



The Pebblebed Heaths
An Options Appraisal
Summary report

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Context

The East Devon Pebblebed heaths are mostly owned by the Clinton Devon Estates and managed by the Pebblebed Heaths Conservation Trust and RSPB. They are nationally important for their wildlife and are much valued by local communities and visitors as a publicly accessible open landscape. Government have recently given a new statutory right of access and passed new legislation on management of common land. They have also set targets for the management of important wildlife sites including the Pebblebed Heaths coupled with increased funding for management.

In the light of these changes, the Trust, supported by RSPB and Natural England (the Government's wildlife conservation agency), has decided to undertake a major review of the management of the Pebblebed Heaths and look at all the options. An important part of this process is to seek the views of local communities and organisations together with visitors and other stakeholders in the heaths.

A recent report, 'A common purpose; a guide to agreeing management on common land', was produced in 2005 by a group of countryside organisations to give guidance on consultations over the future of common land. It recognises the value that communities place on their local commons and sets out principles for carrying out consultation without preconditions and in a way that genuinely seeks a consensus on a way forward through regular communication and a shared understanding of the issues.

It is hoped that this report will be the first step in a wider consultation process that meets the guidance of 'A common Purpose', by laying out the issues in as thorough and transparent way as possible. Following the production of this options report the Trust intends to carry out a wide consultation with users and stakeholders in the Pebblebed Heaths, using a range of interpretation material and a series of public events. This will take place during the summer and autumn of 2009.

Introduction and Background

Most heathlands are derived from the clearance of woodland on light soils by Neolithic or later Bronze or Iron Age farmers. Use of the land for arable and pastoral farming, often accompanied by burning to provide fresh grazing kept the land open, but over time, this wasted the original brown earth soils and left light, acid, freely draining ground, ideal for the growth of heather and other heathland plants. Down the centuries, continued grazing and burning, the removal of turves, bracken and scrub for fuel and animal bedding, cutting of timber and exploitation of other heathland products, prevented woodland from re-establishing. These activities also resulted in the continual removal of nutrients from the system, maintaining the poor soils and their heathland vegetation.

As such uses became uneconomic from the late nineteenth century, many heaths were abandoned or turned to other uses such as farming, forestry, the exploitation of minerals, or development for leisure activities. As a result heathlands have declined in area both in the UK and across north-west Europe and those that remain cover but a small part of their original extent.

The East Devon Pebblebed Heaths are located on the Triassic Budleigh Salterton pebble beds between the Exe and Otter Estuaries about 7 miles south east of Exeter. They cover some 1400 ha

and constitute the largest block of lowland heath in Devon. They are mostly owned by The Clinton Devon Estates and managed by the Pebblebed Heaths Conservation Trust, but with areas owned, leased and managed by the RSPB and Devon Wildlife Trust. Parts of the Pebblebed Heaths were first notified as a Site of Special Scientific Interest (SSSI) for their distinctive heathland habitats and wildlife in 1952, and the various areas of heath were consolidated into the current SSSI of some 1112 ha in 1986. The Pebblebed Heaths have subsequently been designated as sites of European importance for their heathland habitats, birds and invertebrates. Management for nature conservation on this area has been undertaken since 1990. The Pebblebed Heaths are also part of the East Devon Area of Outstanding Natural Beauty which was designated in 1963.

The Pebblebed Heaths make up the largest block of lowland heath in Devon. They are a nationally important representative of the lowland heathlands of Britain and north-west Europe. A significant feature of the site is the diversity of heathland associated communities, related to its large area and the range of substrates and topography. The higher and drier areas are covered with heath dominated by heather, bell heather, western gorse, bristle bent-grass and purple moor-grass. A series of shallow valleys gives rise to distinct changes of vegetation where the dry heath gives way to wet heath with flushes on the valley sides, and to valley mire with patches of willow scrub mainly on the valley floors. Bell heather is replaced here by cross-leaved heath and sedges, herbs and orchids with plants of wetter mires such as bog asphodel, sundews and pale butterwort

Over 70 breeding bird species have been recorded notably nightjar, hobby and Dartford warbler. There are 21 breeding dragonfly species including the nationally rare southern damselfly, as well as bog bush crickets and rare species of beetles and flies.

