehicles are taken onto them. Rabbits may have to be controlled on the Round Barrow to ensure no further damage occurs. The earthworks around the Victoria Memorial Cross should be kept free of scrub, bramble and bracken, and roadside vegetation along Chobham Road kept down to ensure the Memorial Cross remains visible.

Damage to non-scheduled archaeological features as listed in An Archaeological and Historical Survey of Chobham Common proposed Area of Historic Landscape Value must also be avoided.

2.2.9 Landscape

If the conservation management of the site is carried out in a sympathetic manner the open heathland landscape with scattered scrub and trees and wooded margins that makes Chobham Common an important feature in the Thames Basin Heaths Character Area should be retained. The creation and maintenance of windows in the roadside scrub along Staple Hill Road and Chertsey Road and the maintenance of views across the Common from Staple Hill, Jubilee Mount and Roundabout Car Parks will ensure visitors and those crossing the Common by road can enjoy the extensive vistas.

The Clump should be managed with the long-term aim of restoring it as a prominent stand of mature Scots pines; this should be achieved by careful silvicultural management of the Clump itself and by the removal of surrounding areas of scrub and trees, which obscure views of the Clump. Lone pine should also be retained as an isolated prominent landscape feature.

2.2.10. Public access

Access

With the exception of the privately owned areas, the site is open to the public for access and informal recreation as Open Access land under the Countryside and Rights of Way Act 2000, under the1936 revocable Deed of Access and under the terms of the Partnership Agreement and Service Delivery Specification signed by Surrey Wildlife Trust and Surrey County Council.

The site is heavily used for a range of activities so the challenge is to facilitate public enjoyment of the site while minimising damage to the site fabric and to sensitive habitats, and disturbance to wildlife.

General access

The severe erosion that occurred on the site in the past as a result of the ad hoc development of access routes in the second half of the 20th Century has largely been prevented by the provision and maintenance of a network of good quality tracks which was formalized by the creation of the present network of rights of way and agreed horse rides based on the fire track network following the 1996 public enquiry. The maintenance of this network should remain a priority in order to maximise appropriate visitor access.

Most visitors stay on these routes, which minimises disturbance by walkers and horse riders. As people will avoid walking in Calluna dominated areas (Boorman & Fuller, 1977) if given an alternative, disturbance to nesting Dartford warbler and nightjar by walkers without dogs is minimised by the provision of the track network. Nesting density of woodlarks is lower on disturbed sites than on undisturbed, however extensive visitor distribution has a greater negative impact than visitor numbers alone, below certain threshold levels, (Mallord, 2005); this means that disturbance can be minimised by encouraging visitors onto some routes. As 93% of visitors come by car (WSP Environmental 2004) this can largely be achieved by managing the provision of car parking and encouraging visitors onto main routes leading from car parks and away from sensitive locations. Roundabout Car Park links into several well-maintained circular routes that visitors enjoy, and the deep valley mires, areas of deep heather, busy roads to the south and west, and railway to the north all serve to channel people onto the main routes in this area. As part of this strategy to encourage visitors onto the main routes on the northern section of the Common, Roundabout Car Park has been developed as the main car park on the site. Further improvements to Roundabout Car Park should be considered as part of this strategy. The remaining car parks on the Common are less formal and tend to be used more for their views (Staple Hill and Jubilee Mount), for short walks or by model fliers (Longcross and Staple Hill) or by anglers (Fishpool).

At present most pedestrians visiting the Common come from Chobham village, entering the Common from the Burrowhill and Red Lion Road area, with many using the numerous small routes across the south eastern part of the Common. Improvements to make Bridleways 87 and 90 more pedestrian friendly could enhance the enjoyment of the Common by walkers from Chobham. Improvements to pedestrian access to the Common from Sunningdale and Windlesham, in order to reduce the number of car journeys to the Common would be compatible with the strategy of encouraging visitors to use the main access routes on the northern section of the NNR and should be discussed with the relevant local authorities. However given the plans for a major development to the east of Burma Road any proposed provision of pedestrian access from Virginia Water could create access and increase visitor numbers to the Common from that development.

Information boards together with regular Ranger's reports, information on upcoming walks and events and copies of the Byelaws should be maintained in each car park, with appropriate signage at other access points to help visitors make the most of their visits. These paper copies should be supplemented by quarterly updates on the web. The three self guided trails, the site leaflet and the interpretive areas in Roundabout Car Park should be maintained and up-dated as necessary. Regular volunteer

events, walks and other activities should be held to increase visitor enjoyment, participation and understanding of the site.

Visitor safety is of paramount importance and risk assessments and regular risk auditing will be carried out.

Dog walking

Dog walkers make up 49% of visitors (WSP Environmental 2004) and this activity can create conflicts of interest between access and conservation objectives. Dogs frequently enter *Calluna* areas, bogs and other sensitive habitats (Clarke et al 2006). This can cause disturbance to nesting birds(Murison et al., 2007; Woodfield & Langston, 2004b). Nightjars are readily flushed from the nest (Woodfield & Langston, 2004a) and there is a strong link between disturbance of nesting nightjars and the predation of their eggs and young by corvids (Murison, 2002; Taylor, 2002). There is also good evidence that dogs predate the eggs and chicks of ground nesting birds (Nol & Brookes, 1982; Pienkowski, 1984). Predation by dogs can account for up to 29% of water vole mortalities during the winter months, in areas where American mink *Mustela vision* is absent (Jordan & Netheton, 1999), the impact of uncontrolled dogs on the water vole populations in Long Arm and Little Arm Bogs must therefore be a cause for concern. Dogs entering ponds can cause damage to banks and structure, disturb wildlife and may cause contamination if they have been treated for ecto-parasites (Bull, 1998).

Dog fouling can have a significant fertilising effect (Shaw, Lankey & Hollingham, 1995), but the ecological impact of this is largely restricted to the area immediately surrounding Roundabout Car Park on Chobham Common (Williams, 2005). Dog fouling presents a health risk to visitors, detracts from the amenity value of the site and is the cause of most visitor complaints about the Common. Uncontrolled dogs cause nuisance and there have been cases of them attacking other dogs and horses, and chasing deer and horses – including an incident where a horse was struck and killed by a car when it was chased into Chertsey Road by an uncontrolled dog.

There is a need to reduce the incidence of uncontrolled dogs across the Common and to reduce dog fouling at Roundabout Car Park. Education and the enforcement of relevant byelaws have served to reduce these problems but further action could be taken. The provision of dog bins at Roundabout Car Park and the extension of the provisions of the Dog Fouling of Land Act to cover the whole NNR could help to reduce dog-fouling problems. Increased education and policing could help reduce disturbance and nuisance problems caused by dogs, and the provision of alternative sites by local authorities for those who want their dogs to “run free” should be encouraged.

Horse riding

As most riders prefer to use the network of bridleways and agreed horse rides on the site there are few horse related erosion or disturbance problems on the site. Horses may alter the nutrient budgets on track edges (Liddle & Chitty, 1981), but as the edges of the main routes are mown as firebreaks this is not a great cause for concern. The maintenance of a network of good quality tracks is therefore of the highest priority.

Model aircraft flying

This activity is zoned to the western and south-western part of Tank Hill for radio-controlled models, and to the north-western part of Albury Bottom for free flight models. Although it does cause some disturbance, model flying creates bare areas suitable for invertebrates, small paths through areas of *Molinia,* which benefits the marsh gentian colonies within the flying area, and fliers assist in keeping the Albury Bottom and Tank Hill areas free of scrub. This activity should be managed by ensuring that fliers remain within the designated areas, fly in a safe manner and keep noise nuisance to a minimum; and by liaison with Chobham Common Model Fliers Association arranging fliers work parties during the winter months.

Fishing

Fishpool is leased to Chobham and District Anglers Club and the policy with regard to this activity should be to liaise closely with the Fishing Club in order to ensure they continue to manage the area in keeping with conservation, landscape and access objectives, and maintain it in a safe and clean condition.

Cycling

Given the nature of the soils on Chobham Common the site is particularly vulnerable to erosion caused by off-road cyclists. This activity should therefore continue to be restricted to statutory public bridleways, and more adventurous riders should be encouraged to use more suitable purpose made sites.

Other activities

Other recreational activities, organized events and commercial activities (including filming) should only be considered when they do not conflict with nature conservation objectives or public access and enjoyment of the site. These activities may be subject to Natural England consent if they take place on the SSSI, and should not take place during the bird nesting season – mid-February to late September - unless they are restricted to car parks and tracks.

The ban on model rockets and fireworks should remain in place and be strictly enforced. Collection of fungi should be limited on the site by restricting visitors to one kilo per visit, and if this fails to reduce over-collecting, banning this activity altogether.

2.3 A Vision of Chobham Common in 2057

Chobham Common is an extensive area of lowland heath, with a range of heathland and associated habitats with semi natural woodland on its fringes. There is great structural diversity on the site creating a wildlife rich mosaic of microhabitats. There are sweeps of heather with scattered scrub, trees and gorse bushes; and patches of acid grassland and in the botanically rich valley mires and wet heaths. Within the wetland areas there are patches of willow and alder carr and pools of open water. There are open structured oak woodlands on the margins of the site and the Clump is a prominent landscape feature at the heart of the Common. The site is of national importance for its invertebrate communities and breeding birds, and regionally important for it's herptiles and flora with a good range of mammals including water vole. The site is managed in a sustainable way with minimal use of machinery and heathland products being marketed or put to use.

The Common is popular with visitors who come to enjoy the open space, sweeping landscape and abundant wildlife. A wide habitat bridge across the M3 with pedestrian access has greatly reduced the fragmentation of the site by the motorway. The power lines that once blighted the landscape have been moved off site and underground. Visitors are able to enjoy a network of good quality rights of way, access routes and fire tracks. There are a number of easy access routes. There is good pedestrian access from Chobham and Sunningdale linking in with public transport and a trail between Sunningdale and Woking railway stations to encourage sustainable access.

There is excellent on site and off site interpretation with emphasis on the great cultural and ecological importance of heathlands. On-site interpretation is low key and non-intrusive allowing the visitor to discover the joys of the Common. Off-site interpretation includes a web site with virtual self-guided trails, regular reports and a message board. Regular walks, talks and volunteers enhance visitor awareness and enjoyment of the site, and its wildlife and management. The volunteer base is expanded to include a dedicated group who regularly work with the rangers helping with practical management of the common.

The site is a centre for excellence regularly used to demonstrate the sustainable management of heathland and for scientific research. There is excellent on line educational material including illustrated talks/videos about the history, origins and ecology of heathland and a virtual site manager program to illustrate concepts such as succession and sustainable management. Schools and youth groups are encouraged to get involved in practical events like "purge the pine" and simple surveying work in order to foster a sense of stewardship and active involvement in the site and the wider environment.

Objectives

Biological Objectives

All the following objectives are exclusive of events beyond the control of the site managers

Objective 1.

To maintain the dwarf shrub habitats in favourable condition with particular reference to H2 *Calluna vulgaris –Ulex minor* and H3 *Ulex minor – Agrostis curtisii* European dry heath and M16 *Erica tetralix – Sphagnum compactum* North Atlantic wet heath, and their associated species

Features addressed by this objective

1 to 16

Attributes for key features

Feature 1: H1/H2 European dry heath
Feature 2: H3 European dry heath

Attribute: Extent
Target: No un-consented decline in the area of habitat – (see Map 7)

Attribute: Bare ground
Target: 5-10% firm bare ground including compacted paths, flat areas, slopes, banks and faces

Attribute: Vegetation composition – bryophytes and lichens
Target: Cover maintained where naturally present – *Cladonia strepsilis, C. arbuscula* present.

Attribute: Vegetation composition - trees and scrub
Target: < 15% of sufficient age, species and structural diversity to support invertebrate and breeding bird assemblages

Attribute: Vegetation composition – dwarf shrubs
Target: At least two of following species present – *Calluna vulgaris, Erica cinerea, E. tetralix, Genista anglica, Ulex minor*

Attribute: Vegetation structure – dwarf shrub cover
Target: 25-75 % cover of dwarf shrubs

Attribute: Vegetation structure *Ulex spp.*
Target: < 50% *Ulex/Genista spp.* cover, >5% < 25% *Ulex europaeus* cover, no large blocks of *U. europeaus*

Attribute: Vegetation composition – desirable forbs
Target: At least one species (listed in Box A below) at least occasional

Attribute: Negative indicators – invasive introduced species (see Box B below)
Target: < 1% of cover

Attribute: Negative indicators – acrocarpous mosses
Target: < occasional – includes *Campylopus introflexus*

Attribute: Negative indicators – bracken
Target: < 10% dense cover.

Attribute: Negative indicators – Species indicative of eutrophication
Target: < 1% cover (see Box C below)

Attribute: Negative indicators – Heavy/active erosion
Target: < 1%

Attribute: Structure H1/H2 only
Target: 10-40% pioneer *Calluna,* 20-80% building/mature *Calluna,* < 30% degenerate *Calluna,* < 10% dead *Calluna*

Attribute: Vegetation composition – graminoids H1/H2 only
Target: At least one frequent species and one occasional, <25% cover

Attribute: Sward structure H3 and degraded H1/H2 only
Target: <10 % *Molinia caerulea* tussocks

Attribute: *Agrostis curtisii* H3 only
Target: 25-75 % cover

Attribute: Vegetation composition – graminoids H3 only
Target: At least one frequent species and one occasional in addition to *Agrostis curtisii* and *Molinia caerulea*

Attribute: Negative indicators – dense *Molinia caerulea*
Target: < 20 % dense cover

Attribute: Negative indicators – vegetative mat/ thatch
Target: < 25 % cover between plants

Feature 3: Dartford warbler

Attribute: Number of breeding pairs
Target: Population does not fall below 80 pairs

Feature 4: Nightjar

Attribute: Number of breeding pairs
Target: Population does not fall below 45 pairs

Feature 5: Woodlark

Attribute: Number of breeding pairs
Target: Population does not fall below 6 pairs

Feature 6: Outstanding heathland bird assemblage

Attribute: BTO index score of 22
Target: Score does not fall below 16 points

Feature 7: *Dicranum spurium*

Attribute: Frequency/extent
Target: Maintain frequency and extent – if this species is located
Create appropriate habitat for the species to re-establish, with guidance from Natural England bryologists.

Feature 8: Sand lizard

Attribute: Condition of existing colony
Target: To maintain sufficient bare ground adjacent to mature stage heather for breeding and feeding habitat to sustain the existing colony.

Attribute: Potential for further re-introductions
Target: Create at least two other colonies through suitable habitat management

Feature 9: *Formica rufibarbis*

Attribute: Condition of existing colony
Target: Maintain existing colony in good condition

Attribute: Potential for further re-introductions
Target: Create as many other colonies as possible through suitable habitat management as part of the Zoological Society of London's UK Native Species Program Red-Bearded Ant Project

Feature 10: Silver studded blue

Attribute: Frequency/population size
Target: Species present and breeding on site. Unfavourable if more than 25% loss in core habitat or abundance of food plant in any 6 year cycle

Feature 11: *Uloborus walckenaerius*

Attribute: Presence
Target: To maintain sufficient mature H1/H2 heath to support this species

Feature 12: Outstanding invertebrate assemblage – heathland scrub

Attribute: Number of species

Target: To maintain sufficient structural, age and species diversity in heathland scrub communities to support the current assemblage

Feature 13: Outstanding invertebrate assemblage – early successional heathland

Attribute: Number of species
Target: To maintain sufficient areas of and diversity of structure of bare ground and early successional heathland to support current assemblage
The invertebrate community includes the important BAP species:

Thyridanthrax fenestratus

Attribute: Frequency/ numbers
Target: To maintain sufficient adjoining area of mature *Calluna vulgaris* and suitable bare ground to support extensive colonies of it's hosts – *Ammophila spp.*

Anisodactylus nemorivagus

Attribute: Sufficient open sandy heath to support species/ presence of species
Target: Maintain suitable habitat, record species

Feature 14: M16 North Atlantic wet heath (including H2 and M21)

Attribute: Extent
Target: – No un-consented decline in the area of habitat – (see Map 7)

Attribute: Structure
Target: Heather at all stages of growth

Attribute: Bare ground
Target: 1-10% firm muddy exposed bare ground

Attribute: Vegetation composition – bryophytes and lichens
Target: **>** 20% *Sphagnum* or > 5% lichen cover

Attribute: Vegetation composition – dwarf shrubs
Target: At least two of following species present – *Calluna vulgaris, Erica cinerea, E. tetralix, Genista anglica, Ulex minor.* >20% ericoids

Attribute: Vegetation composition - graminoids
Target: At least one two species (listed in Box E below)

Attribute: Vegetation composition – desirable forbs
Target: At least two species (listed in Box F below) at least occasional

Attribute: Indicators of local distinctiveness
Target: Presence of *Sphagnum compactum*

Attribute: Negative indicators - trees and scrub
Target: < 10%, sufficient to support invertebrate assemblage and reed bunting

Attribute: Negative indicators - exotics (see Box B below)
Target: < 1% of cover

Attribute: Negative indicators – Dense *Molinia caerulea*
Target: < 25 %

Attribute: Negative indicators – acrocarpous mosses
Target: < occasional – includes *Campylopus introflexus*

Attribute: Negative indicators – *Ulex europaeus*
Target: < 10% dense cover.

Attribute: Negative indicators – Herbs indicative of eutrophication
Target: < 1% cover (see Box C below)

Attribute: Negative indicators – Bracken
Target: < 5% dense cover.

Negative indicators – Trampling, paths
Attributes- < 1%

Attribute: Negative indicators – Silt and leachates
Target: None

Attribute: Negative indicators – Artificial drains
Target: None

BOX A

DESIRABLE FORBS H2/H3
Heath bedstraw, petty whin, common cats ear, common birds foot trefoil,

ribwort plantain, tormentil, heath milkwort, common sorrel, saw-wort, common dog violet

BOX B

INVASIVE INTRODUCED SPECIES
Includes - Rhododendron, sweet chestnut, turkey oak, Japanese knotweed

BOX C

SPECIES INDICATIVE OF EUTROPHICATION
Common ragwort, nettle, creeping thistle, foxglove, willowherb species (except marsh willowherb), buttercup species, broad leaved dock, heath rush, soft rush, coarse grasses

BOX D

DESIRABLE GRAMINOIDS H2/H3
Agrostis spp. Carex spp. Danthonia decumbens, Deschampsia flexuosa, Festuca spp. Nardus stricta, Trichophorum cespitosum

BOX E

DESIRABLE GRAMINOIDS M16
Carex panacea, Carex pulicaris, Eleocharis spp. Eriophorum spp. Juncus acutiflorus, J. articulatus, Rhynchospora alba, Schoenus nigricans, Trichophorum cespitosum

BOX F

DESIRABLE FORBS M16
Bog pimpernel, sundew spp. petty whin, heath bedstraw, bog asphodel, heath milkwort, tormentil, saw-wort, devil's bit scabious

Objective methods

Heathland communities (features 1, 2, 17 and 18) were traditionally managed by grazing and by the cutting and removal of heather, gorse, scrub and heather turfs for fuel.

Management of the wet heaths is required to restore favourable condition by bringing about structural divergence and by suppressing scrub. It is also vital to prevent the drying out of these areas. Without the instigation of some kind of sympathetic management on this part of the heath the conservation value will continue to decline rapidly. Burning of wet heath can be helpful, but due to the wet nature of the ground, the use of machinery for cutting is not always appropriate or possible. The most sympathetic and effective management of such areas is to graze them. The management options for these parts of the common will need to be appraised as part of the stakeholder engagement process.

Some areas of dry heathland where *Molinia caerulea* is becoming dominant should receive a single flail cut during the winter months, where possible using a flail collector or forage harvester and removing the arisings from site.

In order to achieve favourable condition it is necessary to manage scrub to prevent succession to woodland habitats, this can best be achieved by the selective removal of scrub, with stump treatment, over a ten-year cycle across the site, with remedial follow-up clearance/herbicide treatment where necessary. Sufficient scattered trees, scrub and coppiced scrub blocks should be retained to maintain the conservation and landscape value of the site and to meet the habitat needs of key species and assemblages. With the exception of the Clump, which is to be retained as a landscape feature, areas of pine woodland on the NNR should be progressively thinned and broken up in order to allow heathland communities to re-establish under well-spaced trees. All scrub management works take place between late September and mid February.

Scattered European gorse bushes are an important component of dry heath communities. As part of scrub management fifty per cent of all gorse bushes should be coppiced to ensure there is a good mix of tight and leggy bushes. Large blocks of gorse should be broken up and managed by coppicing them using a scrub-master or where possible a flail collector.

