

PETERSFIELD HEATH
MANAGEMENT STRATEGY 2015

Prepared by
Dolphin Ecological Surveys
August 2015

on behalf of
South Downs National Park Authority

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1.0 THE STRATEGY

This management strategy for Petersfield Heath was prepared by Kate Ryland of Dolphin Ecological Surveys at the request of the South Downs National Park Authority (SDNPA). It is a precursor to the preparation of a new 10-year management plan for the site, which will be written by staff of the SDNPA.

The Petersfield Heath Management Plan 2005 – 2010 (M.Gibbs, Heathland Management Services) is a very comprehensive document and contains a considerable amount of background information about the site.

This management strategy does not reproduce the background and contextual data contained in the previous management plan but reference was made to that document as well as to biological data for Petersfield Heath provided by the Hampshire Biodiversity Information Centre (HBIC).

The main purpose of the strategy is to set out an agreed way forward for integrated management of Petersfield Heath that meets, as far as possible, the sometimes differing needs and aspirations of the various groups and individuals associated with the site.

The strategy includes recommendations for management objectives and some mechanisms to help ensure that a new management plan is successfully implemented in future.

An outline action plan, broad management guidelines, timetables and protocols are put forward as a basis on which to develop an integrated 10-year management plan

On site meetings and telephone discussions with stakeholders were an essential part of preparing the strategy.

Consultees included representatives of the following:

- Petersfield Town Council
- Friends of Petersfield Heath
- Hampshire County Council (Senior Archaeologist)
- "People of the Heath" project
- Heath Pond Association
- Owner of The Plump Duck
- South Downs National Park Authority

Their generous assistance with this process is gratefully acknowledged by the author.

2.0 MANAGEMENT OBJECTIVE & STRATEGY

The consultations that were undertaken with representatives of the groups who use and enjoy Petersfield Heath in different ways informed much of the content of this management strategy. These discussions were wide-ranging but all had a common theme, which is the deep affection and attachment that people have for the site.

In essence there should be just one over-riding objective for management of Petersfield Heath:

To maintain Petersfield Heath as an accessible, safe open space for the use of local people and other visitors whilst maximising its biodiversity and celebrating its outstanding archaeological importance.

Meeting this objective will require the adoption of an agreed, integrated management plan wherein the interests and priorities of all the different stakeholders are acknowledged.

The stakeholders must accept that "give and take" is essential to reach agreement on the details of site management and that in some areas compromise will be needed. However, the ultimate aim of all parties should be an outcome that puts the long-term well-being of the Heath and its important features first.

In the past there has been difficulty in achieving satisfactory and integrated management of Petersfield Heath but none of the problems that have arisen are insurmountable. Indeed, there are many site management actions proposed in this strategy that will meet the needs and aspirations of multiple stakeholders.

The aims of the management strategy can be summarised as:

1. To integrate management for archaeological and ecological objectives wherever possible

For example, some of the archaeological features have become very overgrown with dense vegetation and are suffering underground damage from rabbit burrows. At the same time, open, structurally varied vegetation on sandy soils is very important habitat for many species of wildlife. Rotational management of vegetation and thinning of trees and scrub in key locations is likely to be beneficial for both wildlife and for the ancient barrows.

The archaeology at Petersfield Heath is of national importance. It is important to focus on finding ways to manage semi-natural habitats that are compatible with the archaeological interest rather than in conflict with it

2. To integrate management for angling and ecological objectives wherever possible

For example, management actions to repair and reduce bank erosion and to promote a diverse fringe of marginal vegetation, good water quality and healthy populations of aquatic invertebrates will benefit anglers and wildlife associated with the pond.

3. To enhance the structural diversity of habitats and maintain a mixture of open water, grassland, heathland, scrub and woodland on the site

The current biodiversity of the site, and its appeal to many of the people who use it, owe much to the range of different habitats that now occur on the Heath. In the past it was a far more open, uniform area of grazed heathland but in the absence of livestock grazing it is

unrealistic to aspire towards returning it to that state.

