



# Chobham Common report on public consultations and recommendations for future management

**Dr John Underhill-Day**



FINAL

Recommended Citation  
Underhill-Day, J. C. (2008). Chobham Common report on public consultations and  
recommendations for future management. Footprint Ecology. Wareham. Dorset

## Summary

Chobham Common is one of the largest commons in south-east England. It is important as a public open space with some 250,000-300,000 visits each year by the public. It is also a wildlife site of European and National importance. The Common is owned by Surrey County Council and managed by the Surrey Wildlife Trust (The Trust) for the benefit of people and wildlife.

Following an appraisal of the management issues The Trust decided to carry out a full consultation on the future of the Common with the users and stakeholders and appointed a consultant to advise on, and facilitate this. The consultation has followed the principles set out in the document 'A Common Purpose: A guide to agreeing management on common land'.

Information on the issues relating to the management of the Common was prepared and made available to individuals and local and national organisations through a postal drop, meetings, open days and drop-in days, accompanied by appropriate publicity. A questionnaire was also prepared, circulated and achieved over two hundred responses.

The Common is used for a wide range of recreational pursuits as well as research and education. It contains six car parks, 17km of bridleways, 13 km of agreed horse rides and 13 km of public footpaths as well as three scheduled ancient monuments and the Victoria Memorial Cross.

From the questionnaire analysis (Section 3), the largest user group was walkers and dog walkers but horse riders were a significant minority interest. About 70% of visitors came at least weekly and about a third came on foot and slightly more than half arrived by car. Of those who came by car almost all parked in the car parks, of which about a third parked in the Roundabout car park.

People came to enjoy the scenery and wildlife of the Common; they appreciated the variety of walks and rides, the easy access both by car and on foot and its suitability for dogs. Most knew that the Common is a site of European importance for wildlife. Concerns raised were mostly about the activities of dogs and the condition of paths and bridleways. There were many suggestions about improving information for visitors and a wish for a greater wardening presence.

More than half of respondents thought that wildlife management was about right, but a substantial minority thought more tree and scrub management was needed. When asked about other managements, most visitors were unconcerned by burning, grazing, mowing, turf stripping or a combination of these, but a minority had serious concerns about burning and grazing. In considering grazing, there was a greater level of concern about the use of sheep than other stock, with this being a particular concern of dog walkers. Horse riders were most concerned about ponies or a combination of stock. Overall, nearly 70% of all users were unconcerned about a combination of stock with nearly 60% or more unconcerned about particular stock types.

When asked about stock management over 75% of all users were unconcerned about shepherding, nearly 70% about temporary fencing and over 60% about permanent fencing with or without cattle grids. Generally some 14-15% of all users expressed serious concerns about permanent fencing.

There was some recognition by organisations that the Common is a difficult place to manage for wildlife and people, and that as an SSSI it needs to be moving into favourable condition. The consultation was welcomed.

## Report on Chobham Common consultation and recommendations

There were varying views on the provision of car parks, but general support for the maintenance of the bridleways and footpaths. There were suggestions for better publicity, an educational programme, more liaison with local user groups and more information for the visiting public.

There was support for a variety of management methods including particularly tree and scrub clearance. There was both support for and scepticism about grazing. A number of organisations expressed concern or opposition to fencing, although this also had some support. It was suggested that trials of heather seeding should be instigated.

From a vegetation survey in 2002 (Section 4), less than 5% of the Common is pure *Calluna* dry heath, but over 50% of the Common is dominated by, or has a significant proportion of purple moor grass and much of the rest of the area is dominated by bracken, gorse or woodland and scrub. The latest assessments from 2006-2008, which covered just under 80% of the Chobham Common SWT reserve, recorded 89% of the areas assessed as unfavourable no-change or declining. The condition of the Common is still deteriorating.

The sections of this report describe the various management issues together with the responses of the public, and a more detailed analysis supported by the results of research is included in the Appendices. These include an examination of suggestions for using herbicides and heather seeding for heathland restoration, currently used in parts of the uplands.

The Government has set a target for achieving favourable or recovering condition on 95% of all SSSI land by 2010, has charged Natural England (NE) with meeting this, and has given them powers under the Countryside and Rights of Way Act. NE is also the body responsible for supervising the main funding mechanism for conservation and countryside management. The Trust is charged to do all it can to bring Chobham Common into favourable condition and to do so must explore all the means for achieving this. To do nothing is not an option.

The research suggests (Appendix 5) that all the management options have a place in the armoury of the heathland manager, with burning, mowing and turf stripping having a greater or lesser effect in reducing nutrients, (one of the main causes of conversion of heather to grass dominated communities), and with a suitable grazing regime mediating the balance of dwarf ericaceous shrubs and grasses for the benefit of the former.

The report (Section 7.2) recommends the establishment of a small group to specifically consider visitor issues, using as a starting point the matters on which respondents expressed views or concerns, and considering their suggestions and ideas. It is also recommended that a short visitor implementation plan be consulted on. This would include path and bridleway maintenance, staffing on the Common; visitor management, the provision of facilities, liaison with local communities, education and interpretation, and other matters. This should be incorporated into a five year plan with timetables for action and a ring fenced budget for certain maintenance work including paths and bridleways. There are a range of recommendations for consulting with the public and local organisations and for launching a number of initiatives to engage with local communities.

There follows a series of recommendations (Section 7.3) for habitat management on the Common, including consultation on, and the institution of a long term programme of woodland and scrub management and the inclusion of a bare ground action plan for insertion in the management plan.

The report recommends that all the management options should be employed in the future management of the Common, but with some caveats. In view of the concerns about burning it is recommended that some winter demonstration burns be carried out and that there are further consultations. Areas suitable for burning or mowing should be mapped, and smaller areas identified where turf stripping could give

## Report on Chobham Common consultation and recommendations

maximum benefit. A disposal plan for the stripped material and consultation with archaeological interests will also be necessary.

It is also recommended that grazing be re-introduced on the Common. Grazing by sheep is not considered suitable as the only form of grazing on the Common and is not considered to be currently practical, but should be kept under review. There are concerns about grazing by ponies although they are suitable from an ecological viewpoint, and it is suggested that there be consultations with the horse riding interests to see whether pony grazing might be introduced on the northern part of the Common. Cattle are recommended as the main grazing animal on the Common, with certain provisos as to the type of animal. It is suggested that initially low stocking rates should be used to allow familiarisation and monitoring to take place.

On the use of herbicides and seeding, it is recognised that there are considerable dangers in transferring a successful technique from the uplands onto lowland heath, but it is recommended that some experimental trails be set up to look at this.

A number of recommendations on monitoring both visitor use and the effects of habitat management are made, and attention is drawn to the need for a careful consideration of future staffing if the report's recommendations or most of them are adopted.

It is important that SWT seek the widest possible consensus on the future management of the Common. If the Trust adopts the recommendations in the report, then it is additionally recommended that further consultations with local communities and stakeholders will be needed. Strong views have been expressed by some over the various options for managing grazing stock, particularly fencing, and it is recommended that The Trust investigates the ways in which stock might be managed and consults widely on these.

At the end of the report, the appendices show copies of the responses from organisations, a summary of individual comments on the questions in the questionnaire and a summary of some relevant legislation and background issues. A summary of the comments by the surveyors who carried out the 2002 vegetation survey, a detailed review of the relevant research on heathland management and a copy of the questionnaire, leaflet and background paper used in the first consultation is also included. This is followed by a list of research references.

# Report on Chobham Common consultation and recommendations

1	Introduction and outline of the consultation process .....	1
2	Consultation methodology .....	2
3	Responses to the consultation .....	4
3.1	<i>Introduction</i> .....	4
3.2	<i>Visitor profile</i> .....	4
3.2.1	<i>Postcodes</i> .....	4
3.2.2	<i>Membership of wildlife conservation or amenity organisations</i> .....	6
3.2.3	<i>Awareness of the Common as a European designated site</i> .....	6
3.3	<i>Reasons for visiting and patterns of use</i> .....	6
3.3.1	<i>Reasons for visiting the Common</i> .....	6
3.3.2	<i>Amenities offered by the Common</i> .....	7
3.3.3	<i>Frequency of visit</i> .....	8
3.3.4	<i>Travel methods</i> .....	8
3.3.5	<i>Parking patterns</i> .....	8
3.3.6	<i>Other open spaces visited</i> .....	8
3.4	<i>Respondents views on condition of the Common</i> .....	8
3.4.1	<i>Concerns during visits to the Common</i> .....	8
3.4.2	<i>Views on current management of the Common for visitors</i> .....	9
3.4.3	<i>Views on current management of the Common for wildlife and tree and scrub management</i> .....	9
3.4.4	<i>Information at car parks, footpaths and bridleways and wardening</i> .....	9
3.4.5	<i>Dog Bins</i> .....	10
3.5	<i>Respondents views on future management options</i> .....	10
3.5.1	<i>Views about management options</i> .....	10
3.5.2	<i>Types of stock</i> .....	12
3.5.3	<i>Shepherding and fencing</i> .....	13
3.6	<i>Responses</i> .....	14
3.6.1	<i>Responses from organisations</i> .....	14
3.6.2	<i>Individual responses by post</i> .....	15
3.7	<i>Summary of responses on future visitor and habitat management</i> .....	15
3.7.1	<i>Questionnaire response on visitor management</i> .....	15
3.7.2	<i>Questionnaire responses on habitat management</i> .....	15
3.7.3	<i>Responses from organisations</i> .....	16
4	<i>Habitat Management</i> .....	17
4.1	<i>Introduction</i> .....	17
4.2	<i>Vegetation Survey of Chobham Common</i> .....	17
4.3	<i>Access and Recreation</i> .....	20
5	<i>Management options</i> .....	21
5.1	<i>Introduction</i> .....	21
5.2	<i>Scrub, woodland and bracken</i> .....	21
5.3	<i>Heathland</i> .....	21
5.3.1	<i>Controlled burning</i> .....	21
5.3.2	<i>Mowing</i> .....	22
5.3.3	<i>Turf stripping</i> .....	22
5.3.4	<i>Grazing</i> .....	23
5.3.5	<i>Use of herbicides on Molinia</i> .....	23
6	<i>Grazing management</i> .....	24
6.1	<i>Types of stock</i> .....	24

## Report on Chobham Common consultation and recommendations

6.1.1 Sheep .....	25
6.1.2 Ponies .....	25
6.1.3 Cattle .....	25
6.2 Stock management .....	26
6.2.1 Introduction .....	26
6.2.2 Shepherding .....	26
6.2.3 Temporary electric fencing .....	26
6.2.4 Full permanent perimeter fencing.....	26
7 Management recommendations .....	27
7.1 Introduction .....	27
7.1.1 Status and policy .....	27
7.1.2 Ecological factors .....	28
7.1.3 Consultation results .....	28
7.2 Future management for visitors .....	29
7.2.1 Introduction.....	29
7.2.2 Recommendations.....	29
7.3 Future habitat management .....	31
7.3.1 Introduction.....	31
7.3.2 Recommendations.....	32
7.3.2.1 Clearance of woodland and scrub .....	32
7.3.2.2 Bare ground .....	32
7.3.2.3 Controlled Burning .....	32
7.3.2.4 Mowing .....	33
7.3.2.5 Turf stripping.....	33
7.3.2.6 Grazing .....	33
7.3.2.7 Herbicides and Molinia .....	35
7.3.2.8 Monitoring .....	35
7.3.2.9 Staffing .....	36
8 Further Public Consultations .....	36
8.1 Achieving a consensus .....	36
Appendix 1. ....	<b>Error! Bookmark not defined.</b>
A1.1 Responses from organisations.....	<b>Error! Bookmark not defined.</b>
Appendix 2 .....	<b>Error! Bookmark not defined.</b>
A2.1 Summary of comments from individuals.....	<b>Error! Bookmark not defined.</b>
A2.1.1 Introduction.....	<b>Error! Bookmark not defined.</b>
A2.1.2 Comments on questionnaires.....	<b>Error! Bookmark not defined.</b>
Q B1 Other amenities offered by the Common.....	<b>Error! Bookmark not defined.</b>
Q B2 Concerns during visits to the Common .....	<b>Error! Bookmark not defined.</b>
Q B4 Views on current management of the Common for visitors....	<b>Error! Bookmark not defined.</b>
Q B5 & B6 Views on current management for wildlife and tree/scrub management .....	<b>Error! Bookmark not defined.</b>
<b>Bookmark not defined.</b>	
Q B 10, B11 & B12 Information at car parks, footpaths and bridleways and wardening .....	<b>Error! Bookmark not defined.</b>
<b>Bookmark not defined.</b>	
Q B13 Dog bins .....	<b>Error! Bookmark not defined.</b>
Q B 7 Comments on management options .....	<b>Error! Bookmark not defined.</b>
Q B8 Comments on grazing .....	<b>Error! Bookmark not defined.</b>
Q B9 Comments on Shepherding and fencing .....	<b>Error! Bookmark not defined.</b>
A 2.1.2 Comments from signing in sheets at drop-in days.....	<b>Error! Bookmark not defined.</b>
A 2.1.3 Comments in correspondence and e-mails .....	<b>Error! Bookmark not defined.</b>
Appendix 3 .....	<b>Error! Bookmark not defined.</b>
1.1 Background legislation and other relevant considerations .....	<b>Error! Bookmark not defined.</b>