In order to achieve and maintain favourable condition it is necessary to ensure that there are areas of bare ground and early successional habitat, and that there is a good structural and age mosaic within the dwarf shrub communities. It is also necessary to remove nutrients from the site in order to prevent eutrophication. Heather cutting, turf stripping and controlled burning can achieve these objectives. Small irregular areas should be cut in blocks of mature and degenerate heather using a flail collector, forage harvester or reciprocal cutter, with material being removed from site. Cut heather should be allowed to recover (for 2-3 years) then 25-50% should be turf stripped and turfs removed from site. All works should take place between late September and mid February – the exception being sand lizard (Feature 8) sites were heather and turf cutting be carried out by hand and should take place in April/May.

As heather units reach the late building stage (10-14 years) a single controlled winter burn should be carried out over roughly 50% of each area during a period of suitable conditions when the ground is wet and there is no risk of the fire spreading. A firebreak should be cut around the burn site and sufficient staff and fire fighting equipment must be present to ensure the fire does not spread. This management should not be undertaken near roads or power lines or on lichen rich areas.

Foliar treatment of bracken with Asulam will be undertaken on heathland areas during July with a minimum dosage of 2.2 kg/ha.

As far as is possible arisings from management such as timber, brash, woodchip, heather cuttings and turves should be used in a sustainable

manner, sold or exchanged for labour, although some dead wood and discrete brash piles should be retained for their habitat value.

Uncontrolled fires are a serious threat to heathland communities and the implementation of the fire plan is a key factor in successful heathland management. This will be achieved through the maintenance of a network of fire-tracks, firebreaks and fire access points, the suppression of large blocks of gorse, close liaison with Surrey Fire Service, and the presence of suitably trained and equipped rangers and volunteers on site during periods of high fire risk.

Assessment of proposals: These proposals are necessary for the nature conservation of the site

Monitoring methods:

In each unit in which the main period of scrub management is to be undertaken in the following winter (year 1 of 10), to carry out a site condition assessment on each habitat within that unit on the basis of that habitat's attributes as described above and to carry out fixed point photography on that unit – in order to ascertain the level and type of management required. The following year (year 2 of 10) carry out a site condition assessment and fixed-point photography, in order to record the effectiveness of management and to ascertain if follow up work is needed. Carry out a site condition assessment and fixed point photography four years after management (year 5 of 10) to ascertain if remedial management is required in year 5.

Prior to any recommencement of grazing to collect data regarding vegetation composition and structure and other relevant attributes from representative fixed points across the site and to use this to monitor the effects of grazing and its impacts on an annual basis and to enable the modification of stocking densities and length of grazing season and/or to create stock exclusion zones accordingly.

To use the bracken base map to monitor the location, size and density of bracken blocks in May/June each year in order to plan that year's bracken treatment and to monitor the effectiveness of treatment.

When uncontrolled fires have occurred to map and record the fire site, and monitor its recovery and the effect of remedial management to suppress bracken, *Molinia caerulea* and *Campylopus introflexus* and restore heathland habitats.

To carry out breeding bird surveys for one of the following in each year in a four-year cycle – nightjars, Dartford warblers north of the M3, woodlark, Dartford warblers south of the M3. To estimate the numbers of the other three groups in each year.

To record presence/absence of breeding species within the heathland bird assemblage each year.

To locate and monitor *Dicranum spurium* after the Bryophyte site dossier is produced by Natural England

To assess the condition of the sand lizard site and numbers of lizards each April/May.

To assess the condition of the *Formica rufibarbis* colony and it's surrounding habitat each summer.

To record the presence and location of *Thyridanthrax fenestratus* in July/August

To record silver studded blue numbers on the two butterfly transects currently walked.

There will be no direct monitoring of the following features *Anisodactylus nemorivagus, Uloborus walckenaerius,* and outstanding invertebrate assemblages – heathland scrub, early successional heathland, and heathland and permanent wet mire by Surrey Wildlife Trust; as the monitoring of the relevant habitats is deemed sufficient however any records of *Anisodactylus nemorivagus, Uloborus walckenaerius,* and any nationally rare, RDB, nationally scarce notable A or nationally scarce species will be added to the site dossier.

Management constraints-

Dwarf shrub heath communities are fragile habitats, which in the absence of management are extremely vulnerable to succession, nutrient enrichment and the effects of uncontrolled fire and erosion. The management of succession, control of nutrient levels from atmospheric pollution, fire prevention and provision of access tracks to prevent erosion and allow access for fire fighters and management require on-going intensive management. Current levels of funding allow for a single ten-year cycle of scrub and bracken control on those areas covered by the Countryside Stewardship scheme, other management is carried out in an ad-hoc manner as funding becomes available. Securing higher levels of funding will be necessary to reach and sustain favourable condition across all of the dwarf shrub communities on the site.

Uncontrolled fires are a serious threat to the bio-diversity and integrity of heathland communities and should any extensive fires occur on Chobham Common there could be serious loss of mature dwarf shrub habitats and the feature species and assemblages dependent on those habitats including Dartford warbler, nightjar, the outstanding heathland bird assemblage, sand lizard, *Formica rufibarbis, Thyridanthrax fenestratus,* and the outstanding heathland scrub and heathland invertebrate assemblages. In the event of any serious extensive fires there could be resource implications if large-scale long-term heathland restoration in required.

The possible effects of climate change may seriously impact on the condition of the site and effect Surrey Wildlife Trust ability to deliver favourable condition. Associated periods of drought are a threat to M16 communities, can severely stress *Calluna vulgaris* and increase the risk of damaging uncontrolled fires. Heavy rain events cause serious erosion and can seriously damage fire tracks, rights of way and other access routes. Longer growing seasons and wetter winters could limit the time available to achieve many conservation objects

Housing and other developments in the area could increase visitor use and pressure on the site – especially any increase in dog walking as ground nesting birds are vulnerable to disturbance by uncontrolled dogs. Housing developments containing domestic cats within 1000 metres of the site could threaten ground-nesting birds (Barratt, 1995), and sand lizards could also be vulnerable to predation from domestic cats.

The removal or thinning of areas of woodland in order to meet conservation objectives for the dwarf shrub communities will be subject to Forestry Authority approval and may be subject to public consultation.

The management of Broomhall Heath is subject to a management agreement.

Objective 2

To bring the M21 *Narthecium ossifragum – Sphagnum papillosum* mire including depressions in the peat substrates in the *Rhynchosporion* into favourable condition, and to manage shifting areas of W1 *Salix cinerea – Galium palustre* and W5 *Alnus glutinosa Carex paniculata* wet woodland and M25 *Molinia caerulea* mire within the mire systems, and those areas identified as forb rich M25 meadows.

Features addressed by this objective:

15 to 22

Attributes to key features

Feature 15: M21 *Narthecium ossifragum – Sphagnum papillosum* mire

Attribute: Extent
Target: No un-consented decline in the area of habitat – (see Map 7)

Attribute: Vegetation structure
Target: < 25% litter cover

Attribute: Vegetation structure
Target: 5 - 10% *Molinia caerulea* tussocks

Attribute: Bare ground

Target: < 10% exposed substrate

Attribute: Vegetation composition – bryophytes
Target: > 70% *Sphagnum spp.* cover on 80% sample quadrates

Attribute: Indicators of local distinctiveness – pool edge bryophytes
Target: Good populations of *Sphagnum palustre, S. recurvum*

Attribute: Desirable vascular plants
Target: At least three of the species in Box G frequent

Attribute: W5 wet woodland – **Willy's Leap bog and Fishpool Fen only**
Target: 30-50% of total cover with good age structure

Attribute: W1 wet woodland – **Long Arm and Old Slade bogs**
Target: 20–30 % of total cover Long Arm and Little Arm bogs to be vegetation characteristic of W1 woodland

Attribute: W1 wet woodland – **All other bogs**
Target: 5-10 % of total cover

Attribute: Negative indicators – W4 woodland
Target: < 5% of total cover

Attribute: Negative indicators – undesirable vascular plants
Target: < 5% total cover of species in Box H

Attribute: Negative indicators – undesirable woody plants
Target: < 1% of total cover *Rhododendron, Pinus spp.*

Attribute: Negative indicators - exotics
Target: *Crassula helmsii, Symplocarpus foetides* not present.

Feature 16: Depressions in the peat substrate of the *Rhynchosporion*

Attribute: Ephemeral bog pools with areas of short sward open structured vegetation and bare ground on their margins.
Target: Frequent in all areas of M21 mire.

Attribute: Areas of short sward open structured vegetation and bare ground on the transition zone between M16 wet heath and M21 mire.
Target: Frequent in transition zone.

Feature 17: Marsh club moss

Attribute: Extent and condition of colonies
Target: Maintain the extent and condition of existing colonies.

Feature 18: Wetland plant assemblage

Attribute: Number of species
Target; Maintain the current diversity of key wetland species

Feature 19: Outstanding invertebrate assemblage – permanent wet mire
Attribute: Number of species
Target: To maintain sufficient wet mire and structural diversity of wet mire to support the current assemblage

Feature 20: Water vole

Attribute: Viable colonies in Long Arm and Little Arm bog.
Target: Maintain suitable habitat and viable colonies

Feature 22: Forb rich M25 *Molinia caerulea* meadow (including H3 and M16)

Attribute: Extent
Target: No un-consented decline in the area of habitat – (see Map 7)

Attribute: Structure
Target: >10% short sward and thatch free spaces between tussocks

Attribute: Bare ground
Target: 1-5% firm bare ground including flat, slopes, banks

Attribute: Vegetation composition – desirable forbs
Target: At least two species (listed in Box I below) at least occasional

Attribute: Vegetation composition - graminoids
Target: At least one frequent species and one occasional in addition to *Agrostis curtisii* and *Molinia caerulea*

Attribute: Negative indicators – Dense *Molinia caerulea* tussocks
Target: < 10 %

Attribute: Negative indicators – bracken
Target: < 10% dense cover.

Attribute: Negative indicators - exotics (see Box B below)
Target: < 1% of cover

Attribute: Negative indicators – Herbs indicative of eutrophication
Target: < 1% cover (see Box C below)

Attribute: Negative indicators - trees and scrub
Target: < 10%,

Attribute: Negative indicators – *Ulex europeus*
Target: < 10% dense cover.

Attribute: Negative indicators – Severe trampling, erosion
Target- < 1%

Feature 22: Marsh gentian

Attribute – Extent and condition of all colonies
Target: Maintain current extent and condition of all colonies

Box G

DESIRABLE VASCULAR PLANTS M21 MIRE
Calluna vulgaris, Drosera rotundifolia, Erica tetralix, Eriophorum angustifolium, Molinia caerulea, Narthecium ossifragum, Rhynchospora alba.

Box H

NEGATIVE INDICATORS M21 MIRE
Bracken, bramble, great hairy willowherb, nettle, *Molinia caerulea, Phragmites australis, Phalaris arundinacea, Glyceria maxima, Brachythecium rutabulum, Eurhynchium praelongum.*

BOX I

DESIRABLE FORBS M25 MEADOW
Marsh gentian, saw-wort, tormentil, devil's bit scabious, meadow thistle, southern marsh orchid, ragged robin, petty whin, heath bedstraw

Objective methods

Mire communities (features 20) were traditionally subject to grazing, and the digging of *Sphagnum,* peat and cutting of woody plants.

Cutting vegetation in wet heath and mire communities can help to create structural diversity, but given the wet nature and terrain of the mires is not viable over large areas. Burning is also possible but is difficult except in dry winters (when there are also greater dangers of fires getting out of control) and without follow-up management, is likely to encourage *Molinia* at the expense of *Calluna*. Re-establishing grazing could play a significant part in achieving favourable condition of the mires, as this management has historically created the right habitat for the rare and valuable species on the Common. If grazing was re-introduced it would ideally be across the site and take place in the summer months, using a suitable breed of cattle, with the aim of helping to reduce the *Molinia* cover and litter layer, reducing nutrients and lowering the fire risk. All these management methods need to be appraised, to seek the best ways of reaching favourable condition in ways which will achieve a broad consensus by users of the Common.

In the herb rich M25 *Molinia* (Feature 23) dominated meadows, small areas could be burnt or strimmed and hand raked each year to try and maintain marsh gentian colonies (Feature 24), although more extensive management such as grazing would be preferable and more sustainable in the longer term .

In order to achieve favourable condition it is necessary to manage scrub to prevent succession to woodland habitats, to prevent any areas of W1 and W5 wet woodland that are to be retained being replaced by W4 *Betula pendula – Molinia caerulea* woodland and to restore areas where succession has already occurred. All areas of W4 in mires should be cleared with birch stumps being treated. Selected areas of W1 and W5 should be retained as a proportion of the overall scrub cover of the mire areas and managed on a 10-year coppice cycle with a few degenerate areas being left as cover. In the deeper less accessible bogs ring barking of selected trees may be used to create standing dead wood. All introduced invasive species should be dealt with promptly and rigorously. All scrub management works should take place between late September and mid February.

Scrapes, wet hollows, ephemeral pools and areas of standing water are important components of mire communities and should be regular features within the mire systems. These can either be created mechanically using a Hi-Mac or similar, or manually in more sensitive areas. There should be sufficient ponds in Long Arm and Little Arm to support the water vole populations in these bogs. Marsh club moss sites should be managed manually to create sufficient shallow scrapes and areas of short sward to sustain and extend the existing colonies.

Water levels in the mires should be retained by impeding drainage by obstructing any channels that form, using material from the site such as tussocks and logs.

Assessment of proposals: These proposals are necessary for the nature conservation of the site

Monitoring methods:

In each unit in which the main period of scrub management is to be undertaken in the following winter (year 1 of 10), to carry out a site condition assessment on each habitat within that unit on the basis of that habitat's attributes as described above and to carry out fixed point photography on that unit – in order to ascertain the level and type of management required. To carry out a site condition assessment and fixed-point photography the following year (year 2 of 10) in order to record the effectiveness of management and to ascertain if follow up work is needed. Carry out a site condition assessment and fixed point photography four years after management (year 5 of 10) to ascertain if remedial management is required in year 5.

Prior to more comprehensive management, to collect data regarding vegetation composition and structure and other relevant attributes from representative fixed points across the site and to use this to monitor the effects of management and its impacts on an annual basis and to modify it accordingly.

Locate and monitor the extent and condition of marsh club moss colonies each year.

Check for field signs of water vole annually.

To keep a record of the plant species recorded in each bog and check for the presence of those species each year.

Record the extent and condition of the marsh gentian colonies in August each year.

There will be no direct monitoring of the wetland invertebrate assemblages by Surrey Wildlife Trust – however records of any nationally rare, RDB, nationally scarce notable A or nationally scarce species will be added to the site dossier.

Management constraints-

Mire communities are fragile habitats, which in the absence of management are extremely vulnerable to succession, nutrient enrichment, water level changes and acidification. The management of succession and the control of nutrient levels from atmospheric pollution require on-going intensive management. Current levels of funding allow for a single ten-year cycle of scrub control on those areas covered by the Countryside Stewardship scheme, other management is carried out in an ad-hoc manner as funding becomes available. Securing higher levels of funding may be necessary to reach and sustain favourable condition across all of the mire communities on the site.

The possible effects of climate change may seriously impact on the condition of the site and effect Surrey Wildlife Trust ability to deliver favourable condition. Associated periods of drought are a threat to mire communities and their associated species. Longer growing seasons and wetter winters could limit the time available to achieve many conservation objects

Housing and other developments in the area could increase visitor use and pressure on the site – especially any increase in dog walking, as water voles are vulnerable to disturbance and predation by uncontrolled dogs. Housing developments within 1000 metres of the site could make water voles, sand lizards and perhaps other species vulnerable to predation from domestic cats.

Introductions of invasive species, including plants such as *Crassula helmsii* are a potentially serious threat to mire communities and should any such species become established there would be serious implications both in terms of achieving favourable condition and resources. The water vole colonies in the mire systems north of the M3 could be lost if American mink colonised these areas.
Limitations on the use of the full range of heathland management techniques (cutting, burning, grazing and turf stripping) may mean that it will not be possible to establish favourable condition. This could have consequences for

securing additional funding for site management and could place further pressures on site managers. Management of Chobham Common to achieve favourable condition, under the provisions of the Countryside and Rights of Way Act 2000, must be a central issue for discussion with all the stakeholders who have an interest in the area.

Objective 3

Subject to events beyond the managers' control to maintain the extent and diversity of existing areas of MG5 grassland, including the colony of *Dianthus armeria,* and to restore MG5 grassland in Chobham Place Fields.

Features addressed by this objective:

23 and 24.

Attributes to key features

Feature 23: MG5 *Cynosurus cristatus – Centaurea nigra* grassland

Note this feature will not be part of assessments of SSSI condition

Attribute: Extent
Target: MG5 present on those areas identified in Map 7.

Attribute: Sward height
Target: 2 – 50 cm

Attribute: Sward composition
Target: At least two forbs from Box J present.

Attribute: Negative indicators – Bracken
Target: Not present

Attribute: Negative indicators – Scrub, European gorse, and bramble
Target: < 10%

Feature 24: *Dianthus armeria*

Attribute: Extent of colony
Target: Maintain extent and condition of existing colony

Attribute: Extent of suitable habitat – metres squared
Target: No more than 5% loss in overall coverage of the population
No more than 10% loss of suitable habitat

Box J

DESIRABLE FORBS MG5 GRASSLAND
Agrimony, wood anemone, black knapweed, lady's bedstraw, rough hawkbit, lesser hawkbit, goat's-beard, common bird's-foot's-trefoil, burnet saxifrage, perforated St-John's wort, bitter vetch, grass vetchling, heath milkwort, tormentil, saw-wort, devil's bit scabious, common centaury, yellow rattle, lady's smock, wild parsnip, teasel, bee orchid, yellow-wort, common spotted orchid, eyebright spp.

Objective method

Grasslands were traditionally managed by mowing and the removal of cut material, or by grazing.

Firebreaks should receive a single flail cut in September and a cut in June where monitoring has shown bracken or rank growth to be present.

Site managers should liaise with Surrey County Council to ensure the mowing of areas of grassland on the highway verge is carried out at a time and in a manner that is in keeping with conservation objectives, and that other works are carried out in such a way as to minimise damage to grassland communities.

The more extensive areas of grassland at Little Heath, Burrowhill, The Steep, Brick Hill Parade Ground and Roundabout picnic area should receive a flail cut in September and in June – with the extensive area of yellow rattle, *Rhinanthus serotinus,* at Burrowhill green and small irregular areas of grass elsewhere being excluded from the June cut. Where resources allow a flail collector or forage harvester should be used for mowing these areas and the arisings removed from site.

Chobham Place Fields are to be restored to MG5 grassland by taking regular hay cuts and forage cuts and removing cut material in order to remove nutrients from the site. Once the improved grassland shows signs of increasing diversity, to scatter cut material including seed heads taken from areas of MG5 grassland elsewhere on the Common and introduce yellow rattle (a grass parasite) from Burrowhill onto the fields. Thereafter to carry out forage cuts in June and September each year and remove cut material.

To re-establish goat grazing between the DERA perimeter fences east of Burma Road with the goats being excluded from the southern end of the site between early April and late September. Until grazing is re-established in this area to carry out an annual cut with flail collector between mid September and late March and remove all cut material.

Assessment of proposals: These proposals are necessary for the nature conservation of the site

Monitoring methods:

Check condition of MG5 areas and firebreaks ahead of June and September cuts.
Monitor condition of Chobham Place Fields and effectiveness of restoration works.
Liaise with Plantlife regarding the monitoring of *Dianthus armeria* colony.

Management constraints

Grassland communities are subject to succession from grassland to scrub and woodland and need to be managed by mowing or grazing if succession is to be arrested. All the necessary works required to manage those areas under direct Surrey Wildlife Trusts control can be carried out with existing funding and resources.

Nutrient enrichment caused by dog fouling and atmospheric pollution may limit the bio-diversity of some areas of grassland.

Road verges are outside of the control of Surrey Wildlife Trust and are vulnerable to inappropriate management, dumping of materials and damage by Highways contractors, utilities and others.

Surrey Wildlife Trust does not have tenure of or a formal management agreement of the SSSI to the east of Burma Road

Objective 4

To maintain strips of open structured W10 *Quercus rober- Pteridium aquilinum- Rubus fruticosus* woodland on the margins of the SSSI as identified on the baseline map and those areas outside of the SSSI identified as woodland, and to manage areas of W4 *Betula pendula-Molinia caerulea* woodland at the edges of the W10 woodland and in discreet blocks elsewhere.

Features addressed by this objective:

25 - 30.

Attributes to key features

Feature 25: Semi-natural broad-leaved woodland

Attribute: Extent
Target: W10 and W4 present on those areas identified in Map 7.

Attribute: Naturalness

Target: < 80% of all broadleaved and mixed woodland of an NVC type.

Attribute: Woodland structure
Target: Mature and over mature trees present

Attribute: Woodland structure
Target: Glades and rides (including roads edges) present.