Within the site it is entirely possible to have some areas of open, grassy and heathland habitat. In these areas the archaeological features can be seen and managed to best advantage. In other parts of the site woodland and mixed aged scrub habitats which are valuable for breeding birds, roosting bats and other important wildlife, should be maintained.

The benefits and management of all types of semi-natural vegetation at Petersfield Heath are not restricted to either biodiversity or archaeology interests – there is significant overlap between the two.

4. To ensure that it is easy for local people and visitors to the Heath to enjoy and understand the history and habitats around them as well as the need to carry out management on the site.

There is a need to enhance the interpretation of the special features of the site (archaeological and ecological) and better explain the management that takes place. Improved communication between site managers and site users, especially giving advanced notice of major works affecting trees and shrubs, would be very beneficial and would help to reduce misunderstandings and potential conflict when management actions take site users by surprise.

3.0 ACTION PLAN

In this section the categories of management activity that should be developed in more detail within the full management plan are outlined.

There are two very important issues that need to be addressed by Petersfield Town Council (PTC) if the new management plan is to be accepted by the different stakeholders and successfully implemented for the benefit of Petersfield Heath. These are first, the need to establish a management steering group and second, the need for a designated site manager.

3.1 Management Steering Group

There is an urgent need to establish a management steering group where decisions about the site and its management can be discussed and agreed. The steering group should include two representatives of each group, business or organisation that is associated with the site.

It can be difficult to ensure that a steering group is convened regularly and that members attend the meetings but a serious effort must be made to ensure that stakeholders are fully engaged in the management decision-making process.

At present there appears to be a rather restricted flow of information between those individuals and groups with an interest in the site. At least some of the past difficulties over management decisions appear to have arisen largely due to poor communication.

As a minimum there should be 6-monthly meetings and more regular (possibly monthly) email updates amongst members of the steering group.

3.2 Site Manager

PTC has overall responsibility for management of the site and some tasks are carried out by the grounds maintenance staff. However, much of the management that takes place seems to be carried out by others, sometimes under contract (such as mowing the cricket pitch), sometimes by delegated volunteers (the work of FOPH and Heath Pond Association) and sometimes using external groups (such as SDNPA or CSV workers).

There is an obvious need for a better defined management hierarchy at Petersfield Heath with a designated site manager who has responsibility for implementation of the management plan.

The site manager should be able to take decisions on fine scale details of management actions where flexibility is necessary (for example on appropriate management of vegetation on individual barrows or areas where bracken management is necessary from year to year) and the appropriate skills to oversee and guide management activities involving volunteers.

3.3 Management Activities

Details of which management activity should take place, where on the site and in which year will be refined in the full management plan. The following categories of management activity are intended as a summary of the types of action that will be needed to achieve the aims of the over-arching management strategy.

Protocols for habitat management are included in section 7 of this strategy with a management timetable in section 4. These are intended to help ensure that management actions are carried out in an appropriate manner and are scheduled for the most appropriate time of year.

Woodland management

The secondary woodland in parts of the Heath would benefit from thinning, coppicing, glade and ride creation to promote a more varied structure and increase the amount of light reaching ground level. This is likely to be most appropriate on the level areas of woodland rather than on any of the Scheduled Ancient Monuments (SAMs).

Woodland edge habitat with dense scrub is very valuable for wildlife and this habitat should be promoted in woodland areas where it does not coincide with important archaeological features.

Scrub management

Scrub, including gorse and bramble scrub, is very valuable for a range of wildlife including breeding and roosting birds, invertebrates and small mammals.

Scrub management will need to include rotational cutting to promote a more varied age structure across the site as well as targeted removal of encroaching scrub from open habitats where appropriate.

Problem areas occur where dense scrub is encroaching onto the edges of the cricket pitch and onto the most open, heathy barrows because this is very attractive habitat for rabbits whose burrows and scrapes are particularly damaging in these areas.