1.1.1 <i>The Law of Property Act 1925</i> .....	<b>Error! Bookmark not defined.</b>
1.1.2 <i>The Countryside and Rights of Way Act 2000</i> .....	<b>Error! Bookmark not defined.</b>
1.1.3 <i>PSA Agreement</i> .....	<b>Error! Bookmark not defined.</b>
1.1.4 <i>Higher Level Stewardship for heathland</i> .....	<b>Error! Bookmark not defined.</b>
1.1.5 <i>The Commons Act 2006</i> .....	<b>Error! Bookmark not defined.</b>
Appendix 4 .....	<b>Error! Bookmark not defined.</b>
4. 1. <i>Surveyor’s comments on trends in vegetation on Chobham Common</i> .....	<b>Error! Bookmark not defined.</b>
<b>defined.</b>	
4. 2. <i>Surveyors comments on management of Chobham Common</i> .....	<b>Error! Bookmark not defined.</b>
Appendix 5 .....	<b>Error! Bookmark not defined.</b>
A5.1 <i>Habitat management</i> .....	<b>Error! Bookmark not defined.</b>
A5.1 <i>Woodland, scrub and bare ground</i> .....	<b>Error! Bookmark not defined.</b>
A5.1.1 <i>Woodland and associated scrub clearance</i> .....	<b>Error! Bookmark not defined.</b>
A5.1.2 <i>Gorse</i> .....	<b>Error! Bookmark not defined.</b>
A5.1.3 <i>Bracken</i> .....	<b>Error! Bookmark not defined.</b>
A5.1.4 <i>Bare ground</i> .....	<b>Error! Bookmark not defined.</b>
A5.2 <i>Controlled burning</i> .....	<b>Error! Bookmark not defined.</b>
A5.3 <i>Mowing</i> .....	<b>Error! Bookmark not defined.</b>
A5.4 <i>Turf Stripping</i> .....	<b>Error! Bookmark not defined.</b>
A5.5 <i>Grazing</i> .....	<b>Error! Bookmark not defined.</b>
A5.5.1 <i>Grazing dry heath</i> .....	<b>Error! Bookmark not defined.</b>
A5.5.2 <i>Grazing wet heath</i> .....	<b>Error! Bookmark not defined.</b>
A5.5.3 <i>The effects of grazing on trees and scrub</i> .....	<b>Error! Bookmark not defined.</b>
A5.6 <i>Stock types</i> .....	<b>Error! Bookmark not defined.</b>
A5.6.1 <i>Sheep</i> .....	<b>Error! Bookmark not defined.</b>
A5.6.2 <i>Ponies</i> .....	<b>Error! Bookmark not defined.</b>
A5.6.3 <i>Cattle</i> .....	<b>Error! Bookmark not defined.</b>
A5.7 <i>Molinia management in the uplands</i> .....	<b>Error! Bookmark not defined.</b>
A 5.2 <i>Stock Management</i> .....	<b>Error! Bookmark not defined.</b>
A5.2.1 <i>Shepherding</i> .....	<b>Error! Bookmark not defined.</b>
A5.2.2 <i>Tethering</i> .....	<b>Error! Bookmark not defined.</b>
A5.2.3 <i>Temporary fencing</i> .....	<b>Error! Bookmark not defined.</b>
A5.2.4 <i>Full permanent perimeter fencing</i> .....	<b>Error! Bookmark not defined.</b>
A5.2.5 <i>Combinations of the above</i> .....	<b>Error! Bookmark not defined.</b>
A5.2.6 <i>Cattle grids</i> .....	<b>Error! Bookmark not defined.</b>
A5.3 <i>Stocking densities</i> .....	<b>Error! Bookmark not defined.</b>
Appendix 6 .....	<b>Error! Bookmark not defined.</b>
6.1 <i>Questionnaire</i> .....	<b>Error! Bookmark not defined.</b>
Appendix 7 .....	<b>Error! Bookmark not defined.</b>
<i>Leaflet</i> .....	<b>Error! Bookmark not defined.</b>
<i>Background paper</i> .....	<b>Error! Bookmark not defined.</b>
References .....	38

## Figures

Figure 1 Reasons given for visiting Chobham Common with percentage in each category .....	6
Figure 2 Reasons for visiting the Common (with number of respondents).....	7



## Tables

Figure 1 Reasons given for visiting Chobham Common with percentage in each category .....	6
Figure 2 Reasons for visiting the Common (with number of responses) .....	7
Table 1 Frequency of visit to Chobham Common .....	8
Table 2 Method of arrival at Chobham Common .....	8
Table 4 Views about different managements by visitors to Chobham Common .....	10
Table 5 Views about different managements by dog walkers.....	11
Table 6 Views about different managements by horse riders.....	11
Table 7 Views about different managements by other users.....	11
Table 8 Views about stock types grazing on the Common .....	12
Table 9 Views about stock types from dog walkers .....	12
Table 10 Views about stock types from horse riders .....	12
Table 11 Views about stock types from other users .....	12
Table 12 Views about shepherding and fencing.....	13
Table 13 Dog walker’s views about shepherding and fencing.....	13
Table 14 Horse rider’s views about shepherding and fencing.....	14
Table 15 Other user’s views about shepherding and fencing.....	14

## 1 Introduction and outline of the consultation process

Chobham Common is one of the largest commons in south-east England. It is, however a fragment of much larger areas of lowland heath which once spread across the lighter soils of Surrey, formed by the clearance of woodland, probably during Neolithic times. Elsewhere, evidence suggests that the heaths were kept open by grazing, burning and the collection of firewood, timber, turves and minerals for use by the local communities. Lowland heathland may have been at its maximum extent by about 1800, since when there has been an estimated 84% loss in area within the UK, with a 53% (10,400 ha) loss in area on the Thames Basin heaths (of which Chobham Common is a part) over the last 100 years. Chobham was an important location for army training from about the middle of the nineteenth century until the World War II, and this probably helped both to retain it as heathland and keep it open. Since that time it has become a public open space with over a quarter of a million visits per annum and a much valued amenity by local communities.

Its importance as a wildlife site has also been recognised with its designation as a Site of Scientific Interest (SSSI) in 1973 and later as a Special Protection Area (SPA) and Special Area of Conservation (SAC) under The European Birds and Habitats Directives. It was also declared a National Nature Reserve in 1994.

The Surrey Wildlife Trust (The Trust) took over the management of Chobham Common (The Common) from the owners Surrey County Council in 2002. In consultation with Natural England (NE), the Trust decided that in view of the importance of the site as a public open space, and following an appraisal of the habitat management issues carried out as part of the preparation of a draft management plan revision, a full consultation with the users and stakeholders in the common was both necessary and desirable.

The Trust therefore appointed a consultant with experience of public consultations on commons and knowledge of heathland ecology and management, Footprint Ecology Ltd, to advise on, and facilitate the consultation. The consultation has followed the principles set out in the document 'A Common Purpose: A guide to agreeing management on common land' agreed by EN, The National Trust, The Open Spaces Society, the then Rural Development Service and the Countryside Agency. The Trust wanted the consultation to be transparent and open, and was keen to get the views of as many local people and organisations as possible.

It was decided at an early stage to provide written information in three parts to cater for different degrees of interest and involvement. For this reason a leaflet was produced setting out the issues, with a more detailed background paper, which set these out in considerably more detail. In addition, the draft management plan, which gave fully referenced information and discussion on the management issues, was made available on the Trust website, or as a hard copy for a small fee.

It was also decided to produce a questionnaire both to raise what were seen as the main management issues and to give some structure to the responses, but at the same time inviting additional comments and making it clear that respondents should not be constrained in the issues they might wish to raise.

There was a considerable level of interest from local organisations and residents close to the Common, which, as expected, dropped off further away from the local area. There have been no representations to the Trust that any local organisations or groups have been excluded from the consultations, and a number of complimentary comments have been made applauding the Trust's efforts to consult local interests. The Trust is keen to continue to engage with the local community over management of the Common for visitors and wildlife in the future regardless of the outcome of the current consultation

## 2 Consultation methodology

The public consultation on the future of Chobham Common was informed by a number of documents which were made widely available to the public. These were\*:

- A short two page leaflet giving a brief description and summary of the main management issues and inviting responses.
- A six page background paper summarising the main issues both for habitat and visitor management on the Common and the pros and cons of using the different management options. Both this paper and the leaflet contained full details with dates and locations of drop-in days planned in various locations
- The draft Management Plan for Chobham Common. This 126 page document with a detailed description of the management problems and a comprehensively referenced explanation of the main management techniques was made available on the SWT website, or (subject to a small payment towards the cost of printing) as a hard copy to those who wanted it.
- A questionnaire which asked individual respondents a range of questions about how the current and future management of the Common both for people and wildlife should be progressed

\* A copy of the questionnaire is included in Appendix 6. Copies of the background paper and leaflet can be seen in Appendix 7.

Consultations began in early May 2008 and the consultation period lasted until the end of July 2008, a period of almost three months.

Information was circulated to local residents, visitors to the Common and interested parties using the following methods:

1. Letters (with leaflet, background paper and questionnaire enclosed) were hand delivered to all households adjoining the common and some adjoining roads at Chobham and Sunningdale
2. A letter was sent to SWT members living in the area (with a leaflet and background paper) informing them of the consultation.
3. Letter inviting comments (with leaflet and background paper) were sent to national and local organisations.
4. Four drop-in days were arranged, one in each of the parishes around the Common. Dates and locations of drop-in days were advertised on posters and were included on the leaflet and background paper. The drop-in days were also advertised in all letters to local households and local organisations.
5. Three days with manned information points on the Common were arranged with dates and locations advertised on posters and included on the leaflet and background paper and mentioned in all letters to individuals and local organisations.
6. The Sunningdale drop-in day was poorly attended, and so a further information day was arranged in the main car park and advertised extensively in the Parish.
7. Posters were widely distributed on the Common in car parks and in the area on noticeboards and in local shops and other outlets.
8. Illustrated presentations were given followed by a Q&A sessions to The Chobham Common Liaison Group. Similarly, presentations were given and questions answered at publicly advertised meetings to Chobham Parish Meeting, The Chobham Society and the Chobham Common Riders Association and local horse riders, and a brief presentation was given to the Surrey Countryside Access Forum.

## Report on Chobham Common consultation and recommendations

9. Information was placed on the Trust's website and the address given in printed literature and posters.
10. Press releases were sent out on 6<sup>th</sup> May 2008 letting readers know the start of consultations and inviting participation. A further press release was sent on 3<sup>rd</sup> July to remind readers that they could still contribute their views and again on 22<sup>nd</sup> July to invite participation and to announce that consultations would be drawing to a close at the end of July.
11. An article was published by the Surrey over 50s magazine and a note about the consultations inviting comments and participation was inserted in the Parish Magazines in all local parishes.
12. An interview on the consultation and the reasons behind it was given on local radio.
13. In all the literature and at all the events, participants were encouraged to fill in questionnaires or respond to the consultation by writing or emailing SWT.

## **3 Responses to the consultation**

### **3.1 Introduction**

The general level of response was high with considerable interest particularly from those living around the Common and visitors to the Common. The drop-in day at Sunningdale was poorly attended possibly because there was a local fete on that day.

Attendance at drop-in days was:

Virginia Water	13
Sunningdale	4
Chobham	16
Windlesham	20

Open days in the car parks were well attended except on July 31<sup>st</sup>.

18 <sup>th</sup> May	48
1st June	26
23 <sup>rd</sup> June	24
31 <sup>st</sup> July	2

In all 153 people had direct contact with Trust staff or the Consultants through these events.

Of the 207 completed questionnaires received by the Trust, 88 (42%) were from visitors to car parks, 44 (21%) were from local residents, 33 (17%) from drop-in day attendees and 20 (10%) from meetings. The remainder were from those who responded following the distribution of questionnaires at Chobham Market, who accompanied the guided walk on the Common, from common users such as model aircraft fliers to whom they were distributed directly on the Common or who replied directly to the Trust. There were also two letters and five e-mails from individuals and eleven responses from organisations.

There were many comments from individuals made on the questionnaire and a summary of these has been included as Appendix 2. These have provided considerable insight into many of the issues, but no clear direction as relatively few people provided comments on a number of questions and in many cases they conflict. However, the general thrust of the comments and in many cases specific comments have been fully taken into account in this report. Generally, however, this report has relied on the tick-box answers to the questions for a view on the overall direction of responses. The following section describes the responses from the tick boxes in the visitor questionnaire.

### **3.2 Visitor profile**

#### **3.2.1 Postcodes**

Most people who gave their postcodes lived within the Districts containing, or immediately adjoining the Common (Map 1), including Surrey Heath, Woking and Runnymede but there were a few who gave postcodes from further away:

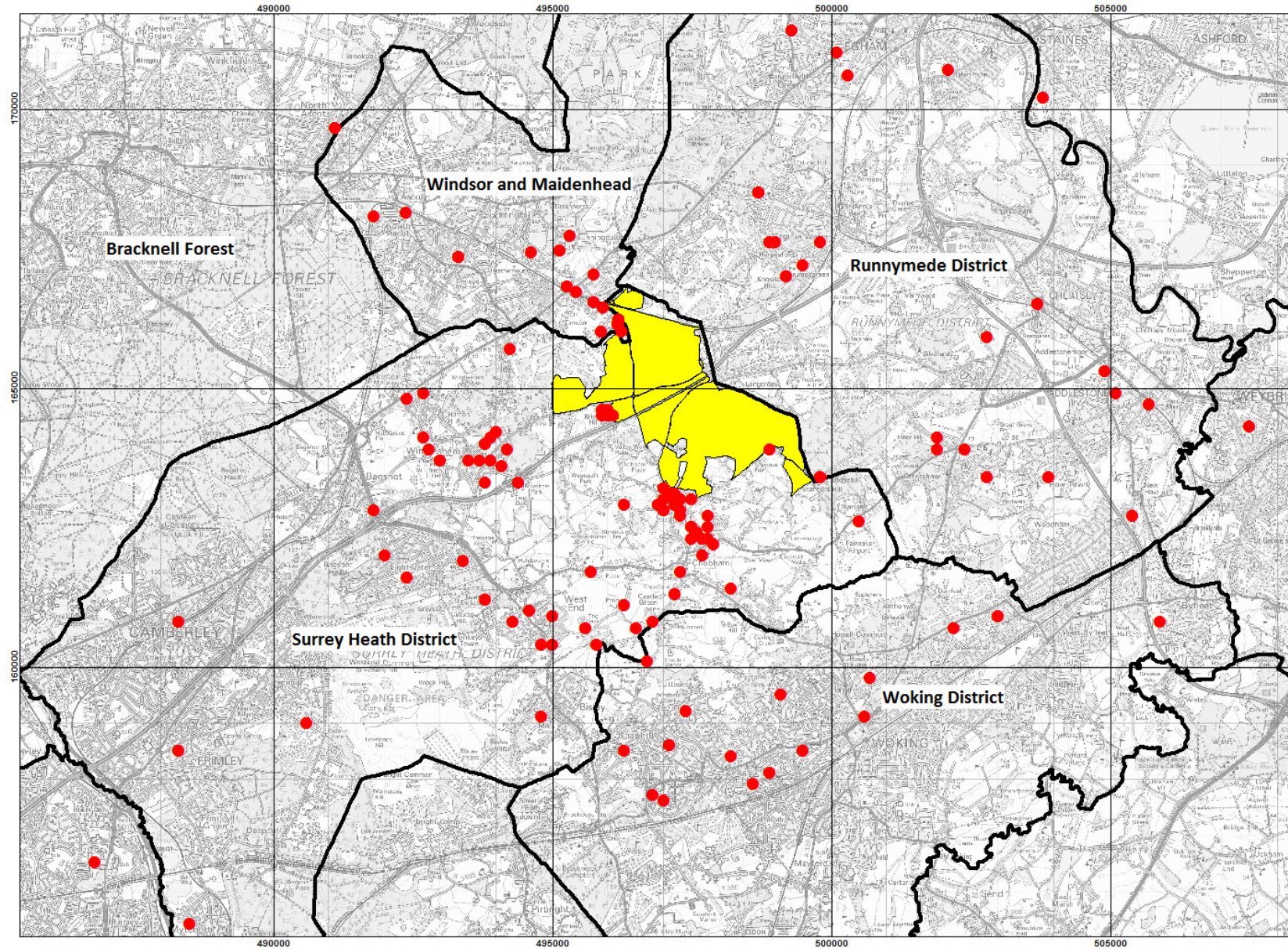
# Home postcodes of respondents to a consultation questionnaire for Chobham Common



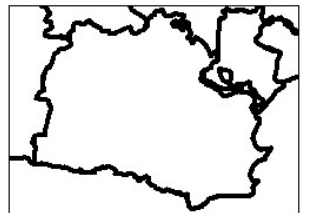
5 December 2008

Scale 1:97414

- Respondent home postcode
- ▭ District boundary
- ▭ Chobham Common



Map reproduced from the Ordnance Survey map by Footprint Ecology with the permission of the Controller of Her Majesty's Stationary Office. © Crown Copyright, All Rights Reserved. Contractor licence number XXXXXXXX for the use of OS data provided through XXXX.