Attribute: Dead wood and wood decay invertebrate assemblage
Target: On ground, and where safe, standing and attached deadwood present.
Presence of veteran and mature trees – with diverse age structure

Attribute: Woodland composition
Target: < 95% of tree and shrub layers composed of native species, > 10% native scrub

Attribute: Ground flora
Target: At least two species from Box K present in W10, > 10% flowering sward

Feature 26: Bat species

Attribute: Number of species
Target: At least five species present

Attribute: *Pipistrellus pipistrellus*
Target: Present

Feature 27: Badger

Attribute: Presence
Target: Present

Feature 28: Invertebrate assemblage of old growth open canopy woodland

Attribute: Number of species
Target: Maintain sufficient habitat of suitable structural diversity to support current assemblage

Feature 29: *Formica rufa*

Attribute: Presence
Target: Present

Feature 30: BAP/BTO Red List birds of woodland edge and scrub

Attribute: Number of species
Target: Maintain sufficient suitable habitat to support current assemblage

Box K

DESIRABLE GROUND FLORA SPECIES W10 WOODLAND
Bluebell, wood anemone, foxglove, broad-leaved helleborine, honeysuckle, lesser stitchwort, wood sorrel, ramsons, lesser celandine, *Dryopteris spp.*

Objective methods

To systematically remove invasive introduced species including *Rhododendron ponticum*, sweet chestnut, sycamore, laurel, exotic oaks and bamboo from W10 and W4 woodlands and where necessary create glades and rides in those areas.
Maintain areas of W4 by coppicing birch to arrest succession and create good age structure.
Should resources allow to thin non-native tree species in the Barrow Woods (Compartment 21**)** and under-plant with native trees and shrubs.
To retain fallen and standing dead wood and over-mature trees where public safety considerations allow.
To erect bat boxes and bird boxes for owls, birds of prey, redstart, spotted flycatcher and mandarin duck in woodland areas that lack suitable nest holes.

Assessment of proposals: These proposals are necessary for the nature conservation of the site

Monitoring methods:

Monitoring of condition of woodlands based on the listed attributes to occur annually.
Regular checks for dangerous trees near roads, power lines and access routes.
Badgers, bats, feature birds and *Formica rufa* to be recorded annually.

There will be no direct monitoring of the outstanding invertebrate assemblage of old growth open canopy woodland by Surrey Wildlife Trust; as the monitoring of the relevant habitats is deemed sufficient however any records of any nationally rare, RDB, nationally scarce notable A or nationally scarce species will be added to the site dossier.

Management constraints

There is currently no funding available for the management of invasive introduced species, creation of glades and rides, and the management needed to create and maintain good structural diversity within the woodland communities, and any works are carried out in an ad hoc manner as ranger time allows. It may be necessary to secure funding in order to meet the woodland objectives.

Woodland works may be subject to Forestry Authority approval

It will not be possible to meet targets on standing and attached deadwood near roads, access routes, car parks, well used areas or power-lines because of health and safety considerations.

There are concerns that climate change could have a detrimental effect on temperate deciduous woodlands and favour some invasive exotic species.

Gracious Pond, Valley Wood and West Wood are subject to management agreements.

Objective 5

To maintain a sufficient range and diversity of permanent, semi permanent and ephemeral ponds across the site to support the current Wet mire assemblage including the nationally rare and scarce species and a good range of other open water species.

Features addressed by this objective:

31 - 33

Attributes to key features

Feature 31: Open standing water

Attribute: Number of ponds
Target: > 32.

Attribute: Diversity
Target: Ensure range of size, maturity and type of ponds in each habitat.

Attribute: Maturity
Target: Ensure that mire ponds and areas of other ponds are allowed to undergo succession in order to enhance bio-diversity.

Attribute: Negative indicators – *Crassula helmsii,* parrot feather
Target: *Crassula helmsii* not present, parrot feather controlled.

Feature 32: Nationally rare or scarce dragonflies

Attribute: Downy emerald
Target: Ensure there are sufficient well lit woodland ponds with leaf litter and emergent vegetation to support this species

Attribute: Brilliant emerald
Target: Ensure there are sufficient well lit woodland ponds with leaf litter and emergent vegetation to support this species

Attribute: Small red damselfly
Target: Ensure there are sufficient sunlit *Sphagnum* fringed oligotrophic ponds with in the 30-50% floating vegetation cover mire systems to support this species

Feature 33: Dragonfly assemblage

Attribute: Number of species
Target: At least 22 species present

Objective methods

Maintain those ponds with amenity value on the margins of the site and the ponds with wooded edges that support brilliant emerald and downy emerald.
Allow ponds in the mire systems to go through a process of succession, while mechanically creating new ponds to replace them, in order to maximise bio-diversity.
Mechanically remove parrot feather where it occurs.
If *Crassula helmsii* is found in any pond, to drain it, spray the *Crassula* with Glyphosate and then cover the pond for at least two years.
To restore the ponds at Burrowhill Green and the Steep once it is established *Crassula helmsii* been eliminated from them.

Assessment of proposals: These proposals are necessary for the nature conservation of the site

Monitoring methods:

To keep a record of the number of ponds and their character.
To record each of the nationally rare or scarce dragonflies species each year.
To keep a record of which dragonfly species occur in each pond or group of ponds.
To check for the presence of *Crassula helmsii,* parrots feather and other invasive exotic species at least three times each year.

Management constraints

Ponds are subject to silting and succession and there is no ongoing natural process that replaces ponds lost to these processes; it is therefore necessary to mechanically create new ponds or maintain existing ponds in order to meet the open water conservation objectives. At present there is no direct funding for pond creation and maintenance and these works are carried out in an ad-hoc manner as funding becomes available. It will be necessary to secure additional funding if the open water objectives are to be met.

Introduced invasive species, including *Crassula helmsii,* are a potentially serious threat to open water communities and should any such species become established there would be serious implications both in terms of achieving favourable condition and resources.

Open water communities are vulnerable to the effects of drought and may be affected by climate change.

Open water communities may be adversely affected by acidification caused by atmospheric pollution and by other pollutants entering water systems.

Dogs entering ponds can cause damage to banks and structure, disturb wildlife and may cause contamination if they have been treated for ecto-parasites.

2.4.2. Landscape and cultural objectives

Objective 6

To maintain an attractive open heathland landscape with wooded margins in keeping with the attributes of the Thames Basin Heaths Character Area and to restore the Chobham Clump as a historic landscape feature at the heart of the site.

Features addressed by this objective:

34 - 36

Attributes to key features

Feature 34: Open heathland landscape

Attribute: Character
Target: To maintain an attractive open heathland landscape with scattered trees and scrub.

Attribute: Views.
Target: To maintain open views across the Common from Staple Hill, Jubilee Mount and Roundabout Car Parks.

Attribute: Roadside views
Target: To encourage Surrey County Council Highways to open up and maintain extensive “windows” in the roadside vegetation on Staple Hill and Chertsey Roads at create views across the Common.

Feature 35: Broadleaved, mixed and conifer woodlands.

Attribute: Wooded margins

Target: To maintain attractive areas of open structured woodland on the margins of the Common

Feature 36: The Clump

Attribute: A clump of Scots pines at the highest point of Staple Hill
Target: To make this a prominent feature of the site.

Objective methods

The open heathland landscape and wooded margins are in keeping with the conservation objectives for the site – care should be taken during conservation management to ensure the site is left in a visually pleasing condition.
Views from car parks will need to be maintained by regular management of surrounding vegetation and SCC should be encouraged to side-arm flail existing roadside "window" and create new "windows" during the winter months.

Scrub and most trees will be removed from around the Clump to make it more prominent. Careful silvicultural management will need to be carried out within the Clump to reduce and then remove broadleaved species and sufficient thinning to ensure the Scots pines are able to grow on to maturity.

Assessment of proposals: These proposals are not necessary for nature conservation management but are not likely to have a significant effect on the internationally important nature conservation features of the site

Monitoring methods:

Review fixed point photographs taken to monitor conservation management to ensure landscape objectives are met.
Regularly check views from Staple Hill, Jubilee Mount and Roundabout Car Parks.

Keep a photographic record of views from those car parks, from roadside windows and of the Clump.

Management constraints

The constraints affecting landscape management are outlined in the conservation objectives in this plan.

The management of roadside vegetation within the highway verge is the responsibility of Surrey County Council Highways department.

Objective 7

To protect and maintain the historic and archaeological features on the site.

Features addressed by this objective:

37 - 40

Attributes to key features

Feature 37: Bronze Age Barrow

Attribute: Fabric condition
Target: To ensure feature is not damaged by inappropriate management, recreational activities or burrowing rabbits.

Attribute: Scrub cover.
Target: To ensure the feature is kept free of trees, scrub, bramble and bracken.

Feature 38: The Beegarden.

Attribute: Fabric condition
Target: To ensure feature is not damaged by inappropriate management, recreational activities or burrowing rabbits.

Attribute: Scrub cover.
Target: To ensure the feature is kept free of trees, scrub, bramble and bracken.

Feature 39: The Rectangular Beegarden

Attribute: Fabric condition
Target: To ensure feature is not damaged by inappropriate management, recreational activities or burrowing rabbits.

Attribute: Scrub cover.
Target: To ensure the feature is kept free of trees, scrub, bramble and bracken.

Feature 40: The Victoria Monument

Attribute: Fabric condition
Target: To ensure feature is in good condition and that the surrounding earthworks are not damaged by inappropriate management, recreational activities or burrowing rabbits.

Attribute: Scrub cover.
Target: To ensure the surrounding earthwork is kept free of trees, scrub, bramble and Bracken and that the feature is clearly visible from Chobham Road.

Objective methods

To manually remove and treat trees scrub and bramble on each feature, and to manually swipe bracken or treat it with Asulam.
To flail cut gorse and birch regeneration along Chobham Road to ensure the Monument remains visible from the road.
To use interpretation, policing and barriers when necessary to prevent inappropriate recreational activities such as horse riding and cycling on these features.
To control rabbits that burrow into these features by using ferreting.
Prior to any major works being undertaken on the Common non-scheduled archaeological features as listed in An Archaeological and Historical Survey of Chobham Common proposed Area of Historic Landscape Value should be identified to ensure they are not damaged.

Assessment of proposals: These proposals are not necessary for nature conservation management but are not likely to have a significant effect on the internationally important nature conservation features of the site

Monitoring methods:

Carry out a visual check of each feature at least once a month for signs of damage and for vegetation growth.

Management Constraints

Archaeological features may be damaged by scrub invasion, inappropriate recreational activities and burrowing animals.

Objective 8

To consider sustainability when managing Chobham Common and to permit economic activity which benefits Surrey Wildlife Trust as long as it is does not affect the conservation objectives for Chobham Common, any other feature or the rights of common users.

Features addressed by this objective:

41

Attributes to the feature

Feature 41: Economic use

Attribute**:** Sustainability
Target: When possible to sell, exchange or utilise materials such as timber, woodchip, heather and turf generated during site management.

Attribute: Filming and other commercial activities
Target: To generate income from filming and other commercial activities as long as it does not effect the conservation objectives for Chobham Common, any other feature or the rights of common users. These activities may be subject to Natural England consent and will not be allowed to take place outside of car parks or off of tracks during the bird nesting season (mid-February to late September)

Assessment of proposals: These proposals are not necessary for nature conservation management but will have no significant effect on the internationally important nature conservation features of the site

Objective 9

To liaise with stakeholders and local communities in order to promote understanding, and to encourage community involvement in site management.

Features addressed by this objective:

42

Attributes to the feature

Feature 42: Community involvement

Attribute**:** Liaison group
Target: To liaise with local communities and stakeholder groups through the Chobham Common Liaison Group.

Attribute: Informal liaison
Target: To carry out visitor surveys in order to monitor visitor attitudes to the Common and it's management, and to produce on-site interpretive material to explain management

Attribute: Volunteer events
Target: To hold regular volunteer events to engage a wide range of stakeholders in the practical management of the site.

Attribute: Volunteer rangers
Target: To investigate the creation of a volunteer ranger group on Chobham Common.

Attribute: Public dialogue over future management
Target: Construct a plan to engage the local community and all stakeholders in developing and implementing management strategies which would achieve favourable condition whilst also facilitating public access and enjoyment of the site.

Assessment of proposals: Good public liaison and public support are necessary if conservation objectives are to be achieved

Management constraints

The public dialogue process over future management will be subject to funding.

Objective 10

To interpret Chobham Common, it's history, natural history and management. To foster an awareness of the importance of lowland

heath and nature conservation in general, and a willingness to participate in the protection of the natural environment.

Features addressed by this objective:

43 - 45

Attributes to key features

Feature 43: Education

Attribute: Teachers packs
Target: To work with educators to create Chobham Common teachers packs and codes of conduct suitable for primary, middle and secondary schools.

Attribute: Student packs
Target: To work with educators to create Chobham Common student packs and codes of conduct suitable “A” level, college and university students.

Attribute: School and university talks
Target: To give talks and walks to school, college and university groups as requested if ranger time permits.

Attribute: School and youth events
Target: To hold events such as “purge the pine” in order to get schools and youth groups actively involved in conservation.

Attribute: Chobham Common DVD
Target: To use the existing Chobham Common power point presentation to create a Chobham Common interpretive DVD with commentary for use by schools, colleges, universities and others.

Attribute: Roundabout interpretive area
Target: To create new interpretive panels, reinstate the habitat beds and maintain the easy access trail.

Attribute: Self guided trails and site leaflet
Target: To maintain all three self-guided trails and distribute the Chobham Common site leaflet.

Attribute: Information boards
Target: To maintain the information boards in each car park, and to update the rangers reports on those boards and other main access points every three months.

Attribute: Interpret management
Target: To have on-site interpretation before and during all major management works.

Attribute: Walks and events
Target: To hold at least ten public walks and events on site each year.

Attribute: On line interpretation
Target: To ensure that Chobham Common is interpreted on line and that any misinformation or inappropriate material posted about the site is responded to or removed

Feature 44: Research

Attribute: Research request
Target: To permit research work on Chobham Common as long as it has SSSI consent and does not compromise conservation objectives, any site features or the rights Common users.

Attribute: Research wish list
Target: To keep and up date a lists of projects suitable for students and researchers that will increase understanding of the Common and it's ecology and the likely effects of any management.

Attribute: Monitoring projects
Target: To keep and update lists of simple monitoring projects suitable for schools, colleges and volunteers.

Feature 45: Demonstration

Attribute: Demonstration events
Target: Hold demonstration events on request.

Assessment of proposals: These proposals are not necessary for nature conservation management but their impact on the SSSI or international features of the site will be assessed on a case by case basis.

Monitoring methods:

Check the condition of information boards as part of the daily car park inspection.

Check the condition and way marking of self-guided trails each month.

Check the Roundabout Car Park interpretive trail and habitat beds each month.

Management constraints: Funding and Ranger time

Those targets that are subject to funding or consent are identified as such in the action plan

Objective 11

To allow public access and enjoyment of Chobham Common and a range of informal recreational activities while ensuring these activities do not adversely effect the high nature conservation value of the site, nature conservation objectives, any other features or the rights of other Common users.

Features addressed by this objective:

46

Attributes to key features

Feature 46: Public access

Attribute: Car park security
Target: Ensure all height barriers are in a safe and useable condition, that car parks are secure so that unauthorised vehicles cannot gain access.

Attribute: Car park safety
Target: Ensure that car parks are in a safe condition, including car park surfaces and car park entrance site lines

Attribute: Car park security – visibility
Target: Ensure all car parks are clearly visible from the road in order to reduce car crime and other inappropriate activities.

Attribute: Car park appearance
Target: Ensure all car parks are in a clean and presentable condition.

Attribute: Roundabout Car Park – overspill area
Target: Improve the safety and appearance of the overspill area in Roundabout Car Park

Attribute: Roundabout Car Park – picnic area
Target: To maintain the picnic area in good condition and regularly check the condition of the site furniture.

Attribute: Roundabout Car Park – disabled spaces
Target: Ensure disabled spaces are clearly defined

Attribute: Non-vehicular access to site
Target: Work with local authorities and others to improve pedestrian access to the site from Chobham, Sunningdale and Windlesham.

Attribute: General access
Target: Maintain the network of high quality all weather tracks to provide access for walkers, other users and fire fighting vehicles

Attribute: Pedestrian access - Chobham
Target: Improve the main access routes in the southwest corner of the site in order to channel walkers and dog walkers from Chobham onto a circular route away from ecologically sensitive areas.

Attribute: Pedestrian access – Chobham Place Fields
Target: Remove fencing and create pedestrian access points and a horse ride as agreed.

Attribute: Public rights of way
Target: Ensure all rights of way are kept open

Attribute: Public rights of way
Target: Monitor the condition of rights of way and liaise with Surrey County Council Rights of Way section when surface repairs are needed

Attribute: Way marking
Target: Regularly check all rights of way, agreed horse routes and self guided trails are properly way-marked

Attribute: Agreed horse rides
Target: Ensure these routes are in a safe and useable condition.

Attribute: Horse ride Chobham Place Fields
Target: Create an agreed horse ride linking Bridleway 87 with Bridleway 81 across Chobham Place Fields (Compartment 23)

Attribute: Horse riding - safety
Target: To ensure horse riders behave in a safe manner and that horse jumps are not set up on the site.

Attribute: Easy access
Target: To maintain the easy access trail around Roundabout Car Park

Attribute: Easy access
Target: To create a new easy access trail from Roundabout Car Park

Attribute: Easy access
Target: To strategically place benches so that people with limited mobility can stop and rest on the main walking routes.

Attribute: Road crossings
Target: To regularly check site lines where access routes cross roads and inform the Highway Authority when site lines are poor.

Attribute: Dog fouling
Target: To erect dog bins at Roundabout Car Park and investigate extending the provisions of the Dog Fouling of Land Act 1996 to cover the whole of Chobham Common NNR.

Attribute: Dog walking
Target: By means of education, interpretation and by-law enforcement ensuring dogs are kept under proper control while on Chobham Common NNR so as to minimise disturbance to wildlife and nuisance to other users.

Attribute: Dog walking
Target: Working with local authorities, Natural England, developers and others to investigate the provision of alternative dog walking sites in the area.

Attribute: Fishing
Target: To liaise closely with the lessees of Fishpool to ensure that any management they undertake is in keeping with conservation and other objectives, and to ensure the area is kept free of litter, fishing tackle, bait and foodstuffs by the lessees during the fishing season.

Attribute: Model aircraft flying
Target: To ensure this activity only takes place in designated areas, and is carried out in a safe manner with no excessive noise nuisance.

Attribute: Cycling
Target: To ensure that cycling is restricted to public bridleways and that no cycle jumps are set up on the site.

Attribute: Cycling
Target: To liaise with local authorities and developers to encourage the provision of alternative off-road cycling facilities in the area.

Attribute: Model rockets and fireworks
Target: To strictly enforce the ban on the use of model rockets and fireworks on the Common

Attribute: Fungi collecting
Target: Through education and enforcement to limit the collection of fungi to one kilo per a visitor per visit, to monitor the effectiveness of this policy and alter it accordingly

Attribute: Other recreational activities
Target: To consider request for organised events and other recreational activities and only giving consent when those activities do not

adversely effect the high nature conservation value of the site, nature conservation objectives, any other features or the rights of other Common users.

Objective methods

Rangers will ensure car parks are presentable, carry out minor repairs and maintain site lines. Surfacing works in car parks are to be carried out by contractors or the Countryside Team as necessary using appropriate materials.

Improvements to Roundabout Car Park will include redefining and improving the appearance of the overspill area, improving the visibility of the disabled parking spaces, re-instating the areas of habitat beds where there is rank vegetation and the provision of dog bins.

Where possible major access routes should be maintained in a condition that allows them to be mown rather than hand cut. Over hanging branches should be cut back to allow vehicular access for management and for fire fighters.

Maintaining the surface of rights of way is the responsibility of Surrey County Council, while surface repairs to agreed horse rides, fire tracks and other routes are the responsibility of SWT. Where ever possible erosion control and step repairs should take place in July or August to prevent disturbance to bare ground species.

Surface repairs should be made using hoggin or Fittleworth stone, with Fittleworth stone or clean brick rubble as hard-core material.

Works in Chobham Place Fields will be undertaken once SCC receives the exchange certificate for this area and the supplementary lease certificate is agreed between SCC and SWT. The works will be funded as part of the exchange.

Assessment of proposals: Successfully managing public access is necessary for the nature conservation of the site.

Monitoring methods

Rangers will check the cleanliness, security, entrance site lines and general condition of car parks, and general site security, and for dumping, vandalism and burnt out vehicles each day.

Rangers will check the condition of car park furniture once a month.

Rangers will check the site lines on road crossings once a month.

Each right of way and main access route shall be checked each quarter to ensure it is clear, safe, the surface is in good repair, it is properly way marked and clean and that barriers stumps, and benches on it's route are in good condition.

Rangers should informally monitor the behaviour of dogs and their owners, horse riders, model fliers and others, while carrying out their normal duties.

The behaviour of dog walkers and their owners be monitored and recorded during the bird-nesting season.