Barrow vegetation management

There is no single, simple prescription for management of the vegetation on barrows that will be ideal for both ecology and archaeology. A degree of flexibility is essential to decide on the most appropriate way to treat each feature.

The current programme of archaeological investigation of selected barrows (2015 - 2017) has meant that small trees and scrub on some features has already been cleared.

On wooded barrows the archaeological interest is not necessarily best served by removing all trees. Ideally the smallest trees should be removed with the least ground disturbance possible. New trees should not be allowed to become established and large, old trees should be monitored so that if they show signs of decaying they can be felled rather than allowed to fall over. Lifting of rootplates when old trees fall is likely to be one of the most destructive things that could happen to the archaeology of the SAMs.

Once each barrow has been excavated the ongoing management should be flexible and where possible and appropriate it should be tailored towards promoting the growth of grassy vegetation rather than the dense bramble scrub.

This is because the ideal state of the barrow surface, for archaeological purposes, is a covering of "binding surface vegetation" i.e. an intact grassland sward.

The real danger to the archaeological remains comes not from surface vegetation but from the action of burrowing mammals (mainly rabbits but also potentially fox and badger). Dense stands of bramble and other scrub provides ideal conditions for rabbit populations to flourish and large warrens may develop.

Once a layer of binding surface vegetation is established on each barrow, it can then be managed for biodiversity as appropriate. For example rotational mowing over a two year cycle could provide both tall and short sward grassland. It would also be possible to sow

heather seed onto bare areas to promote the development of dwarf shrub heathland, provided the heather sward is managed subsequently to keep it low and dense rather than tall and leggy.

In some cases targeted chemical control of bramble regrowth in the first years after excavation might be appropriate to promote the establishment of herbaceous vegetation rather than dense scrub. Having reduced the density of woody species, ongoing rotational management to promote a mosaic of grassland and light, low scrub would be straightforward.

On some of the barrows where there is already dense, shading tree cover, bramble growth may be largely suppressed. Management of the vegetation on such features that are not due to be excavated should be avoided or only undertaken after careful consideration of the likely ecological benefits because woodland management to open the canopy in these circumstances would potentially adversely affect the archaeological interest.

Managing some of the barrows for open grassy or heathy vegetation presents an opportunity to increase the “inter-visibility” between groups of mounds. Being able to see from one mound to others could, in a small way, recreate the historic landscape of the time when they were constructed, which could enhance the experience of the site for visitors.

Not all barrows would be suitable for increased inter-visibility but a sub-set, for example those around the cricket pitch or on Music Hill could lend themselves to this treatment. This should be an aspiration in the full management plan but is not an over-riding priority.

Management of vegetation on the SAMs to allow each individual barrow to be seen is important but does not mean adopting an intensive management regime which would conflict with the ecological importance of these features.

Each barrow will lend itself to a different level of “tidiness” in its ongoing management and this can only be determined on a case by case basis within the framework of an integrated management plan and ideally under the direct guidance of a site manager.

Grassland/heathland management

The different types of improved grassland, acid grassland, wet grassland and grassy heath present on the site will need to be managed by a combination of mowing (usually with removal of the cut material), sapling removal and bracken control.

Mowing grassland and removing the cut material helps to keep soil nutrient levels low and create openings in the sward where seed can spread, for example from the areas of seeded heather into adjoining heathy grassland.

Some of the improved grassland areas of the former golf course could be enhanced using green hay from more diverse parts of the site to increase the proportion of wildflowers in the sward and thus provide more sources of nectar and pollen for insects.

In the past there has been some very successful heathland creation in parts of the old golf course. This involved scraping topsoil and spreading heather cuttings, which has resulted in some dense patches of heather. It is recommended that no further management of this kind is carried out because scraping the soil surface runs a risk of having an adverse impact on archaeological features that lie in or near the upper soil horizons. Instead areas of tussocky vegetation adjoining established patches of heather should be mown in late summer and the cuttings removed so that a short, open sward is created where the heather plants can set seed and spread gradually throughout this part of the site.