The Pebblebed Heaths have been open to the public since 1930 and public rights of access were ensured in perpetuity by the Countryside and Rights of Way Act 2000. The heaths are registered as commons and under the Commons Act 2006 consents are needed for any structures such as fences, buildings or surfacing of car parks. The Commons are a much valued local resource used by dog walkers, horse riders, mountain bikers, model aircraft flyers, fishermen and others. They are also used as a training area by the Royal Marine Commandos who have a lease over part of Woodbury Common for a grenade range and a licence over the rest of the Commons for training, mostly on foot and without live ammunition.

The heaths were first occupied during prehistoric times, and have a wealth of archaeological features. Down the centuries they have been subject to the traditional uses of grazing (with burning) turfing and mineral extraction and have also been used by the military since Napoleonic times. It has been estimated that some 640ha of the Pebblebed Heaths have been lost since 1906.

To maintain their conservation interest, the Pebblebed Heaths need continual management, to keep pace with the encroachment of trees, scrub and bracken. Annual inputs of atmospheric nutrients, particularly nitrogen, cause deterioration of the heathland communities of heather and its allies, and help to drive a conversion from heather to grass domination. In damp and wet heath the grass which comes to dominate is purple moor grass, which now covers large areas of the Pebblebed Heaths.

The accumulated nutrients can be reduced by controlled burning or mowing, or removed by turf stripping, but too frequent mowing or burning encourages grasses at the expense of heather.

Grazing will not remove accumulated nutrients but can help to reduce annual increments and diversify the vegetation structure. The Pebblebed Heathland managers have used a combination of all these managements depending on circumstances on particular sites.

Wild fires have also been a major problem in the past, and human usage appears to be increasing and could pose problems from disturbance, trampling and other effects in the future.

In 2007 the heaths were accepted into the Higher Level Stewardship funding scheme, which will run until 2017. The scheme is administered by Natural England, the Government's conservation agency, and payments are made to ensure the heaths are managed to maintain and enhance the heathland communities and special bird and invertebrate populations. Natural England have carried out assessments of the condition of the heaths and concluded that they are mostly in an unfavourable recovering condition.

Natural England has set out a range of criteria for achieving favourable condition of lowland heathland and management is directed towards achieving these. This requires:

- Ongoing control and management of woodland, scrub, gorse and creation of bare ground
- Management of plant communities to achieve a mosaic of different ages and structures across the vegetation of the heaths for the benefit of the associated flora and fauna
- Control of spreading grasses at the expense of the dry and wet heath and mire communities

Management of these important open spaces for people is also needed and includes:

- Providing a range of facilities to improve people's enjoyment and appreciation of the heaths
- Managing visitor pressures to minimise the impact on wildlife and the environment.

Choices need to be made about what management techniques to use in the future and where.

To take this forward, the Pebblebed Heaths Conservation Trust, supported by the RSPB and Natural England, have commissioned Footprint Ecology to produce an appraisal of the management options for the Pebblebed Heaths, and to put this out for consultation.

It should be emphasised that while it is hoped this report and the consultations which follow will set some short and medium term objectives and prescriptions, they will not be set in stone. The Pebblebed Heaths Conservation Trust sees the management of the heaths as being an evolutionary process with changes taking place to reflect the needs of the local community and visitors and the conservation of the wildlife as these too, develop.

This summary report has been prepared for the Pebblebed Heaths Conservation Trust, with the support of Natural England and the RSPB. It examines the management problems and suggests solutions, presented as a range of options with their advantages and disadvantages for consultation.

The full report considers the background and main issues affecting the site and examines the need for management of the heaths and associated habitats, for wildlife and people. The available options are then described in more detail including mowing, burning, scraping and the implications of continuing and extending grazing.

More detailed analyses and background are included in separate Appendices

Options appraisal

The main mechanisms for managing lowland heath are turf cutting, surface scraping, mowing, burning, herbicide spraying/bruising/cutting (for controlling bracken), grazing and removal of encroaching trees and scrub. Management for visitors includes provision of facilities (e.g. car parks, viewing points, seats), provision of information (e.g. notice boards, maps, leaflets, talks, guided walks), and provision and maintenance of routes (e.g. paths, bridleways, boardwalks, bridges). Estate and forest management includes felling, planting and maintenance of plantations and other woodland, maintenance and repair of scheduled monuments and other features, provision and maintenance of fire breaks, removal of fly tipped material, dumped cars and litter and maintenance of structures such as gates and stiles.