## Report on Chobham Common consultation and recommendations

### 3.2.2 Membership of wildlife conservation or amenity organisations

Sixty-seven respondents (32%) did not answer this question and 41 (20%) said they did not belong to any wildlife or amenity organisation. Of the remainder, membership was as follows:

Surrey Wildlife Trust	38	RSPB	27
National Trust	24	Campaign to Protect Rural England	10
Woodland Trust	10	Chobham Society	5
World Wildlife Fund	5	Royal Horticultural Society	5
Wetlands and Wildfowl Trust	4	Horsell Common Preservation Society	4
British Horse Society	4	Open Spaces Society	4
British Trust for Ornithology	3		

Altogether, of 185 memberships, 104 (56%) belonged to a wildlife conservation or related organisations, 53 (28%) belonged to amenity organisations, 14 (8%) were members of riding, aircraft flying and other activity organisations and the remaining 14 (8%) belonged to a whole variety of other societies and clubs.

Another 36 organisations were named by two respondents or less.

### 3.2.3 Awareness of the Common as a European designated site

Approximately 81% of all respondents were aware that Chobham Common is designated as a European nature conservation site.

## 3.3 Reasons for visiting and patterns of use

### 3.3.1 Reasons for visiting the Common

Many respondents identified more than one reason for visiting the Common (Figure 1).

**Figure 1 Reasons given for visiting Chobham Common with percentage in each category**



The most popular reasons given were

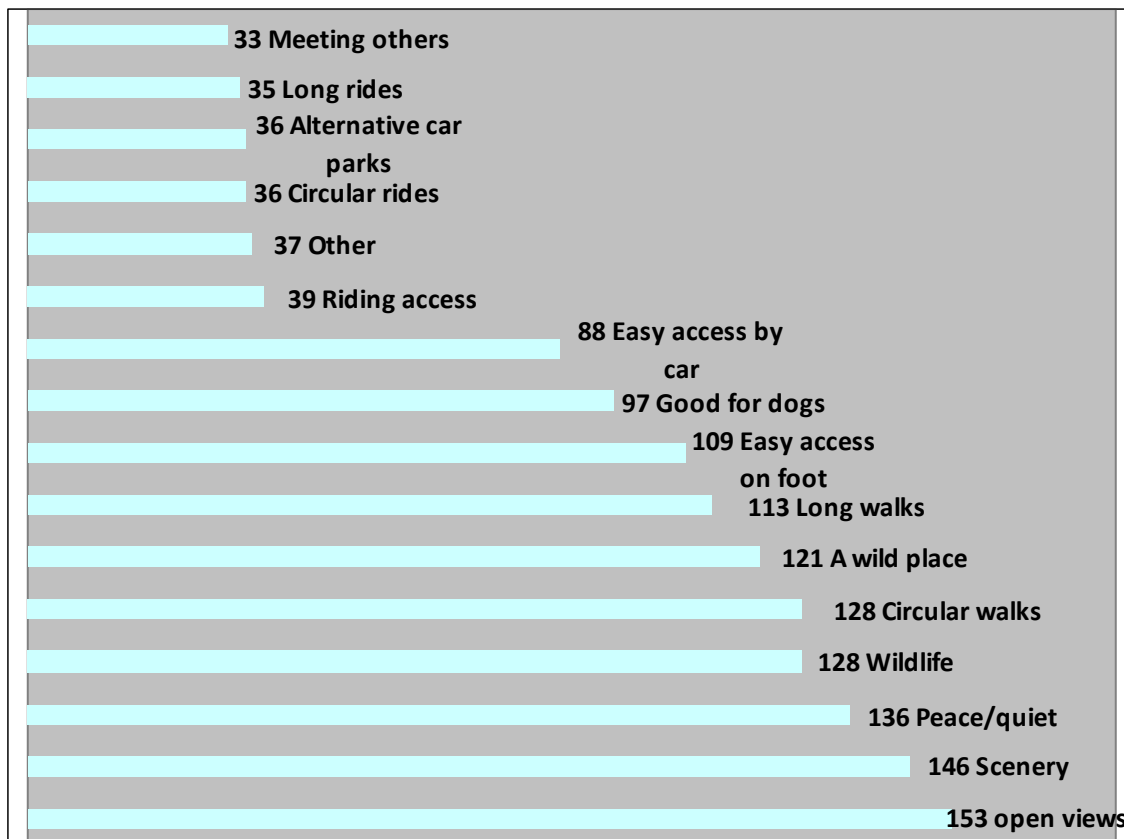
- Walking (27%) and dog walking (21%) which together made up nearly half of all responses
- Next most popular reasons were quiet relaxation (17%), followed by nature study (13%) and horse riding (9%).
- A range of other activities were carried out on the Common by fewer people including cycling, jogging, picnicking and flying model aircraft.

Although this is a snapshot of the reasons people visited, many gave multiple answers so that from 207 questionnaires, there were 514 responses. This suggests that considerable numbers of people visit the Common for a variety of reasons, some of which may not be mutually exclusive on the same visit; walking and nature study or horse riding and quiet relaxation for example.

### 3.3.2 Amenities offered by the Common

This was a multi choice question and the answers indicate that most people visited the Common for a range of amenities. Peace and quiet, open views, a sense of wildness and scenery were all highly valued. Many visitors appreciated the variety of walks and the easy access by car and on foot for those living nearby. The Common was generally seen as a suitable place to bring dogs, and was appreciated by horse riders for its easy access and variety of rides. Few people saw it as a place to meet others.

**Figure 2 Reasons for visiting the Common (with number of responses)**





### 3.3.3 Frequency of visit

**Table 1** Frequency of visit to Chobham Common

Frequency	Daily	Weekly	Monthly	Less often
Number	63	81	34	28
Percentage	31	39	16	14

Seventy percent of people visited the Common on a weekly basis or more often, with 14% of respondents visiting less than once a month.

### 3.3.4 Travel methods

**Table 2** Method of arrival at Chobham Common

Method	Car/van	Horse box	Cycle	On foot	By horse	Public Trans.
Number	135	5	16	79	33	1
Percentage	50.2	1.9	5.9	29.3	12.3	0.4

About half of all visitors arrived by car/van with a further 29% arriving on foot. Some 12% of visitors arrived on horseback. However, these figures should be treated with caution, as some respondents filled in more than one box.

### 3.3.5 Parking patterns

Some 96% of all car/van users parked in the car parks with only 4% parking at roadside. Nearly 30% of users parked at the Roundabout car park, with 16% parking at Staple Hill, and 11% at the Monument and 11% at Gracious Pond Road. Less than 10% of those who came by vehicle parked in any of the other car parks with the lowest use being made of Burma Road and the Fishpool car parks. There were some 70 responses from those who used more than one car park.

### 3.3.6 Other open spaces visited

This was another multi-choice question. Respondents named 60 other open spaces they visited locally, with the most popular being (with number of respondents in parenthesis) Windsor Great Park (20), Horsell Common (15), Virginia Water (12), Wisley Common (5), Windlesham Park (5), Lightwater Country Park (5), Thursley Common (3), Surrey Hills (3), and Sunningdale Golf Course (3). All other open spaces were mentioned by three respondent or fewer, and 7 respondents said they did not visit any other sites.

## 3.4 Respondents views on condition of the Common

### 3.4.1 Concerns during visits to the Common

People were asked about the following issues in another multi choice question to which there were 395 responses.

**Table 3** The main concerns of those who visit Chobham Common

Concerns	Number	%
Uncontrolled dogs	70	17.7
Dog mess	65	16.4
Disturbance to wildlife	48	12.2
Path surfaces	42	10.6
Bridleway surfaces	36	9.1
Walkers meeting riders	24	6.1
Appearance of burnt areas	23	5.8
Too noisy	18	4.5
Riders meeting walkers/joggers/cyclists	16	4.0
Too crowded	7	1.8
Too quiet	2	0.5
Other	45	11.4

No single concern emerged as overwhelming:

- Some 34% of responses were concerned about the activities of dogs
- About 20% of visitors were concerned about path or bridleway surfaces
- 12% of visitors were concerned about disturbance to wildlife
- There were also concerns over walkers meeting riders and riders meeting other users

#### *3.4.2 Views on current management of the Common for visitors*

Of the 199 responses on management:

- 71% (141) thought management was about right
- 22% (41) thought it needed changing
- 8% (15) had no view.

#### *3.4.3 Views on current management of the Common for wildlife and tree and scrub management*

Of the 198 respondents who gave a view on management for wildlife:

- About 62% (122) thought it was about right
- 21% (41) thought it needed changing
- 18% (35) had no view
- On tree and scrub management, of 195 respondents 48% (93) thought it was about right
- 41% (79) thought there was not enough clearance.
- 12% (23) thought there was too much clearance

#### *3.4.4 Information at car parks, footpaths and bridleways and wardening*

Car parks

- About 76% of those who gave a view (189) thought there was enough information in the car parks
- 24% thought there was not enough
- One person thought there was too much

Footpaths and bridleways

- Of 197 responses, 54% thought paths well maintained

## Report on Chobham Common consultation and recommendations

- 40% thought they needed more maintenance
- 6% thought they needed no maintenance
- Of 153 responses, 55% thought bridleways well maintained
- 43% thought they needed more maintenance
- 2% thought that no maintenance was needed

### Wardening presence

- Of 191 responses, 64% thought the wardening presence was about right
- 36% that it was not enough
- No respondents thought that there was too much.

### 3.4.5 Dog Bins

- Of 206 people who responded, just over 70% thought there should be dog bins
- Just over 19% thought they were not needed
- 10% had no view

### Of those who thought there should be dog bins

- 89% thought they should be in all car parks
- 8% opted for bins in the Roundabout car park only
- 3% wanted a wider distribution

The proportion of dog owners and non dog owners who thought there should be dog bins was about 70% in both cases; 86% of dog owners and 96% of non dog owners who wanted bins preferred them to be sited in all car parks.

## 3.5 Respondents views on future management options

### 3.5.1 Views about management options

**Table 4** Views about different managements by visitors to Chobham Common

Management	Respondents						Total
	No concerns		Slight concerns		Serious concerns		
	Number	%	Number	%	Number	%	
Controlled burning	121	65.1	48	25.8	17	9.1	186
Grazing	129	69.0	37	19.8	21	11.2	187
Mowing	143	80.3	33	18.5	2	1.1	178
Vegetation stripping	116	65.5	48	27.1	13	7.3	177
A combination	98	78.4	24	19.2	3	2.4	125

- The majority (65-80%) of respondents had no concerns about using any options
- Respondents were generally less concerned about mowing or a combination of management options than about the use of other options on their own
- For those respondents who expressed slight concerns about management options there was some concern about all options, but concerns about vegetation stripping and controlled burning were slightly higher than for other management options
- About 10% of respondents were seriously concerned about controlled burning and grazing, with slightly lower concern about vegetation stripping and very low levels of serious concern about mowing or a combination of management options.

## Report on Chobham Common consultation and recommendations

Responses were then split between those who were dog walkers, horse riders and all other visitors, (but included a number of respondents who were within more than one of these categories and whose views have therefore been counted more than once in the following tables 5-15).

**Table 5** Views about different managements by dog walkers

Management	Respondents						Total
	No concerns		Slight concerns		Serious concerns		
	Number	%	Number	%	Number	%	
Controlled burning	53	59.6	23	25.8	13	14.6	89
Grazing	55	62.5	24	27.3	9	10.2	88
Mowing	64	77.1	17	20.5	2	2.4	83
Vegetation stripping	52	61.2	24	28.2	9	10.6	85
A combination	40	70.2	15	26.3	2	3.5	57

**Table 6** Views about different managements by horse riders

Management	Respondents						Total
	No concerns		Slight concerns		Serious concerns		
	Number	%	Number	%	Number	%	
Controlled burning	22	55.0	12	30.0	6	15.0	40
Grazing	17	42.5	14	35.0	9	22.5	40
Mowing	28	77.8	7	19.4	1	2.8	36
Vegetation stripping	23	62.2	11	29.7	3	8.1	37
A combination	14	56.0	9	36.0	2	8.0	25

**Table 7** Views about different managements by other users

Management	Respondents						Total
	No concerns		Slight concerns		Serious concerns		
	Number	%	Number	%	Number	%	
Controlled burning	60	71.4	21	25.0	3	3.6	84
Grazing	69	80.2	11	12.8	6	7.0	86
Mowing	68	81.9	15	18.1	0	0.0	83
Vegetation stripping	55	68.8	21	26.2	4	5.0	80
A combination	52	86.7	8	13.3	0	0.0	60

- About 15% of dog walkers and horse riders were seriously concerned about burning as an option, but less than 4% of other users had serious concerns.
- 23% of horse riders, 10% of dog walkers and 7% of other users had serious concerns about grazing.
- The proportions having serious concerns at other options were less than 9% in most cases, except 10% of dog walkers who had serious concerns about vegetation stripping.

## Report on Chobham Common consultation and recommendations

### 3.5.2 Types of stock

**Table 8** Views about stock types grazing on the Common

Type of stock	Respondents						Total
	No concerns		Slight concerns		Serious concerns		
	Number	%	Number	%	Number	%	
Sheep	114	63.7	29	16.2	36	20.1	179
Cattle	105	59.0	43	24.1	30	16.9	178
Ponies	108	62.4	36	20.8	29	16.8	173
A combination	110	69.6	23	14.6	25	15.8	158

- About 60% of respondents had no concerns about the use of individual stock types on the Common and nearly 70% had no concerns about a combination of stock.
- Slight concerns about use of cattle were most frequent, with lower concerns about ponies and sheep, and least slight concerns expressed about a combination of stock types.
- About 20% of respondents expressed serious concerns about sheep and about 17% about cattle and ponies. There was slightly less serious concern about as combination of stock.
- 

**Table 9** Views about stock types from dog walkers

Type of stock	Respondents						Total
	No concerns		Slight concerns		Serious concerns		
	Number	%	Number	%	Number	%	
Sheep	48	53.9	17	19.1	24	27.0	89
Cattle	48	53.9	24	27.0	17	19.1	89
Ponies	50	58.8	18	21.2	17	20.0	85
A combination	50	64.9	13	16.9	14	18.2	77

**Table 10** Views about stock types from horse riders

Type of stock	Respondents						Total
	No concerns		Slight concerns		Serious concerns		
	Number	%	Number	%	Number	%	
Sheep	17	43.6	7	17.9	15	38.5	39
Cattle	14	36.8	11	28.9	13	34.2	38
Ponies	17	44.7	4	10.5	17	44.7	38
A combination	13	41.9	4	12.9	14	45.2	31

**Table 11** Views about stock types from other users

Type of stock	Respondents						Total
	No concerns		Slight concerns		Serious concerns		
	Number	%	Number	%	Number	%	
Sheep	61	77.2	10	12.6	8	10.1	79
Cattle	55	69.6	17	21.5	7	8.9	79
Ponies	55	70.5	18	23.1	5	6.4	78
A combination	58	79.5	10	13.7	5	6.8	73

## Report on Chobham Common consultation and recommendations

- About half of dog walkers had no concerns about any types of stock.
- Dog walkers had most slight concerns about cattle and most serious concerns about sheep. There was least concern about a combination of stock.
- Less than half of all horse riders had no concerns about any stock.
- Horse riders had a slight concern about all types of stock but with least slight concerns about ponies and a combination of stock and most slight concerns about cattle.
- The most serious concerns by horse riders were about a combination of stock and ponies , but with high levels of concern about sheep and cattle.
- Nearly 80% of other users had no concerns about sheep or a combination of stock.
- Other users had more slight concerns about cattle and ponies than about sheep or a combination of stock, slightly higher serious concerns about sheep than about other stock and least serious concerns about ponies or a combination of stock.