Ongoing management of the tussocky, damp grass/heath areas should be by rotational mowing and removal of the cuttings to prevent succession to scrub whilst retaining a varied sward height.

Invasive species control

Bracken readily encroaches into open areas of the site and should be controlled where it threatens to become too dominant. Small infestations can be pulled by hand or larger swathes can be mown or strimmed.

Rhododendron and cherry laurel occur mostly in woodland on the edges of the site, especially along the Sussex Road, and should be selectively removed to favour broadleaved, native species of trees and shrubs and to promote open spaces within stands of dense woodland.

The pond and its margins

Management of the pond comes under two categories, ongoing habitat management and the more complex bank restoration and erosion control scheme.

Ongoing management is straightforward and should include rotational coppicing of bankside willows to create a varied age structure and to allow more light to reach the pond edges, which will promote the growth of marginal vegetation. There is also scope to cultivate and plant native marginal vegetation as part of the bank restoration scheme.

The options to reverse the effects of wave action and bank erosion are currently under discussion by a group of interested parties hosted by PTC. The details of a soft engineering scheme would require specialist advice but it appears that the potentially very beneficial use of willow faggots and coir rolls (pre-planted with appropriate native wetland species) to re-engineer the bank profile and create promontories for angling is under consideration.

Appropriate native wetland plant species to use in the bank restoration scheme should be chosen using the information provided by HBIC and held by SDNPA. Native wetland plants already found in the area or those that have been recorded from the pond in the recent past are likely to establish most successfully.

Providing a degree of separation between anglers and people walking on the Millennium Path around Heath Pond by creating angling promontories could help to reduce any problems or conflicts that might arise when anglers are casting into the pond or if dogs or children come into contact with fishing tackle such as hooks or bait.

Clear guidance needs to be provided to anglers on how to deal with non-native aquatic fauna that occurs in the pond and which they may occasionally encounter. PTC must agree a policy that takes into account the legality of whether such animals should be returned to the water if caught. For example, the red-eared terrapin *Trachemys scripta* is listed under Section 14(1) of the Wildlife and Countryside Act 1981, which prohibits its release into the wild. Therefore if one of these animals is caught by an angler they should not return it to the pond but it should be made easy for them to know what to do and who to go to for help.

Access and interpretation

The Millennium Path that encircles Heath Pond is in need of some maintenance and in places seems very narrow. Any future visitor survey should include questions about its current suitability and any potential improvements for site users.

A sign-boarded archaeological trail is proposed as part of the People of the Heath project. This should include reference to the ongoing management of barrows and the ways in which the needs of archaeology and ecology are being integrated.

Keeping all site users informed about planned management activities is a high priority. Simple site maps showing the location and type of proposed management should be put up at all major site entrances and on the noticeboards at least 2 weeks in advance of any major actions. The maps should be updated regularly, especially during the winter months when tree and scrub management is underway. Maps should be removed one week after management has finished.

Regular posts or press releases on local websites/newsletters giving advanced warning and explanation of management works should also be considered.

Site infrastructure and facilities would benefit from some enhancements. There are several dog waste bins around the site but it was suggested that some additional signage in the car parks to encourage dog walkers to use the bins could help with the occasional problem of dog faeces being left on the cricket pitch. The regular presence of a site manager or ranger can also be very helpful to reduce this kind of anti-social behaviour.

The rubbish bins and toilet block near the cafe were also reported as features that could be improved. The bins are apparently emptied in the morning so can be left over-flowing overnight. If possible they should be emptied at the end of the working day to overcome this problem.

Improving and updating the toilet block would certainly help to enhance the experience of visiting the site.

Biological survey and monitoring

Biological data for Petersfield Heath held by HBIC includes species lists, vegetation mapping, NVC and phase 2 surveys, rare species records, old surveys by Mike Edwards (1999) and Francis Rose (1993) and the 2005 Management Plan.