Most of these activities already take place on the heaths with the site managers and their staff and contractors carrying out annual programmes across the heaths, some of which is repeat work on rotation in areas previously managed in the past. Much of this management is maintenance work, with substantial annual programmes, leaving limited resources for major new initiatives.

Many of these activities involve choosing priorities and making choices about the levels of activity necessary to achieve objectives. Broad objectives for wildlife conservation are clear, to achieve and maintain favourable condition for the features for which the site has been designated. However, objectives for visitors are often less clear as they involve judgements about the level of services to provide within the resources available.

This section is an appraisal of the options for continuing with existing management levels, or increasing or reducing these. Detailed descriptions and qualifications are included in the main report with further detail in the Appendices. Although one possibility could be to do nothing, this is not considered to be realistic. The Heaths are designated as an SPA, SAC and SSSI under national and European legislation. Under the CROW Act such sites must be managed to restore and maintain favourable condition. Without appropriate management, the wildlife interest on the Pebblebed Heaths will deteriorate which, apart from being contrary to the objectives of the PHCT and RSPB as site managers, could trigger greater involvement by Natural England to safeguard the future of the European site. For the conservation bodies, as managers of the heaths, to do nothing is therefore not an option.

Options appraisal

Options	Pros	Cons
Tree and scrub clearance		
Carry out landscape assessment of options	Will inform options on extent of clearance on heaths and management of adjoining woodlands and plantations. Would help to justify and explain chosen options to the public	Could delay formulation of future work programmes Could produce conflicting objectives between conservation work and landscapes
Maintain existing balance of trees/heath	No increase in existing resources In accordance with existing work programmes No additional assessments needed Existing levels accepted by public	May not recognise and address long term trends in encroachment rates May not fully exploit opportunities for heathland restoration
Continue to work towards HLS/NE targets for percentage cover of trees/scrub on the heathland	Attracts funding Improvement in NE condition assessment	Targets may be revised in future if, in hindsight they prove to be to little or too much
Increase tree cover on heaths for landscape/amenity	Could balance public perceptions of tree clearance elsewhere Could have wildlife conservation benefits, e.g. invertebrates and nightjar foraging Could be part of overall landscape plan	Would require careful assessment of conservation, landscape and amenity effects Could increase regeneration rates of trees elsewhere on site through seed dispersal
Extend heath/acid grassland by clearing some plantations	Would restore areas of former heathland and increase heathland resource Could improve wildlife links between adjoining heaths Some plantations could be converted to sacrifice areas for public close to car parks (e.g. disturbance, dog mess) Could be part of overall landscape plan	Could reduce area of commercially valuable forestry Might require environmental impact assessment under regulations Might require some initial reseedling Could result in increased management to prevent reversion to woodland or gorse
Convert some plantations to broad leaved	Would be benefits to wildlife depending on species planted Could benefit visitor experience Could be part of overall landscape plan Would improve nightjar foraging habitat	Could affect medium to long term forest plans and income/cost projections Limited choice of broadleaves on acid soils
Gorse management		
Maintain existing proportion of area covered by gorse	No increase in existing resources In accordance with existing work programmes No additional assessments needed Existing levels accepted by public	May not provide optimum conditions for Dartford warbler
Increase gorse stands for Dartford warbler	Could allow increase in Dartford warbler distribution and breeding population	Could be labour intensive Dartford warblers already well distributed over most of heathlands so might not be priority
Increase gorse coppicing programme	Coppiced gorse at various stages provides	Requires generally small, scattered areas so