### 3.5.3 Shepherding and fencing

**Table 12** Views about shepherding and fencing

Stock management	Respondents						Total
	No concerns		Slight concerns		Serious concerns		
	Number	%	Number	%	Number	%	
Shepherding (for sheep)	129	76.3	21	12.4	19	11.2	169
Temporary fenced enclosures	132	69.5	38	20.0	20	10.5	190
Additional fencing with access points	111	61.0	42	23.1	29	15.9	182
Some additional fencing with cattle grids	111	64.9	36	21.1	24	14.0	171

- Over three quarters of respondents had no concerns about shepherding and over 69% no concerns about temporary fencing.
- Of those respondents who expressed slight concern about the options, fewest expressed concerns about shepherding and most expressed concern about additional fencing with access points.
- Of those respondents who expressed serious concerns, fewest expressed concerns about temporary fenced enclosures and shepherding were more were concerned about permanent fencing with or without cattle grids.

**Table 13** Dog walker's views about shepherding and fencing

Stock management	Respondents						Total
	No concerns		Slight concerns		Serious concerns		
	Number	%	Number	%	Number	%	
Shepherding (for sheep)	56	68.3	13	15.9	13	15.9	82
Temporary fenced enclosures	63	64.3	22	22.4	13	13.3	98
Additional fencing with access points	54	58.1	25	26.9	14	15.1	93
Some additional fencing with cattle grids	56	59.6	20	21.3	18	19.1	94

## Report on Chobham Common consultation and recommendations

**Table 14** Horse rider's views about shepherding and fencing

Stock management	Respondents						Total
	No concerns		Slight concerns		Serious concerns		
	Number	%	Number	%	Number	%	
Shepherding (for sheep)	19	51.3	9	24.3	9	24.3	37
Temporary fenced enclosures	21	50.0	14	33.3	7	16.7	42
Additional fencing with access points	19	47.5	13	32.5	8	20.0	40
Some additional fencing with cattle grids	21	48.8	8	18.6	14	32.6	43

**Table 15** Other user's views about shepherding and fencing

Stock management	Respondents						Total
	No concerns		Slight concerns		Serious concerns		
	Number	%	Number	%	Number	%	
Shepherding (for sheep)	67	89.3	4	5.3	4	5.3	75
Temporary fenced enclosures	63	78.8	11	13.8	6	7.5	80
Additional fencing with access points	51	66.2	14	18.2	12	15.6	77
Some additional fencing with cattle grids	50	67.6	14	18.9	10	13.5	74

- Nearly 70% of dog walkers were unconcerned about shepherding for sheep, over 60% about temporary fencing and just under 60% about permanent fencing with or without cattle grids
- There were roughly equal levels of concerns by dog walkers about all options but with rather higher serious concerns at additional fencing with cattle grids and slightly lower serious concerns about temporary enclosures
- About half of horse riders were unconcerned about shepherding or temporary fencing with just under half unconcerned about permanent fencing
- Conversely about half of horse riders were concerned about shepherding and temporary fencing and just over half at permanent fencing
- There was a higher level of serious concerns by horse riders about fencing with cattle grids than any other option and a lower level of serious concerns about temporary fencing
- Over 65% of other users were unconcerned about shepherding with half unconcerned about fencing with cattle grids
- Other users had low levels of concern about shepherding, about 20% had concerns about temporary fencing and between 30-35% concerns about permanent fencing with or without cattlegrids.

### 3.6 Responses

#### 3.6.1 Responses from organisations

Responses were received from the owner of the Common, Surrey County Council and from the following organisations:

Campaign to Protect Rural England  
Chobham Commons Preservation Committee

## Report on Chobham Common consultation and recommendations

Chobham Parish Council  
Chobham Riders Association  
The Chobham Society  
Hymettus  
National Grid  
Open Spaces Society  
The Ramblers Association  
RSPB  
Surrey Bird Club  
Botanical Society of the British Isles

These responses are all reproduced in full in Appendix 1

### *3.6.2 Individual responses by post*

Individual comments on questionnaires and on drop in day sheets and responses by post are summarised in Appendix 2

## **3.7 Summary of responses on future visitor and habitat management**

### *3.7.1 Questionnaire response on visitor management*

About half of all visitors to Chobham came to walk or dog walk and about one in ten were horse riders. About 70% of visitors came at least weekly. Just over half came by car, about a third on foot and just over a tenth on horseback. Of those who came by car almost all parked in the car parks, of whom, about a third parked in the Roundabout car park with the remainder roughly equally spread among the other car parks except Burma Road and Fishpool car parks which had lower numbers.

The character of the Common with its scenery, wildlife and sense of getting away from it all was valued by the majority of visitors who also appreciated the length and variety of walks, their suitability for dogs, and the easy access to the Common by car or on foot. About half the respondents were members of a wildlife or amenity organisation and about 80% knew that the Common is a site of European importance for wildlife.

The Common offers an outdoor experience which is different in scale and character from many others, and the most popular alternatives had similar features such as Windsor Great Park, Horsell Common and Virginia Water.

Respondents raised a range of concerns but none stood out clearly as being a major worry. Issues with dogs were clearly a concern, with the state of paths and bridleways and disturbance to wildlife also mentioned by many.

There were many suggestions about improving information for visitors with the provision of maps, walking routes, information and signage as well as a greater wardening presence all mentioned by a significant number of respondents. There was considerable support for dog bins in car parks.

### *3.7.2 Questionnaire responses on habitat management*

Over 60% of visitors thought that wildlife management was about right with about a fifth believing it needed changing. About half thought tree and scrub management was about right but a substantial minority thought more was needed.



## Report on Chobham Common consultation and recommendations

Most visitors were unconcerned by any management option and about 80% were unconcerned by a combination of options or mowing, with about 10% seriously concerned about burning or grazing. When split between users, there was a higher level of concern from dog walkers and riders about burning and grazing than from other users.

When grazing was considered, there was a greater level of concern about the use of sheep than other stock, with this being a particular concern of dog walkers. Horse riders were most concerned about ponies or a combination of stock, but 10% or less of other users had concerns about any stock type. Generally the lowest concerns were expressed by other users and the highest concerns by horse riders, but overall, nearly 70% of all users were unconcerned about a combination of stock with nearly 60% or more unconcerned about particular stock types.

When asked about stock management over 75% of all users were unconcerned about shepherding, nearly 70% about temporary fencing and over 60% about permanent fencing with or without cattle grids. The highest serious concerns were expressed about permanent fencing, with dog walkers, and particularly horse riders concerned about permanent fencing with cattle grids. Generally some 14-15% of all users expressed serious concerns about permanent fencing.

### *3.7.3 Responses from organisations*

There was some recognition that the Common is a difficult place to manage for wildlife and people, and that as an SSSI it needs to be moving into favourable condition (see Appendix 3 for explanation of favourable condition). At the same time, concern was expressed that the Common could lose its NNR status if it is not managed. The current consultation was welcomed.

Shortage of funds for management was a concern and it was suggested that cost/benefit analysis of lowland heath management would be useful

There were varying views on car parks with some calling for more car parks and others for manipulation of car parks to reduce disturbance to wildlife or a concentration on one major car park. There was general support for the maintenance of the bridleways and footpaths, but a suggestion that path systems may need to be altered to take account of wildlife or alternatively that path networks might be developed.

There were suggestions for better publicity for the role of the management team, a programme of education for the public, more liaison with horse riders and fishermen, and better information for the public on management, staffing and circular routes on-site. Improved signage and the possibility of a centre was also suggested as were traffic calming measures on the roads.

There was support for a variety of management methods including particularly tree and scrub clearance and grazing, although some scepticism was also expressed about grazing, and its efficacy in relation to tree and scrub control was questioned and alternatives were suggested.

A number of organisations expressed concern or opposition to fencing, although this also had some support. The retention of access was also mentioned. Several organisations expressed the view that trials of heather seeding should be instigated. The need for monitoring was also mentioned.

Specific issues raised included management for the red barbed ant, pond creation and the prevention of surface water entering Chobham village.

## 4 Habitat Management

### 4.1 Introduction

The next section describes the vegetation on the Common and the habitat management problems which face SWT as managers of the site. These are the increase in scrub and woodland, encroaching beds of bracken and conversion of heather dominated heathland communities to grassland, mostly bristle bent grass<sup>1</sup> on drier ground and purple moor grass<sup>2</sup> (*Molinia*) on wetter ground. All of these trends are converting the open heathland to other habitats, to the detriment of the associated flora and fauna, and in ways that will cause significant adverse effects to the nature conservation interest of the site, which conflicts with the Government's obligations under European legislation.

Section 6 includes summaries of the responses from the questionnaire and the main comments (from Appendix 2) over a brief description of the main issues for each habitat and management options. A more detailed description of the ecological background is available in Appendix 5. This also includes a review of *Molinia* management in the uplands including the herbicide based management to convert *Molinia* dominated communities to heather in upland Derbyshire.

Section 6 then considers the background to habitat management by grazing, examines the advantages and disadvantages of using sheep, ponies and cattle, and discusses alternative ways of managing stock, with a summary of the public response to these issues at the start of each subsection.

Section 7 provides a background summary of the main issues and makes recommendation of visitor and habitat management.

Finally section 8 makes recommendations for further consultations as the next stage in the process.

The third Appendix gives details of some of the background legislation together with an explanation of the role of Natural England in relation to Sites of Special Scientific Interest and European designated sites, and an explanation of favourable condition assessment on such sites and Government targets in relation this process.

### 4.2 Vegetation Survey of Chobham Common

The most recent vegetation survey of Chobham Common was commissioned by English Nature and carried out during the summer of 2002 [1]<sup>3</sup>. There have been some problems in rationalising the habitat areas from this survey, as the broad habitat descriptions given in the report combined a range of plant communities some of which had substantially different characteristics. In order to get as accurate a figure as possible, the original raw data was therefore examined and areas extracted and summed for each National Vegetation Classification<sup>4</sup> category. The data covers that part of the SSSI managed by SWT south of the railway, and although there is a slight discrepancy in the sum of the area figures compared to the figure for the area of the reserve, the two figures are within 1% of each other. The broad distribution and proportions of different habitats across the whole SSSI give a reasonable picture of the situation over the majority of the area

---

<sup>1</sup> *Agrostis curtisii*

<sup>2</sup> *Molinia caerulea*

<sup>3</sup> The numbers in square brackets refer to the references at the end of this report

<sup>4</sup> The National Vegetation Classification (NVC) is a way of classifying vegetation communities from the individual plant species most frequently found growing together, and is now the most widely used method of defining plant communities in the UK

## Report on Chobham Common consultation and recommendations

managed by SWT and shows the relative proportions of Molinia dominated habitat and woodland, scrub and bracken in 2002 (Table 1).

**Table 1. Areas and percentages of habitats within Chobham Common SSSI**

Habitat Type	Habitat Area hectares	Percentage of Whole area
Dry heath (H2a*)-Molinia absent, dominated by Calluna	23.92	4.34
Humid heath (H2c)-Molinia is a constant here with cover varying from 0-25%	140.58	25.48
Humid bristle bent heath (H3a & H3c)-Both Molinia and bristle bent grass are constant here with cover values from 0-33% and 11-50% respectively	35.11	6.37
Molinia humid heath derived from dry heath and acid grassland (H2c, H3a and U3) communities. Molinia is dominant here with 76-100% cover	27.53	4.99
Bristle bent grasslands-Molinia dominant (assignable to U3) Bristle bent grass constant with 11-75% cover and Molinia constant with 4-76% cover	35.75	6.48
Wet heath (M16 a & M16 b and M16c)-all with varying amounts of Molinia, (<4-50%, b 0-75%, c <4-25%)	36.29	6.58
Molinia wet heath (M25a) with Molinia constant and with cover values of 51-100%	10.93	1.98
Bracken (U20 & W25)-either bracken stands or very tall bracken associated with bramble or 20-50% heather	17.99	3.26
Gorse (W23)-Gorse stand associated with disturbed ground roads and motorways as well as dry and humid heath	44.27	8.02
Oak, birch and pine woodland with Molinia beneath damper stands and heathy vegetation under drier stands, with bracken under birch and pine and recent woodland becoming invaded by bramble.	136.52	24.75
Bog/wet woodland (W4c, W5, W 6& W7)-Sallow, birch and alder with an understorey of Sphagnum and Molinia in drier stands, and alder woodland with nettles and sedges	13.36	2.42
Recently burnt, bare or hard ground	20.62	3.74
Other habitats including acid and improved grassland, open water, nettle beds poor fen, rush pasture and swamp	8.74	1.58
<b>Total</b>	<b>551.61</b>	

\*The letters and figures denote NVC plant communities and sub-communities

## Report on Chobham Common consultation and recommendations

What is striking about the figures from this survey is how little pure *Calluna* dry heath there is (less than 5%), how much of the Common is dominated by *Molinia* or has *Molinia* as a constant member of the plant community (over 50%) and how much of the rest of the Common is dominated by bracken, gorse or woodland and scrub (about 36%). Of course many of these communities still have substantial amounts of heather, but the experienced heathland botanists who carried out the survey were in no doubt that *Molinia*, bracken, scrub and woodland posed a threat to other heathland communities. (A summary of their comments on the issue of tree and scrub encroachment and conversion of other communities to *Molinia* is included as part 1 of Appendix 4)

It is clear from their comments that the surveyors were concerned about the spread of grasses, woodland and scrub onto both the wet and dry dwarf shrub (heather and its allies) communities, they believed that some of the smaller and more species rich communities were threatened and could be lost and that they believed the further spread of undesirable species was a continuing process.

A later survey carried out by SWT staff since this report was written in 2002, shows that grassland has continued to spread at the expense of dwarf shrub communities despite management, but it is likely that the spread of woodland, scrub and bracken has been checked if not reversed by management measures during the last six years.