Members of the Friends of Petersfield Heath (FOPH) have collected quite extensive but sometimes ad hoc biological records over many years, which they submit to specialist recorder groups but to date have not sent much of their data to HBIC or PTC.

FOPH together with the site manager should establish what biological data gathering can be achieved by local volunteers but also identify key areas where professional surveys may need to be commissioned.

FOPH should attempt to add the location of any rare species, protected species or sensitive/vulnerable habitats to the existing vegetation maps (available from HBIC or SDNPA) and update these regularly so that other stakeholders are aware of ecologically important hot spots.

An FOPH member with special interest in trees (Robin Hart) should provide a map showing the location and species of all trees that are of particular importance/value/interest.

Ideally a reptile survey should be carried out to clarify the status and distribution of these protected species across the site. However the use of cover objects may be problematic on a site with such high levels of public access. Instead an attempt should be made to identify and map potential hibernacula and reptile foci (see section 6).

A simple biological monitoring programme is needed to help measure and document changes on the Heath. As a minimum this should include fixed point photography of all the main habitats and archaeological features, especially those affected by the People of the Heath project. In addition aerial photos to help monitor any changes in the extent of scrub and woodland, would be extremely valuable.

Chamomile is one of the more uncommon plant species still known to be extant on the Heath. It would be useful to carry out regular surveys of its extent on the cricket pitch to ensure that it is maintained in good condition by the current mowing regime.

Agreeing management and sharing information

The management compartments defined in the 2005 management plan are very complex and somewhat outdated so should be reviewed and simplified. It may be sufficient to reduce the site habitat mapping to areas of grassland/heathland, woodland/scrub and open water (see draft site map provided with this strategy). Further detail of important features, species and habitats can then be over-laid on this base map.

All members of the steering group should have access to an agreed "sensitivity map" which shows features, species, habitats etc. that require special care during management or consideration when planning activities.

The steering group should ensure that it has a robust mechanism to receive and collate full records of all management actions undertaken by its members.

Steering group meetings should be held every 6 months, at least initially, so that management activities can be reviewed and achievements or problems can be discussed.

3.4 Suggested Measures of Management Success

The full management plan will include a mechanism for reviewing the outcome of management at Petersfield Heath. It may include some or all of the following suggested measures of success.

- ◆ Increased overall structural diversity in woodland and scrub habitats across the site
- ◆ Improved visibility and inter-visibility of at least some SAMs where appropriate
- ◆ Reduced overall amount of dense scrub harbouring rabbit burrows on SAMs
- ◆ Increased diversity of species in grassland/heathy habitats
- ◆ Increased proportion of nectar- and pollen-rich species in grassland areas
- ◆ Well-structured edge habitats where woodland and grassland habitats meet
- ◆ Improved age structure in gorse scrub with all age classes represented across the site in suitable areas
- ◆ More complex vegetation structure within woodland habitats via glades and rides
- ◆ Increased amount of marginal vegetation around the pond
- ◆ Reduced area of eroded bank and more soft-engineered bank protection in place to limit future erosion
- ◆ Populations of rare/desirable species stable or increasing (provided that defined species are measured or mapped as a baseline)