	foraging, nesting and winter cover for Dartford warblers and stonechats Improved winter survival could be more important than wider distribution	increases machinery travel across heaths Could open up areas to people and dogs Material should be removed to avoid increasing nutrients
Break up large gorse thickets and remove roadside gorse	Large thickets not optimum for Dartford warblers Removal of roadside gorse will reduce use by Dartford warblers and reduce road kills of birds Roadside gorse could hide any fences that might be proposed	Large thickets in strategic positions may deter people and dogs from sensitive areas Roadside gorse will hide roadside grazing animals from motorists and vice versa if extensive grazing with cattle grids was proposed
Bracken management		
Maintain existing proportion of area covered by of bracken	No increase in existing resources In accordance with existing work programmes No additional assessments needed Existing control levels accepted by public	Little evidence on long term trends, could result in slow increase in bracken cover
Increase programme of bracken control	Possible withdrawal of Asulam could mean an enhanced programme of control for three years would be a once only opportunity of control by spraying Reduction in bracken could reduce tick numbers and likelihood of tick infestation of domestic stock and pets and Lyme disease in humans	Major spraying programme could mean aerial spraying unpopular with public Little advantage if not followed up in later years Bracken cutting or bruising seen as more environmentally acceptable by public Major spraying programme could raise concerns by public
Chemical control of purple moor grass		
Start control programme		Untested technique on lowland heaths Could have damaging side effects on other plant and animal species Needs experimental testing before being considered
Conservation mowing		
Maintain existing programmes	Maintains existing proportion of pioneer heather within dwarf shrub mosaic No increase in existing resources In accordance with existing work programmes Can guide or improve access and fire breaks Single mowing reduces some accumulated nutrients if mowings removed from site. Mowing widely accepted as a normal habitat management technique by public	Existing heather rotation probably needs expansion Cannot be used on broken, rough or wet ground or among tree stumps Trends in percentage areas of pioneer, building, mature and degenerate heather unclear as guide to adequacy of existing programme Can open up sensitive areas for people and dogs and create new path systems
Extend mowing regimes	Increases mosaic distribution and size Greater benefits to associated plant and animal communities Greater opportunities for temporary extension of firebreaks	Too frequent mowing can encourage grasses Greater resource commitment
Reduce mowing regimes	Lower commitment of resources Reduces machinery use on heaths	Reduces mosaics and habitat niches for wildlife Accumulation of older heather communities stores problems for the future
Surface scraping		

Maintain existing programmes	Removes nutrients and creates bare ground habitat for invertebrates Surface only, leaves lower archaeological record intact Can remove substantial parts of bracken rhizome systems	Existing provision of bare ground probably not enough Can open up areas for people and dogs in sensitive areas Can be seen as unsightly in the short term Cannot be used on broken, rough or wet ground or among tree stumps May need survey for archaeological surface features which could be damaged Creates spoil for spreading or disposal
Extend existing programmes	Increases bare ground provision	Increases spoil disposal
Reduce existing programmes	Reduces spoil disposal	Reduces bare ground provision
Turf stripping		
	Removes most accumulated nutrients Creates bare ground habitat for annual plants, lower plants and invertebrates	Can damage archaeological features on and under ground surface Can leave unsightly areas in medium term Cannot be used on broken, rough or wet ground or among tree stumps Can create large quantities of material for disposal Any future turf stripping would need archaeological survey
Controlled burning		
Maintain existing programmes	Maintains existing proportion of pioneer heather within dwarf shrub mosaic No increase in existing resources In accordance with existing work programmes Accepted as part of management regime by public	Existing heather rotation from burning (and mowing) probably needs expansion Can concern members of public for health and safety reason Leaves unsightly area short term Controlled burning might encourage arsonists Needs right weather conditions with wide variation in areas burned each year Careful planning of rotation can be upset by wild fires
Extend existing programme	Improve rotational areas and mosaics for associated wildlife	Labour resource intensive
Reduce existing programmes	Reduces demands on labour	Reduces benefits for wildlife Accumulation of older heather communities stores fire problems for the future
Grazing		
Maintain existing programmes	Small enclosures allow targeting of specific areas and control of stocking densities Experience shows that adequate stocking densities control purple moor grass and encroaching scrub and encourage plants and invertebrates Can be managed with existing resources	Enclosures will need to comply with size criteria in Commons Act, or if larger need S of S approval Grazing in enclosures minimises nutrient removal Only some wetter areas currently grazed Increased risk to stock in enclosures from dog worrying and fires Fences around enclosures get broken regularly by Royal Marines on nighttime exercises