It is also clear that changes have, and are taking place on Chobham Common which will continue to cause deterioration in the dwarf shrub communities and these have been noted by Natural England through their condition assessments<sup>5</sup>.

In an earlier assessment Natural England classified most of the area of Chobham Common managed by SWT as unfavourable with over 73% as unfavourable no-change or declining. The latest assessments from 2006-2008, which covered just under 80% of the Chobham Common SWT reserve, recorded 89% of the areas assessed as unfavourable no-change or declining (Table 2). These figures suggest that the condition of the Common is still deteriorating.

**Table 2. Unit areas in hectares (with total percentages in parentheses) under each assessment category by dates of assessment.**

Date of assessment	Favourable	Unfavourable recovering	Unfavourable no change	Unfavourable declining
October 2001	—	4.08	—	—
December 2001	—	—	—	1.51
February 2002	—	—	—	12.84
March 2004	6.69	65.66	—	—
September 2004	—	14.16	—	—
March 2005	—	7.14	—	—
August 2006	—	—	90.42	—
May 2008	—	18.66	52.31	115.41
June 2008	—	—	63.24	—
July 2008	—	28.19	23.85	39.59
Total	6.69 (1.23)	137.89 (25.36)	229.82 (42.26)	169.35 (31.14)

<sup>5</sup> These are assessments carried out by NE on each SSSI every six years to assess the condition of the habitat in each unit of the SSSI against standard criteria. These are assessed as in favourable, unfavourable recovering, unfavourable-no change or unfavourable declining condition.

## Report on Chobham Common consultation and recommendations

Reasons for unfavourable condition include:

Invasion by scrub, mostly birch and pine, but the assessments also record oak, willow, gorse and bramble as well as re-growth of birch coppice. A number of units have insufficient bare ground and poor structural diversity of heather areas, with either too much old heather or too little, or with too much pioneer heather and even aged heath. A lack of, or under-grazing is noted for a number of units. *Molinia* is recorded as invading or dominating in a number of units, or as having a high cover or being too dense in places with a high litter layer. *Molinia* was also noted to be invading after wild fire.

It is clear from the vegetation surveys and from the condition assessments that Chobham Common has severe problems from overgrowth of *Molinia* on wet and humid habitats and from scrub and tree encroachment across a range of habitats, and that the situation is deteriorating despite the best efforts of the managers of the Common.

### **4.3 Access and Recreation**

Most of Chobham Common is covered by a deed of access under the law of Property Act 1925 granted by a previous owner, with small parts not included in that deed being open access land under the Countryside and Rights of Way Act.

Chobham Common is one of the largest open access sites in Surrey and receives an estimated 250,000-300,000 visits by the public each year, for a wide range of recreational activities. This includes an estimated 125,000-150,000 visits to the Common by dogs. There are six car parks with parking for about 200 cars and an extensive network of paths, bridleways and fire breaks which includes three self guided trails. Each car park includes an information board with maps, information about the National Nature Reserve and rangers reports, produced quarterly.

The Common is used for walking and dog walking, for riding horses, cycling and jogging and a part is set aside for model aircraft flying. Educational groups use the site for activities ranging from pre-school outings to post graduate studies. Parts of the Common have been used as film locations. There is also a fishing club which operates under a lease on the Fishpool in the south east corner of the site.

Altogether there are 17km of bridleways, 13 km of agreed horse rides and 13 km of public foot paths on the Common as well as over 20 km of firebreaks. The Common also contains a Bronze Age barrow, two earthworks known as Beegardens, all of which are scheduled ancient monuments, together with the Victoria Memorial Cross erected in 1901, which is a listed building.

## 5 Management options

### **5.1 Introduction**

A range of options were presented during the consultation and these are presented briefly here. Each option is briefly described with a summary of the public response in the box above, its intended result and the method employed. A much fuller description of the scientific background to each option based on the habitats concerned is presented in Appendix 5.

### **5.2 Scrub, woodland and bracken**

Forty-eight percent of respondents thought that the balance of tree and scrub management was about right, but 41% thought there was not enough and 12% thought there was too much. Some organisations were particularly concerned that the Common was losing its open landscape. Most comments on the questionnaires called for more tree and scrub control.

Heathlands are a largely man-made landscape, so that in the absence of continuing use and management, much of the open, heather dominated heathland returns to woodland and scrub. To prevent this, a programme of clearance is required, with trees being removed and stump treated to prevent re-growth. At the same time it is recognised that some trees should be left on the heaths to provide song posts for birds and feeding opportunities for invertebrates and birds, and that some woodland should remain, particularly on the better soils. The difficulty is to get the balance right in relation to wildlife, landscape and visitor enjoyment.

Gorse is a particularly characteristic shrub on lowland heaths and provides a home for heathland invertebrates and food, shelter and nesting sites for birds such as Dartford warbler and stonechat. Gorse can also spread to form large thickets which are of limited value to birds and impenetrable to visitors. The usual management is to cut gorse on a rotation of about 15 years for wildlife and to remove or break up excessive areas of this shrub. Roadside scrub control is usually the responsibility of the highway authority.

Bracken is an invasive species which can compete with heather especially on the slightly better soils often associated with clearance of woodland. Dense bracken casts a heavy shade, contributes to a thick litter layer and inhibits the establishment or growth of other plants. It is usually controlled by spraying, cutting or rolling, repeated at intervals of several years to contain, rather than to eliminate it. It has a number of associated invertebrates and is often part of the vegetation complex used by nesting nightjars.

Bracken, gorse, scrub and woodland are therefore characteristic constituents of heathland ecosystems, but all need a measure of control to prevent them becoming too dominant. This as would have happened in the past when they would have been exploited by local communities.

### **5.3 Heathland**

#### **5.3.1 Controlled burning**

Some 65% of those questioned had no concerns about burning, but about a quarter had slight concerns and just under 10% had serious concerns. There were serious concerns by about 15% of dog walkers and horse

riders (19 in all) about controlled burning. Most comments on burning were concerns about damage to wildlife and the risk to surrounding areas, people and property and hazards to traffic from fires getting out of control. There was also concern about the effects of smoke and ash, about the appearance of the ground after a fire and that burning would encourage grasses. One organisation suggested burning and heather re-seeding should be tried.

Controlled burning of heathland in winter has been a management technique for thousands of years, associated originally with woodland clearance for arable cropping or for pastoral farming. Once cleared and established as heathland, burning was used to remove scrub and create fresh vegetation for grazing animals. It is still used for this purpose in the New Forest [2].

Most burning takes place on dry heath, with the intention of breaking up even aged heather areas and re-starting the heather growth cycle for the benefit of the associated wildlife. Burning can remove some of the accumulated nutrients from the heath, but will encourage grasses, especially if carried out too often. Burning on wet ground can damage sensitive plant communities and on seasonal damp ground will encourage *Molinia* dominance unless followed by grazing. However marsh gentians, a plant of wet heath, appear to be encouraged by occasional burning of their habitat. Burning usually takes place in February or March and covers small areas where fire breaks have been mown beforehand. There are substantial areas of Chobham Common which cannot be included in any controlled burning programme due to the proximity of powerlines and other utilities, the motorway, roads, houses and built development.

### 5.3.2 Mowing

There was less concern about mowing than any other form of management with 80% of respondents to the questionnaire expressing no concern and only 1% (2 people) expressing serious concern. There were no comments by organisations, but individuals commented that mowing would use fossil fuels and increase vehicle movements on the Common, it would be noisy and vehicles could affect soil structure and wildlife.

Mowing can be used to remove nutrients provided the cut material is taken off, but on heathland, where heather and its associated ericaceous plants are dwarf shrubs, cutting, if carried out too frequently, will encourage grasses except on the driest and most nutrient poor areas. Mowing is not practically possible on broken or steep ground, and machinery has to be carefully chosen to avoid soil compaction. Mowing is best used as a restoration technique to remove tall vegetation and thick litter prior to grazing.

### 5.3.3 Turf stripping

Most respondents (65%) had no concerns about turf stripping, but over 35% had slight or serious concerns. These centred upon concerns that that turf stripping was expensive, could be injurious to soil structure and could affect wildlife.

Turf stripping involves removing the top 10 cms or so of the ground to remove nutrients and encourage regeneration of heather from the seed bank. It is extremely expensive, particularly where the surplus material has to be removed off-site and disposed of, but small amounts can sometimes be sold, or used on site in heathland restoration or for bunds etc. The resultant stripped ground can be unsightly, and takes some time to recover. However this can be a very successful technique for restoring small areas of sensitive heathland habitat and is only needed at very long intervals of fifty years or more. Small areas at Chobham Common have been sensitively turf stripped in the recent past and this has resulted in little visual impact, and successful heather regeneration.

#### 5.3.4 Grazing

Nearly 70% of respondents had no concerns about grazing, but just under 20% had slight, and 10% had serious concerns. Highest concerns were voiced by horse riders with 35% (14) having slight and 22.5% (9) having serious concerns but nearly 30% (24) of dog walkers also had slight concerns. A number of organisations expressed concern about grazing, or extensive grazing, others supported the introduction of grazing on the Common.

There were general concerns that livestock could over-graze and harm wildlife, and that livestock could be uncontrolled or impractical, could stray onto roads, be a danger to the public, could scare children, could make walkers uncomfortable and could spook horses and cause problems for horse riders. Concerns were also raised about outbreaks of notifiable disease resulting in access restrictions, that livestock could harbour ticks, that stock rustling might occur, and that grazing livestock could mean dog walkers had to keep their dogs on leads (although the view was also expressed that there would be no problems between livestock and dogs). There was also support for introducing grazing.

Grazing is a traditional management practice on lowland heaths, and, often accompanied by burning, is probably the main management that has kept many heaths open over the years. Grazing has been adopted as a sustainable and ecologically enhancing form of management by heathland managers across the heathlands of north-west Europe including the Thames Basin Heaths, with the re-introduction of traditional management practices and original breeds.

Grazing on lowland heaths can maintain the balance between heather communities and prevent domination by grasses, can contribute to the reduction of nutrient levels and the establishment and maintenance of species and structural diversity, and create niches which contribute to the richness of the wildlife communities.

Grazing does not remove substantial amounts of nutrients from the heath (although substantial amounts can be transferred off the heath onto surrounding woodland) but helps to maintain lower nutrient levels. Both under and over-grazing can cause problems, but on many heathlands, particularly where the deciduous grass *Molinia* is a problem, light levels of summer grazing are the normal practice. The effect of grazing on tree and shrub encroachment on heathland can be variable depending on the type and density of stock, but generally grazing animals delay encroachment rather than stop it and periodic clearance will still be necessary.

#### 5.3.5 Use of herbicides on *Molinia*

It has been suggested by a number of organisations that trials should take place of the vegetation management techniques used in the uplands and particularly in Derbyshire, using herbicides and heather seeding to convert *Molinia* dominated swards to heather. Following these suggestions Dr Day visited Derbyshire and looked at a number of plots with Mr. Eyre who has carried out much of the work on these techniques. A full description of this is given in Appendix 5. Essentially this consists of treating dominant *Molinia* with herbicide following burning or mowing, seeding with *Calluna* heather and then re-treating after a few years to deal with *Molinia* re-growth or seed germination, followed by grazing. Where it has been carried out it has been very successful.

The problems of *Molinia* encroachment and the underlying factors such as historical changes in management and atmospheric nutrient inputs have been dealt with at some length in the draft management plan and will not be repeated here. Suffice it to say that the 2002 survey detailed above found *Molinia* to be present in humid, damp and wet habitats across the site, that it is present in varying amounts



in about 285 ha of heathland and that in many areas it has achieved considerable dominance. In a number of communities, *Molinia* is present with bristle bent grass with which it can be co-dominant. Evidence from this vegetation survey, from site managers and from the recent condition assessments by Natural England confirm that *Molinia* is still increasing in dominance across the site.

A number of studies have been carried out on the effects of management on *Molinia* which have concluded that herbicides can, in the short term be effective in killing *Molinia*, burning and mowing can also be effective short term (but mowing cannot be undertaken during the bird breeding season), sowing heather seeds can be effective in establishing heather but in all cases results can be vary variable from site to site depending on site and treatment conditions. Long term establishment of heather can be helped by grazing and while sheep can prevent seedling establishment, cattle grazing can help suppress *Molinia* and encourage heather.

Consideration of methods used for conversion of *Molinia* upland moor on lowland heath at Chobham raises a number of concerns:

- Herbicides could not be used on the SSSI without the consent of Natural England who would need convincing evidence that there would be no harmful effects to non-target species.
- No experimental studies of the effects of herbicides (other than Asulam for bracken) have been carried out on the plant communities of lowland heath.
- Wet heath plant communities in Southern England have a different range of species and vegetational characteristics to wet heaths in the uplands.
- Lowland heath contains a range of vascular plants, bryophytes and lichens which are absent on upland moors and there is no information on how these might respond to herbicide treatments
- It would not be possible to treat *Molinia* in mixed stands with *Calluna* heather and other ericaceous species without damaging the whole community.
- There are a number of scarce and rare species associated with wet heath communities on lowland heaths (e.g. marsh gentian and the marsh club moss) and there have been no studies of the effects of herbicides on these.
- In many places on Chobham Common, the *Molinia* is associated with bristle bent grass. No trials have been undertaken on the effects of herbicide treatments on bristle bent grass, and there are risks that herbicide applications could increase the dominance of this species from seed, result in greater long term dominance of *Molinia* in mixed stands, or result in an increase in gorse or other scrub.
- Heather seed would have to be sourced locally, as, regardless of the genetic provenance of *Calluna* seed, there will be a range of other propagules with any seed, including vascular plant seed or fragments, spores of bryophytes, lichens and fungi and fungal mycorrhiza.

## 6 Grazing management

### 6.1 Types of stock

The types of stock that could be available at Chobham Common are sheep, ponies and cattle. Because *Molinia* is a deciduous grass and currently constitutes the greatest threat to the heathland communities, pending possible future assessment of the role of grazing on *Calluna*/bristle bent communities, summer grazing is most appropriate.

### 6.1.1 Sheep

Over 60% of respondents had no concerns about sheep but about one in five had serious concerns (36), most of whom were dog walkers or horse riders. By far the most frequently expressed concern was the risk of sheep worrying by dogs and this probably explains why more dog owners, when asked in the questionnaire had serious concerns about sheep than about ponies or cattle. Other concerns were that sheep would need constant supervision, that sheep are noisy, suffer from fly strike, could spook horses and crop too close and would concentrate grazing on young heather.

Sheep are close and selective grazers, creating and maintaining a very short sward. They can damage heather by grazing especially in autumn and by pulling up young plants on areas recovering from management treatments where most regeneration is from seed, and on wetter ground their trampling can lead to soil compaction due to their habit of following each other and creating narrow tracks. On dry heath they may do less damage than heavier stock. On wet heath, sheep grazing of *Molinia* can be ineffectual unless accompanied by cutting or burning. Free range sheep are particularly vulnerable to attacks on dogs and where they have been used on public open spaces there have been many such incidents. Shepherded sheep are safer, particularly when protected by dogs chosen for the purpose, but if attacked, can panic and scatter. There can, however be interactions between these sheepdogs and other dogs. Shepherded sheep can be managed to remove nutrients off the heaths if taken off each night.