Fungi collection should be monitored during the autumn months.

The condition of Fishpool should be checked once a month and Chobham and District Anglers contacted if there is a problem.

Management constraints

Those targets that are subject to funding or consent are identified as such in the action plan

Heavy rain events may damage track and car park surfaces and additional funding may be required for repairs.

Appendix 6 **-** Proposed works Chobham Place Fields – program of works

2.4.3 Estate asset objectives

Objective 12

To comply with and meet all legal and contractual obligations relating to the management of Chobham Common.

Features addressed by this objective:

47 - 74

Attributes to key features

Features 47 - 59: Obligations relating to land tenure and access

Attribute: Leasehold of Surrey County Council land and terms of Partnership Agreement and Service Delivery Specification.
Target: To meet the agreed standards and provide the agreed services.

Attribute: Management agreement Broomhall, West Wood and Valley Wood.
Target: To negotiate a long-term management agreement that allows SWT to

deliver favourable condition and maximise biodiversity condition on these sites.

Attribute: Management agreement Gracious Pond
Target: Implementation.

Attribute: Management agreement for land east of Burma Road
Target: To negotiate a long-term management agreement that allows SWT to deliver favourable condition for this part of the SSSI.

Attribute: Deed of Access under Law of Property Act 1925.
Target: To review the status of this revocable deed should the consequences of it's provisions become a serious threat to any biological or archaeological features.

Attribute: Fishing license
Target: Lease expiry

Attribute: Wayleaves and easements
Target: To liaise with utility companies, neighbours and others who have Wayleaves and/or easements across Chobham Common

Attribute: Commoners Rights
Target: To liaise with commoners regarding their rights and any issues that may effect those rights.

Attribute: Consultation with Chobham Common Liaison Group
Target: To meet with CCLG at least 2 times a year and to keep members of the group informed on issues pertaining to the management of Chobham Common.

Features 60–69: Obligations and agreements pertaining to the conservation of Chobham Common and protection of wildlife, and of historic and archaeological features.

Attribute: Obligations and agreements
Target: Compliance

Attribute: Funding
Target: To seek to enhance funding for conservation management and to obtain funding for future projects

Features 70 and 71: The Health and Safety at Work Act 1974 and the Occupiers Liability Act 1957

Attribute: Risk assessments
Target: To maintain and update site and task risk assessments

Attribute: Dangerous trees

Target: Carry out tree inspections

Features 72 –74: Other obligations

Attribute: Disability Discrimination Act 1995
Target: To make provision for disabled visitors

Attribute: Dog Fouling of Land Act 1996
Target: To extend its provision at Chobham Common and ensure it is enforced

Attribute: Surrey County Council By-laws
Target: Copies displayed on back of all notice boards and held in rangers' vehicles

Objective methods

The works needed to meet the terms of the leasehold of Surrey County Council land and the Partnership Agreement and Service Delivery Specification are covered elsewhere in this plan.
There is a need to negotiate a long-term agreement management agreement for Broomhall Heath, West Wood and Valley Wood.
Works agreed for Gracious Pond are covered elsewhere in this plan.
The negotiation and implementation of a management agreement, freehold or leasehold on the land to the east of Burma Road (Compartment 26) should be a high priority to place this part of the SSSI into favourable condition.
The fishing licence expires in September 2011 and the terms of the lease should be reviewed at that time.
To liaise with utility companies, neighbours and others with way-leaves and easements on the Common in order protect the features on Chobham Common, the fabric of the estate, and the rights and safety of Common users.
To agree programs of line clearance and maintenance with utility com panies that minimise the impact of such works on the nature conservation and other interest on Chobham Common.
At present neither commoner exercise their rights on Chobham Common, however regular contact should be maintained with the commoners with regard to any proposals that could potentially affect the future exercise of their rights.
To continue to hold regular meetings of the Chobham Common Liaison Group (currently two formal indoor meetings and one site visit each year).
To review the membership of the Chobham Common Liaison Group to ensure it is representative of all stakeholder groups and remains so.
Subject to funding, to employ a professional, third party facilitator to manage a dialogue to discuss the future management of the Common.
Objective methods pertaining to meeting obligations and agreements relating to the conservation management of Chobham Common are covered within the conservation objectives section of this plan.

At present the main source of funding for conservation projects is Countryside Stewardship LH2. HLF or SITA funding would greatly enhance SWT's ability to reach favourable condition across the site, and should therefore be sought. Other sources of funding for specific projects should be explored.
The site risk assessment will be rewritten as part of this plan and should be reviewed on an annual basis and following any serious or potentially serious accidents or health and safety related incidents.
The Countryside Team manager will produce task risk assessments at the beginning of each Countryside Team work program.
Contractors, utility companies and others undertaking works on the Common will be required to supply a task risk assessment before commencing any works.
Dangerous trees that are discovered by staff or reported by members of the public will be assessed immediately.
Meeting the provisions of the Disability Discrimination Act 1995 and the Dog Fouling of Land Act 1996 are covered in the cultural objective part of this plan.
Spare encapsulated copies of the By-laws will be kept at the ranger's station so that missing copies can quickly be replaced on notice boards and a copy will be carried in each ranger vehicle to show to members of the public when necessary.

Assessment of proposals: These proposals are not necessary for nature conservation management but will have no significant effect on the internationally important nature conservation features of the site

Monitoring methods:

The monitoring of works needed to meet obligations relating to land tenure and access is largely covered elsewhere in this plan.
The monitoring of works needed to meet obligations and agreements relating to the conservation of Chobham Common are covered elsewhere in this plan.
Natural England carries out site condition assessments on each SSSI unit once every six years.
The Surrey Wildlife Trust Tree Inspector checks trees in Tree Inspection Zone 1 annually and Zone 2 every second year (Map 11).
Rangers will check Zones 1 and 2 after gales.
The presence of bylaws on the back of notice boards will be checked each month.

Objective 13

To maintain the Ranger's Station, vehicles, tools and equipment used on Chobham Common

Features addressed by this objective:

75 - 77

Attributes to key features

Feature 75: Rangers Station

Attribute: General condition
Target: Maintain in good condition

Feature 76: Vehicles.

Attribute: General condition and road worthiness
Target: Maintain in a safe road worthy condition

Feature 77: Tools and equipment

Attribute: Condition of tools and equipment
Target: Maintain all tools and equipment in a safe usable condition

Objective methods and monitoring

Day to day security and cleanliness of the Rangers Station is the responsibility of the rangers using the station.
Maintenance is the responsibility of the designated premises officer who will check the Station each month.
The checks on the vehicle return sheets will be carried out three times a week and when there is a change of driver.
Trailers will be checked before use by users.
Tools will be stored in the Ranger Station, the day to day safety and condition of hand and power tools is the responsibility of users – the tool inventory and the condition of hand and power tools will be checked each month by the designated tool officer.
Small items of lifting equipment will be checked every 6 months and larger items annually as arranged by the Countryside Team Manager.
Electrical equipment will be checked every six months as arranged by the Head of Facilities and Administration Services.
Fire extinguishers will be checked annually as arranged by the Head of Facilities and Administration Services.
Fire aid kits – for the vehicles, Ranger Station and walk leaders, will be checked and kept up to date annually by the designated tool officer.
The Fire Fogging System will be checked by the driver of the vehicle it is attached to as per the manufacturers recommendations during the summer months and prior to storage in the Ranger Station in the winter months.

Assessment of proposals: These proposals are not necessary for nature conservation management but will have no significant effect on the internationally important nature conservation features of the site

Map 11 – Tree inspection areas.

Objective 14

To ensure the security and integrity of Chobham Common

Features addressed by this objective:

78 - 79

Attributes to key features

Feature 78: Site security

Attribute: General condition
Target: Unauthorised access onto the site is prevented

Attribute: Burrowhill Green
Target: Prevent vehicular access onto Green.

Feature 79: Encroachments and incursions

Attribute: Encroachments
Target: Report to SCC

Attribute: Incursions
Target: Report to SCC and liaise with enforcement officers and police.

Objective methods and monitoring

Barriers, gates, height restrictors, locks, ditches, stumps will be checked visually each day and appropriate action taken if site security is compromised.
It is the responsibility of Surrey County Council to deal with encroachments on their land at Chobham Common and any new encroachments should be reported to the SCC Countryside Contracts Manager.
It is the responsibility of Surrey County Council to deal with traveller incursions on their land at Chobham Common and when travellers set up on Chobham Common the situation should be assessed by rangers and then reported to the SCC Enforcement Officer, SCC Countryside Contracts Manager and the police.

Assessment of proposals: These proposals are not necessary for nature conservation management but will have no significant effect on the internationally important nature conservation features of the site

Objective 15

To help to prevent uncontrolled fires on Chobham Common and to minimise scale and impact of any fires that occur.

Features addressed by this objective:

80

Attributes to key features

Feature 80: Fire plan

Attribute: Fire cover
Target: Ensure a suitably equipped and trained ranger or volunteer is on site and regularly checks for signs of fire during periods of high fire risk

Attribute: Fire fogging system
Target: Available and ready for use during periods of high fire risk.

Attribute: Bowser
Target: Filled ready for use at ranger station during periods of high fire risk

Attribute: Beaters
Target: Ready for use on vehicles during periods of high fire risk

Attribute: Fire tracks
Target: Maintain track surfaces in usable condition.

Attribute: Fire tracks
Target: Unobstructed, free of overhanging vegetation

Attribute: Fire tracks – south of Clearmount
Target: Trees cleared back ten metres from edges of fire track

Attribute: Fire track network
Target: Upgrade Bridleway 87 to fire track standard

Attribute: Fire track network
Target: Create new fire track in Compartment 11B as shown in Fire Plan (Map 9)

Attribute: Fire track network
Target: Upgrade Langshot to Lone Pine route, as shown in Fire Plan (Map 9) to firetrack standard.

Attribute: Fire track network
Target: Upgrade horse ride to the west and northwest of Gracious Pond, as shown on Fire Plan (Map 9) to fire track standard

Attribute: Fire track network
Target: Make Monks Walk and Old Slade accessible to fire appliances as shown on Fire Plan (Map 9).

Attribute: Firebreaks
Target: Maintain network as shown in Fire Plan (Map 9).

Attribute: Fire access points
Target: Ensure all fire gates are unobstructed and in a usable condition.

Attribute: Fire access points
Target: Ensure keep clear signs are maintained on each fire gate.

Attribute: Liaison with Fire Service
Target: Ensure local fire station have keys to Chobham Common

Attribute: Liaison with Fire Service
Target: Ensure local fire crews have good knowledge and understanding of Chobham Common and it's Fire Plan

Attribute: Liaison with Fire Service
Target: Ensure that a regularly updated version of the Chobham Common Fire Plan is carried by local fire appliances and on Surrey Fire Service mobile data system.

Attribute: Liaison with Emergency Services
Target: Liaise with Surrey Police and the Ambulance Service regarding emergency procedures.

Objective methods

During periods of high fire risk a ranger or suitably trained volunteer should be on site and regularly check for signs of fire, with a mobile phone and four wheel drive equipped with fire fogging system between 11am and 7pm. A four-wheel drive with a bowser and beaters should be on stand-by at the Ranger's Station and a second ranger on call.

Main fire tracks should be maintained in a condition suitable for use by fire appliances. Track repairs should be carried out using hoggin as a surfacing material and Fittleworth stone, brick off cuts or brick rejects as hard-core. Rangers will carry out minor drainage works as necessary.

Rangers will cut back any overhanging vegetation on fire tracks and ensure there is always sufficient clearance for fire appliances.

Plan improvements to the fire track network are subject to funding and should be costed in summer 2007 prior to funding being sort.

All firebreaks will be flail cut each year between mid-September and mid-February with a second cut in June if necessary.

Rangers will maintain fire access points, ensure they do not become overgrown, maintain site lines and replace “Emergency Access – Keep Clear” signs as necessary.

The site ranger will liaise with Surrey Fire Service at a local level through the Chobham Station Officer and Fire Safety Officer, and ensure that Chobham, Woking, Chertsey and Camberley fire stations have keys for and plans of Chobham Common, and that the electronic fire map on the Surrey Fire Service mobile data system is up to date.

The site ranger will liaise with Chobham police officer with regard to emergency procedures.

Assessment of proposals: These proposals are necessary for the nature conservation of the site

Monitoring methods:

Rangers will check the condition of fire track surfaces annually in February/March and after severe rainstorms. Drainage will be checked on a monthly basis between February and October. Fire-track side vegetation will be checked in February, June and September. Firebreaks will be checked in June and September. Fire access points will be checked for condition, accessibility and site lines once a month. Emergency Access signs will be checked daily as part of site security checks.

Management constraints

Those targets that are subject to funding or consent are identified as such in the action plan

Heavy rain events may severely damage tracks and which may require additional funding for repairs.

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CHOBHAM COMMON SSSI CONSENT YEAR 2008-09

Objective	Code	Task	Month/ season	Additional information	Location	Action taken	Workforce	Funding	Anticipated man days	Actual man days	Anticipated costs	Actual costs	Completed	Notes
3	MH12	Amenity mowing	VI	Flail cut to 75mm	22a		T							Burrowhill Green
3	MH12	Amenity mowing	VI	Flail cut to 75mm	22c		T							Little heath
3	MH12	Amenity mowing	VI	Flail cut to 75mm	24d		T							Brickhill parade ground
3	MH12	Amenity mowing	VI	Flail cut to 75mm	Roundabout CP		T							
3	MH12	Amenity mowing	IX	Flail cut to 75mm	22a		T							Burrowhill Green
3	MH12	Amenity mowing	IX	Flail cut to 75mm	22c		T							Little heath
3	MH12	Amenity mowing	IX	Flail cut to 75mm	24d		T							Brickhill parade ground
3	MH12	Amenity mowing	IX	Flail cut to 75mm	Roundabout CP		T							
4	RH12	Check trees	S		Zone 1		TI							
5	RF23	Check ponds for exotics	IV		All ponds		R		1					
5	RF23	Check ponds for exotics	VI		All ponds		R		1					
5	RF23	Check ponds for exotics	VIII		All ponds		R		1					
9	ML50	Formal liaison	IV	CCLG meeting			R/Ad		2					
9	AI50	Volunteer events	S				R		5					x5
1 - 7	MH42	Spray re-growth	S	Includes SAMs	All Cp's		T							
1	MH36	Spray bracken	VI	Includes SAMs	All Cp's		T							
4	MH31	Control Crassula	S	Spray if required	All ponds		T							
11, 15	AR01	Upgrade tracks as required	S	Use of hoggin, clean brick or fittleworth stone			T + C							

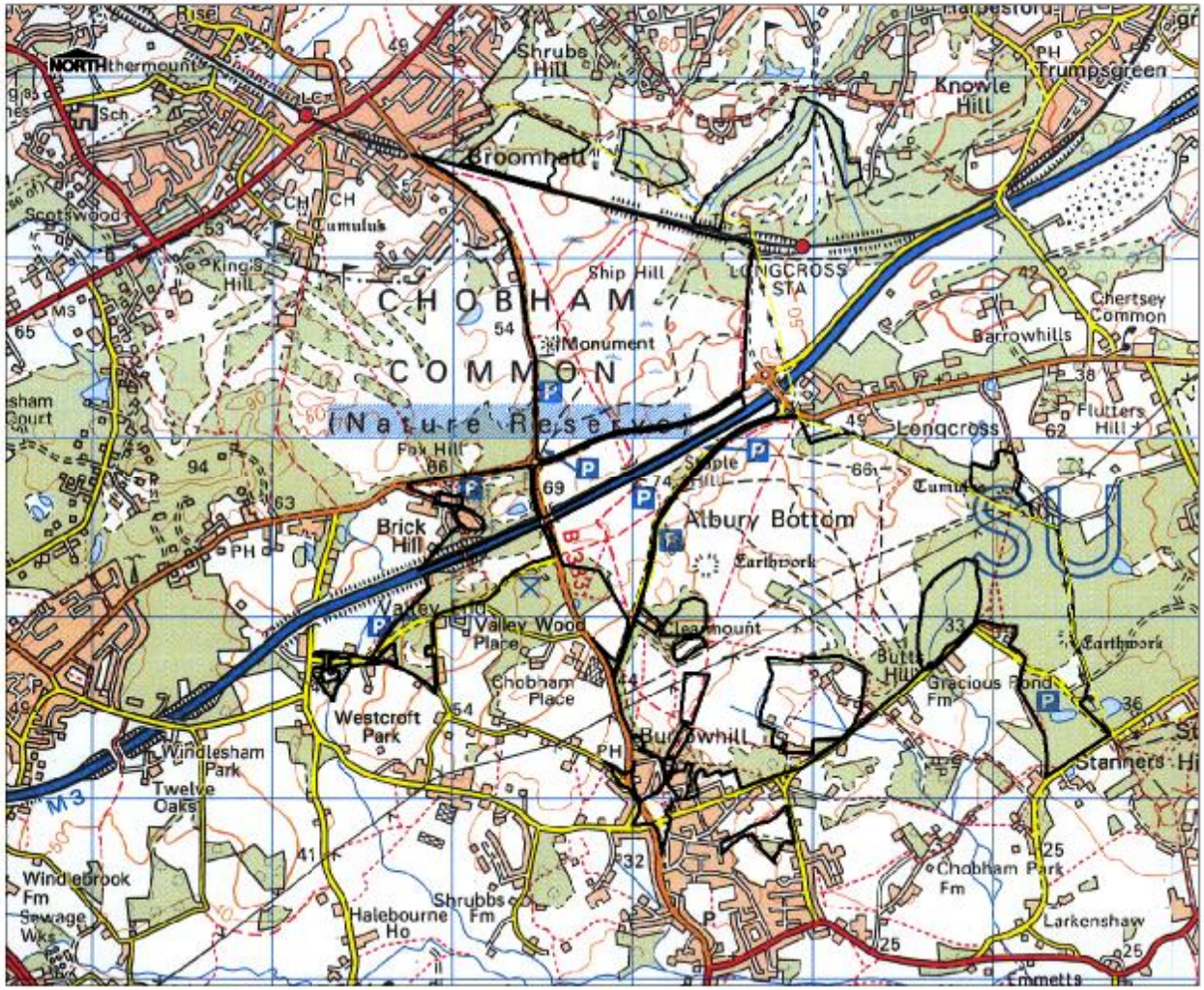
Objective	Code	Task	Month/ season	Additional information	Location	Action taken	Workforce	Funding	Anticipated man days	Actual man days	Anticipated costs	Actual costs	Completed	Notes
11	ME40	Car park repairs	S	Maintain car park surface as required			T							
11	ME40	Rights of Way/ HR	IV	Check/clear/waymark	16 - 20		R		1					Nth of M3
11	ME40	Rights of Way/ HR	IV	Check/clear/waymark	15		R		1					Brickhill/Rushy bottom
11	ME40	Rights of Way/HR	IV	Check/clear/waymark	24		R		1					Valley End
11	ME40	Rights of Way/HR	IV	Check/clear/waymark	13		R		1					Chickabiddy
11	ME40	Rights of Way/HR	IV	Check/clear/waymark	22		R		1					Burrowhill/ Little Heath
11	ME40	Rights of Way/HR	IV	Check/clear/waymark	1		R		1					Fishpool
11	ME40	Rights of Way,/HR	IV	Check/clear/waymark	3, 21		R		1					Monks Walk Barrow Woods
11	ME40	Rights of Way/HR	IV	Check/clear/waymark	5, 10		R		2					Willy's Leap Butts Hill
11	ME40	Rights of Way/HR	IV	Check/clear/waymark	11. 12		R		1					Clearmount Metco
11	ME40	Rights of Way/HR	IV	Check/clear/waymark	6, 7, 8, 9		R		1					Albury Bottom, Tank Hill, Staple Hill
11	ME40	Rights of Way/ HR	VII	Check/clear/waymark	16 - 20		R		2					Nth of M3
11	ME40	Rights of Way/ HR	VII	Check/clear/waymark	15		R		2					Brickhill/Rushy bottom
11	ME40	Rights of Way/HR	VII	Check/clear/waymark	24		R		2					Valley End
11	ME40	Rights of Way/HR	VII	Check/clear/waymark	13		R		2					Chickabiddy
11	ME40	Rights of Way/HR	VII	Check/clear/waymark	22		R		2					Burrowhill/ Little Heath

Objective	Code	Task	Month/ season	Additional information	Location	Action taken	Workforce	Funding	Anticipated man days	Actual man days	Anticipated costs	Actual costs	Completed	Notes
11	ME40	Rights of Way/HR	VII	Check/clear/waymark	1		R		2					Fishpool
11	ME40	Rights of Way,/HR	VII	Check/clear/waymark	3, 21		R		2					Monks Walk Barrow Woods
11	ME40	Rights of Way/HR	VII	Check/clear/waymark	5, 10		R		5					Willy's Leap Butts Hill
11	ME40	Rights of Way/HR	VII	Check/clear/waymark	11. 12		R		2					Clearmount Metco
11	ME40	Rights of Way/HR	VII	Check/clear/waymark	6, 7, 8, 9		R		2					Albury Bottom, Tank Hill, Staple Hill
15	MH40	Mow firebreaks	VI	Rotary flail to 100mm	Staple Hill		T							
15	MH40	Mow firebreaks	VI	Rotary flail to 100mm	M3		T							
15	MH40	Mow firebreaks	VI	Rotary flail to 100mm	BW 81		T							
15	MH40	Mow firebreaks	VI	Rotary flail to 100mm	ESSO pipe		T							
15	MH40	Mow firebreaks	VI	Rotary flail to 100mm	Clump		T							
15	MH40	Mow firebreaks	VI	Rotary flail to 100mm	Jubilee CP		T							
15	MH40	Mow firebreaks	IX	Rotary flail to 100mm	Staple Hill		T							
15	MH40	Mow firebreaks	IX	Rotary flail to 100mm	M3		T							
15	MH40	Mow firebreaks	IX	Rotary flail to 100mm	BW 81		T							
15	MH40	Mow firebreaks	IX	Rotary flail to 100mm	Esso pipe		T							
15	MH40	Mow firebreaks	IX	Rotary flail to 100mm	Clump		T							
15	MH40	Mow firebreaks	IX	Rotary flail to 100mm	Jubilee		T							
1 - 7	MH31	Scrub control	X - II		All Cp's as required		T + C							
1, 2, 6	MH32	Heather cutting	X - XI		All Cp's as required		R + C							
1, 2, 6, 8	MH39	Turf-cutting	X - XI		All Cp's as required									

2, 5	MH61	Create scrapes/ponds	W		Bogs + mires		T / C							
1, 6	MH39	Transplant turves	W		15		C							
1, 4, 6	MH31	Coppicing	W		15		C							
1,	MH39	Scrapes	S	Bare ground creation	All Cp's		T							
1	RA12	Monitor SPA/heath assemblage birds	S		All Cp's		R + V							
1 - 5	RB00	Vegetation Monitoring	S		All Cp's		R + V							
1 - 5	RA82	Invertebrate survey	S		4		C							

N.B. All works under the CSS are already consented by NE.