Extend grazing to rest of heaths	<p>Extensive grazing benefits heathland plant and animal communities</p> <p>Extensive grazing allows animals to behave more naturally in environment</p> <p>Animals would have more opportunities to escape dogs and fires</p>	<p>Animals choose their own grazing areas so grazing not targeted</p> <p>Finding and checking animals can be labour intensive although this can be helped by tracking technology</p> <p>Public can be nervous in the presence of free ranging stock</p> <p>Would need dedicated areas for sick or injured stock and back up procedures to ensure animal welfare</p>
Introduce shepherding for extensive grazing	<p>Shepherded animals can be targeted at areas which will benefit most from grazing</p> <p>Shepherd can be good advocate for grazing</p> <p>Public generally enjoy seeing grazing on heaths</p>	<p>Shepherding ponies is not possible and only experimental shepherding of cattle has been tried. Shepherding therefore confined to sheep</p> <p>Despite shepherd and guard dogs animals can be chased onto roads</p> <p>There can be inter-actions between guard dogs and other dogs</p>
Perimeter fencing for extensive grazing With or without cattle grids	<p>Animals contained and kept off roads</p> <p>Fences also assist in keeping children, dogs and stray horses off roads</p> <p>Access retained by gates at all existing access points</p> <p>Fence can be concealed where there is perimeter scrub</p> <p>Cattle grids can reduce need for fencing, and allow joining up of commons for more extensive grazing</p>	<p>Large capital cost initially</p> <p>Fence can be visible on boundaries where scrub is absent</p> <p>Temporary electric fences is vulnerable to damage and theft</p> <p>Fences require approval from Secretary of State</p> <p>Cattle grids unpopular with some road users</p> <p>Cattle grids need approvals and are costly, and with animals on roads, require speed limits and traffic calming measures</p>
Sheep grazing	<p>Sheep maintain short swards with benefits for some plants and animals</p> <p>Sheep are relatively easy to handle</p> <p>Sheep generally are very safe with people</p>	<p>Sheep grazing on tall, tussocky, uncut vegetation is not effective</p> <p>Free range sheep are very vulnerable to attack by dogs</p> <p>Back-up land for lambing and wintering is required</p> <p>Sheep do not tend to move into fringing woodland at night so nutrient reductions are small</p> <p>Sheep trampling has limited benefits for plants</p>
Pony grazing	<p>Ponies will graze tall coarse vegetation</p> <p>Ponies will move into wet areas to graze</p> <p>Ponies have a large throughput of vegetation and are very effective grazers</p> <p>Trampling by ponies can benefit plant and animal communities</p> <p>Ponies can be out wintered on heathlands</p>	<p>Ponies can be a real nuisance around entrances and car parks if fed by the public</p> <p>Ponies, particularly stallions, can cause problems for horse riders,</p> <p>In hard weather ponies may need feeding for which back-up land is required</p>
Cattle grazing	<p>Cattle will graze tall coarse vegetation</p> <p>Cattle will move into wet areas to graze</p> <p>Trampling by cattle can benefit plant and animal</p>	<p>Young stock can be boisterous and can alarm visitors</p> <p>Bulls can cause concern to visitors</p>

	<p>communities Some traditional breeds are very docile and ignore public and dogs Will not be fed by public</p>	<p>Can be out-wintered but need feeding and this requires back-up land. Land also needed for calving and bulling All stock need regular checking</p>
Combination management		
	<p>Grazing by cattle or ponies following burning or mowing can encourage dwarf shrubs Burning can clear the ground prior to surface scraping or turf stripping and assist archaeological examination Mowing provides a shorter sward for grazing by sheep Surface scraping can reduce bracken growth prior to spraying Bracken mowing or bruising can open up swards for grazing In practice different managements inevitable if site is to be fully managed</p>	<p>Grazing by sheep after burning or mowing can encourage grasses Needs careful explanation to public Increases staff training needs and requirement for external inputs</p>
Management for visitors		
Maintain existing facilities	<p>No increase in resources needed Limits visitor impacts</p>	<p>Current knowledge on visitor requirements and views limited Some existing facilities modest and in need of improvement Existing facilities do not sufficiently explain the substantial input by the land managers</p>
Improve and extend existing facilities	<p>A visitor survey could provide basic information on visiting patterns and perceived needs and views Better education and information to visitors about management of heathland and do's and don'ts of visiting reduce impacts on wildlife and Increases enjoyment of visitors Improvements to car parks, paths and bridleways reduces risk of accidents Raises profile of site and site owners and managers Improving facilities allows better management of visitors in relation to sensitive habitats and species Could reduce conflicts between different visitor groups Foster a better understanding between different visitor groups including more information on the benefits of site use for military training</p>	<p>To determine priorities will require research on visitor views and needs Requires increased resources Possible introduction of car park charges to help pay for improvements</p>

Reduce visitor facilities	Reduces inputs of resources May reduce impacts on wildlife in some areas	Lowers profile of site owners and managers Increases risk of accidents Lowered visitor facilities could lead to site deterioration through an increase in undesirable activities Loss of public understanding and support for management
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