### 6.1.2 Ponies

About 62% of respondent had no concerns about ponies with 21% having slight concerns and 17% serious concerns. Most of these concerns stemmed from dog walkers and horse riders with 20% and 45% respectively (17 in both cases) expressing serious concerns. These concerns were about conflicts between ponies introduced as grazers and ridden horses and dogs. There were further concerns that ponies would be uncontrolled, they would create grazing paddocks and attract people to feed them.

Ponies tend to graze grassland on heaths, will generally move further into wet vegetation to graze than cattle and will graze tall and rough vegetation including dead leaves and stems. They are therefore ideal for grazing on *Molinia* which produces much dead material and grows in wetter areas.

Ponies can become aggressive if fed by visitors and can pose problems for horse riders especially stallions.

### 6.1.3 Cattle

Just under 60% of respondents were unconcerned about cattle grazing, but 24% had slight concerns and 17% serious concerns. As for sheep and ponies, most of those with concerns were dog walkers or horse riders, with 19% and 34% (17 and 13) respectively having serious concerns.

The main concerns about cattle were interactions with dogs, the welfare and safety of the animals themselves and risk of their being a target for vandalism, and that cattle can be curious, unpredictable and threatening to walkers and dogs. It was suggested that cattle would hang around gateways causing an obstruction and treading up the ground, that they could spook ridden horses, they would pull up grasses and leave hoof prints and that they would produce lots of methane.

Cattle's grazing has many similarities with grazing by ponies, as they will graze mostly grasses and will forage in tall and tussocky vegetation. They can damage heather by trampling but tend to use dry heath mainly as a route to water or forage areas or to lie up. Trampling on wet ground creates niches for other plants and

invertebrates. Cows with young calves can be protective particularly when approached by dogs but older cows from traditional breeds are very docile and are widely used for grazing open access heathland.

## **6.2 Stock management**

### *6.2.1 Introduction*

In the questionnaire, respondents were asked about shepherding and temporary or permanent fencing. Tethering was not suggested as an option (see Appendix 5)

### *6.2.2 Shepherding*

There were fewer concerns about shepherding than any other form of stock management with about three-quarters of respondents expressing no concern. Just over 10% expressed slight or serious concerns respectively and these were mostly dog walkers and horse riders. There were few comments but it was suggested that shepherding was expensive, could not cover the whole Common and would be impractical with sheep, dogs and busy roads.

This is discussed in more fully relation to sheep (Appendix 5). Very little information is available on shepherding schemes for other types of stock although some experimental shepherding with cattle is being tried elsewhere. Cattle are not as amenable as sheep to control by dogs and there would be obvious dangers with a large herd and busy roads. Any shepherding scheme at Chobham without fences or grids would involve two units, one on each part of the Common. Shepherding is not an option for ponies.

### *6.2.3 Temporary electric fencing*

Nearly 70% of respondents expressed no concerns over temporary fencing with some 20% having slight concerns and 10% serious concerns. Dog walkers expressed most serious concerns (17%). Some organisations indicated that temporary fencing might be more acceptable than permanent fencing. Some respondents who were unhappy with permanent fencing would accept temporary fencing provided it did not become permanent.

There is a restriction on fenced enclosures under the Commons Act to 10 ha or 10% of any common registration unit (Chobham is a single unit) whichever is less. This effectively means that only 10ha of the Common could be fenced within enclosures at any one time. Small grazing enclosures can target grazing on particular areas, but stock confined in them can be more vulnerable to dogs and fire, and labour resources to manage them and move around fences and water can be high. Temporary electric fencing around the perimeter of the Common would generate very large labour resources in regular checking and would be vulnerable to breakage, damage and vandalism.

### *6.2.4 Full permanent perimeter fencing*

Some 60% of respondents were unconcerned about additional permanent fencing with access points. About 23% of respondents had concerns and 16% serious concerns about this option. The percentage of all users with serious concerns was similar but the percentage of horse riders with slight concerns was higher than dog walkers, where the percentage was higher than other users. Concerns about fencing were largely on access restriction, scenery and landscape grounds, but there was some support for fencing if it was necessary to keep stock off roads.

A substantial proportion of the Common perimeter is already fenced by adjoining owners so perimeter fencing would complete this around the remaining boundaries. Any fencing scheme would have to preserve all existing access points with appropriate gates and suitable access for horse riders. Detailed specifications for access gates etc. for horse riders would be agreed with their representatives. Vehicular access points would need gates or, if required to be kept open, cattle grids with appropriate by-pass arrangements for horses. In areas of high visibility, fences are best hidden in dips or behind banks or concealed by existing gorse thickets.

#### 6.2.5 Fencing with road cattle grids

There were very similar levels of concern about this option with about 21% with slight concerns and 19% with serious concerns, and about 60% who were unconcerned. By far the highest level of serious concern was expressed by horse riders, but with about 20% of dog walkers and 14% of others also expressing serious concerns. Concern was expressed that cattle grids can be dangerous to loose horses, are unfriendly to runners, and need hedgehog escapes.

This option is very similar to the last, but could involve cattle grids rather than fencing on the roads crossing the Common. This would result in considerably less fencing, but grazing stock could cross the roads and could pose a risk of accidents. It would not be possible to separate the Common into different parcels such that part was ungrazed at any one time, unless some roads remained fenced rather than gridded. Scrub and vegetation would need to be cut back along the road edges to improve visibility for both drivers and grazing stock. Traffic calming measures and speed limits might also be needed, but decisions on all these matters together with whether grids were acceptable would be matters for the highway authority. At the location of the grids, suitable by-pass arrangements would need to be in place for horses.

## 7 Management recommendations

### 7.1 Introduction

#### 7.1.1 Status and policy

Chobham Common is a public open space with full and permanent rights of access under the Countryside and Rights of Way (CRoW) Act. As such, it is a valued local resource for walkers, dog walkers, riders and others and the response to this consultation underlines the interest that local individuals, organisations and communities take in its welfare and future. It is important therefore that the Common is maintained as an attractive destination for people to visit and enjoy.

The Common is also an area of extensive common land and a cultural landscape with a range of archaeological, historic, and cultural connections, and is one of the larger fragments of heathland constituting the Thames Basin Heaths.

The Common is designated as an SPA and an SAC under European legislation and as an SSSI as being of national importance for its wildlife. Under the CRoW Act it must be managed to restore and maintain it in favourable condition for these interests. Due to problems of scrub and woodland encroachment and conversion of heather dominated communities to grass in recent years, much of the open heathland is at risk and the condition assessment of Chobham Common by Natural England puts over 70% of the area in unfavourable no-change or unfavourable-declining condition. Without appropriate management the wildlife

## Report on Chobham Common consultation and recommendations

interest on the Common will continue to deteriorate which could trigger greater involvement by Natural England to safeguard the future of the European site. For the Trust as managers of the Common, to do nothing is therefore not an option.

The Government have entered into a Public Service Agreement for SSSIs. (PSA, first introduced in 1998, to modernise and improve the government's performance on the issues that matter most to the public – including education, health, crime and the environment. This has involved setting ambitious and publicly accountable targets across the whole of Government).

Natural England as the Government's conservation adviser has been charged with making sure that 95% of all SSSIs are in favourable or favourable-recovering condition by 2010. NE has expressed the view that in order to manage the Common to achieve favourable condition, a range of management measures are necessary, including grazing. As the Agency charged with managing the Countryside Stewardship Higher Level Scheme, Natural England is also able to help fund the capital and running costs of management of sites like Chobham Common both for conservation and people.

The Trust recognises the importance of managing the Common for its wildlife, and a major management objective is to put the site into favourable condition as soon as possible.

At the same time, the Trust recognises the importance of maintaining the Common as a valuable resource for visitors, including its landscapes and cultural identity. It is also recognised that the status of the Common outside the access provisions of CRoW, make it difficult for SWT to enforce control of some undesirable behaviours even though there are County Council Byelaws covering the Common.

### *7.1.2 Ecological factors*

From an ecological viewpoint the continuation and enhancement of existing programmes of scrub and woodland clearance, the introduction of a structured programme of burning with further mowing and a continuation of some small scale and long term turf stripping, will prevent conversion to woodland and reduce the nutrient levels on the heaths at Chobham Common. Research shows that these managements can either reduce grass dominance in the short term, or will serve to increase grass dominance, particularly from burning. They are effective in the longer term, if carried out in combination with grazing. Suggestions for the use of herbicides on the Common could be of merit, but are untested and would, on present evidence, require follow-up grazing. Sheep grazing is seen as less desirable as a means of restoring heathland habitats than grazing by either cattle or ponies.

### *7.1.3 Consultation results*

The consultation has shown that there are, as expected, a wide diversion of views about aspects of the management of the Common for people and wildlife. However, despite raising a number of concerns, 71% of those who responded to the visitor questionnaire thought the management for visitors to the Common was about right and 75% expressed no concerns about a combination of habitat management methods. A majority were unconcerned by the use of burning, mowing, vegetation stripping or grazing.

Despite this, a substantial minority had concerns about a range of visitor issues concerning management of the Common for visitors and wildlife. These included behaviour of dogs, condition of paths and bridleways, lower than desired wardening presence and the need for dog bins. There were also particular concerns about controlled burning, the introduction of grazing stock and fencing. The consultations showed that there were particular concerns about sheep, due mainly to worries about dogs, and that horse riders had particular concerns about the introduction of ponies.

There was a substantial level of concern by a minority about the ways in which grazing stock might be managed, with a higher level of concern about permanent fencing, (with or without cattle grids) than about temporary fencing or shepherding.

## **7.2 Future management for visitors**

### **7.2.1 Introduction**

Current management already meets many visitor aspirations. The Trust carries out a great deal of work in relation to visitors to the Common and some of the initiatives which have been suggested during this consultation have already been considered, are planned, or are dependant on adequate resourcing. A number of these suggestions and ideas are listed in the draft management plan. It is at times unclear from the range of actions in the management plan to enhance the visitor experience at Chobham Common, where the priorities lie and whether some of the actions are for immediate implementation, dependant on resource availability or more distant aspirations. This is no fault of the plan which follows the normal format for plans of this nature, but it does make it difficult to gain a full appreciation of exactly what is proposed and when. There is, however, a demand for more help and information for visitors to the common and many of those who visit are apparently unaware of some of the measures that have already been put in place.

#### Liaison Committee and other contacts

The regular meetings of the existing Liaison Committee is an excellent initiative and goes much beyond what happens on many other wildlife reserves. However, this does not necessarily establish contact with many users of the common (dog walkers for example who make up a significant minority of those who visit), nor does it always cater for those who may have more immediate day-to-day issues.

Much informal contact already takes place but it would be desirable to put this into some sort of framework. This would help to guarantee that contact is maintained with as many users as possible with sufficient frequency for them to feel that their views are important and to make sure they are fully considered in the management of the Common.

#### Balancing Resources

Many of the measures which might be desirable will be dependant on allocation of scarce resources. However, the results of the public consultation have helped considerably in focussing attention on the issues and in helping to set priorities. In the short term this should allow some shifts in emphasis, or the provision of a 'shopping list' with set priorities. However, SWT has a range of reserves to manage and has to balance the needs of them all against the resources available. If a way forward can be found whereby the Common is put into favourable or recovering condition, this may bring with it additional resources under the Higher Level Stewardship scheme already noted.

### **7.2.2 Recommendations**

It is recommended that SWT put in place the following actions:

1. Establish a small staff group specifically to consider visitor issues and to include input from Trust staff outside the immediate management team
2. Use as a starting point the issues within the questionnaire reported on here about which a majority or substantial minority have expressed views or concerns
3. Trawl through the suggestions and ideas from visitors in this report and include those for which there is

## Report on Chobham Common consultation and recommendations

a broad consensus and that add value to the existing range of suggested initiatives in the management plan

4. Taking the range of actions and ideas from the management plan, to prepare a short visitor implementation plan for all the actions proposed under separate sections dealing with the provision of :
  - Wardening and facilities
  - Management of car parks
  - Management of paths and bridleways
  - Management needs of animals on the common (dogs, horses)
  - Management of potential user conflicts
  - Information and interpretation
  - Guidance for staff
  - Health and safety issues
  - Liaison with other services
  - Monitoring
5. Produce a timetable for action making it clear which aspirations are immediate or ongoing, which are dependant on resources becoming available, and which are more distant; and giving some indication of orders of priority. Produce a five year work plan
6. Based on a five year plan, ring -fence maintenance budgets for estate work such as path and bridleway repairs and fire break maintenance so that forward planning can be instituted and public consultation made more meaningful
7. Initiate a programme of initial and longer term public consultation and information on what is being done and what is proposed. This could include for example:
  - Publication of the implementation plan, five year and yearly work programme
  - Pre-advertised open days or half days at car parks on the common, to give out information and hear views
  - Regular meetings with established user or amenity groups on a formal basis
  - Regular but informal meetings with major users of the common such as riding stables
  - The promulgation of information on the reasons, methods and results of various management techniques e.g. turf stripping
8. Carry out a further questionnaire survey of horse riders with Chobham Common Riders Association to make sure that their particular concerns and needs are recognised
9. Re-launch initiatives to get the local community more engaged in the active management of the Common, this could include:
  - Establishing a voluntary warden scheme on the Common
  - A push to advertise work parties
  - The organisation of management demonstrations
  - A programme of guided walks and presentations on management on the Common and the particular wildlife needs which these address
10. Consideration of initiatives to raise funds for staffing and other costs associated with a greater input into visitor issues. It is however recognised that this is an area where fund raising is not easy and some of the work entailed in visitor management, e.g. path and bridleway maintenance, is very expensive.

## **7.3 Future habitat management**

### **7.3.1 Introduction**

Resolution of some successional problems from open heath to woodland is relatively straightforward

It is clear that there are a number of inter-linked ecological problems in relation to the management of grass invasion at Chobham Common. These relate to the need to reduce existing nutrients within the heathland ecosystem, to institute an ongoing programme for countering continuing inputs of nutrients and a long term programme of management to maintain heathland communities.

The management of woodland and scrub, including gorse, bracken and bare ground is relatively straightforward, and is largely a matter for the expert input of the rangers and forward planning, given the necessary resources. Issues of nutrient build up and conversion of dwarf shrub heathland to acid grassland are more complex and difficult to solve.

Nutrient build-up poses greater challenges for managers

Reduction of existing nutrients can be done mainly by mowing, cutting and turf stripping. These management methods, if repeated at intervals over time, will also help to deplete nutrients, and although levels of deposition are expected to come down [3] over the next fifty years or so, recovery of existing systems may take many decades [4]. Both cutting and burning can maintain *Calluna* dominance on dry heathland communities but none of these techniques, on their own, will maintain a dominance of ericaceous dwarf shrubs on humid and wet heathland which constitute by far the largest component of the Chobham Common heathland communities. Grazing will remove the competitive advantages of the main grass species and encourage communities dominated by dwarf ericaceous shrubs such as heather and *Erica* species. Grazing may not result in a large depletion of nutrients overall but stock will move into woodland or scrub at night and re-distribute a substantial proportion of ingested nutrients off the heath [67]

Visitor and stakeholder views are important

The views of visitors and stakeholders on future habitat management on Chobham Common have been given via the public consultation and questionnaire. These views and comments both by organisations and individuals have been taken fully into account in the recommendations that follow.