4.0 Habitat Management Timetable

Woodland and scrub management												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Scrub clearance	Dark Blue	Dark Blue									Dark Blue	Dark Blue
Gorse coppicing	Dark Blue	Dark Blue									Dark Blue	Dark Blue
Willow coppicing	Dark Blue	Dark Blue									Dark Blue	Dark Blue
Woodland thinning	Dark Blue	Dark Blue									Dark Blue	Dark Blue
Dangerous tree felling	Pale Blue	Pale Blue	Pale Blue	Pale Blue	Pale Blue	Pale Blue	Pale Blue	Pale Blue	Pale Blue	Pale Blue	Pale Blue	Pale Blue
Woodland coppicing	Dark Blue	Dark Blue									Dark Blue	Dark Blue
Glade and ride creation	Dark Blue	Dark Blue									Dark Blue	Dark Blue
Grassland and heathland management												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rotational mowing									Dark Blue	Dark Blue		
Regular mowing of amenity areas and paths				Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue		
Cricket pitch mowing				Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue		
Sward enhancement								Dark Blue	Dark Blue	Dark Blue		
Sapling removal	Dark Blue	Dark Blue	Pale Blue	Pale Blue	Pale Blue	Pale Blue	Pale Blue	Pale Blue	Pale Blue	Pale Blue	Dark Blue	Dark Blue
Edge habitat management	Dark Blue	Dark Blue									Dark Blue	Dark Blue
Invasive species management												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Invasive woody species control	Dark Blue	Dark Blue									Dark Blue	Dark Blue
Bracken management						Dark Blue	Dark Blue					
Pond management												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Bankside tree felling or coppicing	Dark Blue	Dark Blue									Dark Blue	Dark Blue
Bankside mowing									Dark Blue	Dark Blue		
Anti-erosion work on banks						Pale Blue	Pale Blue	Dark Blue	Dark Blue	Dark Blue		
Survey and monitoring												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Wildlife surveys	Pale Blue	Pale Blue	Pale Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Pale Blue	Pale Blue	Pale Blue
Photographic monitoring – fixed points and aerial	Pale Blue	Pale Blue	Pale Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Pale Blue	Pale Blue
Heather coverage						Dark Blue	Dark Blue	Dark Blue	Dark Blue			
Habitat and species mapping	Pale Blue	Pale Blue	Pale Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Pale Blue	Pale Blue	Pale Blue
Maintain site infrastructure	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue

Dark blue = Most effective/least damaging time for management

Pale blue = Work may be less effective and/or requires more care but is acceptable if essential

5.0 Survey & Monitoring Schedule

Action	Priority	Timing	Responsibility
Fixed point photographic monitoring	High	At least bi-annually (summer and winter) and more often if possible	FOPH
Aerial photographic monitoring using remote sensing technology (drone)	High	Ideally annually but every 2-3 years would be acceptable	PTC
Wildlife surveys to fill data gaps For example dragonflies & damselflies, breeding birds, reptiles, bat tree roosts and reptile foci	High	As appropriate for the species but usually April to October	SDNPA, FOPH, contractor
Mapping sensitive habitats and species	High	As soon as possible using existing data. Maps should be kept updated as new information becomes available	SDNPA, FOPH
Mapping important and/or interesting mature trees	Medium	As appropriate	FOPH
Survey and monitor extent of chamomile on cricket pitch outfield	Medium	July	FOPH
Visitor survey	Medium	May to September	PTC

6.0 Reptiles on Petersfield Heath

6.1 Legislation

- All British reptiles are protected under the Wildlife and Countryside Act (1981) as amended (W&C Act). The most widespread species, grass snake (*Natrix natrix*), adder (*Vipera berus*), slow-worm (*Anguis fragilis*) and common lizard (*Zootoca vivipara*) are protected from deliberate killing or injuring (W&C Act sub-section 9.1).
- In addition the two rarest British reptiles, smooth snake (*Coronella austriaca*) and sand lizard (*Lacerta agilis*), receive full protection under the W&C Act and are also protected in European law through the Conservation of Habitats and Species Directive (2010) (informally known as “the Habitats Directive” and transposed into UK law as the Habitats Regulations).
- Section 40 of the Natural Environment and Rural Communities Act (2006) places a duty on all public authorities to conserve biodiversity and implement the UK Biodiversity Action Plan.

6.2 Management for Reptiles

The only recent record of any reptile on Petersfield Heath held by HBIC is a single record of slow-worm from 2005. However, anecdotal evidence (via FOPH) suggests that slow-worm and common lizard occur quite widely on parts of the Heath. Their presence must be taken into account during routine management and whilst the archaeological excavations take place.