Map 1 **Chobham Common: location**



Scale 1:20000

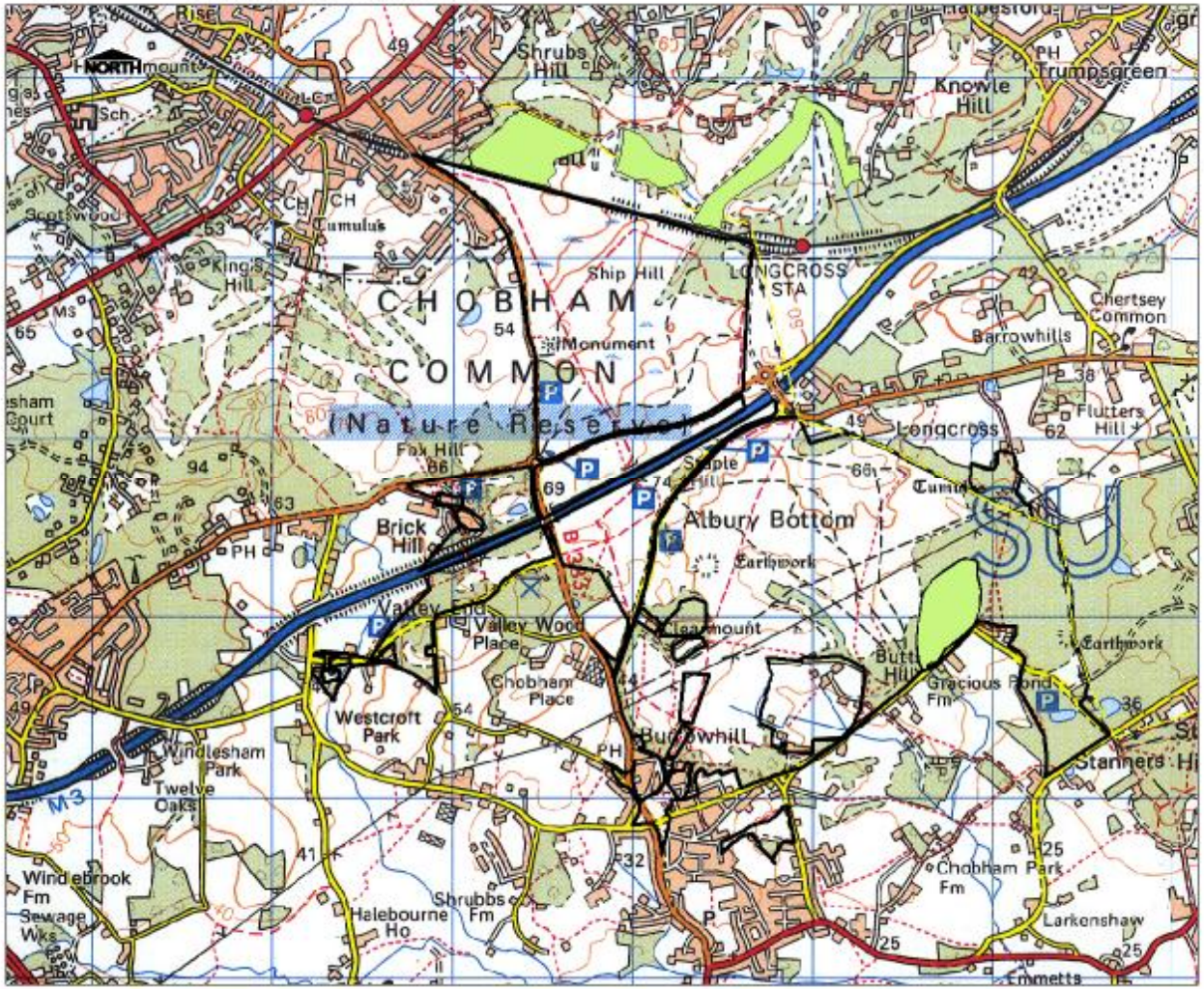
Key

SWTCS Boundary

Plan No. CC5/1

Prepared by SJ Chimbwandira 19.01.07

Map 2 **Chobham Common: tenure**



Scale 1:20000

Key:

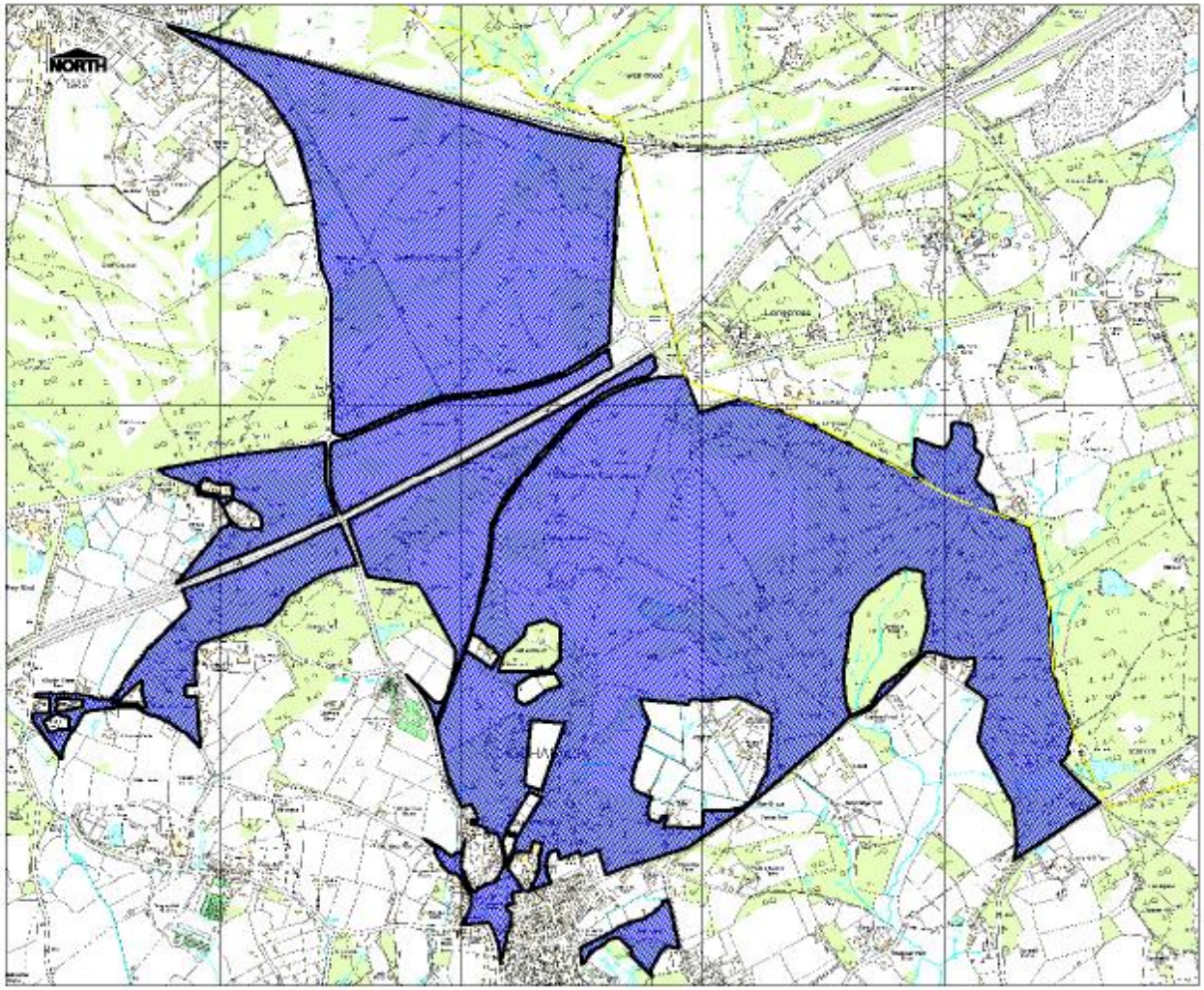
Surrey County Council owned, 50 year lease to Surrey Wildlife Trust

Privately owned, managed by agreement

Plan No. CC/5/2

Prepared by SJ Chimbwandira 19/01/07

Map 3 **Chobham Common: land within SWTCS management and available under CROW**



Scale 1:15000

Key

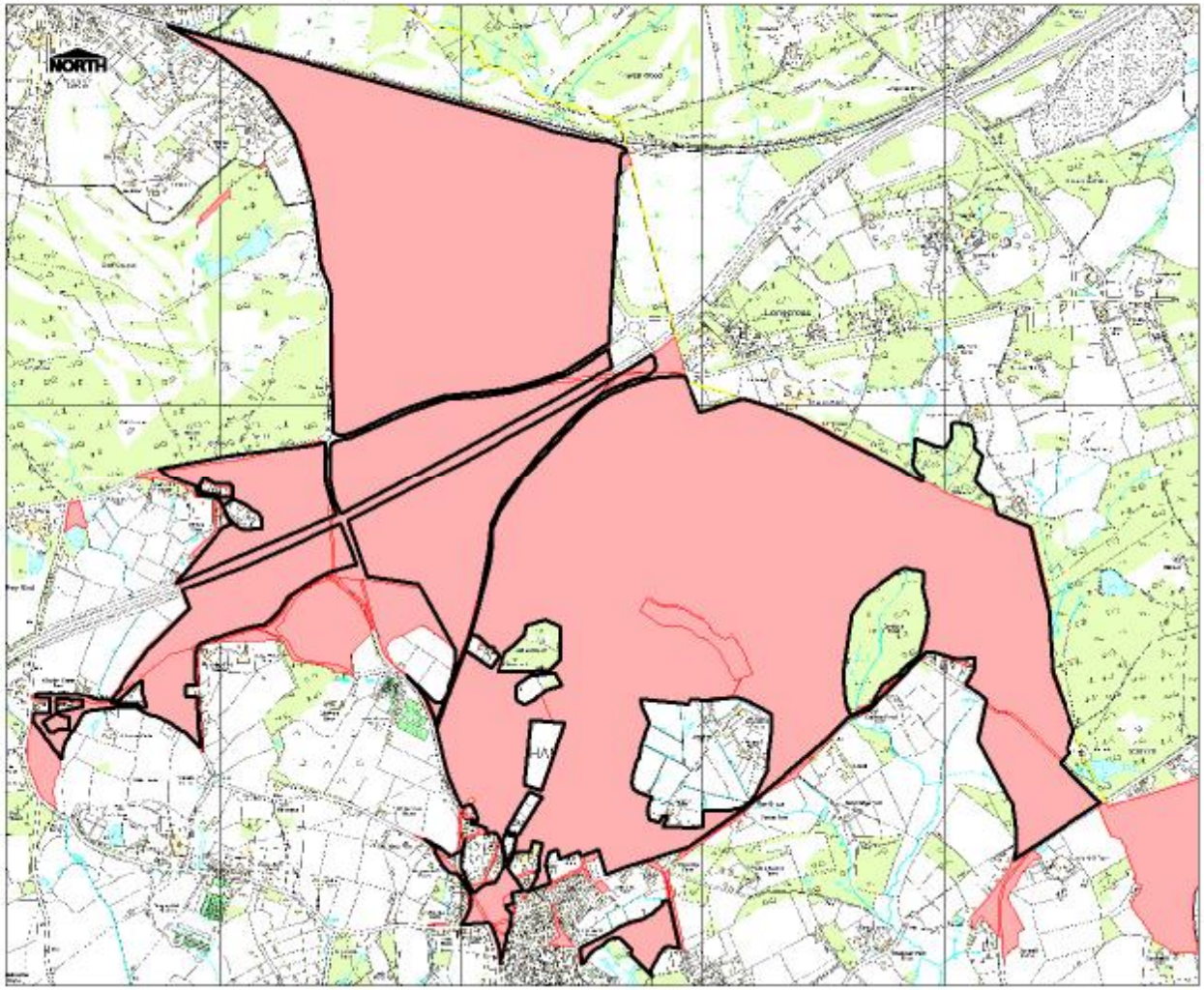
SWTCS Boundary

CROW land

Plan No. CC/5/3

Prepared by SJ Chimbwandira 22/01/07

Map 4 **Chobham Common: registered common land**



Scale 1:15000

Key

SWTCS Boundary

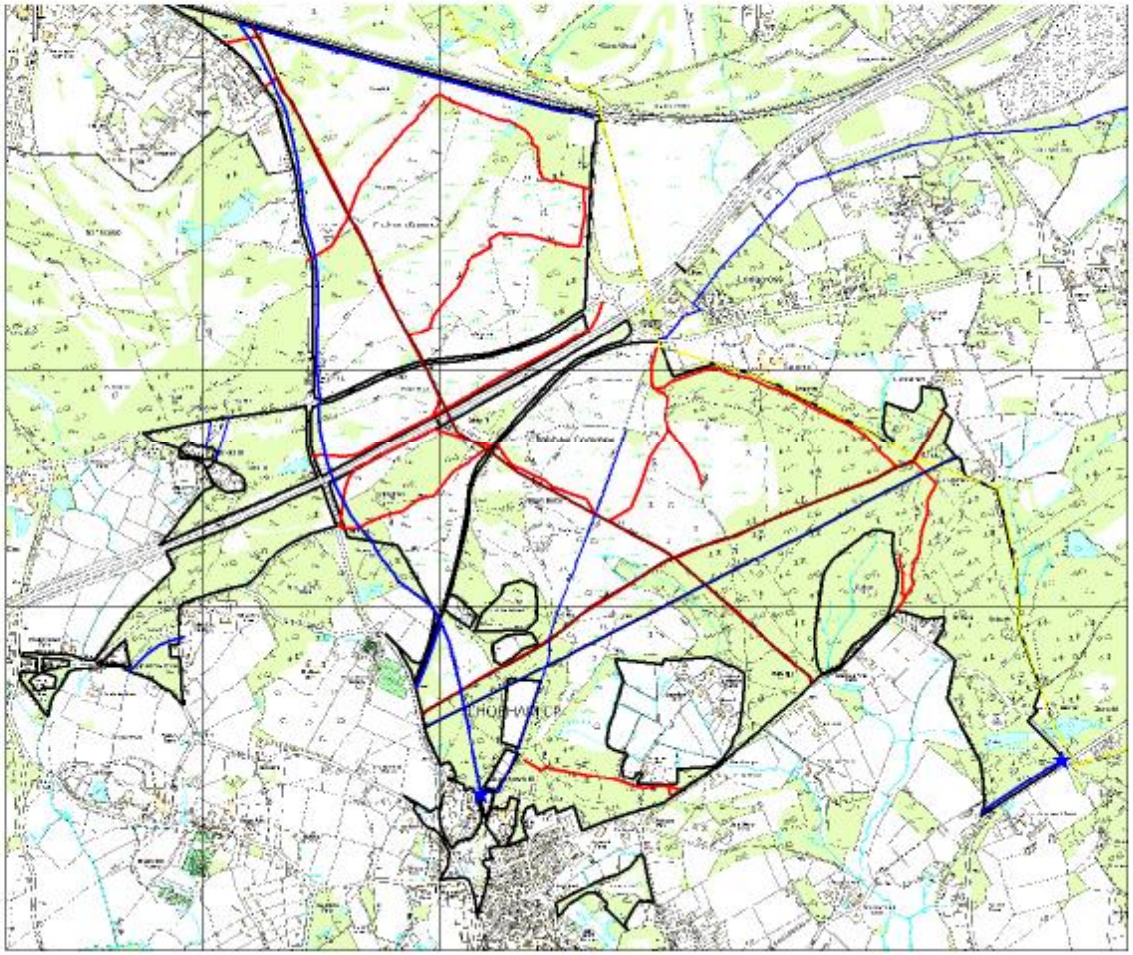
Common land

Plan No. CC/5/3

Prepared by SJ Chimbwandira
22/01/07

Map 5

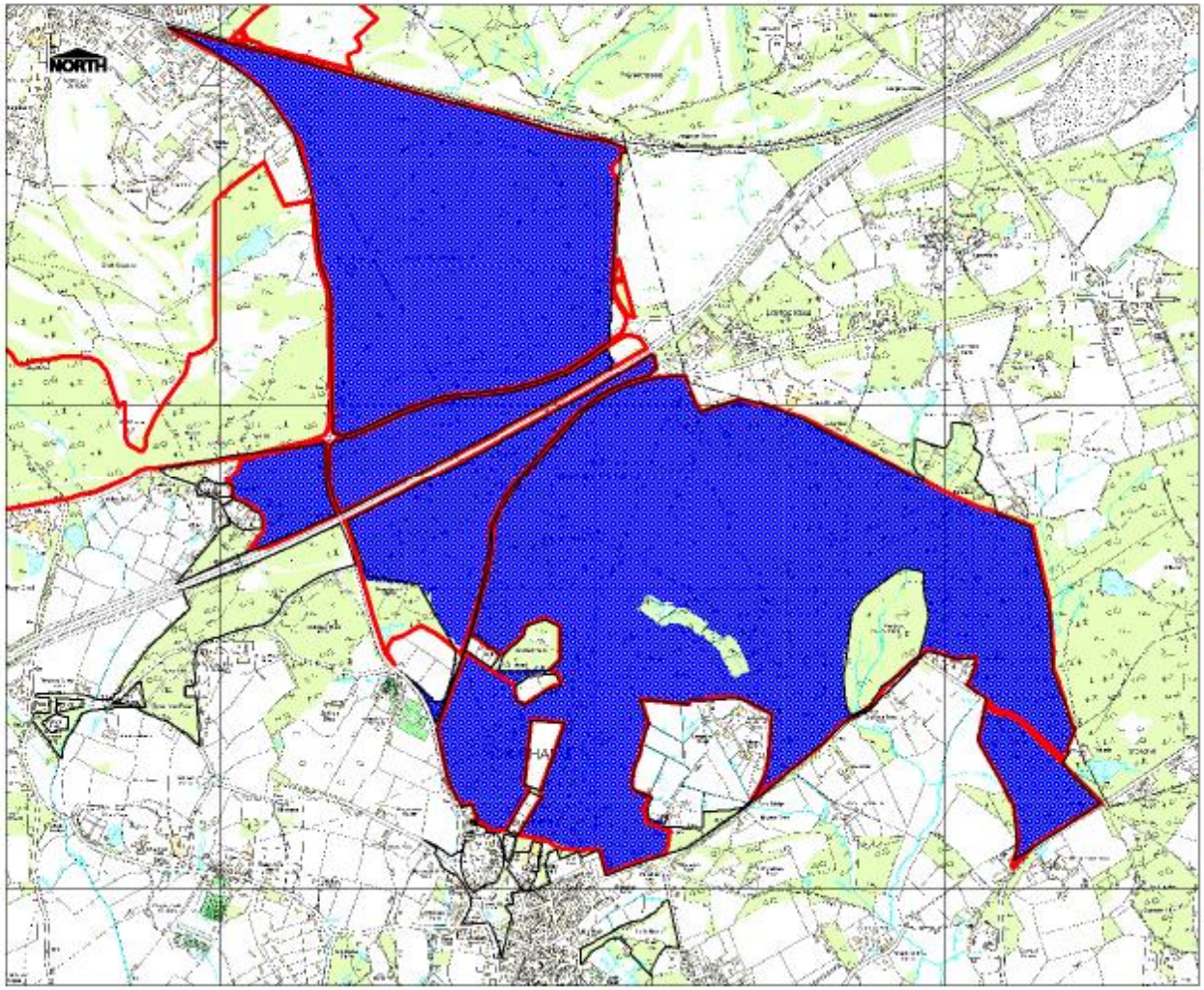
Chobham Common: major utilities



Not to Scale
Indicative Only

Key
- Emergency Access Routes
- Southern Electricity Lines
- Transco Pipe (Gas)
- National Grid Pylons
- Electricity Substation
- SWTCS Management Boundary