Publicity and information

Forward planning for the management actions recommended here should include giving information beforehand to visitors and stakeholders. When management work is being undertaken on the Common, the public should be notified beforehand and kept informed during the progress of the work, with information on the tasks being undertaken and the reasons for them. Where possible, the explanation should be linked to specific habitat, species or visitor benefits.

Work already in progress

It is recognised that a number of the recommendations which follow describe work planned or already in progress. They have been included both for completeness and because not all those who read this report will have read the draft management plan, or necessarily be aware of the substantial amount of habitat management that has been taking place on the Common for many years



### 7.3.2 Recommendations

#### 7.3.2.1 Clearance of woodland and scrub

- Identify the tree densities on the heath for each management area, using recent aerial photographs (with ground truthing), in order to produce a clearance and thinning programme to complement the clearance of areas of more continuous woodland.
- Areas for proposed clearance should be mapped and a public consultation included in the next consultation phase. Considerations relating to those areas of woodland to be retained should include:
  - landscape and amenity
  - known areas of value to wildlife
  - the direction and extent of the seed rain from retained woodland
  - the potential for habitat creation and for creating or adding to locally scarce habitats
  - use of existing woodland as buffers against disturbance to sensitive species and habitats
  - provision of shelter belts and other features to provide sheltered conditions for invertebrates and foraging nightjars
  - preparation of a gorse management plan which makes an accurate assessment of the roadside gorse for removal and the large blocks for fragmenting, and calculates an annual programme of management for the remainder
  - bringing existing areas of bracken on heathland into a treatment cycle of five years
  - follow up treatment of bracken in cleared areas of woodland should be instituted the following year and then brought into the management cycle.

#### 7.3.2.2 Bare ground

Bare ground is an important habitat for rare invertebrates and reptiles and is specifically required as a constituent of favourable condition assessment

- Prepare a bare ground action plan (for insertion into the existing management plan) to incorporate elements of path and fire break creation and maintenance, path diversions and the deliberate creation of flat and sloping bare ground and vertical sand face habitat
- The plan should include targets for bare ground creation and guidance on timing and methods
- Plan preparation should include consultation with the entomological community

#### 7.3.2.3 Controlled Burning

Controlled burning has a place within the range of managements needed to maintain heathland. Concern has been expressed about burning by respondents, who may not be familiar with this form of management. It is recommended that:

- Areas of the Common that are suitable for burning from an ecological, amenity and health and safety viewpoint are mapped
- Advice from the fire services and experienced fire managers of lowland heath on procedures and practice for setting controlled fires is sought
- Following suitable publicity, two winter demonstration burns on dry heath be carried out, with the help of experienced fire setters.
- A follow up consultation is carried out with concerned users to assess whether their concerns have been allayed or whether changes in practice or further initiatives are needed.

## Report on Chobham Common consultation and recommendations

- Follow up management will be needed to prevent a return to grass management

### 7.3.2.4 Mowing

Mowing has a place in the options for heathland restoration but, except in areas intended to be permanent grassland, not generally in heathland maintenance. Mowing is a viable alternative to burning, particularly where this is unsafe or undesirable, but should be avoided on the deeper peats and should use low pressure machines for cutting and carting. Repeated and frequent mowing operations are not sustainable. Among the various management options listed on the questionnaire, there were least public concerns about mowing. It is recommended that:

- Areas of the Common that are suitable for mowing from an ecological, amenity, health and safety and soil condition viewpoint are mapped
- Cut material should be removed wherever possible to lower nutrient levels
- Any problems concerning the disposal of cut material should be resolved before mowing begins
- Follow up management will be needed to prevent a return to grass management

### 7.3.2.5 Turf stripping

Turf stripping can only be small scale and selective in a nutrient stripping programme unless substantial costs are incurred and arrangements made to transport considerable quantities of material off-site. There were concerns about turf stripping but the comments received suggested that these were mostly to do with perceived damage to wildlife and soils. It is recommended that:

- As part of the information and interpretative strategy for the Common, the purpose and consequences of turf stripping be fully explained to visitors and stakeholders
- An assessment be made as to the areas of the Common where turf stripping would be particularly beneficial in removing nutrients and salvaging rare habitats and species
- A disposal strategy for stripped material is formulated before areas are turf stripped
- An archaeological and landscape assessment of proposed areas for turf stripping is carried out
- If time permits, experimental stripped plots are prepared beforehand to assess seed banks, and in the absence of regeneration, appropriate heathland litter for spreading is sourced

### 7.3.2.6 Grazing

Grazing is needed as part of the range of managements at Chobham Common. It is a traditional form of management on commons and commons grazing rights still exist at Chobham which could be legally exercised. Most heathland managers believe that grazing is a sustainable and valuable management tool on the heaths. The research findings suggest that there are a range of benefits from grazing. At Chobham Natural England support grazing management and have identified under-grazing as a reason why the Common is not in favourable condition. The surveyors, who carried out the botanical surveys, both experienced heathland ecologists, recommended that grazing should be re-introduced if the range of plant communities was to be conserved.

#### Sheep grazing

Sheep grazing is not suitable as the only form of grazing for Chobham Common for ecological and practical reasons. Sheep grazing with other stock could bring ecological benefits but there are serious concerns at Chobham which is visited by very large numbers of dogs each year. If sheep grazing was introduced it could only be carried out under a shepherded system, which would be expensive, and under existing

## Report on Chobham Common consultation and recommendations

arrangements, impractical. A shepherded flock should not therefore be ruled out for the future as part of a mixed grazing regime, should land and resources become available to make it a practical proposition. It is therefore recommended that:

- The possibility of introducing a shepherded flock of sheep to the Common should be kept under review and in any case, re-examined as an option at each review of the management plan

### Pony grazing

Ponies are ideal grazing animals on Molinia heath but there can be problems with ridden horses and the public, especially if animals are fed. Horse riders have expressed concerns about free range ponies on the Common. It is recommended that:

- Ponies are not introduced initially to the main southern area of Chobham Common.
- On the northern part of the Common, experimental pony grazing could be put in place when grazing is introduced, using only mares or mares with large foals. The local horse riding community should be consulted.

If pony grazing is instituted:

1. A hardy pony breed should be used, such as Exmoor or New Forest (after taking advice), and should preferably come from a local source to minimise travel and allow removal when required
2. Any introduction of ponies should be accompanied by publicity and education especially in the main car parks and visitors should be firmly discouraged from trying to feed them
3. The possibility of the ponies being checked each day by volunteers, as at Ashdown Forest and elsewhere in Surrey should be investigated
4. The results should be monitored not only for the ecological effects but for the reactions of visitors

### Cattle grazing

Cattle are non-selective grazers and will graze Molinia and other rough vegetation. They do not pose the same problems to people and pets as sheep and ponies. It is recommended that ;

- Traditional beef cattle should be introduced as the main grazing animal for use on the Common. They are generally docile, ignore people and dogs and pose few problems on publicly visited lowland heathland sites elsewhere. ( If ponies are not used, then cattle could substitute, although both would preferably be used)
- Cattle introduced to the Common should not include bulls and cows with young calves
- Arrangements should be put in place to remove any animal that causes problems as soon as these are reported
- Arrangements will need to be made for when the animals need to be transported off the Common and for back-up pasture
- Steps should be taken to make sure that the animals used are accustomed to dogs and people
- Careful thought will need to be given to the location of watering facilities for cattle
- The use of electronic chips would assist in locating and checking the animals
- An information and education programme should be carried out with local communities, local schools and visitors to the Common before cattle are introduced
- Once cattle are introduced, visitors should be offered a stock familiarisation course for their dogs if there is a demand for this
- Visitors should be told when animals are put on and taken off the Common, and at any one time, how many animals of what type are present.

## Stocking

Stock should be introduced gradually to the Common not only to acclimatise the animals to a new and unfamiliar environment but to allow users of the Common and their pets to become used to seeing grazing stock. It is therefore recommended that to start with, low numbers of animals are introduced, both to allow acclimatisation and also to allow monitoring of the activities of stock and their effects on the vegetation. It is suggested that initially 20-30 cattle/ponies should be introduced to the Common, with the herd expected to build to around 50-60 animals after two years.

### 7.3.2.7 Herbicides and Molinia

In view of the uncertainties in using herbicides and particularly glyphosate on lowland heathlands, large scale treatment such as that carried out in the uplands is not recommended

However, in view of the encouraging results contained in upland situations it is recommended that:

- Approaches be made to selected Universities to interest one of them in undertaking a research project on the best ways of converting Molinia dominated heathland habitat to humid and wet heath dominated by characteristic communities of dwarf shrubs and associated species
- Treatments would include a range of methods of reducing Molinia including the use of herbicides, and options for follow up maintenance
- Such experimental trials would take many years and should not be allowed to delay the management of the heathland at Chobham by established and traditional methods

### 7.3.2.8 Monitoring

It will be important to monitor both visitor activities and the results of management in future years. Visitor activities should be monitored in accordance with the monitoring strategy being developed by Natural England across the Thames Basin heaths. Although this has not finally been agreed it is likely to include some or all of the following:

- People counters placed in strategic locations (such as car park exits) to establish numbers and trends in visitors
- A series of simple car park vehicle counts carried out by volunteers to establish spatial distribution of visitors across the Common
- Periodic visitor questionnaire surveys (5-yearly) to check for changes in the origins and behaviour of the visiting public
- Fixed point photography of site fabric (car parks, paths etc) and habitats
- Maintain an incident log (already being done)
- Survey of the numbers and distribution of SPA Annex 1 birds (nightjar, woodlark and Dartford warbler) every five years (already currently carried out annually) possibly helped by reliable volunteers
- Continue condition assessment monitoring (Natural England)
- Carry out periodic surveys of horse rider and pedestrian use and distribution across the Common to assist with predictions of maintenance needs on bridleways and paths

In addition, changes in management practice should be monitored using a selection of the following methods (much of this is already in place):

- Fixed point photography of habitat boundaries

## Report on Chobham Common consultation and recommendations

- Establish plant quadrat monitoring across managed habitats with controls sited in unmanaged exclosures
- Monitor a selection of path widths
- Establish experimental plots for herbicide treatment of *Molinia* using randomised replicated blocks in association with a local university
- Carry out baseline surveys and monitor soil nutrient levels

### 7.3.2.9 Staffing

The recommendations above will have important implications for staffing levels. Existing rangers play a major role in public engagement, but the wide range of issues, continuing consultations on the future of the Common, the numerous local organisations with a particular focus on the Common, and the large number and variety of visitors, means that this aspect of their work is becoming increasingly time consuming. Over a third of respondents felt that the wardening presence on the Common should be greater, with issues over dogs and wildlife disturbance some of the greatest concerns. At the same time, some 20% of respondents wanted to see changes in management, about 40% of the public thought the tree and scrub clearance programme should be increased and the same proportion that more input was needed into path and bridleway maintenance. Apart from these issues, monitoring and recording, habitat and estate management of the Common, relations with statutory undertakers, surrounding landowners and others, supervision of contractors and all the other multifarious tasks associated with a large and heavily visited site need to be done. Chobham Common has a very high public profile as it is part of the internationally important Thames Basin Heaths; it includes a village green, is crossed by a number of major utilities including the motorway, and has numerous rights of way, landscape and archaeological feature and is a major visitor attraction. An increased input of man power resources for community engagement and habitat management appears to be essential if the management objectives for wildlife and people are to be achieved.

## **8 Further Public Consultations**

### **8.1 Achieving a consensus**

It is important that SWT seek the widest possible consensus on the future management of the Common. If the Trust adopts the recommendations above, then further consultations with local communities and stakeholders will be needed. In particular, if grazing is to be included among the range of management techniques which are used then stock management or containment will be required.

The consultations so far suggest that there are strong views on different methods of stock control, particularly fencing, and that views on a range of alternatives should be sought before any options are adopted. This report has recommended that sheep are not practical options at present and would be unsuitable as the main or only grazing animal. It has also recommended that cattle and (on the northern Common) ponies should be the preferred grazers.

If any grazing regime on the Common is to help meet Government targets for favourable condition and attract funding, it will have to be put in place in the next few years.

There are a range of possible alternatives for managing grazing stock. It is recommended that:

## Report on Chobham Common consultation and recommendations

- The Trust explores all the alternative methods of stock containment and prepares a wide range of possible and practical alternatives on which to consult.
- That in relation to grazing options, SWT consult more specifically with the two groups who have expressed most concern, dog walkers and horse riders
- That SWT uses this public consultation to launch a longer term visitor implementation plan including the strengthening of links with the local community.
- That apart from any specific proposals for future management, the consultation process results in a publicly available, shortened version of a habitat and visitor management plan
- The consultation should also include other aspects of the management options outlined elsewhere in this section.

## References

1. Sanderson, N. and G. Groome, *Thursley, Ash, Pirbright and Chobham cSAC, Chobham Common SSSI. Phase II NVC habitat survey 2002*. 2002, EPR report to English Nature, Surrey and Sussex team. : Winchester.
2. Tubbs, C.R., *The New Forest : an ecological history*. 1968, Newton Abbott: David & Charles.
3. Cunha, A., et al., *Whole ecosystem nitrogen manipulation: An updated review*. 2002, JNCC Report No. 331.: Peterborough.
4. Strengbom, J., et al., *Slow recovery of boreal forest ecosystem following decreased nitrogen input*. *Functional Ecology*, 2001. **15**: p. 451-457.
5. Bibby, C.J., *Ecology of the Dartford warbler *Sylvia undata* (Boddaert) in relation to its conservation in Britain*. 1977, Council for national Academic Awards.
6. Bibby, C.J., *Foods of the Dartford warbler *Sylvia undata* on southern English heathland (Aves: Sylviidae)*. . *Journal of Zoology* 1979. **188**: p. 557-576.
7. Catchpole, C.K. and J.F. Phillips, *Territory quality and reproductive success in the Dartford Warbler *Sylvia undata* in Dorset, England*. *Biological Conservation*, 1992. **61**: p. 209 - 215.
8. Murison, G., *The impact of human disturbance, urbanisation and habitat type on a Dartford warbler *Sylvia undata* population*, in *School of Biological Sciences*. 2007, University of East Anglia: Norwich.
9. Murison, G., et al., *Habitat type determines the effects of disturbance on the breeding productivity of the Dartford Warbler *Sylvia undata**. *Ibis*, 2007. **149**(s1): p. 16-26.
10. Van den Berg, L.J., et al., *Territory selection by the Dartford warbler (*Sylvia undata*) in Dorset, England: the role of vegetation type, habitat fragmentation and population size*. *Biological Conservation*, 2001. **101**(1): p. 217-228.
11. Bibby, C.J. and C.R. Tubbs, *Status, habitats and conservation of the Dartford warbler in England*. . *British Birds*, 1975. **5**: p. 177-195.
12. Tubbs, C., *Heathland management in the New Forest, Hampshire, England*. *Biological Conservation*, 1974. **6**: p. 303-306.
13. Pickess, B. *The management of common gorse *Ulex europaeus* at Arne, Dorset*. in *History and Management of Southern Lowland heaths*. 1990. Dorset: RSPB, Sandy.
14. Marrs, R., H., R.J. Pakeman, and J. Lowday, *Control of bracken and restoration of heathland. V. Effects of bracken control treatments on the rhizome and its relationship with frond performance*. *Journal of Applied Ecology*, 1993. **30**: p. 107-118.
15. Marrs, R.H.J.S.W.L.D.M.G., *Control of bracken and restoration of heathland. VIII. The regeneration of the heathland community after 18 years of continued bracken control or 6 years of control followed by recovery*. *Journal of Applied Ecology*, 1998. **35**(6): p. 857-870.
16. Lowday, J. and R. Marrs, *Control of bracken and the restoration of heathland. III. Bracken litter disturbance and heathland restoration*. *Journal of Applied Ecology*, 1992. **29**: p. 212-217.
17. Pakeman, R.J., M.G. Le Duc, and R. Marrs, H., *Bracken distribution in Great Britain: Strategies for its control and the sustainable management of marginal land*. *Annals of Botany*, 2000. **85**: p. 37-46.
18. Miles, S.R., *Heathland flies-UK Biodiversity Action Plan Project, Fifth and final report*. 2003, British Entomological and Natural History Society.