An understanding of reptile biology can help to ensure that any problems for reptiles that could arise from habitat management are avoided or minimised. Key points are:

- Reptiles often favour mid-successional habitats and interfaces or ecotones can be important reptile habitat e.g. between scrub and tussocky grassland or on woodland edges
- They need warmth, connectivity of habitat patches and varied topography/south facing slopes, abundant prey and cover from predators
- Most have quite limited dispersal abilities
- Large scale damage or loss of vegetation can be catastrophic to local populations of reptiles
- Reptiles can show high fidelity to small habitat patches. They hibernate from October/November onwards and can emerge as early as February in warm conditions
- The outcome of habitat management is important. Providing suitable habitat in the long term may mitigate for short term harm to individuals during management actions

Management principals to adopt where reptiles are likely to be present

- Identify and map reptile foci and treat these areas carefully with management specifically tailored for reptiles. These may be areas with favourable topography, diverse habitat

structure rich in prey etc.

- Identify and map communal hibernacula and avoid damage to them during management
- Try to keep south facing slopes open but with a mosaic of scrub and taller vegetation nearby
- Areas of non-intervention are valuable to reptiles, especially in low nutrient status zones where vegetation growth likely to be slow
- Timing of works is crucial to minimise harm to reptiles
- Winter is the best time for surface tree/shrub clearance (Nov-Feb) but leaving a hibernation site completely devoid of cover makes emerging animals vulnerable to predation

It is important to strike a balance between potential harm to individual reptiles and considering the wider needs of reptile populations as well as taking into account other site interest features

6.3 Management Timetable for Reptile Habitats

Adapted from the Reptile Management Handbook (2010)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mowing												
Scrub/tree work												
Bracken cutting												
Stump treatment												

Dark green = most effective/least damaging time for management

Light green = work may be less effective and/or requires more care to avoid disturbance

Source:

Edgar, P., Foster, J. and Baker, J. (2010) Reptile Habitat Management Handbook. Amphibian and Reptile Conservation. Bournemouth

7.0 MANAGEMENT PROTOCOLS

7.1 Woodland & Scrub Management

Management Actions	<p>Coppicing and thinning trees and shrubs</p> <p>Glade and ride creation</p> <p>Invasive species control and bracken management</p>
Reasons for Management	<p>To promote structurally diverse woodland and maximise woodland biodiversity</p> <p>To promote a range of scrub age classes across the site</p> <p>To clear some vegetation from archaeological features</p> <p>For public safety reasons</p>
Potential Constraints	<p>Protected species such as nesting birds, roosting bats, badger, reptiles</p> <p>Archaeological features. These are only likely to be adversely affected if ground disturbance occurs or if woodland management promotes dense growth of bramble scrub</p>
Optimum Time of Year	<p>Routine tree and shrub work between 1st November and 1st March</p> <p>Invasive species control (woody species) between 1st November and 1st March</p> <p>Bracken cutting July/August</p> <p>Emergency removal of dangerous trees at any time but a watching brief for breeding birds or roosting bats needed if during sensitive times of year</p>
Potential workforce	<p>Volunteers (FOPH, SDNPA), PTC staff, contractors</p>

7.2 Archaeological Feature Management

Management Actions	<p>Scrub management, removal of saplings, tree thinning, herbicide treatment of woody vegetation, mowing, removal of mature trees <u>if they are in danger of falling</u></p> <p>Promote and maintain “binding surface vegetation” on burial mounds and other important archaeological features whilst discouraging the action of burrowing mammals as much as possible</p> <p>Adopt a flexible approach to management of vegetation on each barrow. For example tree cover that shades out dense bramble growth on some features and an intact grassy sward on others.</p> <p>Where possible improve “inter-visibility” between groups of barrows</p>
Reasons for Management	<p>To conserve the archaeological features in good condition and reduce the potential for damage through sub-surface disturbance</p> <p>To enhance the experience for visitors to the site by revealing/re-creating a fragment of the ancient funerary landscape</p> <p>To promote surface vegetation that binds the soil surface and ideally vegetation that is inhospitable to burrowing mammals</p> <p>To prevent new trees becoming established on barrows and retain existing mature trees unless they are likely to fall</p>
Potential Constraints	<p>Protected species especially reptiles and breeding birds</p> <p>Public opposition to tree and scrub management</p>
Optimum Time of Year	<p>Tree and scrub work between 1st November and 1st March</p> <p>Mowing vegetation in September/October</p>
Potential workforce	<p>Volunteers (FOPH, SDNPA), PTC staff</p>