Map 6 **Chobham Common: showing SWTCS Management Boundary, SSSI and NNR boundaries**



Scale 1:15000

Key

SWTCS Boundary

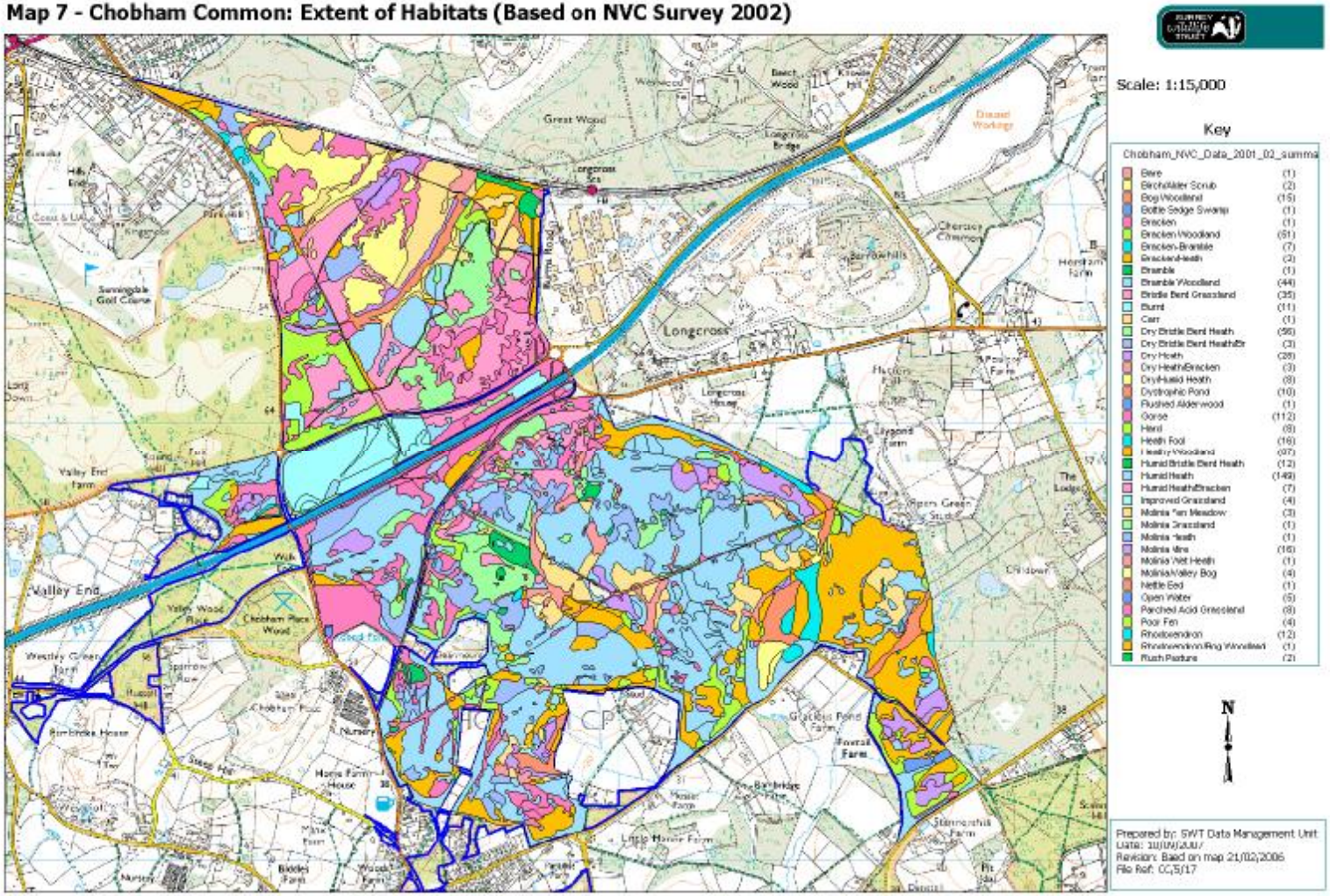
SSSI boundary

NNR boundary

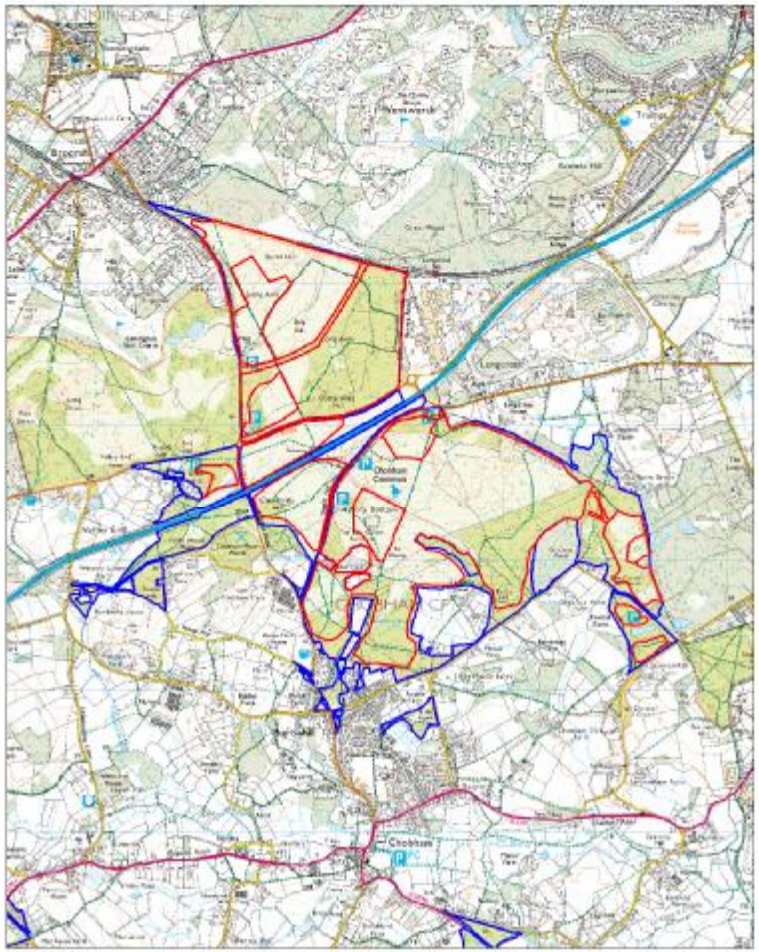
Plan No. CC5/1

Prepared by SJ Chimbwandira 21/03/03

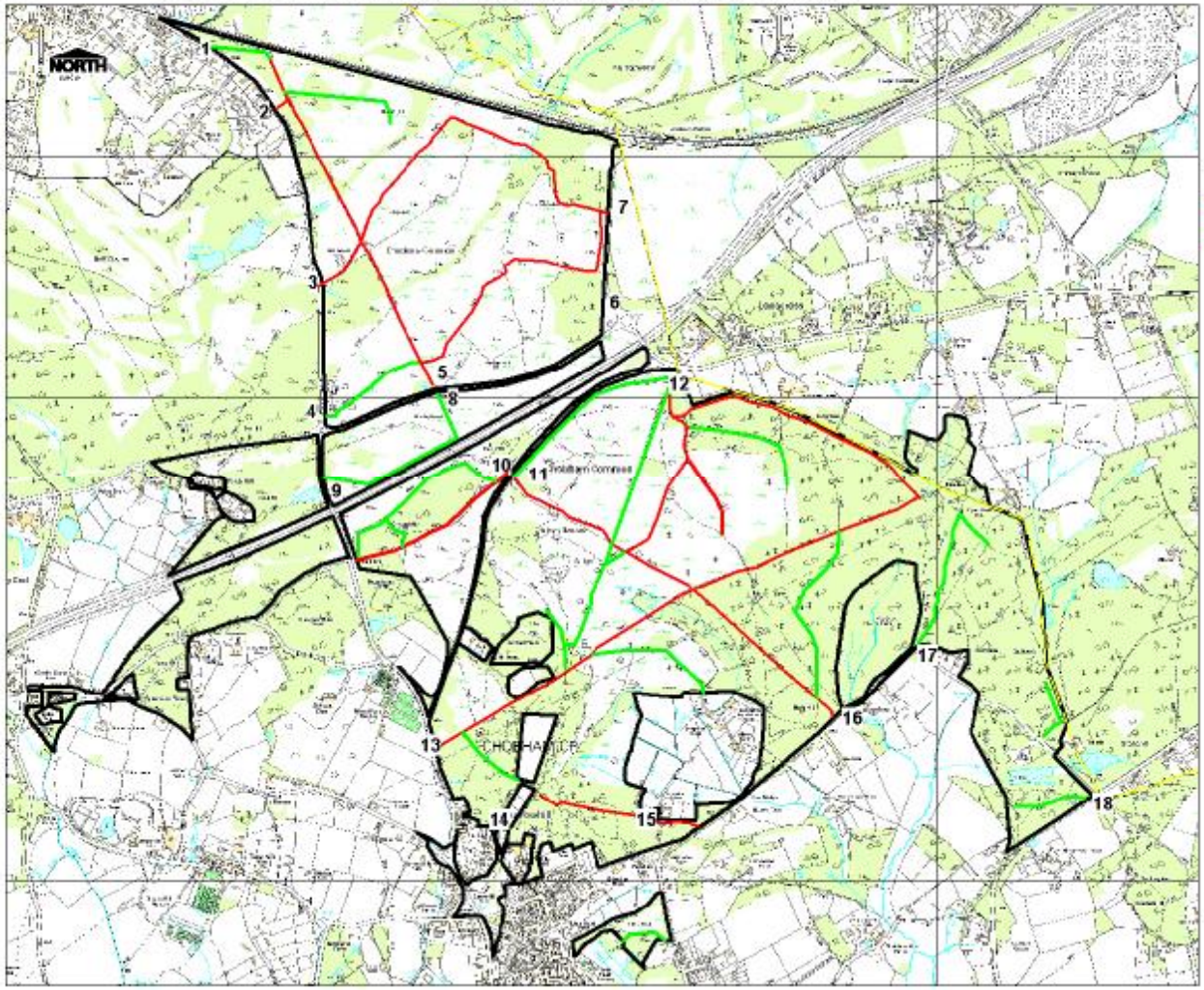
Map 7 - Chobham Common: Extent of Habitats (Based on NVC Survey 2002)



Chobham Common : Stewardship Scheme 2002 2012



Map 9 **Chobham Common: fire plan showing emergency access points**



Scale 1:15000

Key

SWTCS Boundary

Main fire route

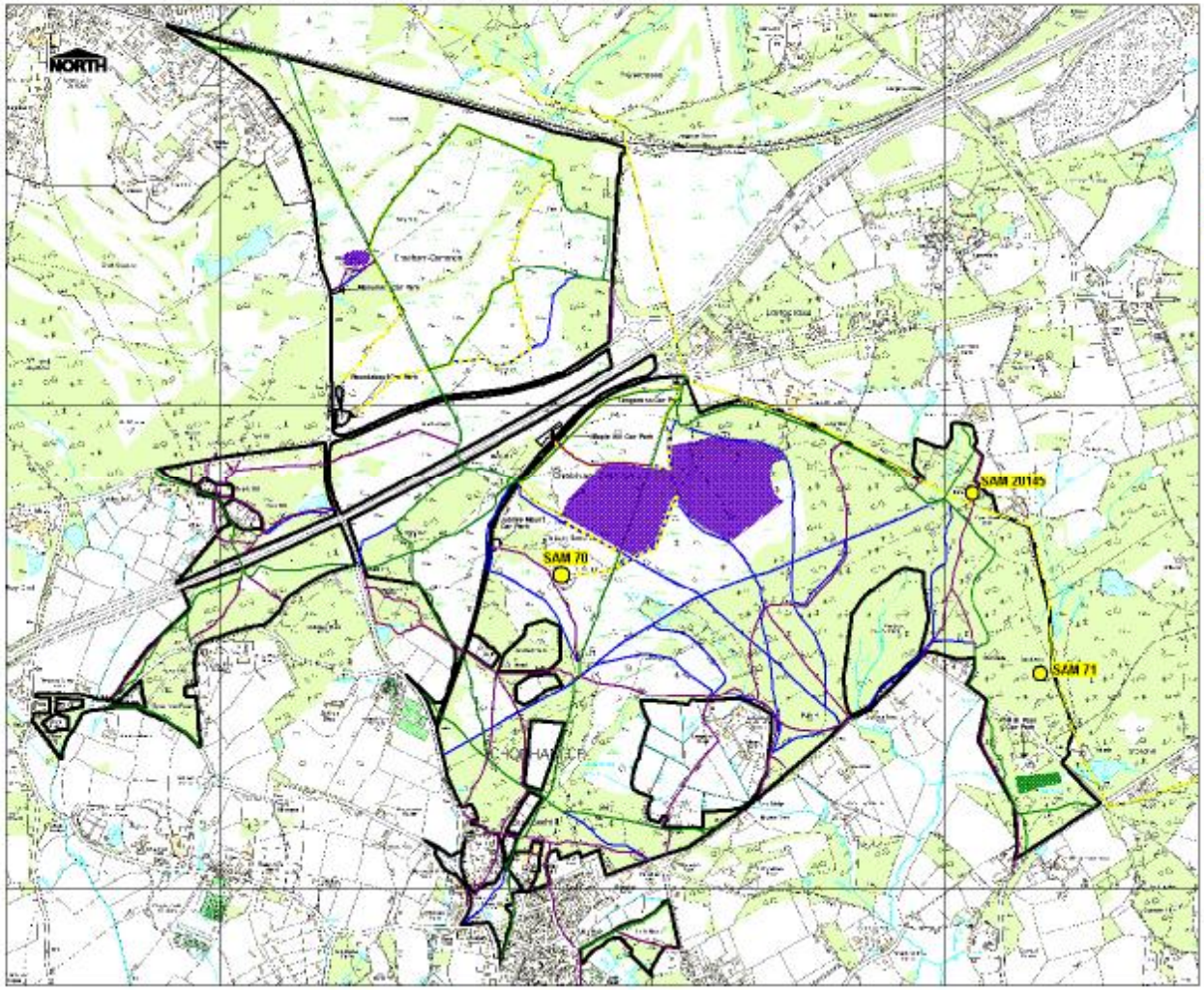
Secondary (AWD) route

1 Gate numbers

Plan No. CC5/1

Prepared by SJ Chimbwandira 3/10/2006

Map 10 **Chobham Common: Access and Visitor Facilities**



Scale 1:15000

Key

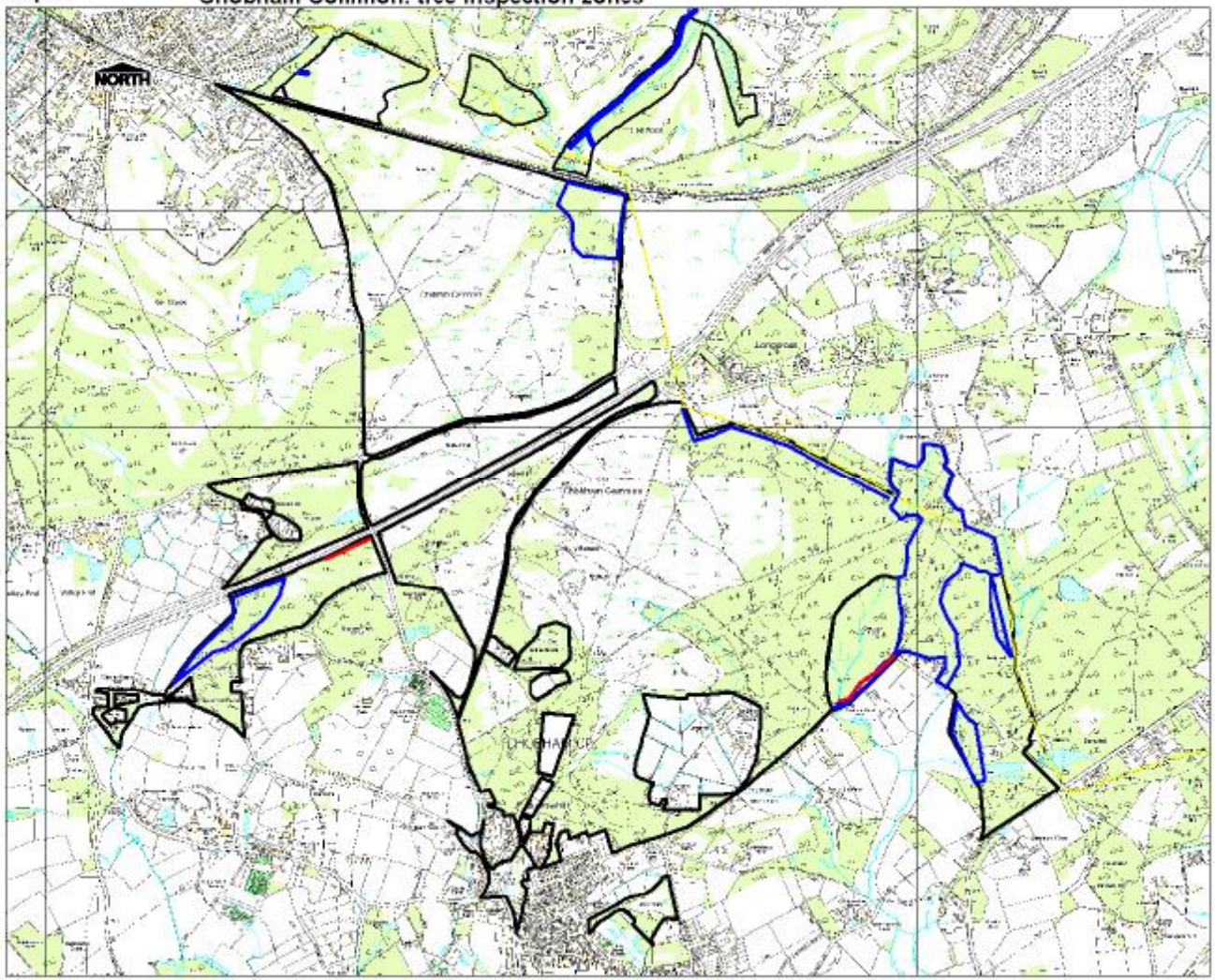
- SWTCS Boundary
- Footpaths
- Bridleways
- Agreed horse rides
- Self guided trail
- Model flying area
- Fishing area
- Scheduled Ancient Monument SAM