19. DEFRA, *The Heather and Grass etc. Burning (England) Regulations 2007*. 2007, HMSO.
20. Allchin, E.A., *Vegetation dynamics following management burning of lowland heathland*. 1997, University of Liverpool.
21. Whittaker, C., *Temperatures in heath fires*. *Journal of Ecology*, 1961. **49**: p. 709-715.
22. Whittaker, C. and C. Gimingham, *The effect of fire on the regeneration of Calluna vulgaris (Hull) from seed*. *Journal of Ecology*, 1962. **50**: p. 815-882.
23. Legg, C.J., E. Maltby, and M.C.F. Proctor, *The ecology of severe moorland fire on the North York Moors: seed distribution and seedling establishment of Calluna vulgaris*. *Journal of Ecology*, 1992. **80**: p. 737-752.
24. Hardtle, W., et al., *Can prescribed burning compensate for atmospheric nutrient loads in wet heathlands?* *Phytocoenologia*, 2007. **37**: p. 161-174.
25. Davies, I., *Review of information on management, research, and monitoring on heathland National Nature Reserves (NNRs)*. 1995, English Nature: Peterborough.
26. Bacon, J., *Examples of current grazing management of lowland heathlands and implications for future policy*. 1998, Peterborough: English Nature Research Report No. 271.
27. Small, R.W., et al., *Towards sustainable grazing for biodiversity: an analysis of conservation grazing projects and their constraints*. 1999, English Nature.
28. Byfield, A. and D. Pearman, *Dorset's disappearing flora. Changes in the distribution of Dorset's rarer heathland species 1931 to 1993*. 1994: Plantlife, RSPB.
29. Bullock, J.M. and R.J. Pakeman, *Grazing of lowland heathland in England: management methods and their effects on heathland vegetation*. *Biological Conservation*, 1997. **79**: p. 1-13.
30. Lake, S., *The role of livestock in the conservation of lowland heaths*. 2002: PhD Southampton University.
31. Bokdam, J. and J.M. Gleichman, *Effects of grazing by free-ranging cattle on vegetation dynamics in a continental north-west European heathland*. *Journal of Applied Ecology*, 2000. **37**(3): p. 415-431.
32. Welch, D., *Studies in the grazing of heather moorlands in north-east Scotland. II. Response of heather*. *Journal of Applied Ecology*, 1984. **21**: p. 197-207.
33. Demopoulos, H., *An assessment of the success of English Nature's Wildlife Enhancement scheme on lowland heaths*. 1996, University College, London.: London.
34. Hester, A.J., J. Miles, and C.H. Gimingham, *Succession from heather moorland to birch woodland. I. Experimental alteration of specific environmental conditions in the field*. *Journal of Applied Ecology*, 1991. **79**: p. 303-315.
35. Bannister, P., *Biological flora of the British Isles: Erica tetralix L.* *Journal of Ecology*, 1966. **54**: p. 795-813.
36. Rose, R.J., P. Bannister, and S.B. Chapman, *Biological floral of the British Isles: Erica ciliaris L.* *Journal of Ecology*, 1996. **84**: p. 617-628.
37. Putman, R.J., et al., *Food and feeding behaviour of cattle and ponies in the New Forest, Hampshire*. *Journal of Applied Ecology*, 1987. **24**: p. 369-380.
38. Tubbs, C.R., *Grazing the lowland heaths*. *British Wildlife*, 1991. **2**: p. 276-289.
39. Bakker, J.P., et al., *Sheep-grazing as a management tool for heathland conservation and regeneration in the Netherlands*. *Journal of Applied Ecology*, 1983. **20**: p. 541-560.
40. Hartley, S.E., *The effects of grazing and nutrient inputs on grass-heather competition*. *Botanical Journal of Scotland*, 1997. **49**: p. 315-324.



41. Alonso, I., S.E. Hartley, and M. Thurlow, *Heather-grass competition on Scottish moorlands: interacting effects of nutrient enrichment and grazing regime*. Journal of Vegetation Science, 2001. **12**: p. 249-260.
42. Clarke, J.L., D. Welch, and I.J. Gordon, *The influence of vegetation pattern on the grazing of heather moorland by red deer and sheep. I. The location of animals on grass-heather mosaics*. Journal of Applied Ecology, 1995. **32**: p. 117-186.
43. Bokdam, J., *Effects of browsing and grazing on cyclic succession in nutrient-limited ecosystems*. Journal of Vegetation Science, 2001, 2001. **12**(6): p. 875-886.
44. Gallet, S. and F. Rose, *Resistance of Atlantic Heathlands to trampling in Brittany (France): influence of vegetation type, season and weather conditions*. Biological Conservation, 2001. **97**(2): p. 189-198.
45. Pywell, R.F., N.R. Webb, and P.D. Putwain, *A comparison of techniques for restoring heathland on abandoned farmland*. Journal of Applied Ecology, 1995. **32**(2): p. 400-411.
46. Thompson, K., J. Bakker, and R. Bekker, *The soil seed banks of North West Europe: methodology, density and longevity*. 1997, Cambridge: Cambridge University Press.
47. Rodwell, J., *Mires and heath*. British plant communities. Vol. 2. 1991, Cambridge: Cambridge University Press.
48. Lake, S. and J. Underhill-Day, *Effects of grazing on heathland flora.*, in *International seminar on heathland management in north west Europe. Programme Life "Gestion des lands du nord ouest l'Europe"*. 1999, Bretagne Vivante/SEPNB. p. 150-158.
49. Lake, S., J.M. Bullock, and S.E. Hartley, *Impacts of livestock grazing on lowland heathland in the UK*. 2001, Peterborough: English Nature. (English Nature Research Reports No. 422).
50. Clarke, M.J., *Past and present mire communities in the New Forest and their conservation*. 1988, University of Southampton.
51. Evans, F., *A review of the management of lowland wet heath in Dyfed, West Wales*. 1989, Nature Conservancy Council: Peterborough.
52. Chatters, C., *Conserving rare plants in muddy places*. British Wildlife, 1996. **7**: p. 281-286.
53. Cox, J., *Botanical monitoring of the Dorset heathlands Wildlife Enhancement Scheme - West Bog, Hartland Moor NNR*. 1998, English Nature.
54. Diemont, W., *Survival of Dutch heathlands*, in *IBN Scientific Contributions 1*. 1996, DLO Institute for Forestry and Nature Research: Wageningen, Netherlands.
55. Bakker, J. and F. Berendse, *Constraints in the restoration of ecological diversity in grassland and heathland communities*. Trends in Ecology & Evolution, 1999. **14**: p. 63-68.
56. Aerts, R. and G.W. Heil, *Heathlands: Patterns and processes in a changing environment.*, ed. M.J.A. Werger. 1993, Dordrecht: Kluwer Academic Publishers.
57. Chambers, F.M., D. Mauquoy, and P.A. Todd, *Recent rise to dominance of *Molinia caerulea* in environmentally sensitive areas: new perspectives from paleoecological data*. Journal of Applied Ecology, 1999. **36**: p. 719-733.
58. Tybirk, K., J. Bak, and L.H. Henriksen, *Basis for mapping of critical loads*. Temanord, 1995. **610**: p. 1-69.
59. Sanderson, N.A., *Notes on heathland grazing in the New Forest*. 1994, Ecological Planning and Research, Winchester. Unpublished.
60. Fottner, S., et al., *Impact of sheep grazing on nutrient budgets of dry heathlands*. Applied Vegetation Science, 2007. **10**: p. 391-398.

61. Diemont, W.H. and J.T. de Smidt, *The use of grazing sheep and cattle in the management of heathland nature reserves with special reference to the Netherlands.*, in *Heathland management in the Netherlands.* 1987, Rijksinstituut voor Nuteurbcheer Arnhem, Leersum en Tecel.
62. Edwards, P.J., *Some effects of grazing on the vegetation of stream-side lawns in the New Forest.* Proceedings of the Hampshire Field Club and Archaeological Society, 1985. **41**: p. 45-50.
63. Tubbs, C.R., *The New Forest.* 1986, London: Collins.
64. Hulme, P.D., et al., *Rehabilitation of degraded Calluna vulgaris (L.) Hull - dominated wet heath by controlled sheep grazing.* Biological conservation, 2002. **107**: p. 351-363.
65. Newton, A., et al., *Impacts of grazing on lowland heathland in North-west Europe.* Biological Conservation, In Press.
66. Marrs, R.H., M.J. Hicks, and R.M. Fuller, *Losses of lowland heath through succession at four sites in Breckland, East Anglia.* Biological Conservation, 1986. **36**: p. 19-38.
67. Tubbs, C.R., *The ecology of pastoralism in the New Forest.* British Wildlife, 1997. **9**: p. 7-16.
68. Bartolome, J., et al., *Grazing alone is not enough to maintain landscape diversity in the Montseny Biosphere Reserve.* Agriculture Ecosystems & Environment, 2000. **77**(3): p. 267-273.
69. Pratt, R.M., et al., *Use of habitat by free-ranging cattle and ponies in the New Forest, Southern England.* Journal of Applied Ecology, 1986. **23**: p. 539-557.
70. Marrable, C., *Ashdown Forest grazing action plan. English Nature Research Reports No. 602.* 2004, English Nature: Peterborough.
71. ADAS. *Molinia in the uplands and within ESAs.* in *Molinia management in ESAs and the uplands.* 2000. Peak District National Park: ADAS.
72. Wilkinson, B., *From mowing to grazing: the control of scrub at Little Scrub Meadows.* Enact, 2000. **8**: p. 16-18.
73. Baker, S., *Survival of the Fittest, A natural history of the Exmoor pony* 1993, Exeter: Exmoor Books.
74. Lake, S., Bullock, J.M., Hartley, S., *Impacts of livestock grazing on lowland heathland in the UK.* 2001, English Nature: Peterborough.
75. Oates, M.R., *A review of the role of horses and ponies in habitat management for nature conservation. A practical guide.* 1994, National Trust: Cirencester.
76. Ball, M., *Floristic changes in grassland and heaths on the Isle of Rum after a reduction or exclusion of grazing.* Journal of Environmental Management, 1972. **41**: p. 53-60.
77. Heil, G. and J. de Smidt, *Cattle grazing improves diversity of heath communities (Netherlands).* Ecological Restoration, 2001. **19**: p. 46-47.
78. Buttenschon, R., H. Degn, and S. Jorgenson. *Management of Molinia caerulea, preliminary result from management experiments on Randbol Hede, Jutland.* in *Eighth European Heathland Workshop.* 2003. Schneverdingen, Germany.
79. Grant, S.A., L. Torvell, and T.G. Common, *Controlled grazing studies on Molinia grassland: effects of different seasonal patterns and levels of defoliation on Molinia growth and responses of swards to controlled grazing by cattle.* Journal of Applied Ecology, 1996. **33**: p. 1276-1280.
80. Marrable, C.J., *Ashdown Forest - A review of grazing,* in *English Nature Research Reports.* 2003.
81. Ball, M.E., *Floristic changes in grassland and heaths on the Isle of Rum after a reduction or exclusion of grazing.* Journal of Environmental Management, 1972. **41**: p. 53-60.
82. Anderson, P., *Diversity from Molinia moorlands,* in *Enact.* 2002, English nature: Peterborough. p. 15-18.

83. Anderson, P., *The National Trust Derwentdale heather restoration trials*. 2002, Penny Anderson Associates: Derbyshire.
84. Milligan, A.L., et al., *Developing an integrated land management strategy for the restoration of moorland vegetation on Molinia caerulea dominated vegetation for conservation purposes in upland Britain*. Biological Conservation, 2004. **119**: p. 371-385.
85. Marrs, R., H., et al., *Control of Molinia caerulea on upland moors*. Journal of Applied Ecology, 2004. **41**: p. 398-411.
86. Milligan, A., P.D. Putwain, and R. Marrs, H., *A laboratory assessment of the relative susceptibility of Molinia caerulea (L.) Moench and Calluna vulgaris (L.) Hull to a range of herbicides*. Annals of Applied Biology, 2008. **135**: p. 503-508.
87. Ross, S., H. Adamson, and A. Moon, *Evaluating management techniques for controlling Molinia caerulea and enhancing Calluna vulgaris on upland wet heathland in northern England, UK*. Agriculture Ecosystems & Environment, 2003. **97**: p. 39-49.
88. Grant, S., et al., *Controlled grazing studies on Molinia grassland: effects of different seasonal patterns and levels of defoliation on Molinia growth and responses of swards to controlled grazing by cattle*. Journal of Applied Ecology, 1996. **33**: p. 1267-1280.
89. Mitchell, R., R. Rose, and S. Palmer, *Restoration of Calluna vulgaris on grass dominated moorlands: The importance of disturbance, grazing and seeding*. Biological Conservation, 2008. **141**: p. 2100-2111.
90. Smith, D.G. and J. Bird, *Restoration of degraded Molinia caerulea dominated moorland in the Peak District National park eastern moorlands, Derbyshire, England*. Conservation Evidence, 2005. **2**: p. 101-102.
91. Clay, D. and R. Stevens. *Herbicide use in industrial and amenity areas: current practice and future prospects*. in *Brighton Crop Protection Conference*. 1991. Brighton.
92. Critchley, N., *Sustainable grazing of moorland*, in *ADAS Science Review 2003-2004*. 2004, ADAS: Redesdale.