7.3 Grassland & Heathland Management

Management Actions	<p>Mowing and removal of cuttings. PTC to collect cut material for composting off site wherever possible</p> <p>Green hay strewing or wildflower seed spreading</p> <p>Sapling removal</p> <p>Edge habitat management</p>
Reasons for Management	<p>To prevent succession to scrub and improve the biodiversity of open habitats</p> <p>To maintain valuable grassland habitat and promote natural development/return of acid grassland/heathy plant communities</p> <p>To control invasive species</p> <p>To increase the extent and connectivity of open habitat and promote diverse, well-structured edge habitat.</p> <p>To maintain important archaeological features in good condition and enhance their (inter-)visibility</p> <p>To maintain short sward in amenity areas, paths and cricket pitch</p> <p>Cuttings to be removed to reduce nutrient input and help with recovery of improved swards to more species-rich grassland</p> <p>Edges of grassland/heathland areas should grade into adjoining woodland areas with dense transitional habitat where this does not conflict with other management aims</p>
Potential Constraints	<p>Protected species particularly reptiles</p> <p>Archaeological features, but only likely to be adversely affected if ground disturbance occurs or if management promotes dense growth of bramble scrub</p>
Optimum Time of Year	<p>Mowing between April and late September. Different areas of grassland will be mown under different mowing regimes.</p> <p>Sapling removal between November to February or with care at other times of year</p> <p>Edge habitat management between November and February</p>
Potential workforce	<p>PTC staff, Cricket Club, FOPH, SDNPA</p>

7.4 Pond & Margins Management

Management Actions	<p>Bankside tree and shrub management</p> <p>Mowing vegetation on pond banks (with unmown margin wherever possible)</p> <p>Bank erosion repair and control through soft engineering, bank re-shaping and promotion of more marginal vegetation</p> <p>Water quality monitoring</p>
Reasons for Management	<p>To maintain and enhance a diverse and healthy pond habitat for wildlife with a sustainable fishery for the benefit of anglers</p> <p>To maintain the pond as an accessible and attractive feature for visitors to the Heath</p>
Potential Constraints	<p>Public opposition to management of tree and scrub management</p> <p>Protected species, particularly breeding birds</p> <p>Seasonal water levels</p>
Optimum Time of Year	<p>Tree and scrub work between 1st November and 1st March</p> <p>Mowing vegetation on banks September or October</p> <p>Bank erosion control will depend on water levels and accessibility</p> <p>Water quality monitoring - ongoing</p>
Potential workforce	<p>PTC staff for mowing. Angling club with FOPH, SDNPA volunteers, contractor for soft engineering of banks</p>

7.5 Cricket Pitch Management

Management Actions	<p>Mowing outfield and cricket square</p> <p>Scrub control and occasional mowing of tall vegetation around pitch edges. PTC to collect cut material for composting off site wherever possible</p>
Reasons for Management	<p>To maintain the pitch and surrounding areas in a suitable condition for playing cricket.</p> <p>The short sward that is maintained for playing cricket also provides ideal conditions for the population of chamomile.</p> <p>To restore more open, permeable vegetation structure around the pitch and the barrows in this area to promote long views and enhance the inter-visibility of this group of archaeological features.</p>
Potential Constraints	<p>Presence of chamomile</p>
Optimum Time of Year	<p>Regular mowing from April to early October</p> <p>Occasional mowing of tall vegetation in September/October</p> <p>Scrub management between 1st November and 1st March</p>
Potential workforce	<p>Contractors, the Cricket club, PTC staff, FOPH</p>