Plan No. CC/5/3

Prepared by SJ Chimbwandira 21/03/03

Map 11

Chobham Common: tree inspection zones



Scale 1:16000

Key

SWTCS Boundary

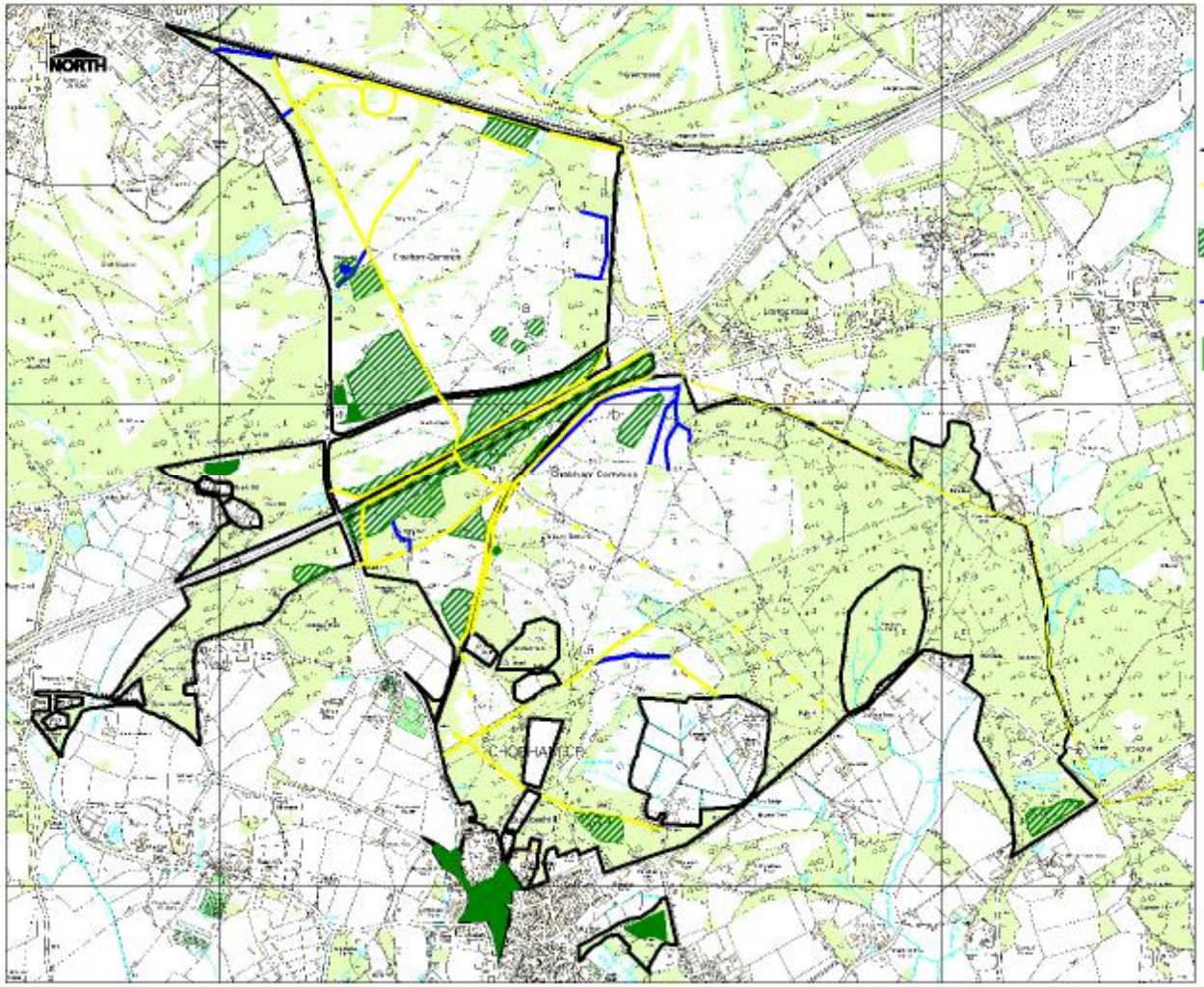
Medium risk

High risk

Plan No. CC5/11

Prepared by SJ Chimbwandira
21/03/03

Map 12 **Chobham Common: annual mowing programme**



Scale 1:15000

Key

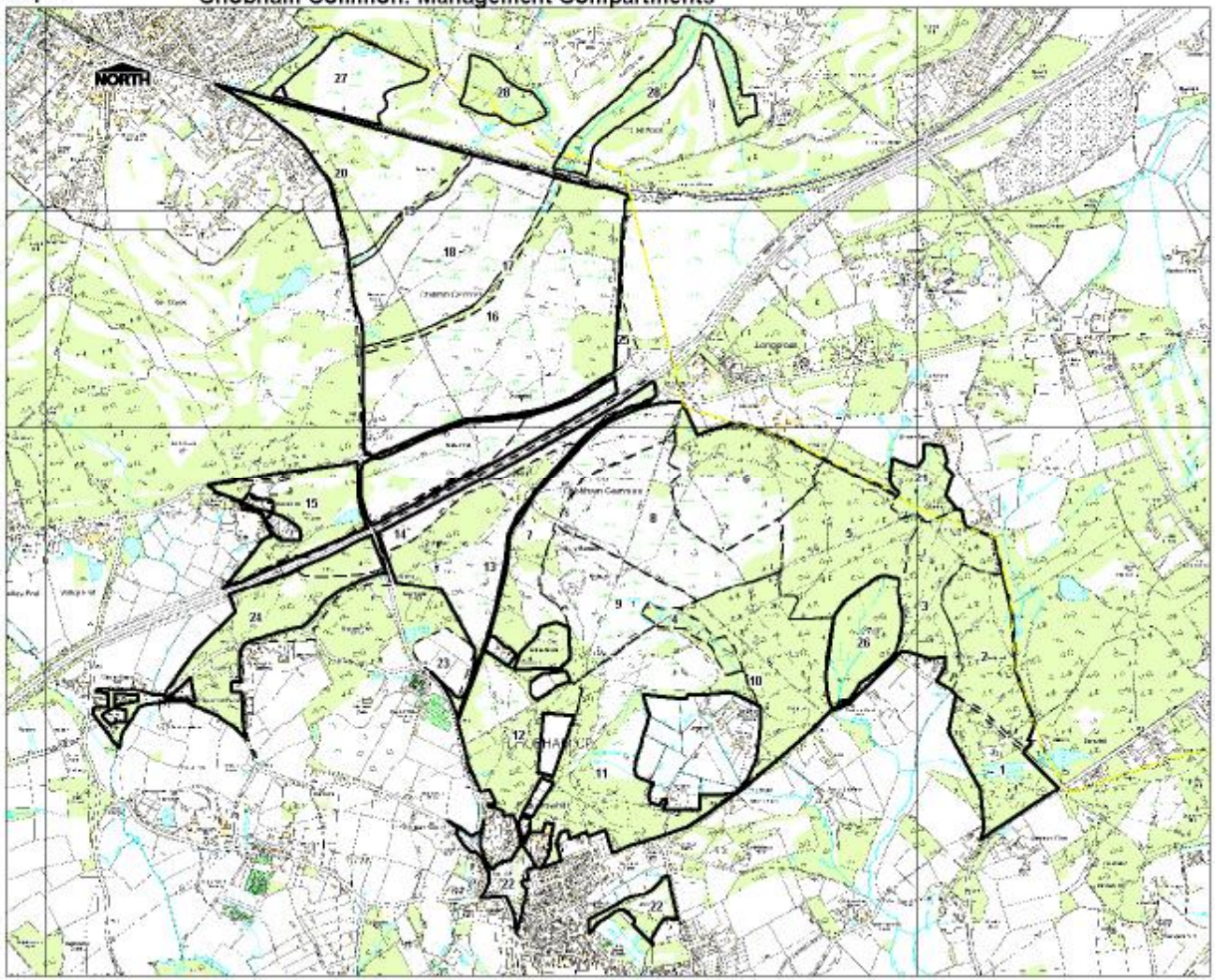
- SWTCS Boundary
- Firebreaks
- Conservation Mowing (September - February)
- Sidearm (September - February)
- Amenity Mowing (June & September)

Plan No. CC/5/7b

Prepared by SJ Chimbwandira 21/03/03

Map 13

Chobham Common: Management Compartments



Scale 1:16000

Key

SWTCS Boundary

Management Compartment

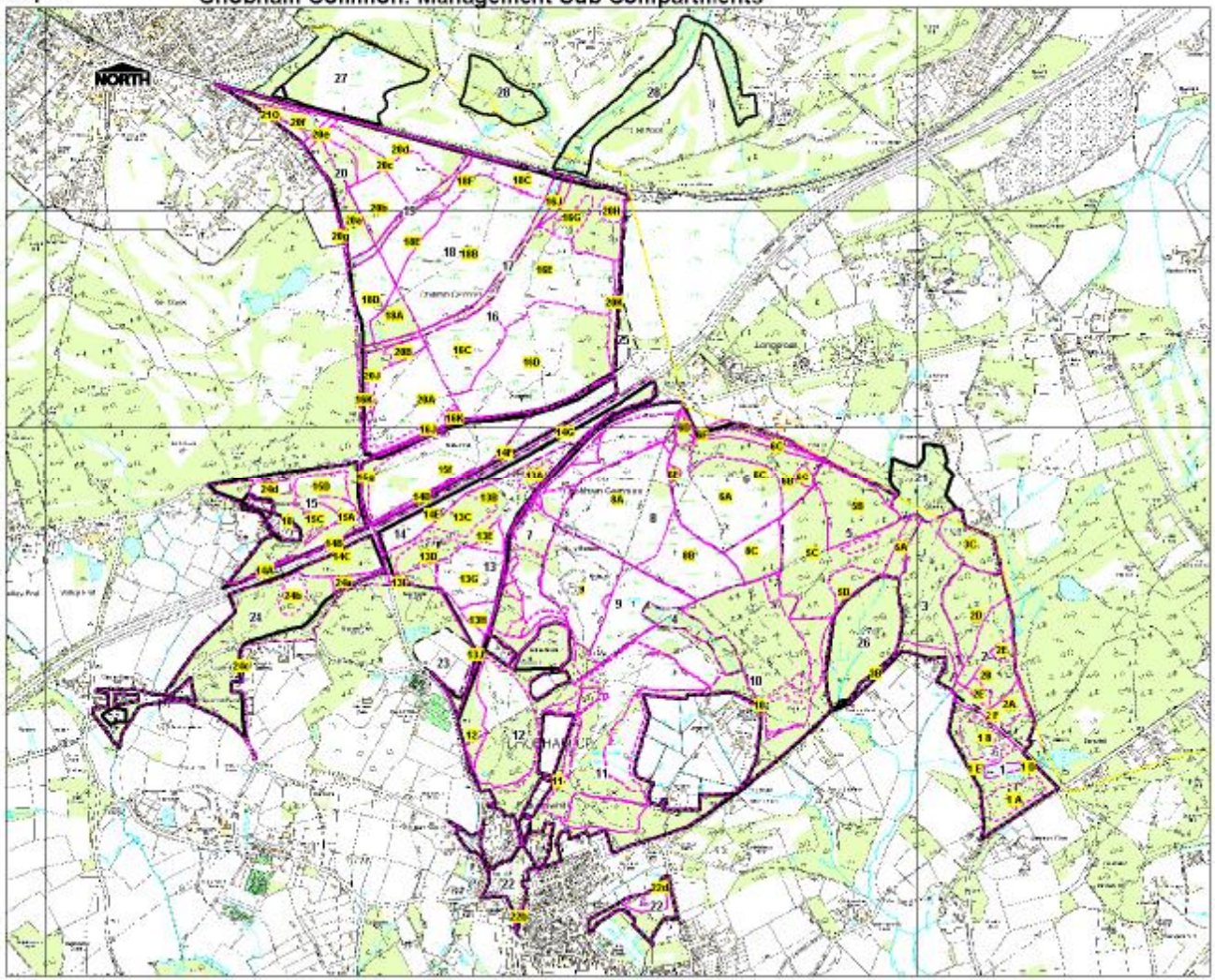
1 Compartment number

Plan No. CC5/12

Prepared by SJ Chimbwandira 21/03/03

Map 14

Chobham Common: Management Sub Compartments



Scale 1:16000

Key

SWTCS Boundary

Management Compartment

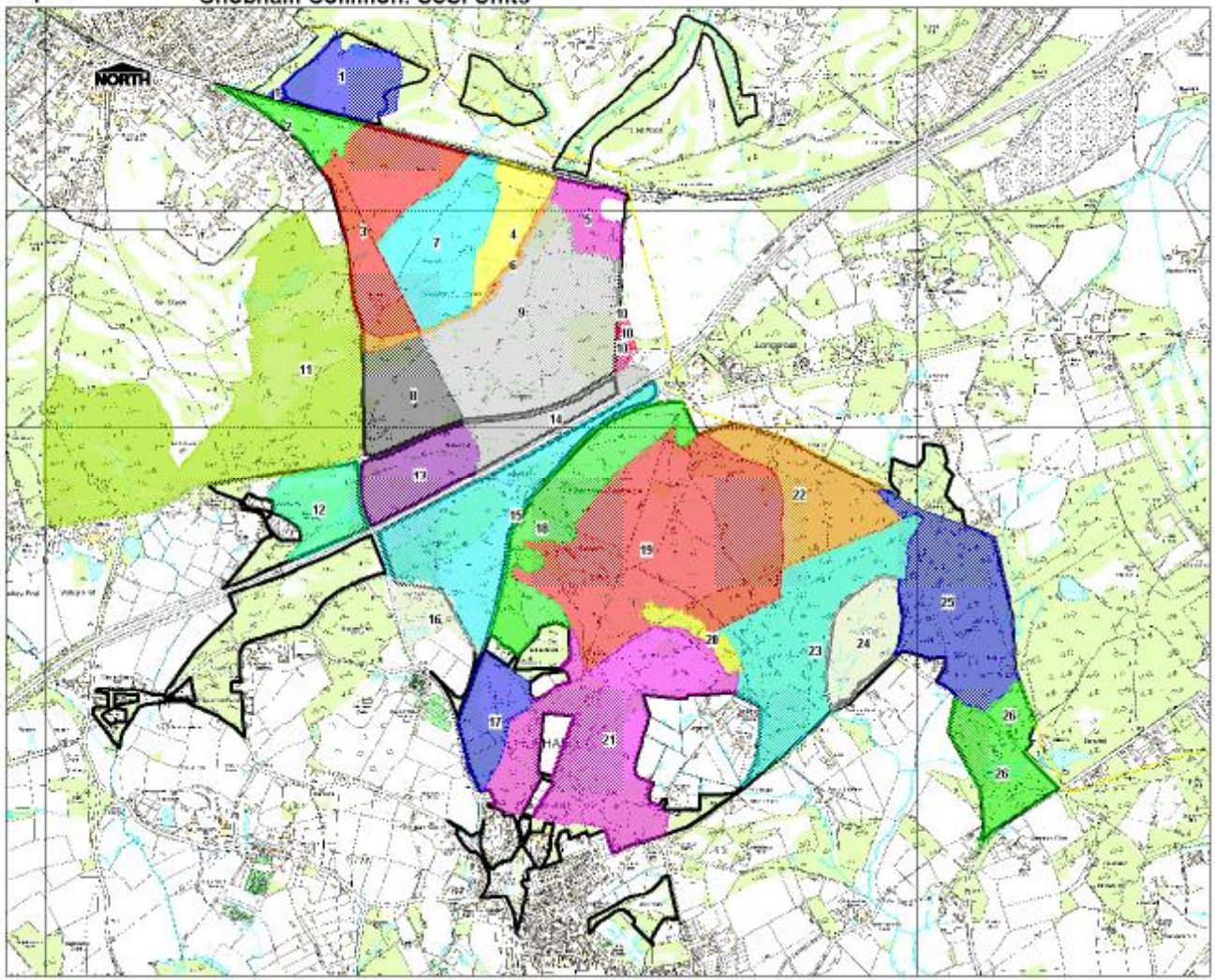
1 Compartment number

Plan No. CC/5/12

Prepared by SJ Chimbwandira 21/03/03

Map 15

Chobham Common: SSSI Units



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Key

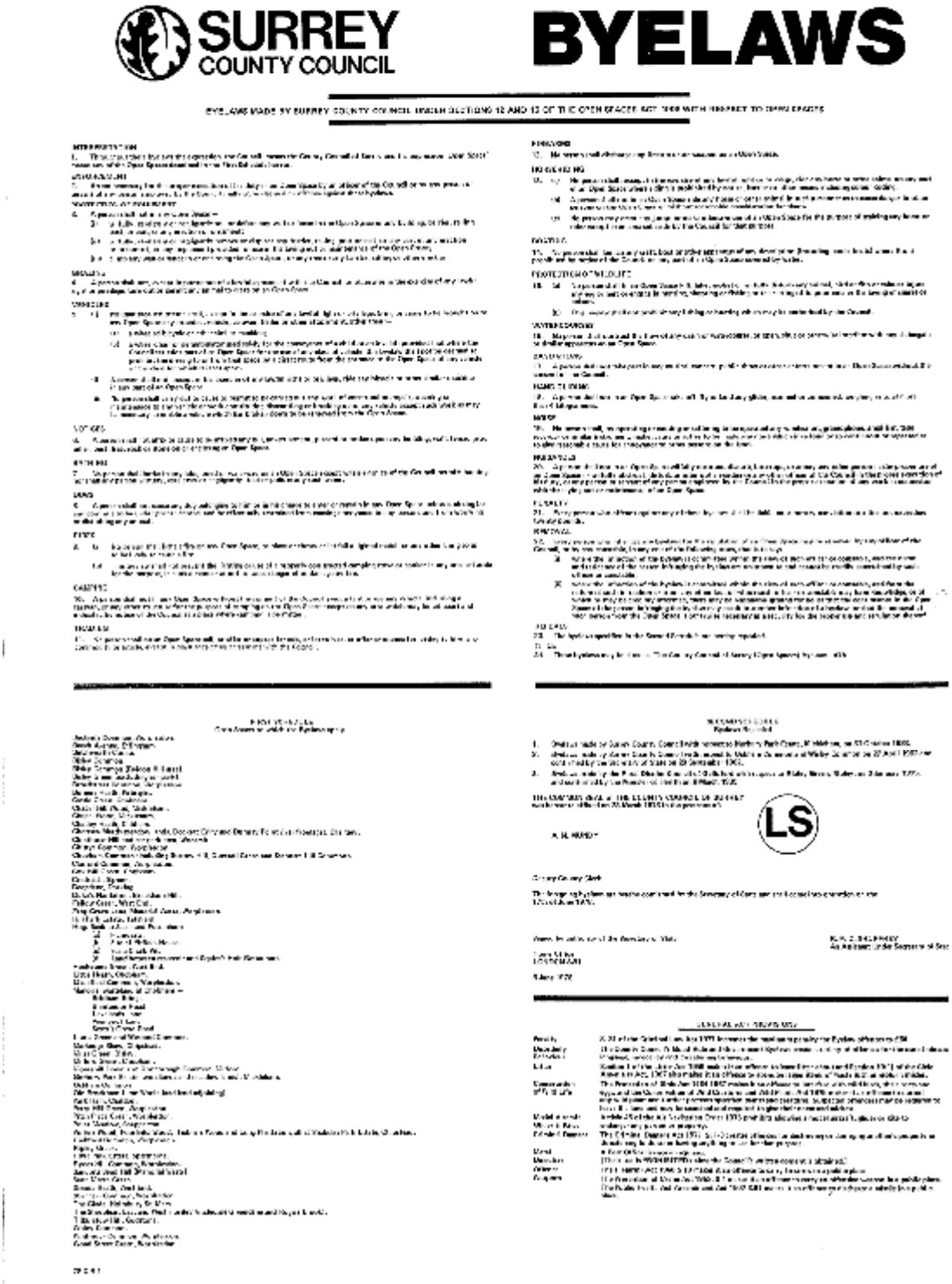
SWTCS Boundary

Plan No. CC/5/15

Prepared by SJ Chimbwandira
21/03/03

Appendices

Byelaws



SURREY COUNTY COUNCIL

BYELAWS

BYELAWS MADE BY SURREY COUNTY COUNCIL UNDER SECTIONS 12 AND 15 OF THE OPEN SPACES ACT 1906 WITH RESPECT TO OPEN SPACES

CHOBHAM COMMON SITE RISK ASSESSMENT

CONTACT DETAILS
RANGER: ANDY WRAGG
TELEPHONE: 01276 858013 (OFFICE), 07968 832502 (MOBILE)
DAYS OFF: Tuesday/Wednesdays
COVER (DAYS OFF, LEAVE, ILLNESS): STEVEN FRY
TELEPHONE: 01276 858013 (OFFICE), 07968 832512 (MOBILE)

CHOBHAM COMMON IS A SITE OF SPECIAL SCIENTIFIC INTEREST, A NATIONAL NATURE RESERVE, A POTENTIAL EUROPEAN SPECIAL PROTECTION AREA AND A CANDIDATE EUROPEAN SPECIAL AREA FOR CONSERVATION, AND THERE ARE THREE SCHEDULED ANCIENT MONUMENTS, **ALL WORKS MUST BE DISCUSSED WITH THE SITE RANGER WELL IN ADVANCE,** AS IT MAY BE NECESSARY TO GAIN LEGAL CONSENTS FROM NATURAL ENGLAND/ENGLISH HERITAGE BEFORE WORK CAN COMMENCE. THE COMMON IS AN OPEN SPACE - EXPECT TO MEET WALKERS, HORSE RIDERS, CYCLIST AND DOGS.

SITE DETAILS
NEAREST TELEPHONES: BURROWHILL GREEN 01276 858912
SUNNINGDALE 01344 20239

NEAREST A&E HOSPITAL: ST. PETERS HOSPITAL
GUILDFORD ROAD
CHERTSEY 01932 872000
THE MOST DIRECT ROUTES TO HOSPITAL ARE LONGCROSS ROAD THEN TURN RIGHT AT ROUNDABOUT AT END OF ROAD, OR TAKE STONEHILL ROAD IN DIRECTION OF CHERTSEY AND AT END OF ROAD TURN RIGHT ONTO LONGCROSS ROAD.

GROUND CONDITIONS:
THERE ARE STEEP SCARPS ON STAPLE HILL, TANK HILL, OYSTERSHELL HILL, SHIP HILL, BURNT HILL, AND ON EITHER SIDE OF THE M3.
THE ACCESS TRACK NETWORK IS SHOWN ON THE PLAN ATTACHED; THERE IS A TEN MPH SPEED LIMIT.
CAUTION MUST BE TAKEN WHEN CROSSING, OR TURNING OFF OF OR ON TO LOCAL ROADS AS TRAFFIC LEVELS AND VEHICLE SPEEDS ARE HIGH IN THE AREA.
ACCESS TRACKS MAY BECOME WATERLOGGED AFTER RAIN AND UNSUITABLE FOR VEHICULAR USE (CHECK WITH RANGER FIRST).
VEHICULAR TRACKS AND ACCESS POINTS ARE RESTRICTED TO 3 METRES WIDTH; CAR PARK ENTRANCES HAVE HEIGHT RESTRICTOR BARRIERS.
VEHICLES MUST NOT GO OFF TRACK WITHOUT PERMISSION.
THERE ARE EXTENSIVE AREAS OF DEEP HEATHER AND GRASS TUSSOCKS WHICH CAN HIDE SUCH HAZARDS AS OLD STUMPS, DEEP RUTS, HOLES AND OLD SLIT TRENCHES - THE GROUND NEEDS TO BE CAREFULLY CHECKED PRIOR TO COMMENCING ANY WORK.
WOODED AREAS NEED TO BE CHECKED FOR TREE HAZARDS PRIOR TO WORK.
MANY OF THE LOW LAYING AREAS ARE BOGGY OFTEN WITH DENSE GRASS

TUSSOCKS MAKING FOOTING DIFFICULT SECTIONS OF LONG ARM, LITTLE ARM AND LANGSHOT BOGS ARE DEEP
THERE ARE SOME THIRTY PONDS ON THE COMMON THE DEEPEST BEING ROUGHLY FOUR FEET.

OTHER HAZARDS:
THE NATURE OF THE VEGETATION MEANS THAT DURING PERIODS OF DRY WEATHER THERE IS A HIGH FIRE RISK. DO NOT BURN MATERIALS OR USE EQUIPMENT THAT IS LIKELY TO START FIRES AT ANY TIME UNLESS CONSENT HAS BEEN GIVEN BY RANGER. AVOID AREAS OF SCRUB AND GORSE DURING FIRES.
ELECTRITY FROM OVERHEAD LINES CAN ARCH THROUGH SMOKE – FIRE FIGHTERS AND MEMBERS OF THE PUBLIC SHOULD BE WARNED OF THIS DANGER DURING FIRES.
THE ADDER *VIPERA BERIS, IS* PRESENT ON THE SITE, MEDICAL ADVICE SHOULD BE SOUGHT IF BITTEN.
EXPOSURE TO THE SAP OF CUT OR BRUISED WILD PARSNIP, A YELLOW FLOWERED UMBELLIFER, MAY CAUSE SEVERE BLISTERING DURING BRIGHT SUNLIGHT.
DOG FOULING IS COMMON ON AND AROUND CAR PARKS AND ELSEWHERE AND POSES A POTENTIAL HEALTH RISK ESPECIALLY WHEN USING STRIMMERS AND SIMILAR EQUIPMENT.
DUMPING OCCURS REGULARLY ON THE MARGINS OF THE SITE AND MAY INCLUDE HAZARDOUS MATERIALS. OCCASIONAL BURNT OUT VEHICLES ALSO POSE A SERIOUS HEALTH RISK.
ALTHOUGH NOT SEEN RECENTLY BROWN RATS HAVE OCCURRED AT FISHPOOL AND WHERE DOMESTIC AND GARDEN WASTE HAVE BEEN DUMPED - BE AWARE OF THE RISKS OF LEPTOSPIROSIS.
MODEL AIRCRAFT FLYING TAKES PLACE AT TANK HILL AND ALBURY BOTTOM AND NEAR THE MONUMENT.
FISHPOOL IS USED FOR ANGLING.

UTILITIES: MAJOR UTILITIES CROSSING THE COMMON ARE INDICATED ON THE ATTACHED PLAN AND CONTACT NUMBERS ARE AS FOLLOWS.

HIGH PRESSURE OIL PIPELINE: - 0845 0701245 EMERGENCY 01189 712021
SOUTHERN ELECTRICITY: 0845 7444 555 EMERGENCY 0845 7708090 (POWER LINES)
NATIONAL GRID 0800 7312961 EMERGENCY: 0800 404090 (PYLON LINES)
ESSO EMERGENCY: 0800 136812 (ESSO PIPELINES)
NATIONAL GRID GAS PIPELINES: EMERGENCY 0800 111 999

THERE ARE NUMEROUS MINOR UTILITIES RUNNING PARALLEL WITH THE ROADS THAT CROSS THE COMMON AND SERVING NEARBY PROPERTIES. PRIOR TO WORKING NEAR ROADS OR PROPERTIES CHECKS SHOULD MADE WITH –
GAS – 0800 731 2961
SOUTHERN ELECTRICITY - 01256 337294
BRITISH TELECOM - 0800 9173993
THREE VALLEYS WATER -

TIPPER LORRIES AND TIPPING TRAILERS SHOULD NOT OPERATE WITHIN 9METRES OF POWER LINES OR 15 METRES OF PYLON LINES.
NO TREE FELLING SHOULD TAKE PLACE WITHIN TWO TREE LENGTHS OF OVERHEAD LINES.
FRONT LOADERS CARRYING TREES SHOULD NOT OPERATE WITHIN ONE TREE LENGTH PLUS 3 METRES OF POWER LINES OR ONE TREE LENGTH PLUS 5 METRES OF PYLON LINES.
AERIAL TREE WORK SHOULD NOT TAKE PLACE WITHIN A DISTANCE OF 15 METRES PLUS THE LENGTH OF THE LONGEST TIMBER BEING DROPPED OF OVERHEAD LINES.
FIRES SHOULD NOT BE LIT NEAR OBERHEAD LINES.
NEIGHBOURING HAZARDS:
SURREY COUNTY COUNCIL (01276 453564 EMERGENCIES 0870 1266060) IS RESPONSIBLE FOR ALL THE ADJOINING ROADS AND HIGHWAY VERGES, WITH THE EXCEPTION OF THE SECTION OF THE B383 CHOBHAM RD NORTH OF THE COUNTY BOUNDARY SIGN WHICH IS THE RESPONSIBILITY OF WINDSOR AND MAIDENHEAD BOROUGH COUNCIL (01628 683800 EMERGENCIES).
MAINTENANCE OF THE M3 FENCE LINES IS THE- RESPONSIBILITY OF THE HIGHWAY AGENCY (08457 504030) AND IF IT IS DAMAGED OUT OF OFFICE HOURS THE POLICE SHOULD BE CONTACTED IMMEDIATELY.
MAINTENANCE OF THE RAILWAY LINE FENCE
WHICH FORMS THE NORTHERN BOUNDARY OF THE COMMON IS THE RESPONSIBILITY OF NETWORK RAIL (08457 114141) THERE IS AN ELECTRICITY SUB STATION AS MARKED ON THE PLAN AT BURROWHILL - EMERGENCY CONTACT NUMBER 0800 210999

EC Directive 92/43 on the Conservation of Natural Habitats and of Wild Fauna and Flora

Citation for Special Area of Conservation (SAC)

Name:	Thursley, Ash, Pirbright and Chobham
Unitary Authority/County:	Surrey
SAC status:	Designated on 1 April 2005
Grid reference:	SU914411
SAC EU code:	UK0012793
Area (ha):	5138.00
Component SSSI:	Ash to Brookwood Heaths SSSI, Chobham Common SSSI, Colony Bog and Bagshot Heath SSSI, Thursley, Hankley and Frensham Commons SSSI

Site description:
The heathland is a series of large fragments of previously more continuous areas and is principally dominated by heather – dwarf gorse (*Calluna vulgaris – Ulex minor*) dry heathland. There are transitions to wet heath and valley mire, scrub, woodland and acid grassland, including types rich in annual plants. This habitat supports an important assemblage of animal species, including numerous rare and local invertebrate species, including the nationally rare white-faced darter *Leucorrhinia dubia*, as well as sand lizard *Lacerta agilis* and smooth snake *Coronella austriaca*.

This site supports the sole area of lowland northern Atlantic wet heath in south-east England. The wet heath at Thursley is mainly cross-leaved heath – bog-moss (*Erica tetralix – Sphagnum compactum*) and contains several rare plants, including great sundew *Drosera anglica*, bog hair-grass *Deschampsia setacea*, bog orchid *Hammarbya paludosa* and brown beak-sedge *Rhynchospora fusca*.

Depressions on peat substrates are widespread, both in bog pools, mires and in flushes where they occur as part of a mosaic associated with valley bog and wet heath. They show extensive representation of brown-beak sedge and are also important for great sundew and bog orchid *Hammarbya paludosa*.

Qualifying habitats: The site is designated under **article 4(4)** of the Directive (92/43/EEC) as it hosts the following habitats listed in Annex I:

- Depressions on peat substrates of the *Rhynchosporion*
- European dry heaths
- Northern Atlantic wet heaths with *Erica tetralix*. (Wet heathland with cross-leaved heath)

This citation relates to a site entered in the Register of European Sites for Great Britain.
Register reference number: UK0012793
Date of registration: 14 June 2005
Signed:
On behalf of the Secretary of State for Environment, Food and Rural Affairs

Register of European sites

Register entry UK0012793 under Regulation 11 of the Conservation (Natural Habitats, &c.) Regulations 1994

This is the register entry for the European site known as **Thursley, Ash, Pirbright and Chobham** in the Region of **Surrey**. This area has been designated by the Secretary of State for Environment, Food and Rural Affairs pursuant to Article 4.4 of the "Habitats Directive" (Council Directive 92/43/EEC) as a Special Area of Conservation. The register reference number for this European site is UK0012793 and a folder, kept under this reference as part of this register, contains a map of the European site and a citation, both signed by me, giving the reasons for designation of the site as a Special Area of Conservation.

Other details of the European site are as follows:

Date designated as a Special Area of Conservation: 1 April 2005

Site centre location[1]

Longitude: **00 41 35 W**

Latitude: **51 09 42 N**

Area: **5138.00**

Priority status[2]: **No**

Date of registration: **14 June 2005**

Signed:

on behalf of the Secretary of State for Environment, Food and Rural Affairs

[1] This indicates the approximate centre of the site. Where the European site consists of several distinct areas, the co-ordinates of the most important sub-area are entered.

[2] Indicates whether the site has been identified under Article 4.2 of the Habitats Directive (Council directive 92/43/EEC) as hosting one or more priority natural habitat types or priority species.

2.2. Updated citation

The following revisions and amendments are proposed to the pSPA citation to take account of recent ornithological information and SSSI boundary changes:

EC Directive 79/409 on the Conservation of Wild Birds
Thames Basin Heaths potential Special Protection Area (pSPA)
Surrey, Hampshire, Berkshire

Component SSSIs: Ash to Brookwood Heaths SSSI, Bourley & Long Valley SSSI, Bramshill SSSI, Broadmoor to Bagshot Woods & Heaths SSSI, Castle Bottom to Yateley Common SSSI, Chobham Common SSSI, Colony Bog & Bagshot Heath SSSI, Hazeley Heath SSSI, Horsell Common SSSI, Ockham & Wisley Commons SSSI, Pamber Forest & Silchester Common SSSI, Sandhurst to Owlsmoor Bogs & Heaths SSSI, Smarts & Prey Heaths SSSI, Warren Heath Ponds SSSI and Whitmoor Common SSSI. The pSPA includes the whole of each SSSI, except for the following areas: Bourley and Long Valley SSSI: Ministry of Defence camping grounds north and south of Bourley Road (SU 829510, SU 831510); Ockham and Wisley Commons SSSI: the land north of the M25 motorway (TQ 079595, TQ 083593); Hazeley Heath SSSI: two areas of deciduous woodland south of the B3011 road (SU 754584, SU 754579); Pamber Forest & Silchester Common SSSI: deciduous woodland at SU 615608.

Boundary: see pSPA map

Size: 6064.16 ha

European ornithological interest of pSPA

The Thames Basin Heaths pSPA is of European importance because it is used regularly by at least 1% of the GB population of three species listed on Annex 1 of the Birds Directive (79/409/EEC):

Annex 1 species	Estimated population	% GB	Date of survey
Dartford Warbler *Sylvia undata*	100 pairs	5.3	1994
Nightjar Caprimulgus europaeus	89 males	2.8	1992
Woodlark *Lullula arborea*	59 males	8.4	1994

Populations estimated from raw data from the following national surveys:

Morris, A., Burges, D., Fuller, R.J., Evans, A.D. & Smith, K.D 1994. The status and distribution of Nightjars *Caprimulgus europaeus* in Britain in 1992: a report to the British Trust for Ornithology. Bird Study, 41: 181-191.

Gibbons, D.W. & Wotton, S. 1996. The Dartford Warbler in the United Kingdom in 1994. British Birds, 89:203-212.

COUNTY: SURREY, BERKSHIRE SITE NAME: CHOBHAM COMMON

BOROUGH: SURREY HEATH/WINDSOR & MAIDENHEAD

Status: Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and Countryside Act 1981. Part of the site is declared as a Local Nature Reserve (LNR) under S21 of the National Parks and Access to the Countryside Act 1949.

Local Planning Authority: Surrey Heath Borough Council, Windsor and Maidenhead Borough Council

National Grid Ref: SU 973 648 Area: 651.2 ha (1608.5 acres)

Ordnance Survey Sheets 1:50,000: 175, 176, 186 (part) 1:10,000: SU 96 NW, NE, SW, SE

Date notified (under 1949 Act): 1973 Date of last revision: 1980

Date notified (under 1981 Act): 1985 Date of last revision: 1993

Other Information: Gracious Pond is a Surrey Wildlife Trust Reserve. This site is listed in 'A Nature Conservation Review'[1]. It forms part of Thames Basin Heaths proposed Special Protection Area (pSPA), proposed for designation under the European Commission Directive 79/409 on the Conservation of Wild Birds (the Birds Directive).

Reasons for Notification

Chobham Common is an area of extensive, open land which supports dry and wet heathland, bog, scrub and woodland, forming one of the largest surviving heathlands in the Thames Basin. It supports a rich variety of characteristic heathland plants and animals, including many which are rare[2] or scarce[3]. The heathland bird community is particularly rich, and includes nationally important breeding populations of nightjar *Caprimulgus europaeus*, woodlark *Lullula arborea* and Dartford warbler *Sylvia undata,* all birds listed on Annexe 1 of the Birds Directive.

Open heathland has been part of the Surrey landscape for thousands of years, during which time traditional grazing and gathering of brushwood and bracken maintained its character. Western Surrey was, at one time, largely covered by these open habitats, but drainage and development for intensive agriculture, forestry, housing and roads have severely reduced their extent, and many remnants have become invaded by scrub. Surviving examples of open heathland are thus particularly important.

The heathland has developed on the acidic soils of the tertiary sand and gravel deposits of the London basin (maintly Bagshot Sands). A prominent central ridge runs diagonally across the generally undulating terrain; in the north of the site lies another ridge and two linear depressions where the ground is waterlogged and

1 'A Nature Conservation Review', D A Ratcliffe (1977), Cambridge

2 Nationally rare species: recorded from 1-15 10x10 km squares in Britain, and listed in one of the draft or published Red Data Books

3 Nationally scarce species: recorded from 16-100 km squares in Britain

valley bogs have developed.

Large areas of dry heath and acid grassland occur on the higher ground along with extensive areas of bracken, gorse, birch scrub and invasive pine. Depressions in the southern part of the Common contain bog, carr, wet heath and acidic marshy grassland communities. Extensive areas of secondary mixed woodland occur around the margins of the site and at Gracious Pond, a former mediaeval fish pond. There are several small acidic ponds on the common, but these are of recent origin.

Dry Heath

The dry heath and acidic grassland complexes contain heather *Calluna vulgaris*, bell heather *Erica cinerea,* dwarf gorse *Ulex minor* and bristle bent grass *Agrostis curtisii* (for which Chobham is the most easterly location in Britain). Most of the purer heather stands are even-aged; these are prevented from reaching maturity by frequent accidental fires. Purple moor-grass *Molinia caerulea* is an important component of the bristle bent grassland and tolerates all but the driest areas. A colony of Deptford pink *Dianthus armeria* (which is very rare in Surrey) occurs on a small patch of grassland at the eastern edge of the site.

Wet heath and bog

The wet heath areas are dominated by cross-leaved heath *Erica tetralix* and purple moor-grass. The more boggy areas support round-leaved sundew *Drosera rotundifolia,* oblong-leaved sundew *Drosera intermedia,* cross-leaved heath, bog asphodel *Narthecium ossifragum*, common cotton grass *Eriophorum angustifolium,* bog pimpernel *Anagallis tenella* and heath spotted orchid *Dachtylorhiza maculata.* Several rare Surrey species also occur in these bogs, including hare's tail cotton grass *Eriophorum vaginatum*, bogbean *Menyanthes trifoliata,* royal fern *Osmunda regalis*, the scarce[3] marsh gentian *Gentiana pneumonanthe* and the rare[2] marsh clubmoss *Lycopodiella inundata.*

Woodland and scrub

Silver birch *Betula pendula* and Scots pine *Pinus sylvestris* have invaded large areas of dry heath. Areas of more mature mixed woodland contain oak *Quercus robur*. Alder *Alnus glutinosa* dominates the carr woodland at Gracious Pond and smaller areas of willow carr (*Salix* species) occur throughout the Common. Gracious Pond also contains two ponds, a stream and some drier oak woodland, and supports rich and varied populations of fungi, mosses and ferns.

Open water

There are several areas of standing water on Chobham Common which are of importance primarily for the rich invertebrate fauna they support. A pond in the north-east of the site has recently been created and some of the shallower ones fill only erratically. The largest water body, adjacent to Sunningdale golf coure, is used as a reservoir and is too deep to support an extensive aquatic flora. The larger pond margins are dominated by rushes (*Juncus* species).

Bryophytes and lichens

The Common has a rich bryophyte (mosses and liverworts) and lichen flora. Bog mosses, including *Sphagnum compactum, S. palustre, S. .recurvum* and *S. papillosum* are locally abundant in the boggy

areas. Other heathland species include the moss *Dicranum spurium* and the lichens *Cladonia strepsilis* and *C. arbuscula*.

Invertebrates

The Common is a very important national site for invertebrates, particularly ants, bees and wasps (Hymenoptera), aquatic beetles (Coleoptera), flies (Diptera), butterflies and moths (Lepidoptera) and spiders (Araneae). Sixty-four scarce or rare species have been recorded. Rarities include the ant *Formica rufibarbis,* known elsewhere in Britain only in the Isles of Scilly, the robber fly *Eutolmus rufibarbis,* the saladid bug *Micranthia marginalis* and sizeable colonies of the silver-studded blue butterfly *Plebegus argus*. Chobham Common has the largest known spider fauna in Britain (approximately 50% of all British species have been recorded here), including the rare *Oxyopes heterophthalmus, Cheiracanthium pennyi, Araneus alsine* and *Uloborus walckenaerius.*

Birds

The extensive open heath and scrub within the site support many species of characteristic birds, often at high densities. The population of nightjar *Caprimulgus europaeus* is particularly large. Other rare species include woodlark *Lullula arborea,* Dartford warbler *Sylvia undata* and hobby *Falco subbuteo*; the diverse bird community includes more than 80 species: more common birds include stonechat *Saxicola torquata,* tree and meadow pipits *Anthus trivialis* and *A. pratensis* and yellowhammer *Emberiza citrinella.*

Chobham Common SSSI forms part of Thames Basin Heaths pSPA, which consists of a group of heathlands extending from Wisley in Surrey to Tadley in Hampshire and Bracknell in Berkshire, supporting nationally important populations of a number of bird species. These include nightjar, woodlark, dartford warbler (all listed on Annexe 1 of the Birds Directive as being rare and in need of protection) and hobby. Thames Basin Heaths pSPA, taken as a whole, supports an estimated 9.0, 29.2, 16.3 and 3.2% respectively of the British breeding populations of these species.

Members of Chobham Common Liaison Group

Organisation

Natural England
Chobham Society
RSPB
Ramblers' Association
Chobham Parish Council
Chobham Common Model Flyers Association
Surrey County Council
Surrey County Council (Foxhills & Virginia Water)
Chobham Common Riders' Association
Surrey Heathland Project
Windlesham Parish Council
Hon Sec, Chobham Common Preservation Committee
Runnymede Borough Council
Surrey Heath Borough Council
Surrey Heath Borough Council
Virginia Water Community Association
Surrey County Council
Surrey Wildlife Trust
Surrey Wildlife Trust